The application of detrital zircon grains from Pleistocene eskers for reconnaissance bedrock mapping in the Acasta Gneiss Complex

by

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ABSTRACT

The Acasta Gneiss Complex (AGC) is a ~2400 km^2 Hadean-Mesoarchean terrane that contains the oldest known zircon-bearing rocks on Earth. Despite its importance for early Earth geology, only a small fraction (~50 km^2) has been mapped in detail. To determine the lateral extent of ancient rocks and assess relative proportions of diverse-age rock units in the vast, little-studied parts of the AGC, I used a novel approach based on detrital zircon grains recovered from a series of eskers that transects the complex. The zircon grains were derived from the subglacial erosion of AGC and surrounding bedrock during the late Pleistocene and are therefore a proxy for the ages of exposed bedrock in the study area. U-Pb dates on ~3600 detrital zircons from three grain-size fractions (50 – 1mm, 12 – 2mm, and ≤ 250μm) from four separate esker transects yielded age distributions that coincide with ages of regionally mapped AGC bedrock, and the adjacent Wopmay Orogen and Slave craton. Based on detrital zircon age distributions and new reconnaissance-scale mapping, I infer that 3.37 Ga granitoids are a volumetrically significant component of the unmapped AGC. Esker zircons >3.7 Ga are present in several esker samples but at low abundance, which suggests that Eoarchean and Hadean rocks are a volumetrically subordinate component of the exposed AGC. However, the data also show that unmapped rocks at least as old as 3.95 Ga are present close to the inferred eastern limit of the AGC. I also outline several practical considerations for future detrital zircon esker-based bedrock exploration projects. Coarser grain size fractions reflect more proximal bed rock units, and thus are more useful for approximating rock unit boundaries, while a sample spacing of 5 to 10 km provides sufficient spatial resolution to observe gradual changes in detrital zircon age spectra across the esker transect.

PREFACE

This thesis represents collaborative works reflected in the co-authorship of Chapters 2 and 3.

Chapter 2 of this thesis is a manuscript prepared for and submitted to the journal *Geology*. Bilak, G.S., Niemetz, K., Reyes, A.V., Reimink, J. R., Chacko, T., Dufrane, S.A., Belosevic, M., Ketchum, J.W.F. *Prospecting for ancient crustal relics in the Acasta Gneiss Complex using detrital zircons in Pleistocene eskers*. J.R.R, T.C., and A.V.R. devised the initial premise; A.V.R., G.S.B., and J.R. collected samples in the field; zircon separation and analyses were performed by G.S.B, K.N, and S.A.D.; G.S.B., J.R.R., T.C., A.V.R., M.B., and J.W.F.K. contributed information on the geological context for the study. The manuscript was written by G.S.B. with contributions from A.V.R, J.R.R, and T.C.

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CHAPTER 1

1.1 INTRODUCTION

Bedrock mapping is a fundamental practice in geology. Survey-level mapping was the foundation for the research and exploration that lead directly to the discovery of the Acasta Gneiss Complex (AGC), one of Canada's most scientifically notable geological resources. Since its discovery the AGC has received increasing attention due to its extreme antiquity (e.g. Bowring et al., 1989; Hoffman and Bowring, 1999; Stern and Bleeker, 1999; Iizuka et al., 2006; Reimink et al., 2014). In fact, the AGC contains the oldest known zircon-bearing rocks on Earth, the 4.02 Ga Idiwhaa Formation, and its study by Reimink et al. (2014; 2016b) was used to infer the composition of early Earth-forming magmas and propose a possible emplacement model for early terrestrial crust. While study of the AGC has yielded significant insight into early crustal dynamics, it remains largely under-studied due to several limiting factors. The AGC is located in the remote northern regions of the Northwest Territories devoid of infrastructure, such as roads, and thus the AGC is only accessible by aircraft. Mapping is hindered by dense vegetation or thick lichen cover on most outcrop surfaces. Finally, the AGC is a highly deformed gneissic terrane with many convolute layers at outcrop scale requiring meticulous description, detailed sampling, and extensive geochemical and geochronological analyses. In this thesis, I combine U-Pb detrital zircon geochronology with prospecting techniques targeting Quaternary glacial sediments to broad spatial patterns of bedrock composition in the under-mapped regions of the AGC.

1.2 DRIFT PROSPECTING USING ESKER SEDIMENTS

Drift prospecting pertains to the application of glacially derived sediments for mineral, ore, and base and precious metal exploration. While already an established source of kimberlite indicator minerals with traceable dispersal trains eg. (Lee, 1968; Krajick, 2001), the application of esker sediments for bedrock exploration and early reconnaissance mapping is not yet appreciated. Eskers are large, meter-scale, sinuous ridges of stratified glaciofluvial sand and gravel deposited in ice walled channels eroded into the base of a glacier or ice sheet (Banerjee and McDonald, 1975). Prior to deposition esker sediments are subject to entrainment and transportation from the original source material as englacial basal sediment within the ice sheet, and glaciofluvial detritus in melt water channels (Shilts et al., 1976; Alley et al., 1997). Constraining the transport distance from signal to source is therefore the primary concern when using esker sediments in both bedrock and mineral exploration. Previous studies by Hellaakoski (1931), Lee (1965), Gillberg (1968), Pertunnen (1989), Bolduc (1992), and Levasseur and Prichonnet (1995) – and summarized in Cummings et al. (2011) – suggest that esker sediment transport distances typically range from 0 – 40 km down-ice of the initial bedrock source. The relatively local derivation and deposition of esker sediments therefore make them a suitable proxy for proximal bedrock at the surface in the up-ice direction.

1.3 DETRITAL ZIRCON U-Pb GEOCHRONOLGY

Due to its high closure temperature to lead diffusion, trace amounts of uranium and thorium, negligible amounts of initial common lead, resistance to chemical and mechanical

abrasion, and recalcitrant nature, zircon is a robust and very popular target for geochronological analysis. Countless researchers have used detrital zircon to determine the emplacement ages of igneous rock or provenance of sedimentary units (e.g. Barr et al., 2003; Decelles et al., 2007). More recently Yi et al. (2014) used detrital zircon grains recovered from glacial meltwater channels in Greenland to infer the extent of Archean rock units underneath the Greenland ice sheet. This was done by comparing detrital zircon U-Pb age data with the known rock ages along the ice margin and information regarding the erosive extent of the glaciofluvial system up-ice. A similar approach is applied in this thesis, where detrital zircon grains recovered from eskers will be used in conjunction with limited bedrock data to constrain the transport distance of the sediments, and estimate the relative proportions of bedrock along the esker transect.

All zircon analyses for this study were done using the Thermo Scientific iCap Quadrupole LA-ICP-MS (laser ablation inductively coupled plasma mass spectrometry) at the University of Alberta Canadian Centre for Isotopic Microanalysis. Prior to laser ablation, backscatter electron and cathodoluminescence zircon images were taken using a Ziess Evo LS15 EP-SEM to visualize internal zoning and identify suitable regions for analysis. All ages in this thesis are reported using the $^{207}Pb/^{206}Pb$ ratio and common lead corrected when necessary using the Andersen (2002) method. Information regarding operating conditions for the LA-ICP-MS, error propagation, and secondary standards used during analyses are reported in methods A1 and table A1.

1.4 THESIS OBJECTIVES AND OUTLINE

This thesis aims to use detrital zircon geochronology in conjunction with esker prospecting techniques to infer the composition of bedrock in currently under-mapped regions of the AGC. The unique approach offered in this thesis allows a very large and challenging map area be assessed for initial areas of interest and relative proportions of bedrock estimated with comparative ease. It is important to take the zircon fertility of individual rock units into consideration for this approach; as more felsic units typically contain higher zircon counts, while mafic units are very zircon poor, and thus under-represented in the detrital record. Additionally, differences in erodibility may also introduce a bias towards more easily weathered or highly fractured rock units.

Chapter two of this thesis is a paper titled *Prospecting for ancient crustal relics in the Acasta Gneiss Complex using detrital zircons in Pleistocene eskers*. This chapter focuses on a single esker transect collected across the southern extent of the AGC. Detrital zircon grains from two size fractions (50 – 1mm and ≤ 250µm) were U-Pb dated using LA-ICP-MS and age data visualised using kernel density estimation (KDE). The three main objectives of this chapter are to assess the relationship between grain size and transport distance, infer the composition of the bedrock along the transect, and identify prospective areas of particularly old rocks for future mapping projects.

Chapter three of this thesis is a paper titled *Bedrock exploration and reconnaissance using detrital zircon recovered from esker systems in the Acasta Gneiss Complex.* This chapter uses LA-ICP-MS detrital zircon age data from samples collected across four separate esker

transects to establish a series of guidelines for future exploration work in similar regions. Grain size and its relationship to transport distance is further analyzed along with sample spacing and the detection of geochronologically distinct units as the esker transect crosses mapped bedrock boundaries.

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Chapter 2. Prospecting for ancient crustal relics in the Acasta Gneiss Complex using detrital zircons in Pleistocene eskers

2.1 INTRODUCTION

The processes responsible for the formation of Earth's earliest continental crust during the late Hadean and early Archean Eons (~3.5–4.0 Ga) are still hotly debated. In part, the difficulty in unraveling Earth's earliest history is due to a lack of physically preserved rock samples from this period, with less than a handful of bedrock terranes known to contain rocks >3.7 Ga. One of the few existing relics of ancient crust is the Acasta Gneiss Complex (AGC), an area of basement gneisses exposed along the western edge of the Slave craton in Canada's Northwest Territories (St.Onge et al., 1991; Fig. 2.1A). The AGC comprises rocks of diverse ages that are thought to have formed during discrete pulses of magmatic activity between ~2.9 and 3.8 Ga (e.g., Bowring et al., 1989; Iizuka et al., 2007; Reimink et al., 2016a). The AGC also includes rare rocks in isolated outcrops >3.9 Ga and as old as 4.02 Ga (Bowring and Williams, 1999; Iizuka et al., 2006; Reimink et al., 2014, 2016b; Stern and Bleeker, 1998), along with xenocrystic zircons up to 4.2 Ga (Iizuka et al., 2006). As such, the AGC is a critical region for evaluating crust-formation processes over a broad swath of early Earth history (e.g., Reimink et al., 2019).

Despite its geological significance, the AGC as a whole is largely unexplored. Of the ~2400 km^2 area identified as AGC basement gneisses (St. Onge et al., 1991; Stubley, 2005), only ~50 km^2 have been mapped in detail (e.g., Iizuka et al., 2007; Belosevic et al., 2017) due to the remote location, extensive lichen cover, and inherent complexity of unravelling the history of ancient gneiss terranes. In particular, the true extent of ancient

rocks and the relative abundances of rocks of different ages across the broader AGC are essentially unknown.

Here we offer a unique approach to the characterization of this challenging field area. We U-Pb-dated detrital zircons from a late Pleistocene esker system that transects the regional strike of bedrock units in the AGC (Fig. 2.1A and B). The esker sediments are derived from subglacially eroded Archean and Proterozoic bedrock sourced east (i.e. up-ice) of a given sample site. We compare prominent peaks in the age distribution of esker detrital zircons to the geological framework for the AGC derived from regional-scale maps and new basement-sample zircon U-Pb data. Our results highlight the utility of this approach for estimating the regional abundance of distinct units in this complex gneiss terrane and identifying the presence of previously unmapped early-Archean crustal rocks.

2.2 GEOLOGICAL SETTING

The AGC is a small remnant of highly deformed late Hadean to Mesoarchean gneisses, granitoids, and mafic rocks along the western edge of the Slave craton in northern Canada (Hoffman, 1988; Bowring and Williams, 1999). Detailed mapping and geochronology near the initial "Discovery Site" on the Acasta River (Fig. 2.1A) identified six major granitoid magmatic events at 4.02, 3.96, 3.75, 3.55-3.60, 3.37, and 2.94 Ga (e.g., Iizuka et al., 2006; Reimink et al., 2016b). Directly east of the AGC lies a large body of 2.58–2.68 Ga granitoids emplaced within > 2.8 Ga gneisses and granitoids (Fig. 2.1A; Bleeker, 2002). We performed several mapping transects across the general strike of foliation in the AGC in summer 2013. The results of this mapping (Fig. 2.1A) and U-Pb geochronology (J.

Reimink, J. Ketchum, T. Chacko, unpublished data) are summarized as follows: 1) the easternmost portion of the mapped area has a NE-SW trending belt of gneisses that are banded at the decimeter scale. Outcrops in this relatively lower strain zone contain mafic, intermediate, and felsic rocks. U-Pb ages within this package match those reported from the central "Discovery Site" where intermediate-felsic gneisses have been dated to 3.96–3.4 Ga, with a large fraction of ~3.6 Ga samples (e.g. Bowring and Williams, 1999; Iizuka et al., 2007). The central region contains the same lithologies as the eastern zone, but these gneisses are highly deformed and layered at the cm scale. The western portion of the mapped area has a distinctly different character than the other two: mafic gneisses become a minor component, and there are km-scale exposures of 3.37 Ga foliated granitoids. Note that >3.4 Ga gneisses still exist in the western region, but ~3.37 Ga units are much more prevalent.

Along its northern, southern, and western margins, the AGC borders rocks of the Hepburn Metamorphic-Plutonic Internal Zone (HMIZ) of the ~ 1.85-1.90 Ga Wopmay Orogen (Fig. 2.1A; St Onge and King, 1987; Lalonde, 1989). These rocks, which are substantially younger than the AGC, include the Akaitcho Group, Odjick Formation, and the Hepburn and Bishop intrusive suites (Lalonde, 1989; St. Onge et al., 1991). Detrital zircons in Akaitcho Group sandstones have two distinct age populations of 2.57 and 1.89 Ga (Hoffman and Bowring, 1984; Hoffman et al., 2011). Additional contributions of ~1.9 Ga zircon come from rhyolites associated with the collision of the Hottah terrane (Hoffman and Bowring, 1984), along with 1.885 and 1.855 Ga zircon populations from, respectively, the Hepburn and Bishop intrusive suites (Bowring, 1984; Hoffman and Bowring, 1984).

The latest deglaciation of the Acasta study region began ~10,500 ^{14}C years ago (Dyke, 2004). The most prominent glacial landforms are a series of generally west-trending eskers (Fig. 2.1B) with continuous segments up to tens of km long. Esker sediments are an established target for mineral exploration (e.g., Cummings et al., 2011) because they are ultimately sourced from subglacial erosion of bedrock up-ice of a sampling site, through entrainment of subglacial sediment or debris-rich basal ice and glaciofluvial transport in subglacial channels. Eskers on the AGC are generally sandy to cobble-gravel in grain size, with rare boulders. This range of grain sizes implies variable glaciofluvial transport distance, which can complicate interpretation of esker sediment provenance.

2.3 METHODS

We collected six bulk sediment samples along an esker that cuts across several distinct bedrock units (Fig. 2.1A). Sampling sites were on local topographic highs to minimize potential for sediment wash during deglaciation. Samples were sieved into 50-1 mm and <250 μm grain size fractions, respectively termed the coarse and fine fractions, with subsequent crushing and milling of the coarse fraction. Zircons were then extracted from the bulk sediment using standard Wilfley Table, Frantz isodynamic magnetic separator, and heavy liquid techniques, additional details are provided in methods A2.

At least 200 zircons from each fraction were analyzed for their U-Pb isotope ratios using a Thermo Scientific iCAP-Q quadrupole ICP-MS at the University of Alberta. The final $^{207}Pb/^{206}Pb$ dates were filtered to ±5% discordance (Fig. 2.2), and the modal distributions of zircon U-Pb dates were visualized by kernel density estimation (KDE) using the

IsoplotR library (R Core Team, 2013; Vermeesch, 2018). Proportions of zircon U-Pb dates in the text and figures are relative to the number of analyzed grains that satisfy the discordance filter.

2.4 RESULTS

The distribution of U-Pb dates (Table B1) from esker sediment detrital zircons yielded multiple peaks, many of which occur in all samples (Fig. 2.2). Prominent peaks of varying amplitude in the 2.58–2.80 Ga interval are present in all samples, though the peaks are muted in AVR16-13 and are only present in the fine fraction. A ~3.37 Ga peak is also repeatedly observed throughout the sample suite, and is the largest and most prominent peak in samples AVR16-16, AVR16-14, and AVR16-13. Other peaks only present in isolated samples include ~3.75 Ga (AVR16-11), ~3.5-3.6 Ga (AVR16-12, -13, -14, and -16) and ~1.9 Ga (AVR16-12).

Similarities in the U-Pb-age spectra between the coarse and fine fractions from each sample were assessed using the program DZ Stats, which compares shared modes, modal abundances, and sub-modal intervals (Saylor and Sundell, 2016). A value of 0 indicates no similarity between samples, while a value of 1 indicates a perfect match. All samples yielded high similarity values (Table 2.1; minimum 0.846, AVR16-14; maximum 0.906, AVR16-12), suggesting that zircons from both size fractions were sourced from the same bedrock material.

Although the modal distributions and abundances of zircon U-Pb dates are similar in the two size fractions, there are subtle differences. A distinct, yet relatively low amplitude, peak at ~1.9 Ga is present in both size fractions of AVR16-12, but is more prominent in the coarse fraction (Fig. 2.2F). This is the only notable appearance of ~1.9 Ga zircons in the esker transect, and it occurs in the westernmost sample that is located outside the mapped AGC and within the Wopmay Orogen.

2.5 DISCUSSION

2.5.1 Signal Strength and Proximity to Source

We compared the modal abundance of zircon dates at each esker sampling site to ages of proximal bedrock units in order to assess the effect of transport distance on the U-Pb age spectra. Samples AVR16-13 and AVR16-12 are located west of the AGC (Fig. 2.1A) within the foreland of the Wopmay Orogen, where ~1.9 Ga zircons from the HMIZ are common (Lalonde, 1989). Though esker sample AVR16-13 was collected ~1 km west (down-ice) of the AGC, in the region mapped as Akaitcho Group by St. Onge et al. (1991), it is virtually devoid of ~1.9 and ~2.5 Ga grains, and is instead dominated by an AGC signature with a well constrained peak at ~3.37 Ga in both size fractions (Fig. 2.2E; Fig. 2.3). In contrast, sample AVR16-12, collected further west into the HMIZ and ~7 km down-ice from the AGC, has peaks in the age distribution at ~2.6 Ga (n=23/73) and ~1.9 Ga (n=11/73) in the coarse fraction, and a prominent peak at ~2.6 Ga (n=24/91) with a small cluster of ~1.9 Ga grains (n=4) in the fine fraction (Fig 2.2F). These detrital zircon ages are similar to zircon U-Pb dates from the Akaitcho Group (2.57, 1.89 Ga), Hepburn Intrusive suite (1.885 Ga), and Bishop Intrusive suite (1.855 Ga) (Hoffman et al., 2011;

Hoffman and Bowring, 1984; Bowring, 1984). The spatial relation between the detrital zircon data and geochronology from mapped bedrock units thus strongly suggests the esker sediments are primarily derived from local sources ranging from ~5 km up to several tens of kilometers in the up-ice direction.

2.5.2 Ubiquitous Slave Craton 2.58–2.80 Ga Signature

The peaks in the 2.58–2.80 Ga interval (Fig. 2.2), which are present in all samples but less prominent in AVR16-13 and -16, are characteristic of the majority of exposed crust in the Slave craton. The ubiquity of this Slave craton signature could be due to extensive outcrops of these rocks some distance up-ice to the east. An alternative and more likely explanation for the prominent peaks in this age range is that Neoarchean rocks are intermixed with older AGC rocks more proximal to the sample sites in the up-flow direction. There is a substantial increase in the amplitude of the broad peaks spanning ~2.5-2.8 Ga from the eastern-to-central sampling sites (Fig. 2.1A, 2.2), implying that the source of these grains lies somewhere between the two sample locations. Indeed, we noted a large granitoid body similar in appearance to other Neoarchean granites ~5 km south of AVR16-16 during aerial reconnaissance in 2013 (Fig. 2.1A), which could plausibly explain the strong Slave craton signature in ages from samples AVR16-11 and -15. This signature attenuates progressively further west (AVR16-14 and -13) and only reappears more prominently in the westernmost sample, where the differentiation of Akaitcho Group and Slave craton rocks is complicated by temporal overlap at ~2.57-2.58 Ga.

2.5.3 Detrital Zircon Signatures of Unmapped Paleo- and Eoarchean Rocks

The AGC esker sediments represent an integrated sample of bedrock that can be used to infer the presence of unmapped units and estimate relative proportions of exposed rocks in complex gneiss terranes such as the AGC. Well defined peaks in age distributions at ~3.37 Ga are present in all esker samples, and are dominant in AVR16-16, -14, and -13. The likely source of this signature is recently mapped and dated 3.37 Ga foliated granodiorite bodies (Reimink et al., 2016a; Belosevic et al., 2017), which our mapping transects suggest are regionally extensive in the west-central AGC west of Acasta River (Fig. 2.1A). The prominence of the detrital zircon 3.37 Ga signature (Fig. 2.2) suggests that the recently-identified 3.37 Ga foliated granodiorite is an important component of the unmapped AGC (Reimink et al., 2016a; Belosevic et al., 2017), and that this interval was likely a time of major regional tectono-magmatic activity.

Additionally, detrital zircons >3.7 Ga are present in most samples, but in far lower proportions than younger zircons (Fig. 2.3). The largest peak of >3.7 Ga zircons is present in the coarse fraction of AVR16-11 (Fig. 2.2C, 2.3C), suggesting the outcrop-scale presence of unmapped >3.7 Ga rocks to the east. Furthermore, the oldest grain of the study, 3953 ± 67 Ma, was recovered from the fine fraction of AVR 16 -11. New reconnaissance-scale mapping in 2013 (Fig. 2.1A) confirms the presence of a NNE-trending belt of ~3.75 Ga mafic and felsic gneisses east of the Acasta River "Discovery" site. However, the relatively low modal abundance of ~3.75 Ga and older esker detrital zircons suggests that zircon-bearing rocks of this age are a volumetrically subordinate component of the study area.

Though Eoarchean zircons are not common in the esker detrital zircon population, we also note the presence of a 3945 ± 37 Ma zircon in the coarse fraction of AVR16-16. This sampling site is ~15 km east (up-ice) of the Acasta River "Discovery" locality, thus providing a tantalizing hint for the presence of earliest Eoarchean or possibly Hadean rocks in the unexplored eastern region of the AGC.

2.6 CONCLUSION

We demonstrate that detrital zircons from a Pleistocene esker transect provide an effective and efficient reconnaissance tool for estimating the extent and proportions of ancient rocks in complex gneiss terranes such as the AGC. Ages and modal abundances within the detrital zircon populations, together with new bedrock mapping, indicate that 3.37 Ga crustal rocks are a volumetrically significant component of the unmapped AGC. Furthermore, the presence of >3.7 Ga zircons in the easternmost samples point to the presence of undiscovered outcrops of Eoarchean and possibly Hadean rocks, and emphasize the need for further exploration of a region that is crucial to understanding early Earth evolution. Similar sampling and U-Pb dating strategies in other areas where glacial deposits mantle unmapped early Archean rocks (e.g. Yi et al., 2014), coupled with other isotopic and geochemical tracers, may contribute to new understanding of crustal settings and tectonics during Earth's earliest history.

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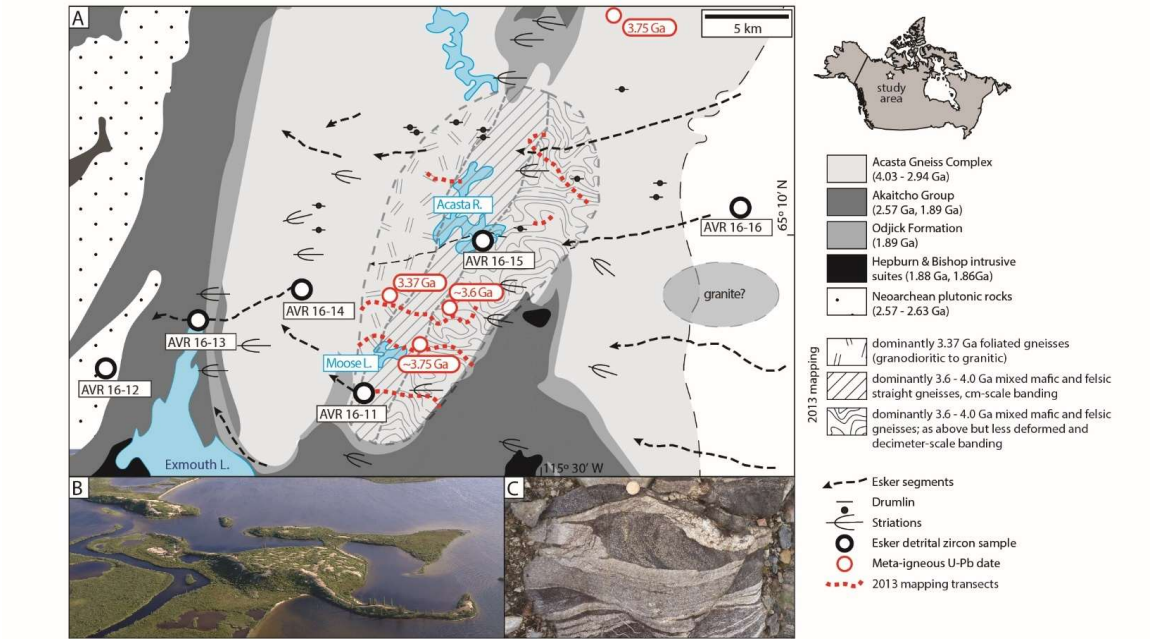

Figure 2.1. A: Map of the AGC study area with generalized bedrock (St.Onge et al., 1991; Stubley, 2005) and surficial (St.Onge, 1988) geology, esker and bedrock sampling sites, and locations mentioned in the text (Hoffman and Grotzinger, 1985; Hoffman et al., 2011; Jackson et al., 2013). Dashed line at the eastern edge of AGC polygon denotes the limit of bedrock mapping by St. Onge et al. (1991). B: Aerial photo showing a typical esker ridge in the AGC. C. Example of the complex, multicomponent nature of typical AGC gneisses. Coin for scale is 2.5 cm diameter.

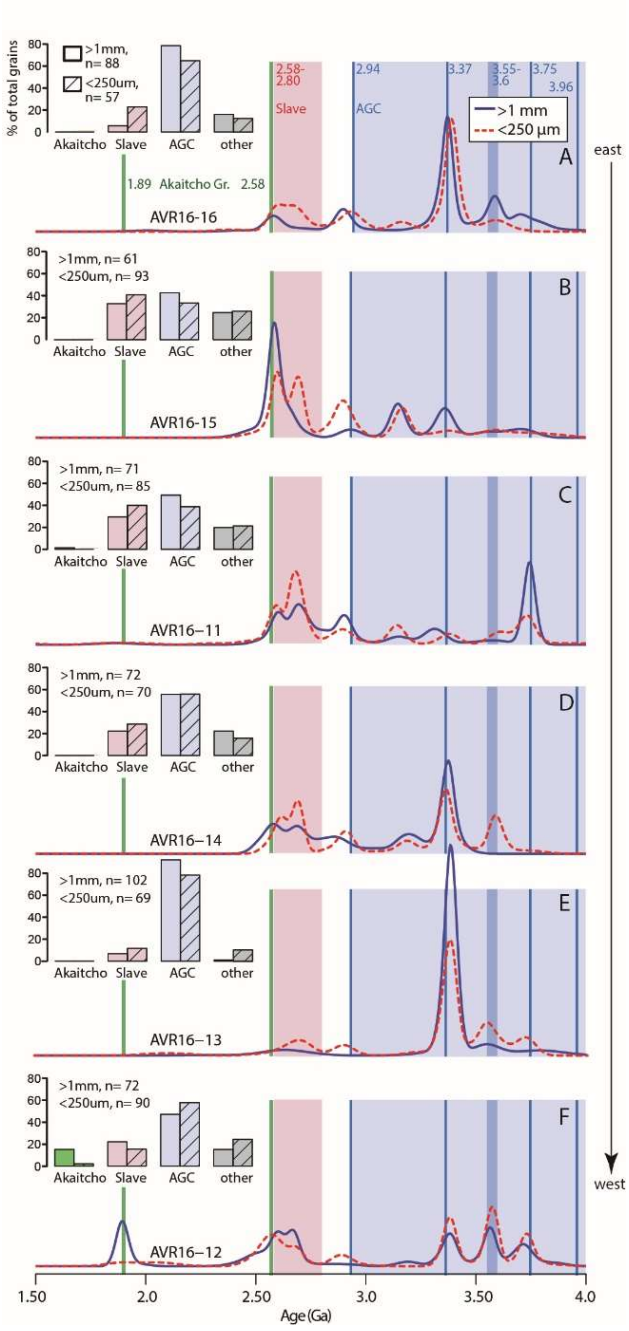

Figure 2.2. Kernel density estimates (KDE) of $^{207}Pb/^{206}Pb$ ages from the 2016 esker transect that have passed the ±5% discordance filter. The data are arranged from east/up-ice (top) to west/down-ice (bottom). Vertical bars denote age ranges of mapped AGC, Akaitcho Group, and Slave craton source rocks. Inset bar plots show proportion of dates attributed to each source. Data for the coarse and fine fraction are marked by solid symbols and dashed/hatched, respectively.

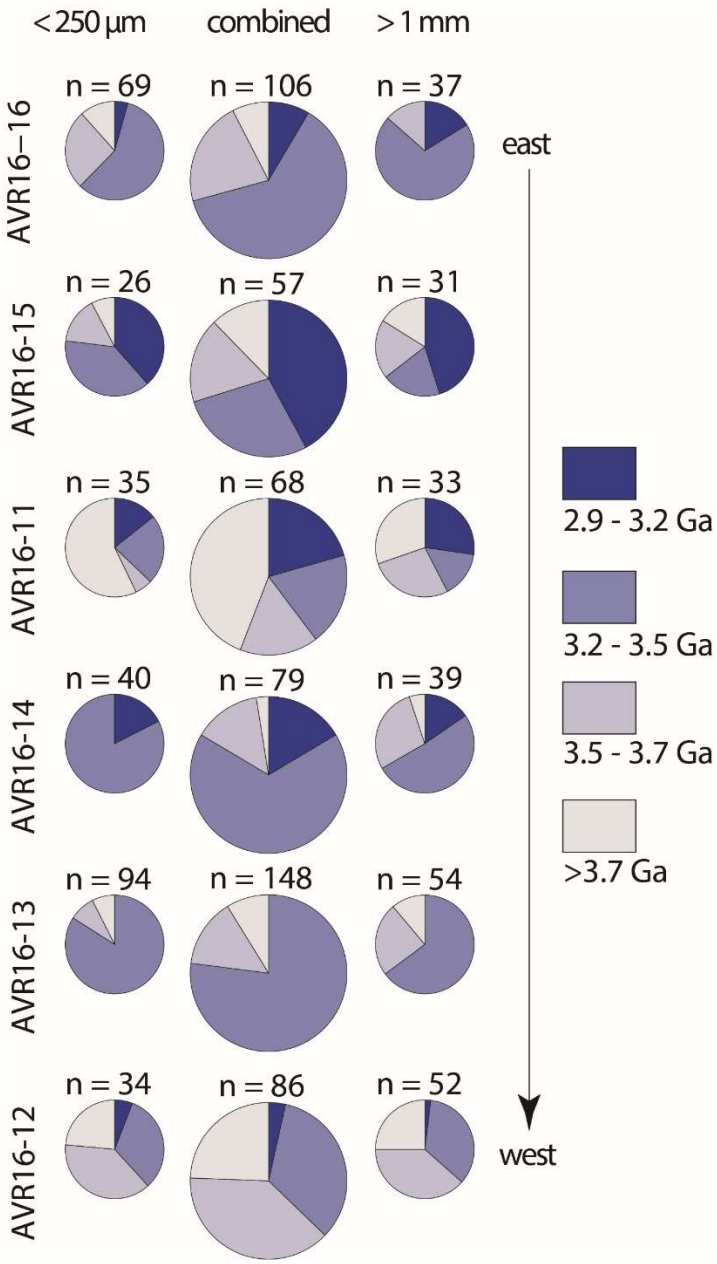

Figure 2.3. Pie charts showing the distribution of $^{207}Pb/^{206}Pb$ ages attributed solely to AGC source rocks, for both separate and combined size fractions, at each sample site. Sites are arranged from east/up-ice (top) to west/down-ice (bottom). Age groups were chosen to differentiate between the major granitoid magmatic events plotted in Fig. 2.2.

Table 2.1. Dz Stats results (Saylor and Sundell, 2016) comparing the fine and coarse fraction AVR data sets.

	AVR 16-11	AVR 16-12	AVR 16-13	AVR 16-14	AVR 16-15	AVR 16-16
Cross correlation coefficient	0.510	0.583	0.855	0.536	0.548	0.634
Likeness	0.671	0.724	0.626	0.661	0.648	0.639
Similarity	0.877	0.906	0.851	0.846	0.879	0.868
K-S p value	0.098	0.299	0.145	0.107	0.058	0.043
K-S test k statistic	0.193	0.15	0.174	0.197	0.213	0.228
Kuiper Test p value	0.285	0.648	0.001	0.039	0.005	0.077
Kuiper Test v statistic	0.216	0.172	0.342	0.289	0.334	0.273

Chapter 3. Bedrock exploration and reconnaissance using detrital zircon recovered from esker systems in the Acasta Gneiss Complex

3.1 INTRODUCTION

Esker based exploration is as an effective method of mineral exploration in previously glaciated terrains (Cummings et al., 2011) and is becoming increasingly popular since first established by Lee (1965) to trace gold dispersal trains in the Munro esker. More recently esker sampling for detrital kimberlite indicator minerals has led to the discovery of the Lac de Gras kimberlite field, Northwest Territories (NWT), home to the Ekati Diamond (Krajick, 2001). While esker sediments are a proven source of kimberlite indicator minerals with traceable dispersal trains, their potential application to survey-level assessment of under-mapped bedrock is less well appreciated. The aim of this study is to assess the viability of combining esker-based exploration techniques with U-Pb geochronology of detrital zircon grains recovered from the Acasta Gneiss Complex (AGC), NWT to gain insight into the proportions of different aged bedrock units in unmapped regions of the complex.

The AGC is one of only a few regions worldwide known to contain rocks in excess of 3.7 Ga (Hartlaub et al., 2006), and the only known region with U-Pb dated Hadean rocks (Reimink et al., 2014). Hadean zircons from the AGC have been geochemically analyzed by Reimink et al. (2014, 2016b) to better constrain the composition of early crust forming magmas and develop a model for early terrestrial crust emplacement. While the AGC is exceedingly significant for Precambrian earth science, it remains heavily under-mapped; only ~2% of the 2400 km^2 area has been mapped at the outcrop scale (Fig. 3.1; St. Onge et

al., 1991; Hoffman and Williams, 1999; Stubley, 2005; Iizuka et al., 2007; Reimink et al., 2016a; Belosevic et al., 2017). The paucity of mapping is the result of several inhibiting factors: the AGC is located in the remote northern region of the NWT only accessible by aircraft from Yellowknife, NT, many of the outcrops are typically lichen covered; and the AGC itself is a extensively deformed gneissic terrane where discerning between units at the outcrop scale is complex. With 98% of the total bedrock still unmapped at outcrop scale, there is a possibility more Hadean outcrops remain undiscovered.

Here we describe how esker sampling for detrital zircons can help to address some of these challenges. We sampled a series of ~east-west oriented late Pleistocene eskers (Fig. 3.2) that transect the AGC, and which are broadly perpendicular to the mapped terrane boundaries in the region. Detrital zircon grains were extracted from the sediment and U-Pb dated using LA-ICP-MS to discern the relative proportions of the contributing bedrock in the up-ice direction using the existing geochronological framework. Sampling esker sediment is particularly useful where outcrop exposure is intermittent, for it serves as an indicator of the nature of the bedrock ~ 5 to 40 km in the up-ice direction (Cummings et al., 2011). Similar techniques were used by Yi et al. (2014) to infer the presence of Archean gneisses beneath the Greenland ice sheet using detrital zircons generated by glacial meltwater channels. This study applies similar techniques to detrital zircon grains from esker sediment to infer the composition of the AGC along the esker transects.

When assessing the provenance of esker sediments there are two primary factors to be considered: 1) How far did the sediments travel within the ice sheet before glacio-fluvial

entrainment, and 2) How far did the sediments travel once entrained by the glacio-fluvial system (Shilts, 1984). Esker sediments are a secondary sediment, derived primarily from glacial till, which in turn is derived from the underlying bedrock through glacial erosion and entrainment, and thus has an initial transport distance (Gillberg, 1968; Shilts, 1976). The till deposits mapped by St. Onge et al. (1988) are a mix of both 'till blankets' described as lodgment or basal melt-out till, and 'till veneers' that mimic the form of the underlying bedrock. While it is difficult to ascertain the origin of the till in the region without directly studying it, the relatively flat topography of the region coupled with the descriptions by St. Onge et al. (1988) imply relatively low transport distances in the region. Clark (1987) summarized the results from several till dispersal train studies from various landscapes and substrates (Gillberg, 1965; Saarnisto and Taipale, 1984; Shakesby, 1979; Holmes, 1952; Clark and Karrow, 1983; Kaszycki and Shilts, 1979; and Dyke, 1984), and found total transport distances ranging from 5 to 500 km. The only example of transport distances in excess of 70 km was the Kaszycki and Shilts (1979) study of glacial erratics, which may not reflect the transport distance of finer grained basal tills. Studies pertaining to igneous bedrock by Saarnisto and Taipale (1984) and Shakesby (1979) found till dispersal trains ranged from 13 to > 30 km from their original source which is in the range of what we anticipate in the study region.

The second factor to consider when using esker sediment as an exploratory tool is how far the sediments travel once entrained by the glacio-fluvial system. Sharply crested eskers with steep ridges and limited deltaic deposits like the ones in the study area form in ice walled tunnels, or R-channels, where deposition occurs within the active tunnel (Banerjee

and Macdonald, 1975). Transport distance of sediment within the glacio-fluvial system is then controlled by grain size/density, and competency of the fluvial system. However, these factors are limited to the length of the englacial or subglacial tunnel. For exploration purposes, Cummings et al. (2011) classifies eskers as short conduit eskers with R channels ~ 1 – 5 km in length forming at glacial margins, and long conduit eskers with extensive R channels 100s of km in length in regions where glacial melt water is abundant. A compilation of till and esker dispersal trains in Cummings et al. (2011) found esker dispersal trains extend up to ~80 km down ice of known source rocks, while the bulk of the signal is detected in the 10 – 40 km range (Hellaakoski, 1931; Lee, 1965; Gillberg, 1968; Pertunnen, 1989; Bolduc, 1992; and Levasseur and Prichonnet, 1995). While these data may imply a short conduit model of deposition, Cummings et al. (2011) assert that similar dispersal trains may also occur in long conduit eskers. Regardless of the model, the results indicate the local derivation of esker sediment with transport distances typically < 50 km, making them suitable targets to asses the bedrock geology at a reconnaissance scale.

3.2 GEOLOGICAL BACKGROUND

The AGC is a ~2400 km^2 terrane of Hadean to Mesoarchean gneisses, granitoids and mafic rocks located along the western margin of the Slave Craton, NWT (Hoffman 1988; Bowring and Williams 1999; Stubley 2005). It has received increasing attention since dated by Bowring et al. (1989) due to the antiquity (~3.96 Ga) of some of the initial rocks studied. Detailed bedrock maps of the "discovery site" have since been generated by Bowring and Williams (1999), Iizuka et al. (2007), and most recently Reimink et al. (2016a), in which six geochronologically distinct granitoid units were identified using U-

Pb zircon geochronology. The ages of these units are 2.94, 3.37, 3.55-3.60, 3.75, 3.96 and 4.02 Ga.

The AGC is a tectonic window within the Hepburn Metamorphic-Plutonic Internal Zone of the Wompay Orogen; (Lalonde, 1986) and is bordered along its northern, southern, and western margins by rocks of the Coronation Supergroup, a series of ~ 1.9 Ga rift basin rocks including the Akaitcho Group and Odjick Formation (Hoffman and Williams, 1984; St. Onge et al., 1991). The Akaitcho Group is the most prominent component of the Coronation Supergroup in the region and is composed of clastic and chemical sedimentary rocks, tholeiitic basalt, gabbroic sills and rhyolite extrusives (Hoffman and Williams, 1984; Easton, 1983). U-Pb isotope analyses of zircons from the clastic rocks yielded ages of 1.89 and 2.57 Ga (Hoffman et al., 2011) whereas the rhyolites yielded U-Pb dates of ~ 1.9 Ga. The Odjick Formation is a 1.89 Ga siliciclastic unit that overlies the Akaitcho Group, and comprises a minor portion of the Coronation Supergroup in the region. Additionally, the Coronation Supergroup is intruded by the 1.885 and 1.855 Ga Hepburn and Bishop intrusive suites, respectively (Bowring, 1984; Hoffman and Bowring, 1984). Along its eastern margin the AGC is bordered by a vast expanse of 2.58 – 2.68 granitoids with local regions > 2.8 Ga of the Slave craton (Bleeker, 2002). With the exception of the 2.57 Ga zircons in the Akaitcho Group, which are similar in age to zircons derived from granitoids in the Slave Craton, these three units, the Slave craton, the Coronation Supergroup, and the AGC, are all geochronologically distinct and identifiable in the detrital zircon grains recovered from the esker transects.

3.3 METHODS

3.3.1 Field reconnaissance and sampling

The advantage to using esker sediment for bedrock reconnaissance is the ease with which a relatively large area can be sampled, since esker sediments integrate spatially the sedimentary products of subglacial erosion. In this study, I report the results of four east-west esker transects, 10-, 30-, 30-, and 40-km-long separated from each other in a north-south direction by ~ 5 km. Collectively, these transects span an area of ~900-1000 km^2, and were sampled in three days of field work supported by float-plane transport between sites.

Eskers were identified prior to the field season using stereoscopic air photos obtained from the National Air Photo Library, existing surficial maps by St. Onge et al. (1991) and satellite imagery accessed through Google Earth. Sample locations were then chosen near suitable landing sites spaced ~ 5 – 10 km apart to discern geochronological changes in the bedrock across the transects.

At each target location a local topographic high along the crest of the esker was chosen for sampling to minimize the impact of sediment wash out from previous erosive events. A small pit ranging from 40 – 90 cm in depth was dug into the esker and ~ 10 kg of esker sediment typically ranging from cobbles to very fine sand was sampled. In this chapter, samples with the "AVR" prefix were collected by A. Reyes and J. Reimink in the summer of 2016, while the "GSB" prefix denotes samples collected by G. Bilak, A. Reyes and M. Belosevic in the summer of 2017.

AVR16-16 (65º 11.0’ N, 115º 14.0’ W) was collected east of AGC limits mapped by St Onge et al., (1991) from a prominent and sharp crested esker ~ 25 m above the surrounding tundra. Boulders covered the surface but were rare at depth, where cobbles and pebbles became more common. A pit was dug to ~70 cm in depth, with the top 25 cm appearing winnowed and weathered with minor rootlets. A sample was collected composed largely of cobbles to fine sand (Fig. 3.3).

AVR16-15 (65º 10.0’ N, 115º 33.5’ W) was collected from and island that was the initial ‘discovery site’ described by Bowring et al. (1989) along the Acasta River. The esker is composed of pebbles to fine sand with very minor cobbles, and the crest is ~5-10m above the surrounding topography. A sample of pebbles to fine sand was extracted from the bottom of a ~ 75 cm-deep pit (Fig. 3.4).

AVR16-14 (65º 8.6’ N, 115º 46.7’ W) was collected from an esker in the central AGC, west of the Acasta River. The esker rises ~ 5-10 m above the adjacent lake, and cobbles and boulders were rare at the sample location. A pit ~ 65 cm in depth with surface fines observed in the top 15 cm was excavated and a sample extracted consisting predominantly of pebbles to fine sand (Fig. 3.5).

AVR16-13 (65º 7.5’ N, 115º 55.7’ W) was collected from an esker along the northern extent of Exmouth Lake near the boundary between the AGC and Wopmay Orogen (St. Onge et al., 1991). The esker ridge is ~ 20 m above the nearby lake, and the surface appeared winnowed with common boulders and cobbles. A pit 75 cm in depth was

excavated, which became richer in pebbles and sand after ~ 20 cm, and a sample ranging from cobbles to fine sand extracted.

AVR16-12 (65º 6.2’ N, 116º 2.0’ W) was collected from a broader, more washed out esker ~ 3-4 m above the surrounding area and was located in the Wopmay Orogen ~5 km west of the AGC-Wompay contact. A pit ~ 50 cm in depth was excavated for sampling, with weathering and root growth observable in the top 25 cm. A sample of grain sizes ranging from cobbles to fine sand was collected.

AVR16-11 (65º 5.4’ N, 115º 42.8’ W) was collected from a prominent esker south of the region mapped by Belosevic et al. (2017). A poorly sorted sample of cobbles to fine sand was collected from a pit ~ 40 cm in depth, with apparent weathering in the first 12 cm.

GSB17-B1 (65º 14.5’ N, 115º 15.7’ W) was collected near the eastern limits of the Archean rocks mapped by St. Onge et al. (1991) from a prominent esker ~ 15 m above the nearby lake level. A sample ranging from cobbles to fine sand was extracted from a pit 80 cm deep with weathering observed in the top ~ 20 cm (Fig. 3.6).

The D esker transect was collected from a near continuous esker south of Acasta Lake as a contingency when several sites along the B transect were bypassed due to poor landing conditions. GSB17-D1 (65º 19.9’ N, 115º 27.4’ W) was sampled from the region mapped as members of Coronation Supergroup by St. Onge et al. (1991). The esker itself stood ~ 15 m above the surrounding topography and the surface was composed of grain sizes ranging

from cobbles to sand with occasional boulders. A pit of 85 cm in depth was excavated where a sample ranging from rare cobbles to fine sand was obtained, with no apparent weathering horizon observed (Fig. 3.7).

GSB17-D2 (65º 19.7’ N, 115º 34.2’ W) was collected along an esker segment with similar morphological features described in GSB17-D1, however the sample site is situated on bedrock mapped as Archean by St. Onge. et al. (1991). A pit 70 cm in depth with a weathering horizon observed at ~ 30 cm was excavated, and a sample ranging from cobbles to fine sand was collected.

GSB17-C1 (65º 23.7’ N, 115º 27.8’ W) was collected ~ 5 km north of GSB 17-D1, also from the region mapped as Coronation Supergroup. The esker stood ~ 10 m above the nearby lake and appeared more heavily eroded than previous sample sites. The sediment was loosely consolidated and predominantly pebbles to sand sized grains. A sample ranging from pebbles to fine sand was collected from a pit ~90 cm deep with apparent weathering identified up to ~ 60 cm total depth.

GSB17-C2 (65º 24.1’ N, 115º 35.5’ W) was collected from a sharp crested esker ~20 m above the adjacent lake from a region mapped as Archean (St. Onge et al., 1991). The surface of the esker was covered with frequent cobbles and boulders and proved difficult to sample. A pit 65 cm in depth with weathering observed at ~50 cm in depth was excavated and a sample ranging from cobbles to fine sand was extracted.

GSB17-C5 (65º 27.6’ N, 116º 11.9’ W) is the most westerly sample of the study and is located ~ 25 km west of the AGC within the Wopmay Orogen (St. Onge et al., 1991). The esker stood ~ 5 m above the surface of nearby Bishop lake, was heavily vegetated, and composed predominantly of sand sized grains with minimal gravel. A sample of predominantly small pebbles to very fine sand was obtained from a pit 90 cm in depth with weathering observed in the upper 30 cm.

3.3.2 Zircon separation and analysis

When analyzing esker sediments an appropriate grain size fraction for the desired target mineral should be determined. A comparison of coarse (50 -1mm) and fine (< 250 μm) grain size fractions from the AVR data set by Bilak et al. (in review) found abundant zircon grains in both fractions, with minor differences in age distribution expressed as more proximal signals in the coarse fraction. Based upon these findings a grain size of 12-2 mm was chosen for analysis from the GSB transects to minimize the nugget effect of larger clasts while reducing the number of far traveled fine grains.

All zircon separation and analyses for this study were conducted using University of Alberta facilities including the Canadian Centre for Isotopic Microanalysis. Each bulk sample was separated into discrete grain size fractions with a series of sieves and Wilfley shaker table. Grain size fractions >250 μm chosen for analysis (50 – 1 mm, and 12 – 2 mm) were then milled to < 250 μm in order to disaggregate zircon from the bulk rock. AVR samples underwent density and magnetic susceptibly separation using standard Wilfley table techniques, Frantz isodynamic magnetic separation, and methylene iodide

heavy liquid separation prior to zircon picking, while GSB samples were separated using only modified Wilfley table techniques prior to picking. Additional details regarding zircon separation are available in methods A2.

At least 200 zircon grains were picked per sample, per grain size fraction, resulting in a total of ~3600 individual grains analyzed. After the zircons were picked and mounted in epoxy, they were imaged under cathodoluminescence using a Zeiss EVO LS15 EP-SEM to identify internal igneous cores for analyses (Fig. 3.8). Individual grains were then dated with the Thermo Scientific iCap Quadrupole LA-ICP-MS. U-Pb ages from the zircons are reported as $^{207}Pb/^{206}Pb$ ages and common Pb corrected using the Andersen method and criteria outlined in Appendix A (Anderson, 2002; Table B1). These $^{207}Pb/^{206}Pb$ ages were filtered to 5, 10, and 20% discordance, and age distributions visualized and compared using KDEs (kernel density estimates) and histograms generated using Isoplot (R Core Team, 2013) and Isoplot R (Vermeesh, 2018) (Fig. 3.9, 3.10, 3.11). The software DZstats (Saylor and Sundell, 2016) was used to statistically compare the zircon age distributions within individual samples at 5 and 20 % discordance (Table 3.1), and between different samples from the AVR and GSB transects at 5% discordance (Table 3.2). Cross-correlation (C-C), likeness and similarity are assessments of shared peaks, and peak shape and magnitude between samples, where 1 indicates a perfect match between distributions and 0 a complete mismatch. The Kolmogorov-Smirnov and Kuiper assess both test the null hypotheses that the two samples are derived from parent populations with the same age distribution where a p value of ≤ 0.05 indicates a $\geq 95\%$ chance the samples are not derived from the same population (Saylor and Sundell, 2016).

3.4 RESULTS

The U-Pb isotope data for zircon are presented in full in Table B1 and discordance filter grain counts displayed in Table 3.3. A high percentage of zircon grains from each sample, typically > 50%, were > 20% discordant, likely caused by large amounts of uranium damage related to the antiquity of the grains. Zircon age distributions are presented as KDEs in Figure 3.12. Below, the U-Pb results are reported in an east to west down-ice sequence for each transect.

Within the AVR16-16 fine fraction there is a large and narrowly defined peak near 3.37 Ga, a lower amplitude and broader peak in the 2.58 – 2.80 Ga interval and a subdued peak at ~2.94 Ga. From the coarse fraction a well-defined peak occurs at ~3.37 Ga, and lower amplitude peaks at 3.55-3.60, ~2.90 Ga, and in the 2.58-2.80 Ga interval (Fig. 3.12A).

Analyses of the fine fraction from AVR16-15 yielded a prominent bimodal peak in the 2.58 – 2.80 Ga interval at ~2.6 Ga and ~2.7 Ga, while two lower amplitude peaks occur at 2.90 and ~3.15 Ga. Within the coarse fraction there is a high amplitude peak in the KDE at ~ 2.58 Ga along with two lower amplitude peaks at ~3.15 Ga and 3.37 Ga Fig 12B (Fig. 3.12B).

There is a wide bi-modal peak in both the fine and coarse fractions of AVR16-11 in the 2.58 – 2.80 Ga interval, again near ~2.6 Ga and ~2.7 Ga. The remainder of the grains from the fine fraction form minor peaks at ~2.9 Ga and several scattered across the AGC range,

while the coarse fraction contains the highest amplitude peak of the sample set at ~3.75 Ga (Fig. 3.12C).

The highest amplitude peak in the both size fractions of AVR16-14 occurs at 3.37 Ga, while a broader and lower amplitude bimodal peak occurs ~2.6 Ga and ~2.7 Ga in the fine fraction, along with a low amplitude peak in the 3.55- 3.60 Ga range. The remainder of the coarse zircon data are more broadly distributed from 2.58 - 2.90 Ga (Fig. 3.12D).

AVR16-13 is defined by one significant peak shifted slightly older than 3.37 Ga in both size fractions. Minor peaks in the fine fraction occur at roughly 2.7, 3.5 and 3.7 Ga (Fig. 3.12E).

The fine fraction of AVR16-12 contains three peaks of similar magnitude at ~3.37 Ga, 3.55-3.60 Ga and ~3.75 Ga, as well as one broader peak in the 2.58-2.80 interval with the same bimodal trend described in AVR16-15, AVR16-14, and AVR16-11. Within the coarse fraction five peaks of similar magnitude occur at: 1.90 Ga, a bimodal peak in the 2.58-2.8 Ga interval as described above, ~3.37 Ga, 3.55 – 3.6 Ga, and ~3.7 Ga (Fig. 3.12F)

GSB17-B1 contains one very high amplitude peak near 2.6 Ga, with very minor peaks at ~2.90 Ga and ~3.15 Ga (Fig. 3.12G).

The highest amplitude peak in GSB17-C1 occurs between 3.70 and 3.75 Ga with a secondary broad peak in the 2.58 – 2.80 Ga interval and minor peaks at ~ 2.0 and 2.9 Ga,

and spread across the ACG age range (Fig. 3.12H). A large bi-modal peak in GSB17-C2 similar in age and shape to the one described in the AVR data set can be observed in the 2.58 – 2.80 Ga interval along with several low amplitude peaks across the age range of the AGC and a very low amplitude peak at ~2.0 Ga (Fig. 3.12I). GSB17-C5 contains one high amplitude peak near 2.6 Ga with two secondary peaks of much lower amplitude at ~3.15 Ga and ~3.37 Ga and a very low amplitude peak again at ~2.0 Ga (Fig. 3.12J).

There is one very high amplitude peak in GSB17-D1 at ~2.6 Ga with two much smaller peaks at ~2.9 Ga and a broader peak spanning 3.5-3.7 Ga (Fig. 3.12K). Like GSB17-D1 there is one large peak at ~2.6 Ga in GSB17-D2, along with lower amplitude peaks at ~ 2.9 Ga, ~3.15 Ga, and another low amplitude, broad peak from ~3.5-3.7 Ga similar to the one in GSB17-D1 (Fig. 3.12L).

The two most frequently observed peaks in the KDE data occur at or near 3.37 Ga and 2.60 Ga. The 3.37 Ga peak occurs in many of the AVR samples and was used by Bilak et al. (in review) to infer a division in the AGC where > 3.4 Ga rocks compose much of the western portion, while < 3.6 Ga rocks comprise the eastern portion. The second prominent peak, ~2.60 Ga, is the highest amplitude peak across the GSB data set, with the exception of GSB17-C1 where it is the second highest peak, and typically occurs bimodally with a second peak near ~2.70 Ga. The lower grain counts reported in the GSB data set are the result of two factors: 1) A fraction of the grains from each sample was lost during polishing, most notably in GSB17-D1 and GSB12-C2; 2) More discretion was used when choosing not to analyse highly metamict grains in the mount.

The detrital zircon $^{207}Pb/^{206}Pb$ ages were initially filtered to ≤ 5% discordance to ensure that the reported ages closely match the true crystallization of the granitoids from which the zircons were derived. The difference in distribution and amplitude between peaks in the KDE data filtered at 5, 10, and 20% discordance (Fig. 3.9, 3.10, 3.11) is minimal with the more discordant data typically following the same trend but with lower amplitude peaks. Additionally, the KDE data filtered at 5 % and 20 % discordance were compared using DZstats (Table 3.1) and values close to 1.0 are frequently observable in all columns, indicating very little difference between age populations. The high cross correlation, similarity and likeness values amongst the age population at different discordance filters is useful when reported grain counts are low due to a higher abundance of discordant data.

Statistical analyses of the fine and coarse fractions from the AVR transect show values for cross correlation, likeness, similarity, and the K-S and Kuiper test *p* value all lower among samples from the coarse fraction (Table 3.2), indicating a higher degree of contrast between detrital zircon age distributions. Comparisons between sample spacing and cross correlation, likeness, and similarity were not as clear. GSB17-D1 and GSB17-D2 are adjacent samples from the same transect ~ 5 km apart, and are the two most alike samples from the study. Conversely AVR16-16 and AVR16-15 are also adjacent samples ~ 15 km apart and are frequently below average in cross correlation, likeness and similarity (Table 3.2).

3.5 DISCUSSION

3.5.1 Assessing bedrock boundaries

Samples GSB17-C1, C2, and C5 and GSB17-D1, and D2 were chosen for analysis to assess changes in the detrital zircon population as sample locations transition between ~1.9 Ga rocks of the Coronation Supergroup and Hepburn/Bishop intrusive suites to > 2.9 Ga rocks of the AGC. Additional zircon ages of ~1.9 Ga are reported from multiple granites and granodiorites in the Wopmay Orogen south of Exmouth Lake (Jackson et al., 2013) The 1.9 Ga grains are rare in the C transect and absent in the D transect, and thus cannot be used to differentiate the transition between regions. While essentially devoid of 1.9 Ga grains, insights regarding the surrounding bedrock can still be inferred from the data set. A notable peak in the KDE near 3.75 Ga is present in GSB17-C1, with a similar but less prominent peak in GSB17-C2 (Fig. 3.12I, J). This large peak of ~3.75 Ga grains could be sourced from 3.75 Ga rocks reported east, and up-ice, of the sample sites by Bilak et al. (in review). Furthermore, low amplitude peaks at ~3.37 Ga in GSB17-C2 and GSB17-C5 correspond with the ~3.37 Ga signatures observed in AVR16-14 and AVR16-13, which were used to infer the presence of large 3.37 granitoid bodies in the western region of the AGC (Bilak et al., in review).

Sample GSB17-B1 was chosen for analyses due to its proximity to AVR16-16, which was initially sampled east of the region mapped by St. Onge et al. (1991) to further asses the eastern extent of AGC. The significant volume of zircon grains from the AGC age range in AVR16-16 (Fig. 3.12A) supports the more recent Slave craton map compilation of Stubley (2005), which shows the AGC extending further to the east than the limit of the St. Onge et

al. (1991) mapping. GSB17-B1 was analyzed to further constrain the eastwardly extent of the AGC; however, unlike AVR16-16, there are virtually no AGC age zircons in GSB17-B1, and instead a large number of grains ~2.6 Ga in age. This result suggests the presence of a ~2.6 Ga granitoid pluton immediately to east of the GSB17-B1 sample site, which dominated the esker sediment supply. A possible way to reconcile the differing age distributions obtained from samples GSB17-B1 and AVR16-16 is to posit that ~2.6 Ga plutons locally intrude AGC-age rocks in the region to the east of field area. The prominence of the 2.6 Ga age peak in any particular esker sample would reflects whether one of these plutons was present up-ice.

3.5.2 Sources of ~2.6 Ga and ~2.9 Ga grains

Zircon ages attributed to the Slave Craton (2.58 – 2.80 Ga) are present throughout all the samples, and form the highest amplitude peak in AVR16-15, GSB17-B1, GSB17-C1, GSB17-C5, GSB17-D1, and GSB17-D2. Of these samples, GSB17-C1 and GSB17-D1 are located on mapped Coronation Supergroup rocks, and GSB17-C5 is located west, ~ 10 km down-ice, of a large region mapped as Akaitcho Group by St Onge et al. (1991). While the ~2.6 Ga grains coincide with the 2.57 Ga grains of the Akaitcho Group it is an unlikely a major source due to the scarcity of 1.89 Ga grains found in the GSB data set. U-Pb analyses of 27 detrital zircon grains from an Akaitcho Group sandstone by Hoffman et al. (2011) report 10 zircon ages clustered at 2.57 Ga, and 11 ages between 1.8 – 2.0 Ga, showing no representational bias for 2.57 Ga grains over ~1.89 Ga grains. In turn, this suggests that the ~2.6 Ga grains are not sourced from the Coronation Supergroup rocks in the immediate area, or that the detrital zircon population of the Coronation Supergroup

rocks in the area differs from those reported by Hoffman et al. (2011) ~150 km north of the study area.

A potential source of the ~2.6 Ga zircon grains, is a large ~2500 km^2 area of 2.58 – 2.68 Ga granitoids directly east, and up-ice of the AGC (Bleeker, 2002; Stubley, 2005). This large granitoid region would have been subjected to basal ice sheet erosion and entrainment during the accumulation phase of the LIS and detrital material subsequently transported from east to west as glacial till and glaciofluvial sediment (St. Onge et al., 1988; Alley et al., 1997; Dyke 2004). Furthermore, the bimodal peaks repeatedly observed at ~2.6 and ~2.7 Ga fit roughly within the 2.58 – 2.68 Ga interval. Additionally, Ootes et al. (2009) report detrital zircon ages clustered at 2.64 Ga from grains recovered from the Emile River greywacke ~30 km west of the study area. Jackson et al. 2013 also report 2.63 - 2.57 Ga plutonic rocks in close proximity to Exmouth Lake, just south of the study area.

Alternatively, the ~2.6 Ga zircon grains could be sourced from locally intruded granites in the AGC in close proximity to sample locations with high amplitude peaks at ~2.6 Ga. This is supported by the drastic difference in detrital zircon ages between AVR16-16 and GSBB1-17 and personal communications with Tom Chacko and Jesse Reimink who observed large-scale occurrences of granite in the eastern region of the AGC similar in appearance to other ~2.6 Ga granites from the Slave craton.

Low amplitude peaks between ~2.8 – 2.9 Ga occur within most of the data set (Fig 3.12). Detrital zircon analyses of five quartzites from the Central Slave Cover Group (CSCG) by

Sircombe et al. (2001) revealed zircon populations from this age interval at Loop Lake, Patterson Lake, and Exmouth Lake. Given Exmouth Lake's proximity to study region and the mapped occurrences of CSCG in the region, it is a potential source for the 2.8 – 2.9 Ga detrital zircons in the study.

3.5.3 Source of the ~2.0 Ga peaks in the GSB17-C transect

Small peaks at ~2.0 Ga occur in GSB17-C1-C2-C5 (Fig. 3.12H, I, J). This is the only occurrence of ~2.0 Ga grains from the four esker transects, and they appear in the northern most transect. Hoffman et al. (2011) report U-Pb zircon ages of ~ 2.0 Ga in the Valliant tuff, which extends below the Odjick Formation at Valliant Lake, ~ 200 km north of the AGC. Additionally, Coombs (2015) reports U-Pb zircon ages of ~ 2.0 Ga from Artemisia kimberlite granite and semi-pelite xenoliths recovered within the Coronation Supergroup at approximately the same locale. These two occurrences of ~2.0 Ga zircon grains recovered from the Coronation Supergroup north of the study area provide a potential source for the ~2.0 Ga peaks observed in the GSB17-C transect. It is unlikely the grains are sourced from distances ranging upwards of 200 km, and more likely small occurrences of the Valliant tuff or similar xenoliths are found within the Coronation Supergroup more proximal to the study region.

3.5.4 Suitable grain size for bedrock reconnaissance

The statistical comparison of the fine and coarse fractions of the AVR transect (Table 3.2) yields lower between-site values in cross-correlation, likeness and similarity in the coarse data set, relative to the fine data set. This may be a function of grain size, with coarse

grains representing sourcing from more localized bedrock or till, and higher contributions of farther-traveled zircon grains in the fine fraction. The suspension and subsequent transportation of finer grain sizes in the glaciofluvial system may contribute to increased mixing and homogenization of the detrital zircon population in the fine fraction of the esker samples. Additionally, ~1.9 Ga zircon grains from AVR16-12 (Fig. 3.12F), associated with the underlying Akaitcho Group, are present in greater abundance in the coarse fraction relative to the fine. From these findings coarser grain sizes appear to reflect more proximal bedrock. However, it should be noted differences in the detrital zircon age distribution between the coarse and fine fraction were subtle (Fig. 3.12). A comparison of dispersal trains in esker samples composed of cobbles versus coarse sand in the Lac Brisson esker report similar findings, with only subtle differences in transport distance between size fractions, and the coarser grain size representing more proximal sources (Bolduc, 1992; Cummings et al., 2011). Samples composed of coarse grain sizes, pebbles and larger, appear to contain lower numbers of distal detrital zircon grains and better reflect the composition of proximal bedrock in the region.

3.5.5 Sample Spacing

Sample spacing in drift prospecting is largely dependent upon the targeted indicator mineral and the goals of the sampling campaign. A comparison of dispersal trains of typical kimberlite indicator minerals by Atkinson (1989) found olivine and phlogopite dispersal trains typically extend ~5 km from the source, whereas zircon dispersal trains range up to 30 km from the source due to the more robust nature of the grains. From this observation, a suitable sample spacing for the detection of zircon dispersal trains appears to

be on the order ~ 15 to 20 km. While this may be sufficient for detecting zircon grains from a singular point source, it may not provide sufficient resolution for detecting and discerning multiple zircon-rich bodies along an esker transect. In fact, a suitable sample spacing for zircon-based bedrock studies is still to be determined. Samples GSB17-D1 - GSB17-D2, and GSB17-C1 - GSB17-C2, are both spaced ~5 km apart from one another on respective transects. From the KDE and statistical data (Fig. 3.12. H, I, K, L, Table 3.2) very little difference is observed between age distributions and it is unlikely significant variation in the detrital zircon age population exists between sample sites. Samples AVR16-14, AVR16-13, and AVR16-12 are also spaced ~ 5 km apart, and gradual but distinct changes in the detrital zircon age population were used by Bilak et al. (in review) to infer the presence of a large 3.37 Ga body in the AGC. Along this transect, a coarser sampling resolution of ~10 km apart would not have included the AVR16-13 site, and in turn the detrital zircon evidence for the presence of significant 3.37 Ga granitic bodies would not be as definitive. Additionally, AVR16-16 and AVR16-15 are consecutive samples spaced 15 km apart (Fig. 3.1) and are two of the least alike samples (Table 3.2). There is significant difference in the age distributions between the two samples (Fig. 3.12A, B) with the large and prominent peak at ~3.37 Ga in ARV16-16 replaced by a high amplitude peak at ~ 2.60 Ga in AVR16-15. Though apparently abrupt, this change is difficult to interpret and the source of the ~2.60 Ga material may be more easily determined had a sample been taken between these two locations. In the AGC, and possibly in other formerly glaciated crystalline terranes, a sample spacing of 5 km is ideal for observing changes in the age population along the esker and in turn inferring the composition of the surrounding bedrock. If samples are spaced in excess of 10 km, changes in age population may be

undetected or difficult to interpret, and, if detected, appear more abrupt than they actually are. This is particularly the case where units of interest, such as the 4.02 Ga Idiwhaa unit (Reimink et al., 2014), are volumetrically minor compared to other zircon-bearing units in the region.

3.5.6 Transport Distance

Esker sediments are subject to transport as both basal till entrained within the ice sheet, and as fluvial sediment within the glacio-fluvial esker system prior to deposition (Gillberg, 1968; Shilts, 1976; Alley et al., 1997). The samples along the AGC esker transects appear to be a mix of locally derived bedrock with contributions from 2.58 – 2.68 Ga granitoids ~ 40 km east, up-ice of AVR16-16 (Bleeker, 2002). AVR16-12 and GSB17-C5 were collected down-ice of the AGC-Wopmay contact to better constrain the transport distance of esker sediments. AVR16-12 is located 5 km down-ice of the AGC-Wopmay contact and contains a distinct population of ~1.9 Ga grains, indicating 15% of the grains sampled were sourced from a distance of 5 km or less. Conversely GSB17-C5 is located 25 km down-ice of the AGC-Wopmay contact and contains only ~4% (2 of 52) grains in the 1.8 – 2.0 Ga range, where as ~40% of the grains (20 of 52) range from 3.0 – 4.0 Ga and presumably are derived from AGC sources at least 25 km away.

The absence of 1.90 Ga grains is unexpected and may be better constrained with further sampling down-ice to the west. From our findings, we can conclude that esker sediments in the region are sourced anywhere from < 5 to ≥ 25 km, in concurrence with the findings summarized in Cummings et al. (2011). It is pertinent to note that GSB17-C5 was

collected from a low standing esker with no cobble component and significantly more sand relative to other samples. The finer-grained facies from which the sample was obtained may in part explain the lack of ~1.9 Ga grains, and the abundance of grains from 3.0 – 4.0 Ga

3.6 CONCLUSIONS

Esker-based bedrock exploration is a developing field with many unknowns. Its application is particularly useful in large regions where bedrock mapping may be exceedingly time consuming or not possible. From our study, we have identified three key factors to consider when using esker sediments to infer the ages and relative proportion of under-mapped regional bedrock. 1) What is the ideal grain size for analyses? This varies depending on the scope of the project and the targeted mineral. For zircon-related studies, mineral grains were found in high abundance across all three grain size fractions, however zircon populations recovered from the coarsest fraction (50 – 1mm) reflect more local bedrock ages. 2) How far apart should samples be spaced? For bedrock mapping purposes, a sample spacing of 5 km provided sufficient resolution to observe changes in the zircon age population across the AGC transects. Changes in the age population between samples in excess of 10 km apart appear more abrupt and require a greater degree of interpretation. 3) How far traveled are the esker sediments from the original source? In our study, we found esker sediments derived between < 5 to ≥25 km, however 25 km was the longest transport distance assessed, and further sampling down-ice along the esker would provide a more definitive maximum.

It is also worth noting the most meaningful insights from the study were drawn from the AVR transect, the most continuous esker system in the study region. Interpreting esker data is best done on a continuum, where changes in the detrital age population can be observed in 5 – 10 km intervals, as wider sample spacing makes interpretation of the age data more uncertain. In our study region, esker sediments provide a suitable proxy for local bedrock with contributions upwards of 25 km up-ice. Patterns and changes in the age distribution of recovered detrital zircon populations along the esker transect provide significant insight into the composition of the surrounding bedrock both locally, and up-ice, and are convenient bedrock exploration and reconnaissance targets in previously glaciated terrains with limited access and outcrop exposure.

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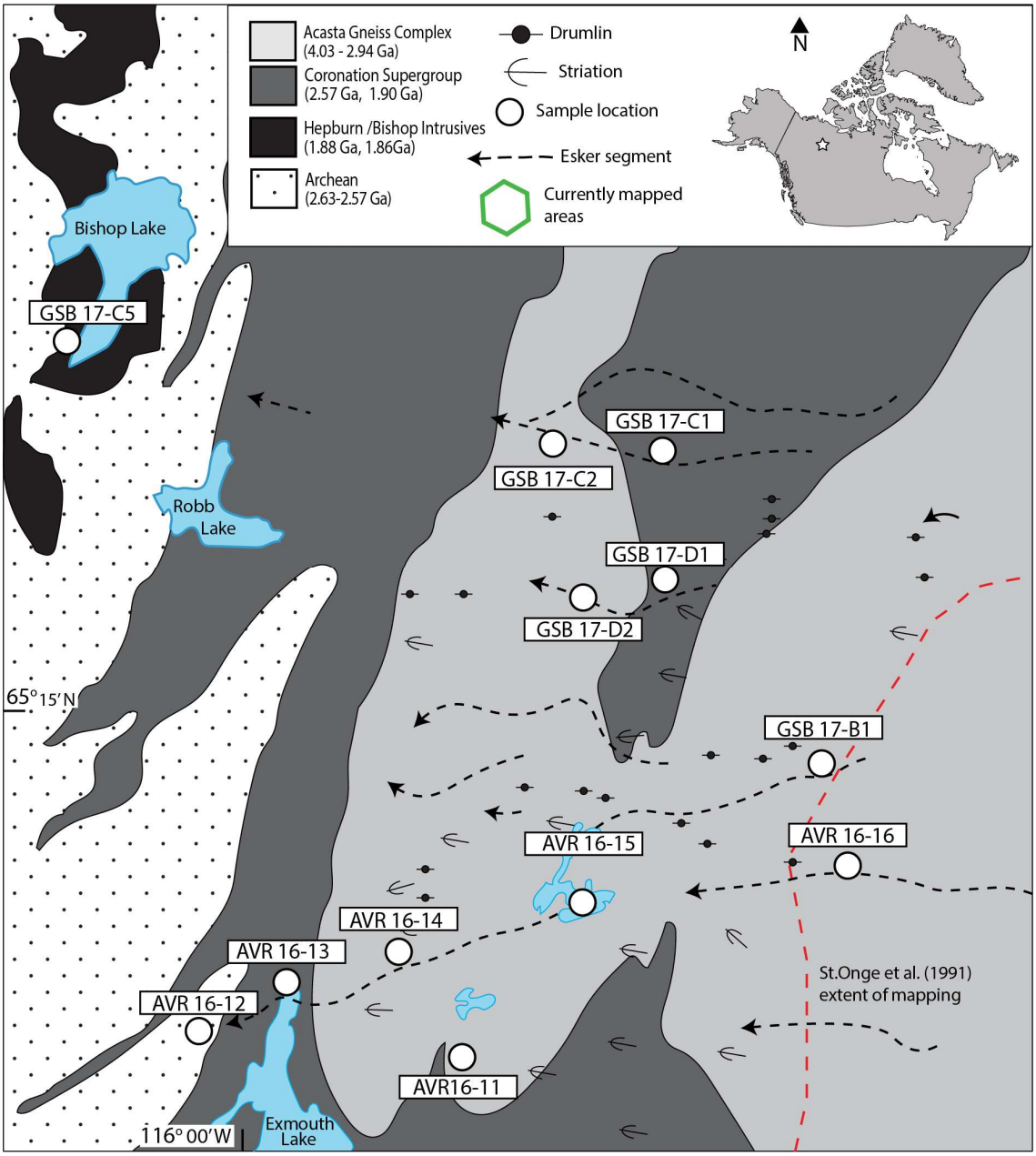

Figure 3.1. A map of the study region showing drumlins, striations, and eskers from previous glaciations (St. Onge et al., 1988), and bedrock boundaries between the AGC and Wopmay Orogen (St. Onge et al., 1991; Stubley 2005; Hoffman et al., 2011; and Jackson et al., 2013). Green polygons represent regions mapped at outcrop scale by Bowring and Williams (1999); Iizuka et al., (2007); Reimink et al., (2016a); and Belosevic et al., (2017).

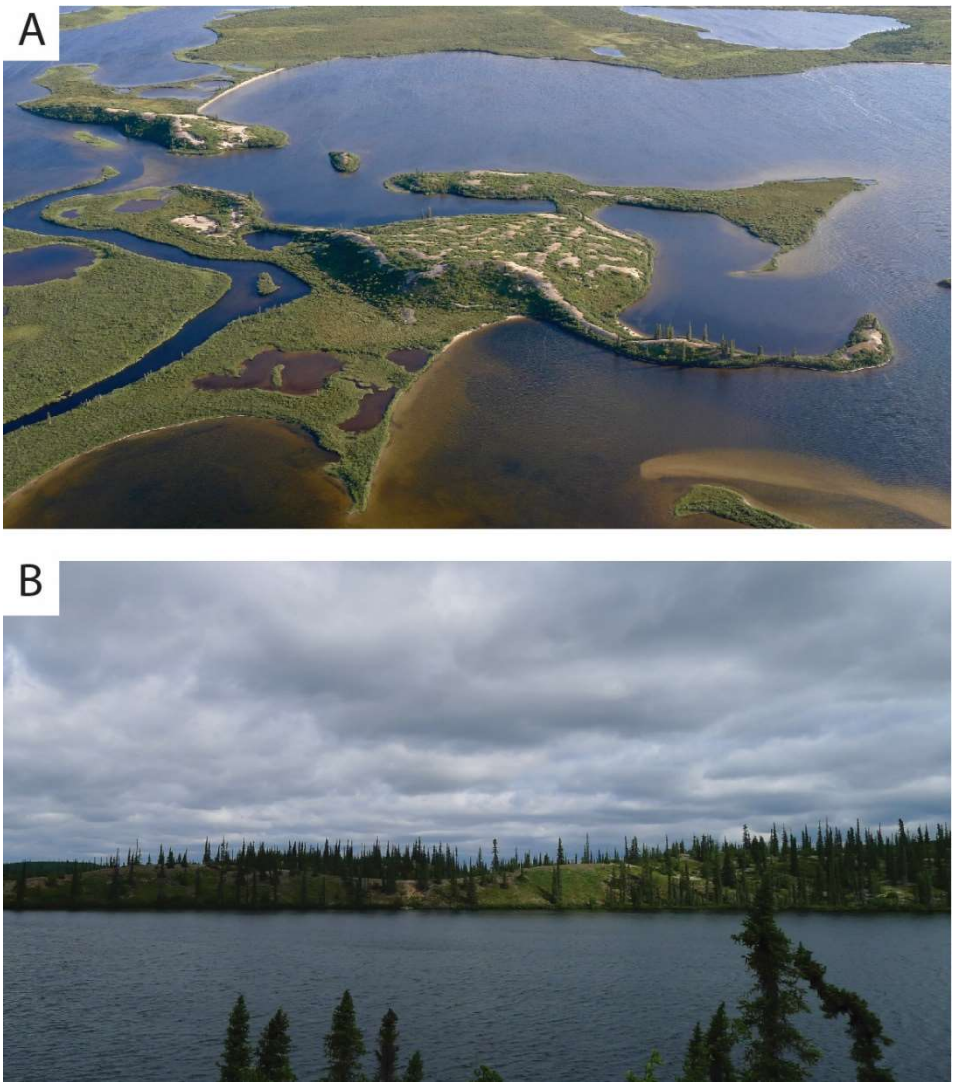

Figure 3.2. A.) An unsampled esker from the study area showing a typical gravel ridge extending between 5-10m above the surrounding topography. Esker ridges in the study area are typically vegetated along the sides with barren gravel along the crest. and typically occur as segments < 5 km in length. B.) A profile view of the prominent esker sampled at AVR16-13, at its maximum height the esker stands ~20 m above Exmouth lake.

Figure 3.3. Sample location AVR16-16. The esker crest is ~ 25 m above the surrounding tundra and small shrubs and boulders are scattered across the surface. A weathering horizon with minor rootlets observed in the field is visible within the top 25 cm of the sample pit (total depth 70 cm). Grain sizes ranging from boulders to very fine sand can be observed within the sample pit, however the largest grain sizes sampled were small cobbles and the mean grain size sampled ranges from pebbles to medium sand.

Figure 3.4. Sample location AVR16-15. The surface of the esker is intermittently bare gravel with vegetated areas of shrubs and small trees. The esker is composed almost entirely of pebble sized clasts or smaller and stands ~5m above the adjacent river. A sample ranging from pebbles to very fine sand was collected from a pit 75 cm in depth.

Figure 3.5. Sample location AVR16-14. The esker crest is ~ 5-10 m above the nearby lake and small shrubs are intermittent across the surface. Weathering and small roots can be observed in the top 15 cm of the sample pit (total depth 65 cm). Grain sizes ranging from small cobbles to very fine sand are observed within the sample pit, and the mean grain size sampled ranges from pebbles to fine sand.

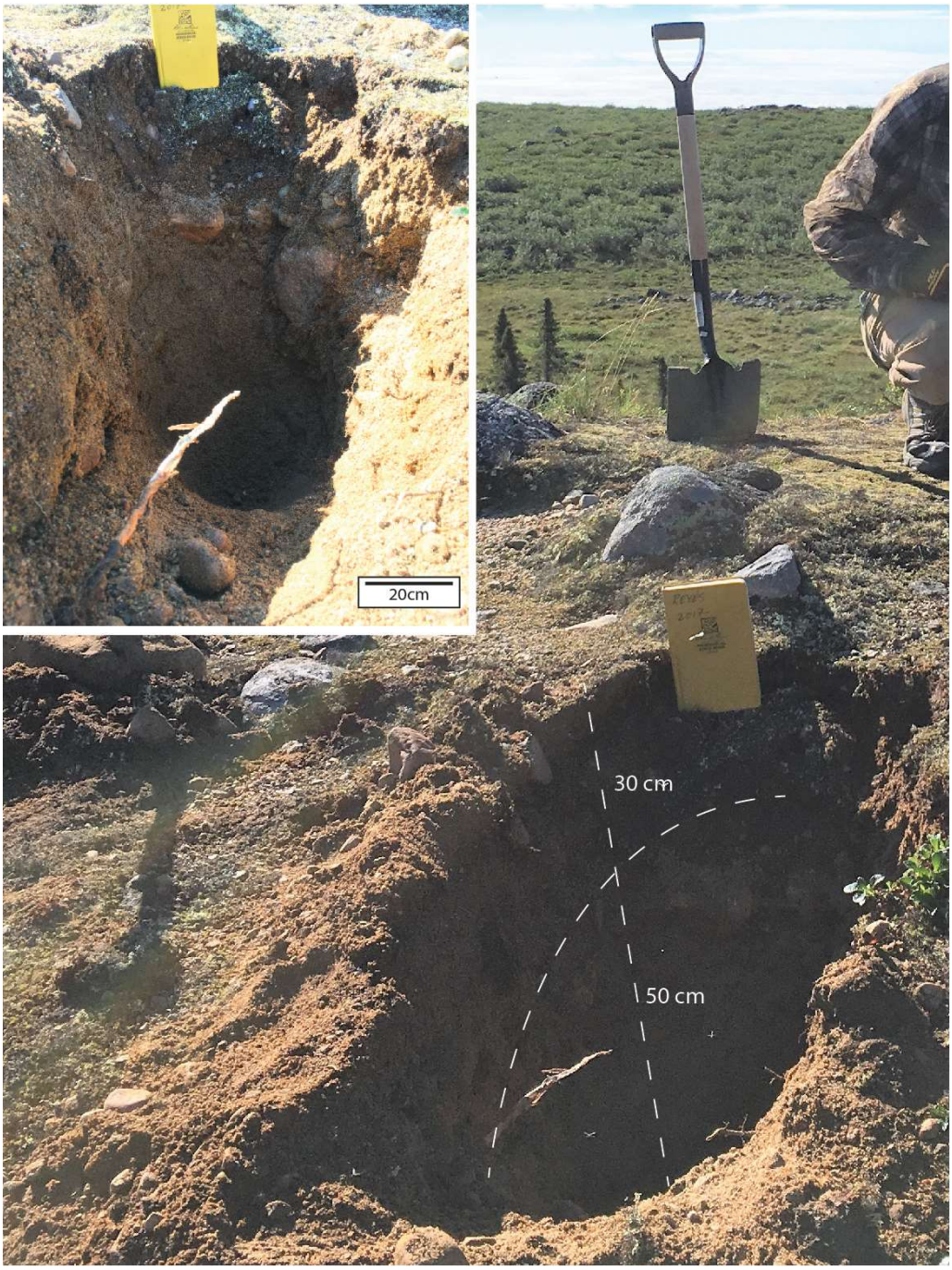

Figure 3.6. Sample location GSB17-B1. The surface of the esker is vegetated with small shrubs and lichen, along with occasional cobbles and boulders. A weathering horizon with small roots is visible within the top 30 cm of the sample pit (total depth 80 cm). Grain sizes ranging from boulders to very fine sand can be observed within the sample pit, although the largest grain sizes sampled were small cobbles while the mean grain size sampled ranges from pebbles to medium sand.

Figure 3.7. Sample location GSB17-D1. The esker crest stands ~ 15m above the nearby lake. Small shrubs and boulders are infrequent along the crest; however the slopes are heavily vegetated. A pit 80 cm in depth was excavated for sampling, and no obvious weathering horizon was observed. Grain sizes ranging from large cobbles to very fine sand are present within the sample pit, and the mean grain size sampled ranges from pebbles to medium sand.

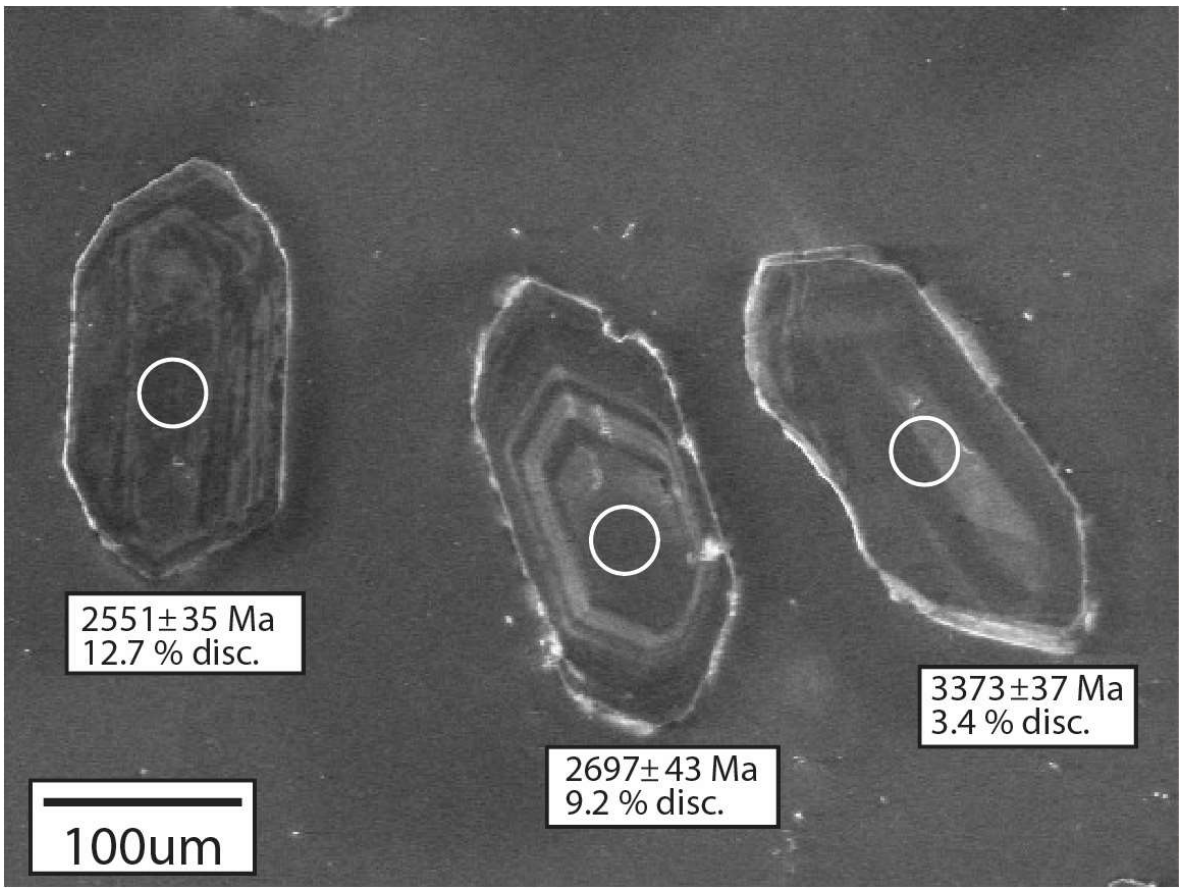

Figure 3.8. Zircon grains from AVR16-14 showing commonly observed ages from ~2.58 – 2.80 Ga and 3.37 Ga. Internal cores were targeted for analysis using a spot size of 30 μm. Ages are reported using $^{207}Pb/^{206}Pb$ ratios.

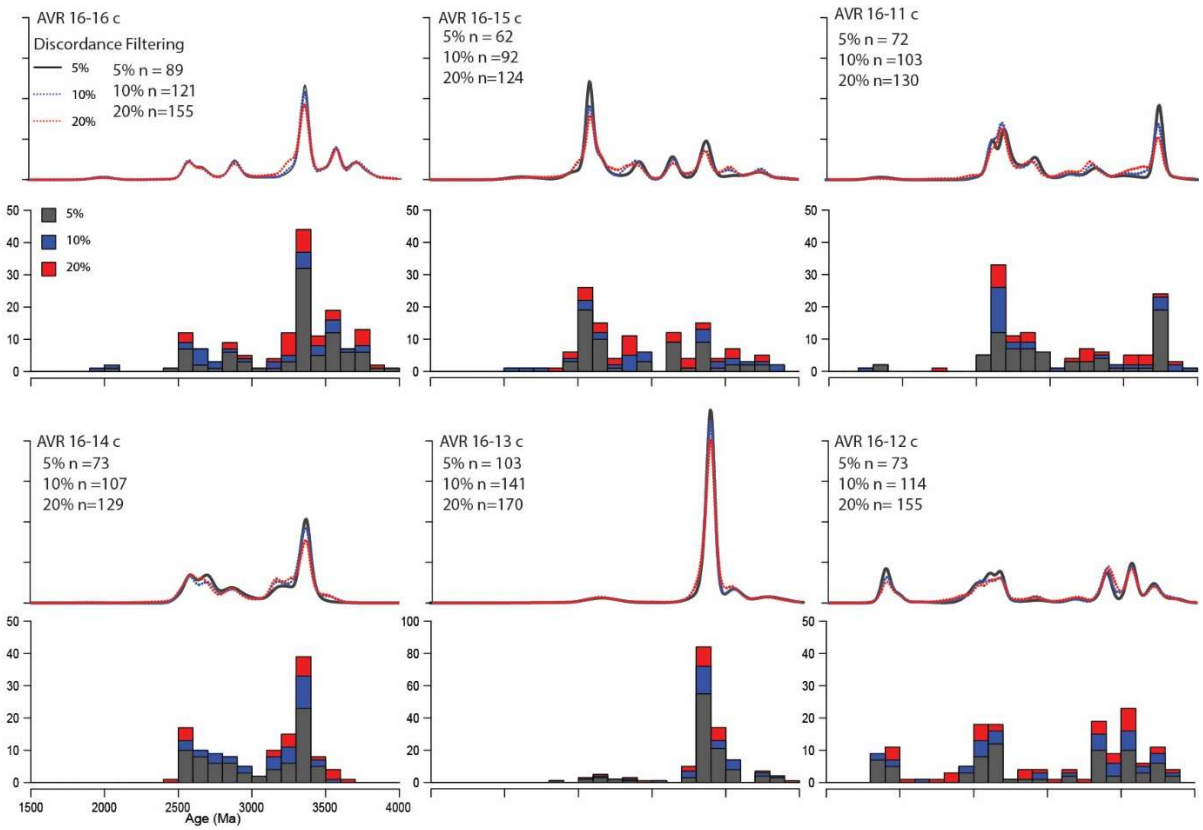

Figure 3.9. KDEs and histograms of the AVR coarse fraction comparing the detrital zircon $^{207}Pb/^{206}Pb$ ages at 5, 10, and 20% discordance.

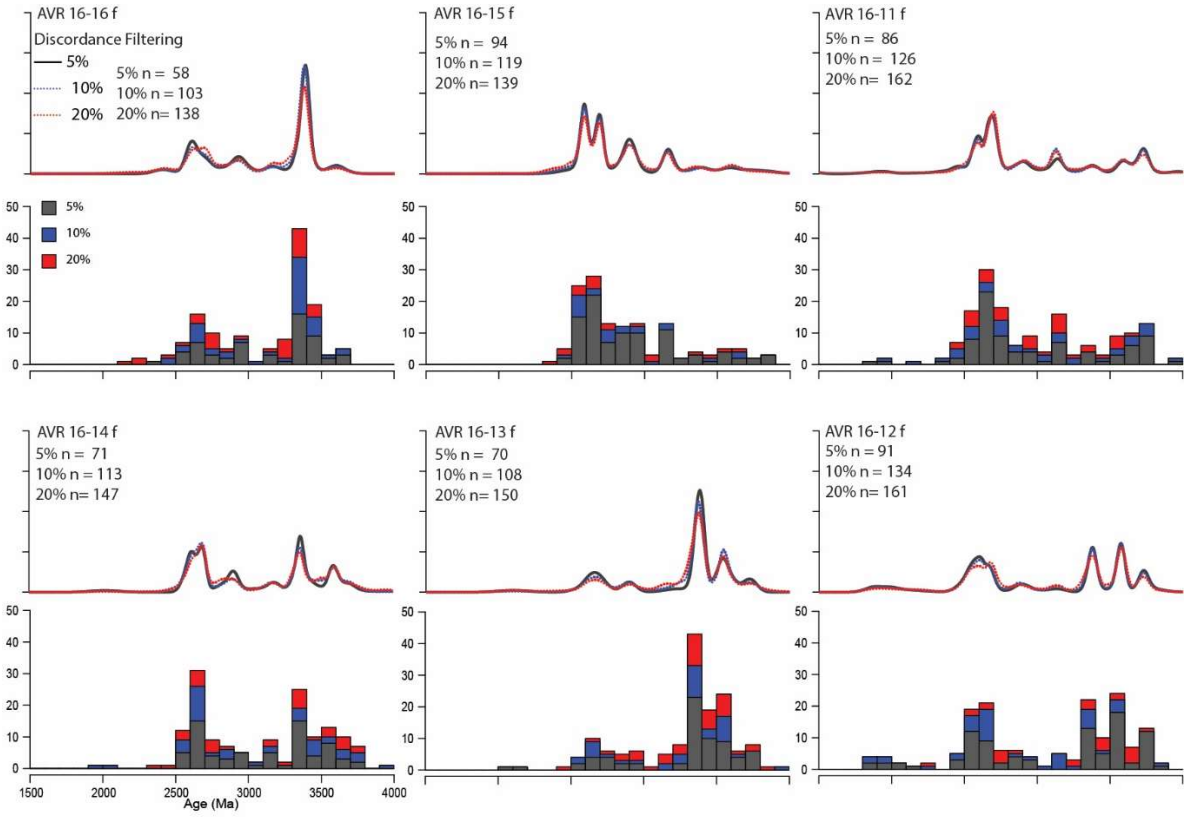

Figure 3.10. KDEs and histograms of the AVR fine fraction comparing the detrital zircon $^{207}Pb/^{206}Pb$ ages at 5, 10, and 20% discordance.

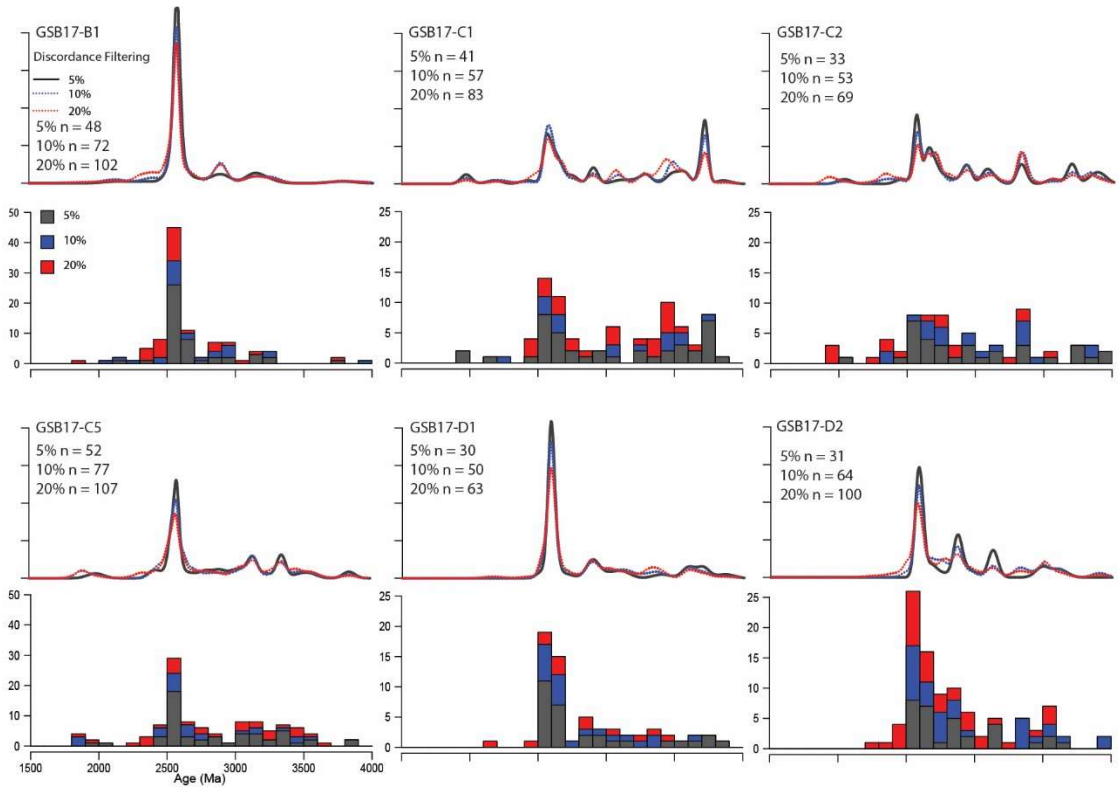

Figure 3.11. KDEs and histograms of the GSB transect comparing the detrital zircon $^{207}Pb/^{206}Pb$ ages at 5, 10, and 20% discordance.

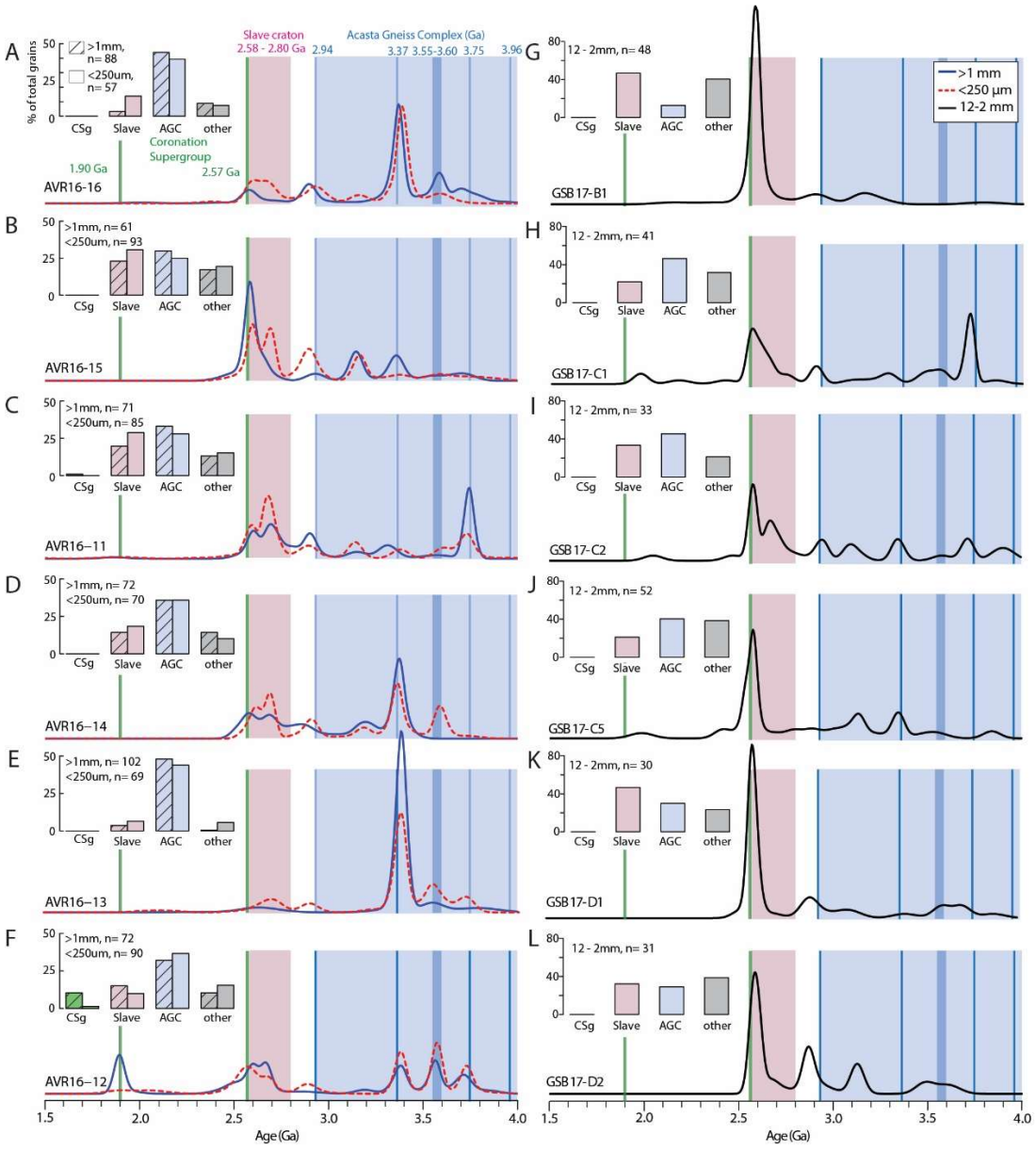

Figure 3.12. KDE of the fine and coarse fractions of the AVR transect and the GSB transect with inset cumulative bar plots. The AGC age range is displayed in blue with darker lines indicating dates a 2.94, 3.37, 3.55-3.60, 3.75 and 3.96 Ga (Reimink et al., 2016a). The Slave craton is represented by the pink region spanning 2.58 – 2.80 Ga (Bleeker 2002), and the Coronation Supergroup displayed in green at 1.90 and 2.57 Ga (Hoffman et al., 2011).

Table 3.1 Comparison of 5 and 20 % discordance filter data

AVR 16 (≤250 µm)

	C-C	Likeness	Similarity	K-S test p	Kuiper test p
AVR 16-16	0.939	0.861	0.976	0.922	0.976
AVR 16-15	0.971	0.909	0.987	0.980	1.000
AVR 16-14	0.901	0.826	0.961	0.995	0.972
AVR 16-13	0.934	0.841	0.961	0.801	0.955
AVR 16-12	0.926	0.864	0.964	0.635	0.947
AVR 16-11	0.957	0.880	0.987	0.973	0.949

AVR 16 (50 - 1 mm)

	C-C	Likeness	Similarity	K-S test p	Kuiper test p
AVR 16-16	0.951	0.869	0.981	0.743	0.981
AVR 16-15	0.877	0.777	0.930	0.642	0.653
AVR 16-14	0.944	0.884	0.981	0.940	0.983
AVR 16-13	0.982	0.873	0.972	0.809	0.808
AVR 16-12	0.918	0.871	0.980	0.989	0.993
AVR 16-11	0.876	0.846	0.973	0.992	0.991

GSB 17 (12 - 2 mm)

	C-C	Likeness	Similarity	K-S test p	Kuiper test p
GSB 17-B1	0.925	0.751	0.913	0.126	0.200
GSB 17-C1	0.759	0.801	0.964	0.765	0.167
GSB 17-C2	0.942	0.893	0.988	0.915	0.999
GSB 17-C5	0.896	0.824	0.959	0.782	0.972
GSB 17-D1	0.900	0.761	0.928	0.991	0.982
GSB 17-D2	0.798	0.713	0.897	0.561	0.596

Table 3.2 **AVR 16 (≤ 250 µm) 5% discordance**

Cross Correlation

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.231					
AVR 16-14	0.659	0.540				
AVR 16-13	0.797	0.057	0.542			
AVR 16-12	0.429	0.254	0.601	0.570		
AVR 16-11	0.201	0.785	0.517	0.092	0.337	
Average	0.441					

Likeness

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.550					
AVR 16-14	0.741	0.666				
AVR 16-13	0.719	0.361	0.630			
AVR 16-12	0.557	0.484	0.649	0.646		
AVR 16-11	0.531	0.757	0.641	0.431	0.588	
Average	0.597					

Similarity

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.835					
AVR 16-14	0.938	0.894				
AVR 16-13	0.882	0.704	0.886			
AVR 16-12	0.794	0.779	0.846	0.885		
AVR 16-11	0.802	0.930	0.865	0.733	0.837	
Average	0.841					

K-S (Kolmogorav-Smirnov) test p value

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.000					
AVR 16-14	0.471	0.000				
AVR 16-13	0.047	0.000	0.002			
AVR 16-12	0.004	0.000	0.018	0.012		
AVR 16-11	0.001	0.456	0.017	0.000	0.001	
Average	0.069					

Kuiper test p value

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.000					
AVR 16-14	0.147	0.000				
AVR 16-13	0.103	0.000	0.002			
AVR 16-12	0.000	0.000	0.000	0.000		
AVR 16-11	0.000	0.433	0.000	0.000	0.000	
Average	0.046					

AVR 16 (50 - 1 mm) 5% discordance

Cross Correlation

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.190					
AVR 16-14	0.581	0.393				
AVR 16-13	0.682	0.076	0.544			
AVR 16-12	0.308	0.413	0.304	0.157		
AVR 16-11	0.096	0.241	0.158	0.006	0.285	
Average	0.296					

Likeness

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.446					
AVR 16-14	0.582	0.562				
AVR 16-13	0.565	0.296	0.421			
AVR 16-12	0.576	0.579	0.5	0.363		
AVR 16-11	0.468	0.496	0.564	0.225	0.542	
Average	0.479					

Similarity

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.774					
AVR 16-14	0.770	0.833				
AVR 16-13	0.804	0.585	0.690			
AVR 16-12	0.813	0.809	0.704	0.640		
AVR 16-11	0.755	0.802	0.741	0.498	0.813	
Average	0.735					

K-S (Kolmogorav-Smirnov) test p value

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.000					
AVR 16-14	0.000	0.003				
AVR 16-13	0.009	0.000	0.000			
AVR 16-12	0.000	0.023	0.004	0.000		
AVR 16-11	0.000	0.002	0.001	0.000	0.013	
Average	0.004					

Kuiper test p value

	AVR 16-16	AVR 16-15	AVR 16-14	AVR 16-13	AVR 16-12	AVR 16-11
AVR 16-16						
AVR 16-15	0.000					
AVR 16-14	0.001	0.000				
AVR 16-13	0.000	0.000	0.000			
AVR 16-12	0.000	0.000	0.000	0.000		
AVR 16-11	0.000	0.006	0.000	0.000	0.003	
Average	0.001					

GSB 17 (12 - 2mm) 5% discordance

Cross Correlation

	GSB 17-B1	GSB 17-C1	GSB 17-C2	GSB 17-C5	GSB 17-D1	GSB 17-D2
GSB 17-B1						
GSB 17-C1	0.397					
GSB 17-C2	0.274	0.556				
GSB 17-C5	0.704	0.461	0.518			
GSB 17-D1	0.862	0.540	0.363	0.670		
GSB 17-D2	0.760	0.477	0.458	0.695	0.842	
Average	0.572					

Likeness

	GSB 17-B1	GSB 17-C1	GSB 17-C2	GSB 17-C5	GSB 17-D1	GSB 17-D2
GSB 17-B1						
GSB 17-C1	0.460					
GSB 17-C2	0.424	0.694				
GSB 17-C5	0.568	0.637	0.676			
GSB 17-D1	0.671	0.553	0.518	0.578		
GSB 17-D2	0.611	0.557	0.530	0.629	0.726	
Average	0.589					

Similarity

	GSB 17-B1	GSB 17-C1	GSB 17-C2	GSB 17-C5	GSB 17-D1	GSB 17-D2
GSB 17-B1						
GSB 17-C1	0.692					
GSB 17-C2	0.669	0.925				
GSB 17-C5	0.779	0.853	0.899			
GSB 17-D1	0.822	0.814	0.774	0.813		
GSB 17-D2	0.817	0.773	0.773	0.823	0.893	
Average	0.808					

K-S (Kolmogorav-Smirnov) test p value

	GSB 17-B1	GSB 17-C1	GSB 17-C2	GSB 17-C5	GSB 17-D1	GSB 17-D2
GSB 17-B1						
GSB 17-C1	0.001					
GSB 17-C2	0.001	0.707				
GSB 17-C5	0.037	0.058	0.310			
GSB 17-D1	0.071	0.239	0.191	0.316		
GSB 17-D2	0.009	0.053	0.470	0.220	0.868	
Average	0.237					

Kuiper test p value

	GSB 17-B1	GSB 17-C1	GSB 17-C2	GSB 17-C5	GSB 17-D1	GSB 17-D2
GSB 17-B1						
GSB 17-C1	0.002					
GSB 17-C2	0.003	0.268				
GSB 17-C5	0.013	0.162	0.848			
GSB 17-D1	0.376	0.025	0.215	0.168		
GSB 17-D2	0.044	0.002	0.482	0.086	0.594	
Average	0.2192					

Table 3.3

	Discordance filtering (total grain counts)			
	≤5%	**≤10%**	**≤20%**	**Total grains**
AVR16-16f	58	103	138	204
AVR16-16c	89	121	155	199
AVR16-15f	94	119	139	197
AVR16-15c	62	92	124	199
AVR16-11f	86	126	162	213
AVR16-11c	72	103	130	196
AVR16-14f	71	113	147	205
AVR16-14c	73	107	129	200
AVR16-13f	70	108	150	199
AVR16-13c	103	141	170	204
AVR16-12f	91	134	161	194
AVR16-12c	73	114	155	200
GSB17-B1	48	72	102	172
GSB17-C1	41	57	83	159
GSB17-C2	33	53	69	147
GSB17-C5	52	77	107	164
GSB17-D1	30	50	63	114
GSB17-D2	31	64	100	188

*f denotes fine fraction, *c denotes coarse fraction

Chapter 4

4.1 SUMMARY AND SIGNIFICANCE OF RESEARCH

The goals of this thesis were to assess the viability of esker-based detrital zircon bedrock exploration techniques and use the U-Pb age data to infer the composition of AGC bedrock in under-mapped regions. The results allowed me to establish a set of sample preparation, analytical, and interpretive guidelines for esker-based exploration projects, apply them to the large dataset of zircon U-Pb dates presented here, and use the detrital zircon age data to better constrain the composition of the AGC. A large number of 3.37 Ga grains in AVR16-14 and AVR16-13 were used in conjunction with the 2013 bedrock transects to infer a division in the AGC of < 3.4 Ga rocks in the western portion, and > 3.6 Ga rocks in the eastern portion. Furthermore, a large number of zircon grains from the AGC range were found in AVR16-16, including a 3945 ± 37 Ma, 1.6% disc. grain, which hints at the possibility a significantly old portion of AGC bedrock remains undiscovered towards its eastern margin. The esker-based exploration approach developed here is well-suited to assessing the likely eastern extent of AGC-aged rocks. The relationship between transport distance and grain size was thoroughly examined, and coarser grain sizes (50 – 1 mm) were found to contain more proximally sourced zircon grains. The differences in age distribution were subtle but significant, as bedrock boundaries were more accurately discerned by the coarse data set. Sample spacing was also assessed and an ideal spacing of 5 km was established for detrital zircon esker-based bedrock reconnaissance. Publications on esker-based detrital zircon bedrock exploration are sparse, and the findings in this thesis will aid future researchers undertaking similar endeavours.

4.2 FUTURE RESEARCH

The results presented here also suggest that esker-based zircon sampling and analyses may be fertile scientific ground for studies of crustal rocks in formerly glaciated settings. Several sample sites (e.g. AVR16-11 and AVR16-16) contained an appreciable number of zircon grains in excess of 3.7 Ga and thus hint at the presence of extremely old crust relatively close to the sample sites in the up-ice direction. Additional sampling and analysis of a short transect to the east of the AVR transect would help constrain the potential source for this ancient zircon signature.

Due to time and resource limitations, several samples from the GSB transect were not processed and analyzed. These samples were collected west of the AGC-Wopmay boundary and their examination may address the relatively absent 1.9 Ga grains from Chapter 3. For future research we recommend longer, continuous transects with ~5 km sample spacings. Every effort should be made to ensure samples are not spaced more than 10 km apart, and transects should extend adequately up-ice (10-20 km) and down-ice (40 - 60 km) from areas of interest to ensure the dispersal train is sampled in entirety.

The detrital zircon grains from this study can be further analyzed for oxygen and hafnium isotopes to gain insight into the composition of the early earth forming magmas from which they originated. Additionally, rare earth element signatures may be compared to those from known bedrock in the region to further constrain the source of individual grains. Finally, if the esker detrital zircon techniques become more routinely applied, it would be useful to assess replicability of results through field duplicates at the same esker sampling site.

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APPENDIX A

METHODS A1. LA-ICP-MS operating conditions and zircon analyses

Zircon U-Pb isotope data were collected using laser ablation inductively coupled mass spectrometry (LA-ICPMS) at the Canadian Centre for Isotopic Microanalysis at the University of Alberta (Table DR1). The analytical setup consists of a New Wave UP-213 laser ablation system interfaced with a Thermo Scientific ICAP-Q. We operated the laser at 5 Hz with a beam diameter of 30 μm which yielded a fluence of ~3 J/cm^2. Ablations were conducted in a He atmosphere at a flow rate of 0.5 l/min through the ablation cell. Output from the cell was joined to an Ar (0.55 l/min) makeup gas line and an N_2 line (4 ml/min) before entering the injector. We auto-tuned the instrument by ablating NIST 612 and then manually adjusted the Ar makeup gas to achieve a U/Th of ~1.05 and ThO/Th < 0.5%. Data were collected in time resolved mode with each analysis, including a 25 s blank, taking approximately 70 s with a 30-45 s washout between analyses. Dwell times were 20 milliseconds (ms) for masses 238 and 232; 30 ms for masses 235, 208, 207, and 206; and 40ms for mass 204, for a total duty cycle of 200 ms. We analyzed zircon reference materials LH94-15 (Ashton et al., 1999), and OG1 (Stern et al., 2009), before and after each set of 10-20 unknowns to monitor U-Pb fractionation, reproducibility, and instrument drift. All data were reduced offline using the visual-age data reduction scheme (Petras and Kamber, 2012) within the Iolite software program. Unknowns and secondary reference materials were normalized to LH94-15 as the primary reference.

Uncertainties reported are a quadratic combination of the internal measurement precision and the overall reproducibility of the standards during an analytical session. The 2σ

reproducibility for the standards is estimated to be ~1-2% for $^{207}Pb/^{206}Pb$. Data that contained substantial amounts of common Pb (206/204 < 1500) were corrected using the method of Anderson (2002).

The $^{207}Pb/^{206}Pb$ ages were filtered to ±5% discordance. We visualized the distribution of these filtered ages by kernel density estimation (KDE) using IsoplotR (Vermeesch, 2018; R Core Team, 2013), with a 30 Myr bandwidth modified by adaptive smoothing following Abramson (1982). This approach applies a narrower bandwidth where the density of dates is higher and a wider bandwidth were dates are sparse (Vermeesch, 2018). The KDEs for all samples were normalized, so that the area under the curve for each KDE (Fig. 2.2, 3.12) is equivalent. Filtering at ±10% or ±20% discordance does not alter the structure of the KDE or our interpretation (Fig. 3.9, 3.10, 3.11).

LA-ICP-MS $^{207}Pb/^{206}Pb$ data were calibrated using secondary standard OG-1 to monitor discrepancies caused by instrument mass fractionation. OG-1 zircon reference grains come from a quartz diorite located in the Western Australian Pilbara craton. Repeated SHRIMP analyses by Stern et al. (2009) report a reference material age of 3465.5 Ma. Reported $^{207}Pb/^{206}Pb$ zircon ages from OG-1 standards used in this thesis frequently agree within error of 3465.5 Ma with the exception of limited analyses, most notably in AVR16-12 and AVR16-11 from the (50 – 1mm) fraction, requiring greater error propagation in those samples.

METHODS A2. Zircon Separation techniques

Samples AVR16-11 to -16 were collected in July 2016. Samples were collected from topographic highs along discrete esker ridges across the study region. A pit at each sample site (~1 m in depth) was dug below the weathering horizon (typically 15 – 50 cm in depth) and a ~ 10 kg sample of sediment ranging from cobbles to fine sand was collected. All zircon separation and analyses were conducted at the University of Alberta. First, after removing larger cobbles by hand the bulk sediment was sieved into discrete grain size fractions (12-4 mm, 4-2 mm, 2-1 mm, 1 mm-750µm, 750-500 µm, 500-250µm, and <250µm. Zircon grains were picked from the < 250µm ("fine") and aggregated ~50-1 mm, ("coarse") fractions. The coarse fraction was then crushed and milled to < 250µm. Heavy minerals were concentrated using a Wilfley table. Crushing/milling equipment and the Wilfley table were cleaned thoroughly between samples. The zircon concentrate was then sorted by magnetic separation at 0.2, 0.4, and 0.6 amps using a Frantz LB1 to remove magnetic minerals. Zircon grains were then separated by density from the non-magnetic fraction using di-methylene iodide heavy liquid. Zircon grains from the GSB17 transect were separated from the bulk sediment using only modified Wilfley table techniques, with no further reduction via magnetic susceptibility or di-methylene iodide. Modified Wilfley table techniques entailed the initial removal of all low-density light-colored minerals with some heavy mineral component via water stream from a squeeze bottle. The remainder of the heavy minerals were then collected in standard collection containers and zircon grains concentrated in small bands by gently swirling the samples in a circular motion in a small volume of water and allowing them to settle based upon their own density. From the zircon separate for each size fraction, ~200 individual zircon grains were hand selected and mounted in epoxy. The grain mount was polished to expose the grain centers and regions

suitable for analysis were identified by cathodoluminescence on a Zeiss EVO LS15 EP-SEM.

Table A1. Thermo Scientific iCAP-Q quadrupole ICP-MS operating conditions

laboratory name	Canadian Center for Isotopic Microanalysis, Dept. of Earth & Atmospheric Sciences, Univ. Alberta
sample type	detrital zircons
imaging	cathodoluminescence
laser system	ESI/New Wave Research UP213 Nd YAG
ablation cell	New Wave/ESI standard cell, 33cm^3 volume
laser wavelength	213 nm
pulse width	<4 ns
fluence	~2-3 J/cm^2
repetition rate	5 Hz
ablation duration	40 s
ablation pit depth	~10-15 μm
spot diameter	30 μm
sampling mode	spot ablation
carrier gas	100% ultrapure He
cell carrier gas flow	0.5 l/min
ICPMS	ThermoScientific ICAP-Q quadrupole ICPMS
sample introduction	ablation aerosol
RF power	1550 W
make up gas flow	~0.55 l/min Ar + 4 ml/min N_2 ; makeup gas and ablated aerosol mixed in 30 cm^3 syringe mixer volume
detection system	discrete dynode secondary electron multiplier
masses measured	238, 235, 232, 208-206, 204
dwell times	20 ms: 232, 238; 30 ms: 235, 208-206; 40 ms: 204; total sweep time 200 ms
deadtime	40 ns
data processing	
gas blank	25 second on peak zero subtraction
calibration strategy	LH9415 used as primary reference material, OG1 used for secondary validation
reference material	LH9415 (Ashton et al 1999, Heaman, unpublished data); OG1 (Stern et al 2009)
data processing	Iolite "Vizual Age" (Petras and Kamber 2012), U-Pb fractionation and normalization, uncertainty propagation in external spreadsheet
mass discrimination	normalized to LH9415
common Pb correction	Andersen (2002)
uncertainty level/propagation	Uncertainties are 2 sigma absolute. External uncertainties propagated by quadratic addition.

Table A.2 Summary of LA-ICP-MS secondary standards

Og-1 Standards	207Pb/ 206Pb	207Pb/ 206Pb	207Pb/ U235	207Pb/ 235U	206Pb/ 238U	206Pb/ 238U	207Pb/ 206Pb age	207Pb/ 206Pb age
Sample run	**mean**	**st.dev**	**mean**	**st.dev**	**mean**	**st.dev**	**mean**	**st.dev**
AVR16-16,-15,-14 (c)	0.294	0.015	27.45	3.86	0.673	0.077	3438.82	88.77
AVR16-13 (c)	0.298	0.002	28.40	0.84	0.691	0.020	3461.20	9.62
AVR16-12,-11 (c)	0.300	0.003	28.31	1.69	0.683	0.038	3472.45	16.55
AVR16-15,-14 (f)	0.300	0.002	28.88	3.71	0.699	0.090	3467.65	10.72
AVR16-13,-12,-11 (f)	0.295	0.007	29.92	2.62	0.735	0.057	3445.22	37.34
GSB17-B1,-C1	0.298	0.002	29.36	0.54	0.715	0.012	3459.63	8.30
GSB17-C2,-C5	0.299	0.002	29.98	0.46	0.728	0.008	3462.47	11.83
GSB17-D1,-D2	0.299	0.002	29.27	0.63	0.711	0.016	3463.75	9.73

(c) denotes coarse fraction
(f) denotes fine fraction

APPENDIX B. LA-ICP-MS U-Pb ZIRCON RESULTS

* common lead corrected using Anderson method
uncorrected ratios not used in statistical analysis of data

AVR 16 16 > 1mm								207Pb/		207Pb/		206Pb/			Mass	Mass
	207Pb/		207Pb/		206Pb/			206Pb	2 σ	235U	2 σ	238U	2 σ	%	204	206
name	206Pb	2 σ	235U	2 σ	238U	2 σ	ρ	age (Ma)	(Ma)	age (Ma)	(Ma)	age (Ma)	(Ma)	disc.	cps	cps
avr16-497	0.1236	0.0036	6.05	0.27	0.355	0.012	0.762	2009	51	1984	38	1959	58	2.5	9.5	44900
avr16-422	0.1586	0.0041	9.52	0.40	0.436	0.014	0.780	2441	43	2390	37	2330	63	4.7	34.3	123700
avr16-551	0.1695	0.0067	11.99	0.80	0.513	0.027	0.802	2553	65	2604	60	2669	116	-4.4	6.3	209000
avr16-553	0.1708	0.0089	11.09	0.87	0.471	0.028	0.748	2565	84	2531	70	2488	120	3.1	19.6	57400
avr16-472	0.1717	0.0049	11.91	0.51	0.503	0.016	0.751	2574	47	2598	39	2628	69	-2.0	9.1	62700
avr16-566	0.1721	0.0085	11.41	0.87	0.481	0.028	0.758	2578	81	2558	69	2532	120	1.8	13.7	87000
avr16-523	0.1721	0.0048	11.20	0.51	0.472	0.017	0.784	2578	46	2540	41	2491	73	3.5	14.1	48800
avr16-532	0.1727	0.0051	11.96	0.54	0.502	0.017	0.753	2584	49	2602	41	2624	73	-1.5	6.4	69500
avr16-548	0.1743	0.0046	11.87	0.51	0.494	0.017	0.791	2599	43	2594	39	2588	72	0.4	10.4	92100
avr16-411	0.1823	0.0047	12.83	0.51	0.511	0.015	0.759	2674	42	2667	37	2659	65	0.6	2.4	139800
avr16-427	0.1845	0.0060	12.85	0.68	0.505	0.021	0.788	2694	53	2668	48	2635	89	2.2	7.6	49100
avr16-552	0.1959	0.0106	14.80	1.18	0.548	0.032	0.736	2792	86	2803	73	2817	133	-0.9	15.6	72000
avr16-455	0.2045	0.0070	16.10	0.93	0.571	0.027	0.809	2862	54	2883	54	2912	109	-1.7	5.2	26300
avr16-519	0.2076	0.0057	16.32	0.83	0.570	0.024	0.842	2887	44	2895	48	2908	99	-0.7	4.4	45800
avr16-440	0.2079	0.0096	16.68	1.27	0.582	0.035	0.797	2889	73	2917	70	2957	142	-2.3	5.7	17400
avr16-478	0.2090	0.0067	15.88	0.78	0.551	0.021	0.759	2898	51	2869	46	2829	85	2.4	7.1	70200
avr16-504	0.2091	0.0056	15.54	0.65	0.539	0.017	0.766	2899	43	2849	39	2779	72	4.3	4.3	30400
avr16-573	0.2092	0.0060	15.48	0.67	0.537	0.017	0.749	2899	46	2845	41	2770	73	4.7	5.6	65200
avr16-424	0.2099	0.0060	16.41	0.74	0.567	0.020	0.775	2905	45	2901	42	2895	81	0.3	6.7	19460
avr16-530	0.2121	0.0054	16.09	0.66	0.550	0.018	0.782	2922	41	2882	39	2826	73	3.4	5.8	43300
avr16-524	0.2166	0.0066	17.50	0.84	0.586	0.022	0.778	2956	48	2963	45	2973	89	-0.6	16.6	85200
avr16-527	0.2258	0.0072	17.90	0.87	0.575	0.021	0.753	3023	51	2984	46	2928	86	3.2	10	140000
avr16-597	0.2487	0.0077	20.78	0.99	0.606	0.022	0.758	3177	48	3128	45	3054	87	4.0	7	108600
avr16-569	0.2620	0.0126	22.76	1.70	0.630	0.036	0.764	3259	74	3217	70	3150	141	3.5	13	114600
avr16-444	0.2630	0.0135	24.66	2.32	0.680	0.054	0.838	3265	79	3295	88	3344	203	-2.4	4.1	14660
avr16-456	0.2684	0.0094	24.39	1.42	0.659	0.031	0.797	3297	54	3284	55	3263	118	1.0	14	37400
avr16-475	0.2708	0.0073	23.83	0.99	0.638	0.020	0.760	3311	42	3261	40	3182	79	4.0	7.1	45400
avr16-454	0.2710	0.0163	24.40	2.07	0.653	0.039	0.703	3312	91	3284	79	3240	150	2.2	6.3	18800
avr16-585	0.2747	0.0074	24.09	1.05	0.636	0.022	0.789	3333	41	3272	42	3173	86	5.0	12.2	140300
avr16-415	0.2749	0.0071	24.67	0.99	0.651	0.020	0.764	3334	40	3295	38	3231	77	3.2	14.5	66570
avr16-575	0.2750	0.0072	24.08	1.04	0.635	0.022	0.797	3335	40	3272	41	3169	86	5.2	12.3	77600
avr16-536	0.2753	0.0078	25.24	1.19	0.665	0.025	0.799	3336	44	3318	45	3287	96	1.5	31.2	136700
avr16-409	0.2759	0.0075	24.50	1.14	0.644	0.025	0.816	3340	42	3288	45	3205	96	4.2	140	251200
avr16-570	0.2779	0.0086	24.87	1.26	0.649	0.026	0.793	3351	47	3303	48	3224	101	3.9	11.4	140100
avr16-562	0.2780	0.0173	24.99	2.43	0.652	0.049	0.769	3352	94	3308	91	3236	188	3.6	11.8	68800
avr16-510	0.2788	0.0069	25.33	1.01	0.659	0.021	0.784	3356	38	3321	38	3263	80	2.8	6.3	85900
avr16-571	0.2794	0.0087	26.00	1.35	0.675	0.028	0.798	3360	48	3347	49	3325	107	1.0	17.2	276000
avr16-474	0.2799	0.0084	25.86	1.19	0.670	0.023	0.757	3362	46	3341	44	3306	89	1.7	5.1	24210
avr16-545	0.2804	0.0072	26.95	1.15	0.697	0.024	0.803	3365	39	3382	41	3409	91	-1.3	9.5	97600
avr16-494	0.2804	0.0081	26.41	1.31	0.683	0.027	0.811	3365	45	3362	47	3356	104	0.3	8.2	43200
avr16-526	0.2807	0.0083	26.47	1.22	0.684	0.024	0.767	3367	45	3364	44	3360	92	0.2	2.2	102900
avr16-511	0.2809	0.0074	25.76	1.08	0.665	0.022	0.779	3368	40	3337	40	3287	83	2.5	10	49000
avr16-484	0.2811	0.0076	26.51	1.13	0.684	0.023	0.774	3369	42	3366	41	3360	86	0.3	2.7	30800
avr16-469	0.2815	0.0073	26.66	1.12	0.687	0.023	0.785	3371	40	3371	40	3371	86	0.0	4.9	36200
avr16-513	0.2816	0.0071	25.45	1.04	0.656	0.021	0.787	3372	39	3326	39	3250	81	3.8	13.5	99000
avr16-512	0.2819	0.0074	26.58	1.08	0.684	0.021	0.763	3373	40	3368	39	3359	81	0.4	11.3	45100
avr16-593	0.2822	0.0073	25.76	1.07	0.662	0.022	0.783	3375	40	3337	40	3275	83	3.1	27	129100
avr16-495	0.2825	0.0076	25.36	1.09	0.651	0.022	0.780	3377	41	3322	41	3232	85	4.5	50	69500
avr16-485	0.2828	0.0088	25.77	1.22	0.661	0.024	0.756	3378	48	3338	45	3271	91	3.3	4.7	32800
avr16-481	0.2832	0.0085	26.94	1.25	0.690	0.024	0.763	3381	46	3381	44	3383	92	-0.1	7.1	20110
avr16-576	0.2836	0.0074	26.11	1.06	0.668	0.021	0.765	3383	40	3351	39	3297	79	2.6	5.8	65600
avr16-434	0.2837	0.0091	26.87	1.40	0.687	0.028	0.787	3383	49	3379	50	3371	107	0.4	1.7	45700
avr16-568	0.2840	0.0138	26.27	2.05	0.671	0.041	0.783	3385	74	3357	73	3310	156	2.3	19.8	33200
avr16-506	0.2840	0.0077	25.53	1.13	0.652	0.023	0.791	3385	42	3329	42	3236	89	4.6	37	187000
avr16-468	0.2847	0.0074	27.39	1.11	0.698	0.022	0.768	3389	40	3397	39	3412	82	-0.7	1.6	79600
avr16-442	0.2850	0.0155	26.64	2.07	0.678	0.038	0.713	3391	82	3370	73	3337	143	1.6	3.8	58000
avr16-507	0.2863	0.0073	25.70	1.08	0.651	0.022	0.798	3398	39	3335	40	3232	85	5.1	11.9	80300

avr16-503	0.2868	0.0079	26.20	1.08	0.663	0.020	0.748	3400	42	3354	40	3277	79	3.8	5.9	38020
avr16-564	0.2887	0.0104	26.43	1.58	0.664	0.032	0.796	3411	55	3363	57	3283	121	3.9	7.1	66200
avr16-496	0.2888	0.0075	26.73	1.11	0.671	0.022	0.776	3411	40	3374	40	3311	83	3.0	8.5	51500
avr16-410	0.2942	0.0093	27.73	1.24	0.684	0.022	0.714	3440	48	3410	43	3359	83	2.4	10.6	67000
avr16-529	0.3039	0.0083	29.33	1.27	0.700	0.024	0.775	3490	42	3465	42	3421	89	2.0	8.6	55300
avr16-413	0.3039	0.0084	28.45	1.21	0.679	0.022	0.762	3490	42	3435	41	3341	84	4.5	17.9	57100
avr16-437	0.3070	0.0158	29.46	2.46	0.696	0.046	0.787	3506	77	3469	79	3405	171	2.9	4.2	34400
avr16-574	0.3120	0.0092	30.24	1.62	0.703	0.031	0.835	3531	45	3495	51	3432	118	2.9	-5	133500
avr16-470	0.3179	0.0096	31.56	1.61	0.720	0.030	0.805	3560	46	3537	49	3496	110	1.8	1.9	27180
avr16-538	0.3201	0.0099	30.85	1.39	0.699	0.023	0.729	3570	47	3514	44	3417	87	4.5	5.9	8300
avr16-595	0.3211	0.0090	32.05	1.52	0.724	0.028	0.805	3575	43	3552	46	3511	102	1.8	48	80200
avr16-467	0.3227	0.0083	32.66	1.36	0.734	0.024	0.784	3583	39	3570	40	3548	88	1.0	3.1	48190
avr16-412	0.3234	0.0086	30.98	1.28	0.695	0.022	0.764	3586	40	3518	40	3401	83	5.4	9.7	50400
avr16-446	0.3240	0.0142	33.55	2.19	0.751	0.036	0.739	3589	66	3597	62	3611	132	-0.6	1.6	47300
avr16-431	0.3241	0.0083	32.64	1.32	0.731	0.023	0.775	3589	39	3570	39	3535	85	1.5	3	35300
avr16-433	0.3255	0.0092	32.13	1.41	0.716	0.024	0.763	3596	43	3554	42	3481	89	3.3	5.3	28660
avr16-482	0.3260	0.0095	33.22	1.64	0.739	0.029	0.805	3598	44	3587	47	3567	108	0.9	6.8	52600
avr16-449	0.3263	0.0100	33.47	1.72	0.744	0.031	0.805	3600	46	3595	49	3585	113	0.4	2.6	42800
avr16-498	0.3282	0.0087	33.35	1.44	0.737	0.025	0.787	3609	40	3591	42	3559	92	1.4	7.5	65800
avr16-450	0.3400	0.0098	33.85	1.64	0.722	0.028	0.805	3663	43	3606	47	3504	105	4.5	44.4	153000
avr16-463	0.3439	0.0097	35.42	1.52	0.747	0.024	0.757	3680	42	3650	42	3596	89	2.3	5.8	35590
avr16-407	0.3459	0.0098	36.44	1.55	0.764	0.024	0.746	3689	43	3678	41	3659	88	0.8	12.1	41070
avr16-438	0.3460	0.0321	37.69	5.86	0.790	0.099	0.803	3689	135	3712	143	3753	346	-1.7	8.7	76500
avr16-429	0.3479	0.0113	35.69	1.93	0.744	0.032	0.799	3698	49	3658	52	3585	118	3.1	9.6	35700
avr16-589	0.3535	0.0118	36.02	1.95	0.739	0.031	0.787	3722	50	3667	52	3567	115	4.4	9.5	23300
avr16-462	0.3552	0.0094	38.00	1.60	0.776	0.025	0.779	3729	40	3720	41	3703	92	0.7	13.4	37600
avr16-508	0.3601	0.0110	38.58	1.77	0.777	0.026	0.744	3750	46	3735	44	3706	95	1.2	3.2	47630
avr16-561	0.3700	0.0174	39.49	3.20	0.774	0.051	0.815	3791	69	3758	77	3695	183	2.6	21.2	50800
avr16-476	0.3704	0.0100	38.46	1.78	0.753	0.028	0.811	3793	40	3732	45	3619	103	4.8	3.1	55100
avr16-596	0.3714	0.0107	40.10	1.75	0.783	0.026	0.751	3797	43	3773	42	3728	92	1.9	15.5	108700
avr16-541	0.3868	0.0103	42.03	1.74	0.788	0.025	0.764	3859	40	3820	40	3746	89	3.0	18.6	101600
avr16-414	0.4097	0.0104	45.11	1.82	0.799	0.025	0.778	3945	37	3890	39	3784	89	4.3	1.6	82500
> 5% Disc.																
avr16-563*	0.1210	0.0133	5.46	0.82	0.327	0.033	0.680	1971	184	1894	121	1824	160	8.1	327	105600
avr16-563	0.2980	0.0166	16.67	1.79	0.406	0.037	0.856	3460	84	2916	98	2197	169	57.5	327	105600
avr16-466*	0.1244	0.0066	5.73	0.43	0.334	0.018	0.710	2020	91	1936	63	1858	86	8.7	40.5	55300
avr16-466	0.2024	0.0093	10.24	0.88	0.367	0.027	0.844	2846	73	2456	77	2015	124	41.2	40.5	55300
avr16-598	0.1716	0.0049	10.77	0.47	0.455	0.015	0.757	2573	47	2503	40	2418	67	6.4	22.9	173000
avr16-572*	0.1739	0.0057	10.88	0.53	0.454	0.016	0.738	2596	54	2513	44	2413	72	7.6	13	19700
avr16-572	0.1846	0.0062	11.70	0.81	0.460	0.028	0.876	2695	54	2581	63	2439	123	10.5	13	19700
avr16-525	0.1796	0.0060	11.22	0.56	0.453	0.016	0.734	2649	55	2541	45	2409	73	10.0	11.9	14750
avr16-584	0.1798	0.0049	11.58	0.58	0.467	0.019	0.838	2651	44	2571	45	2470	85	7.3	16.5	78600
avr16-487	0.1808	0.0060	11.79	0.64	0.473	0.020	0.792	2660	54	2588	50	2497	88	6.5	11.1	41000
avr16-425	0.1814	0.0053	11.71	0.54	0.468	0.017	0.777	2666	48	2581	42	2475	74	7.7	40.2	48360
avr16-522	0.1815	0.0049	11.74	0.50	0.469	0.016	0.776	2667	44	2584	39	2480	68	7.5	22.8	224800
avr16-581	0.1863	0.0054	12.33	0.55	0.480	0.016	0.764	2710	47	2630	41	2527	71	7.2	57	49200
avr16-557	0.1939	0.0049	13.11	0.53	0.490	0.015	0.778	2776	41	2688	37	2572	66	7.9	9.9	99200
avr16-464	0.2071	0.0056	14.53	0.61	0.509	0.016	0.768	2883	43	2785	39	2652	70	8.7	14.7	55200
avr16-483	0.2160	0.0112	15.40	1.28	0.517	0.034	0.780	2951	82	2840	76	2686	141	9.9	8.7	210800
avr16-502	0.2408	0.0067	18.33	0.82	0.552	0.019	0.785	3125	43	3007	42	2833	80	10.3	2.9	25950
avr16-439	0.2410	0.0179	19.34	2.17	0.582	0.049	0.749	3127	114	3059	103	2957	197	5.7	9.1	36700
avr16-458	0.2601	0.0079	21.19	1.14	0.591	0.026	0.825	3247	47	3148	51	2993	106	8.5	14.8	63200
avr16-554	0.2640	0.0095	22.28	1.31	0.612	0.028	0.788	3271	56	3196	55	3078	112	6.3	84	45300
avr16-509	0.2751	0.0070	23.93	1.03	0.631	0.022	0.806	3335	39	3266	41	3154	86	5.8	9.8	63300
avr16-567	0.2770	0.0230	23.91	2.94	0.626	0.057	0.739	3346	124	3265	113	3134	222	6.8	139	91400
avr16-432	0.2781	0.0074	23.24	1.04	0.606	0.022	0.802	3352	41	3237	43	3054	87	9.8	19.3	94300
avr16-421	0.2787	0.0075	24.29	1.08	0.632	0.022	0.797	3356	41	3280	43	3157	88	6.3	10.3	95700
avr16-542	0.2866	0.0072	24.95	1.00	0.631	0.020	0.778	3399	39	3306	38	3155	77	7.8	19.4	61500
avr16-531	0.2880	0.0076	25.04	1.02	0.631	0.019	0.760	3407	41	3310	39	3152	77	8.1	38.4	63600
avr16-528	0.2951	0.0086	26.20	1.15	0.644	0.021	0.746	3445	45	3354	42	3205	82	7.5	8.6	33600
avr16-403	0.3039	0.0092	27.82	1.25	0.664	0.022	0.741	3490	46	3413	43	3283	85	6.3	8.7	22600
avr16-514	0.3086	0.0094	27.83	1.33	0.654	0.024	0.772	3514	46	3413	46	3244	93	8.3	9.8	26000
avr16-423	0.3148	0.0079	29.70	1.22	0.684	0.022	0.789	3545	38	3477	39	3360	84	5.5	-0.1	108100
avr16-488	0.3204	0.0088	29.33	1.26	0.664	0.022	0.773	3572	41	3465	41	3283	85	8.8	5.3	36400
avr16-477	0.3212	0.0094	30.65	1.40	0.692	0.024	0.771	3576	44	3508	44	3390	92	5.5	16	41200
avr16-428	0.3363	0.0112	32.74	1.97	0.706	0.035	0.833	3646	50	3573	58	3443	133	5.9	7.9	163800
avr16-533	0.3527	0.0091	35.01	1.70	0.720	0.030	0.846	3719	39	3639	47	3496	110	6.4	7	135900

avr16-490	0.3570	0.0103	35.74	1.59	0.726	0.025	0.763	3737	43	3659	43	3518	92	6.2	6.5	44300
> 10% Disc.																
avr16-517	0.1687	0.0053	9.26	0.48	0.398	0.017	0.799	2545	52	2364	47	2160	76	17.8	35.7	93600
avr16-518	0.1718	0.0050	10.23	0.48	0.432	0.016	0.776	2575	48	2456	42	2315	70	11.3	36.7	113700
avr16-408	0.1722	0.0046	10.21	0.47	0.430	0.016	0.812	2579	44	2454	41	2306	71	11.8	22.9	118500
avr16-577	0.2039	0.0054	13.33	0.57	0.474	0.016	0.787	2858	43	2703	40	2501	70	14.3	6.5	157900
avr16-417	0.2088	0.0056	14.11	0.82	0.490	0.025	0.888	2896	43	2757	54	2571	109	12.7	53	97000
avr16-587	0.2202	0.0064	15.54	0.73	0.512	0.019	0.789	2982	46	2849	44	2665	81	11.9	16.6	80900
avr16-580	0.2446	0.0089	17.23	1.09	0.511	0.027	0.820	3150	56	2948	59	2661	112	18.4	7.2	50500
avr16-400	0.2555	0.0069	18.32	1.04	0.520	0.026	0.878	3219	42	3007	53	2699	109	19.3	47.1	259300
avr16-582	0.2576	0.0076	18.54	1.04	0.522	0.025	0.853	3232	46	3018	53	2708	105	19.4	125	284000
avr16-426	0.2582	0.0086	19.08	0.96	0.536	0.020	0.749	3236	52	3046	48	2767	84	17.0	36	75400
avr16-555	0.2593	0.0074	18.63	0.97	0.521	0.023	0.838	3242	44	3023	49	2703	96	19.9	14.4	479000
avr16-491	0.2636	0.0079	20.54	1.12	0.565	0.026	0.837	3268	46	3117	52	2887	106	13.2	23.3	96900
avr16-404	0.2657	0.0069	21.14	0.92	0.577	0.020	0.799	3281	40	3145	41	2936	81	11.7	16	141600
avr16-550	0.2671	0.0086	19.56	1.12	0.531	0.025	0.826	3289	50	3070	54	2746	105	19.8	36	109800
avr16-500	0.2746	0.0070	22.03	0.92	0.582	0.019	0.792	3332	40	3185	40	2956	78	12.7	9.1	109000
avr16-583	0.2769	0.0076	21.91	1.13	0.574	0.025	0.849	3346	42	3180	49	2924	103	14.4	11.9	87400
avr16-420	0.2771	0.0081	21.37	0.93	0.559	0.018	0.741	3347	45	3155	41	2864	74	16.9	9.8	46600
avr16-520	0.2781	0.0074	22.16	1.00	0.578	0.021	0.811	3352	41	3191	43	2941	86	14.0	16.5	148800
avr16-501	0.2791	0.0069	23.09	0.98	0.600	0.021	0.811	3358	38	3231	40	3030	82	10.8	33.2	176500
avr16-534	0.2831	0.0080	22.37	1.04	0.573	0.021	0.793	3380	43	3200	44	2920	86	15.8	23.3	65500
avr16-473	0.2845	0.0092	22.91	1.16	0.584	0.023	0.767	3388	50	3223	48	2965	91	14.3	22.4	31400
avr16-546	0.2884	0.0077	23.30	1.05	0.586	0.021	0.806	3409	41	3240	43	2973	86	14.7	61	165600
avr16-586	0.2902	0.0083	22.89	1.23	0.572	0.026	0.846	3419	44	3222	51	2916	106	17.2	29.5	314000
avr16-418	0.3007	0.0079	23.88	1.02	0.576	0.019	0.788	3474	40	3264	41	2932	79	18.5	15.9	63600
avr16-489	0.3127	0.0103	27.55	1.46	0.639	0.027	0.783	3534	50	3403	51	3185	103	11.0	12.1	99500
avr16-457	0.3215	0.0083	27.44	1.23	0.619	0.023	0.819	3577	39	3399	43	3106	90	15.2	6.5	65500
avr16-443	0.3230	0.0214	27.66	3.37	0.621	0.064	0.839	3584	98	3407	113	3114	248	15.1	11.1	58400
avr16-445	0.3520	0.0235	32.42	3.22	0.668	0.049	0.739	3716	98	3563	93	3298	187	12.7	38	133500
avr16-549	0.3557	0.0121	30.46	1.57	0.621	0.024	0.751	3732	51	3502	49	3114	95	19.8	92	34500
avr16-499	0.3558	0.0093	33.41	1.47	0.681	0.024	0.806	3732	39	3593	43	3348	92	11.5	10.9	72600
avr16-479	0.3673	0.0113	35.30	1.63	0.697	0.024	0.746	3780	46	3647	45	3409	91	10.9	50.4	52700
avr16-419	0.3676	0.0115	33.55	1.98	0.662	0.033	0.848	3782	47	3597	57	3275	127	15.5	23.6	70100
avr16-547	0.3963	0.0112	37.65	1.97	0.689	0.030	0.843	3895	42	3711	51	3379	115	15.3	5.5	64000
> 20% Disc.																
avr16-471	0.1453	0.0061	5.19	0.62	0.259	0.029	0.937	2291	70	1851	97	1485	147	54.3	66	99100
avr16-588	0.1562	0.0040	5.26	0.24	0.244	0.009	0.831	2415	43	1862	39	1408	49	71.5	104	211200
avr16-465	0.1645	0.0046	5.55	0.32	0.245	0.012	0.870	2502	47	1909	48	1412	63	77.2	39.5	129900
avr16-405	0.1680	0.0050	5.00	0.31	0.216	0.012	0.879	2538	49	1820	51	1261	62	101.3	16.9	34500
avr16-579	0.1722	0.0058	8.76	0.44	0.369	0.013	0.730	2579	56	2314	44	2025	63	27.4	141	191000
avr16-565	0.1804	0.0075	9.23	0.78	0.371	0.027	0.869	2657	68	2361	74	2034	127	30.6	85	93600
avr16-451	0.1856	0.0057	10.09	0.48	0.394	0.014	0.766	2704	50	2443	43	2143	66	26.2	70.8	58500
avr16-543	0.1879	0.0062	8.67	0.44	0.335	0.013	0.760	2724	53	2304	45	1862	62	46.3	48.9	116100
avr16-578	0.1933	0.0064	9.59	0.46	0.360	0.013	0.726	2770	53	2396	43	1981	59	39.9	42	256000
avr16-537	0.1952	0.0071	7.56	0.41	0.281	0.011	0.738	2786	58	2180	47	1596	56	74.5	388	89800
avr16-492	0.1975	0.0101	6.97	0.73	0.256	0.023	0.870	2806	82	2108	89	1469	118	90.9	306	77800
avr16-461	0.2006	0.0053	11.17	0.51	0.404	0.015	0.812	2831	43	2537	41	2186	68	29.5	10.8	108400
avr16-594	0.2029	0.0062	8.35	0.39	0.299	0.010	0.748	2850	49	2270	41	1684	51	69.2	235	316200
avr16-493	0.2130	0.0168	7.08	1.14	0.241	0.034	0.872	2929	122	2121	134	1392	173	110.4	278	49100
avr16-559	0.2179	0.0103	6.58	0.56	0.219	0.015	0.830	2965	74	2057	72	1277	81	132.3	350	234400
avr16-430	0.2266	0.0058	14.13	0.58	0.452	0.014	0.781	3028	40	2759	38	2405	64	25.9	21.9	106200
avr16-516	0.2326	0.0068	12.87	0.60	0.401	0.015	0.780	3070	46	2670	43	2175	67	41.1	28	166000
avr16-592	0.2328	0.0067	13.00	0.66	0.405	0.017	0.822	3071	45	2680	46	2192	77	40.1	29.1	317000
avr16-459	0.2370	0.0072	14.65	0.68	0.448	0.016	0.757	3100	48	2793	43	2388	70	29.8	144	179100
avr16-406	0.2520	0.0068	8.24	0.40	0.237	0.010	0.837	3197	42	2258	43	1372	51	133.0	312	67200
avr16-435	0.2550	0.0143	17.09	1.83	0.486	0.044	0.851	3216	86	2940	98	2553	189	26.0	5	119300
avr16-539	0.2630	0.0070	17.15	0.94	0.473	0.023	0.873	3265	41	2943	51	2497	98	30.8	9.4	197400
avr16-560	0.2650	0.0200	16.33	1.89	0.447	0.039	0.758	3277	114	2896	105	2382	172	37.6	76	145400
avr16-558	0.2660	0.0181	15.55	1.47	0.424	0.028	0.694	3283	103	2850	87	2279	125	44.1	70	91500
avr16-544	0.2660	0.0191	13.79	2.06	0.376	0.049	0.877	3283	108	2735	132	2058	227	59.5	63	159200
avr16-515	0.2662	0.0069	14.99	0.63	0.408	0.013	0.783	3284	40	2815	39	2208	61	48.7	53	115900
avr16-448	0.2672	0.0106	14.85	0.99	0.403	0.021	0.802	3290	61	2805	61	2183	98	50.7	192	22100
avr16-505	0.2694	0.0072	19.54	0.97	0.526	0.022	0.844	3303	41	3069	47	2725	93	21.2	13.6	177400
avr16-402	0.2701	0.0077	18.77	0.88	0.504	0.019	0.796	3307	44	3030	44	2631	80	25.7	27.9	177500
avr16-416	0.2715	0.0089	16.15	0.78	0.431	0.015	0.735	3315	50	2886	45	2312	68	43.4	36.3	163900
avr16-401	0.2722	0.0081	18.63	0.84	0.496	0.017	0.754	3319	46	3023	43	2598	73	27.7	79	138300

avr16-441	0.2810	0.0201	14.14	1.54	0.365	0.030	0.753	3368	108	2759	98	2006	140	67.9	376	121000
avr16-540	0.2848	0.0074	16.18	1.17	0.412	0.028	0.933	3389	40	2887	67	2224	125	52.4	181	68900
avr16-453	0.2860	0.0121	13.80	1.06	0.350	0.022	0.835	3396	64	2736	70	1935	106	75.5	76.8	76900
avr16-447	0.2893	0.0116	18.95	1.21	0.475	0.023	0.776	3414	61	3039	60	2505	102	36.3	101	42700
avr16-591	0.2894	0.0087	17.93	0.84	0.449	0.016	0.768	3414	46	2986	44	2393	71	42.7	358	121600
avr16-556	0.2928	0.0082	20.79	1.03	0.515	0.021	0.826	3433	43	3129	47	2678	89	28.2	91	55500
avr16-436	0.2940	0.0174	17.88	2.11	0.441	0.045	0.864	3439	89	2983	107	2355	198	46.0	150	55200
avr16-486	0.2943	0.0091	9.13	1.28	0.225	0.031	0.975	3440	47	2351	121	1308	160	163.0	60	30400
avr16-480	0.3096	0.0087	24.37	1.15	0.571	0.022	0.804	3519	43	3283	45	2912	88	20.8	16.3	205000
avr16-452	0.3234	0.0093	26.04	1.26	0.584	0.023	0.802	3586	44	3348	46	2965	91	20.9	67.4	81600
avr16-460	0.3292	0.0092	26.58	1.15	0.586	0.019	0.765	3613	42	3368	42	2971	78	21.6	8.7	81700
avr16-521	0.3390	0.0136	27.02	2.19	0.578	0.041	0.868	3658	60	3384	76	2941	164	24.4	4.1	171700
avr16-535	0.3545	0.0104	20.72	1.12	0.424	0.019	0.842	3726	44	3126	51	2279	87	63.5	245	81400
avr16-590	0.3558	0.0096	21.93	1.20	0.447	0.021	0.870	3732	41	3181	52	2382	94	56.7	1128	75600

AVR 16 15 > 1mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr15-337	0.1952	0.0056	26.89	1.65	0.999	0.054	0.884	2786	46	3379	59	4465	173	-37.6	465	455000
> -5% Disc.																
avr15-319	0.1579	0.0078	9.49	0.70	0.436	0.024	0.737	2433	82	2387	65	2333	105	4.3	36.5	14500
avr15-233	0.1621	0.0103	10.28	0.98	0.460	0.033	0.746	2478	104	2460	85	2440	143	1.6	16	104800
avr15-373	0.1636	0.0056	10.17	0.74	0.451	0.029	0.885	2493	56	2451	65	2400	128	3.9	13	207300
avr15-239	0.1670	0.0108	10.96	1.10	0.476	0.037	0.767	2528	104	2520	89	2510	158	0.7	17	45500
avr15-357	0.1687	0.0079	11.44	0.91	0.492	0.031	0.807	2545	76	2560	71	2579	134	-1.3	1	55500
avr15-353	0.1700	0.0101	11.51	0.99	0.491	0.031	0.722	2558	96	2565	77	2575	131	-0.7	8	47000
avr15-385	0.1700	0.0050	11.16	0.66	0.476	0.024	0.868	2558	48	2536	53	2510	105	1.9	7.7	55000
avr15-271	0.1704	0.0049	11.41	0.51	0.486	0.017	0.767	2562	47	2558	41	2552	72	0.4	6.1	70900
avr15-224	0.1704	0.0049	10.90	0.58	0.464	0.021	0.842	2562	47	2515	49	2457	91	4.2	14.8	156100
avr15-262	0.1712	0.0047	11.49	0.47	0.487	0.015	0.746	2569	45	2564	37	2557	64	0.5	4.1	46440
avr15-210	0.1717	0.0046	11.03	0.45	0.466	0.015	0.761	2574	44	2525	38	2465	64	4.4	3.2	72200
avr15-299	0.1719	0.0047	11.45	0.48	0.483	0.015	0.757	2576	45	2561	39	2541	66	1.4	11.1	64700
avr15-247*	0.1723	0.0099	11.31	0.98	0.476	0.031	0.753	2580	93	2549	78	2510	135	2.8	204	67100
avr15-247	0.2110	0.0139	14.42	1.45	0.496	0.037	0.753	2913	103	2778	91	2597	159	12.2	204	67100
avr15-307	0.1726	0.0074	11.02	0.79	0.463	0.027	0.801	2583	70	2525	65	2453	116	5.3	20	24700
avr15-220	0.1727	0.0047	11.34	0.49	0.476	0.016	0.774	2584	45	2551	40	2510	69	2.9	10.7	155000
avr15-377	0.1731	0.0086	11.79	1.08	0.494	0.038	0.838	2588	81	2588	82	2588	161	0.0	163	97000
avr15-274	0.1732	0.0052	11.75	0.56	0.492	0.018	0.773	2589	49	2585	43	2579	77	0.4	10.5	31400
avr15-365	0.1734	0.0104	11.86	1.07	0.496	0.033	0.744	2591	97	2593	81	2597	142	-0.2	11.2	59600
avr15-270	0.1735	0.0048	11.87	0.53	0.496	0.017	0.787	2592	45	2594	41	2597	75	-0.2	5.5	183300
avr15-388	0.1735	0.0048	11.78	0.49	0.492	0.015	0.752	2592	45	2587	38	2581	66	0.4	7.2	46200
avr15-399	0.1736	0.0048	11.41	0.50	0.477	0.016	0.779	2593	45	2557	40	2513	71	3.2	6.9	51200
avr15-305	0.1740	0.0050	11.47	0.50	0.478	0.016	0.751	2596	47	2562	40	2519	68	3.1	12.5	24900
avr15-329	0.1748	0.0046	11.81	0.49	0.490	0.015	0.769	2604	43	2589	38	2570	67	1.3	7.1	69800
avr15-227	0.1757	0.0101	11.70	1.10	0.483	0.036	0.791	2613	93	2581	84	2540	154	2.8	34	75400
avr15-283	0.1759	0.0067	11.59	0.74	0.478	0.024	0.799	2615	62	2572	58	2519	105	3.8	23	114800
avr15-266	0.1763	0.0059	12.37	0.66	0.509	0.021	0.776	2618	55	2633	49	2652	89	-1.3	3	120000
avr15-280	0.1787	0.0057	12.33	0.56	0.500	0.016	0.719	2641	52	2630	42	2615	70	1.0	4.5	19800
avr15-336	0.1793	0.0048	11.94	0.50	0.483	0.016	0.777	2646	44	2600	39	2541	69	4.2	94	115700
avr15-328	0.1801	0.0046	12.54	0.51	0.505	0.016	0.774	2654	42	2646	37	2635	67	0.7	12.3	90600
avr15-378	0.1810	0.0055	12.58	0.58	0.504	0.018	0.752	2662	50	2649	43	2631	75	1.2	4.4	64500
avr15-316	0.1810	0.0060	12.35	0.61	0.495	0.018	0.740	2662	54	2632	45	2592	77	2.7	37.9	53400
avr15-345	0.1852	0.0051	13.01	0.57	0.509	0.017	0.773	2700	45	2680	40	2654	73	1.7	11.4	26900
avr15-360	0.1862	0.0062	12.91	0.75	0.503	0.024	0.821	2709	54	2673	53	2627	102	3.1	17.2	114000
avr15-367	0.2118	0.0096	15.92	1.23	0.545	0.034	0.808	2919	72	2872	71	2804	140	4.1	6.7	120000
avr15-235	0.2130	0.0158	16.71	2.07	0.569	0.056	0.800	2929	115	2918	112	2904	228	0.9	13.2	66900
avr15-252	0.2152	0.0060	17.45	1.56	0.588	0.050	0.951	2945	44	2960	82	2981	200	-1.2	656	422000
avr15-352	0.2381	0.0108	19.04	1.27	0.580	0.028	0.735	3107	70	3044	62	2949	115	5.4	2.7	45500
avr15-371	0.2410	0.0198	20.14	2.49	0.606	0.056	0.746	3127	125	3098	113	3054	220	2.4	3.3	50500
avr15-351	0.2423	0.0090	20.71	1.14	0.620	0.025	0.742	3135	58	3125	52	3110	100	0.8	10.3	38300
avr15-236	0.2430	0.0142	21.38	1.91	0.638	0.043	0.756	3140	90	3156	83	3181	168	-1.3	8.2	30400
avr15-380	0.2442	0.0067	20.77	0.95	0.617	0.023	0.801	3148	43	3128	44	3098	90	1.6	4.1	162400
avr15-231	0.2450	0.0218	21.38	3.02	0.633	0.069	0.777	3153	134	3156	129	3161	269	-0.3	11.1	34000
avr15-202	0.2452	0.0065	21.21	0.86	0.627	0.019	0.759	3154	41	3148	39	3139	76	0.5	15.3	73600
avr15-303	0.2467	0.0072	21.23	0.94	0.624	0.021	0.748	3164	46	3149	42	3126	81	1.2	5.7	20600
avr15-338	0.2494	0.0075	20.63	0.90	0.600	0.019	0.728	3181	47	3121	42	3029	77	5.0	8.8	41950

avr15-301	0.2666	0.0081	24.30	1.10	0.661	0.022	0.739	3286	47	3280	43	3271	85	0.5	5.3	15340
avr15-364	0.2730	0.0220	26.12	3.43	0.694	0.072	0.790	3323	121	3351	121	3398	268	-2.2	23.5	138000
avr15-296	0.2765	0.0078	25.81	1.15	0.677	0.024	0.777	3343	43	3339	43	3333	90	0.3	8.1	86800
avr15-264	0.2768	0.0075	24.54	1.01	0.643	0.020	0.753	3345	42	3290	39	3201	78	4.5	4.2	45740
avr15-386	0.2786	0.0075	25.20	1.03	0.656	0.020	0.751	3355	41	3316	39	3252	78	3.2	2.4	27780
avr15-321	0.2803	0.0084	25.55	1.12	0.661	0.021	0.730	3365	46	3329	42	3271	81	2.8	6.3	38900
avr15-363	0.2810	0.0155	28.21	2.50	0.728	0.051	0.783	3368	84	3426	83	3526	186	-4.5	5.5	176800
avr15-366	0.2820	0.0146	26.95	2.15	0.693	0.042	0.761	3374	79	3381	75	3394	158	-0.6	5.7	51600
avr15-317	0.2837	0.0082	26.29	1.36	0.672	0.029	0.826	3383	45	3357	49	3314	109	2.1	9	92700
avr15-311	0.2845	0.0080	26.16	1.21	0.667	0.024	0.792	3388	43	3353	44	3294	94	2.8	6.1	23100
avr15-372	0.3020	0.0279	30.15	4.40	0.724	0.082	0.774	3481	136	3492	134	3511	299	-0.9	4.6	54500
avr15-392	0.3174	0.0081	31.37	1.26	0.717	0.022	0.772	3557	39	3531	39	3484	83	2.1	7.3	95500
avr15-232	0.3200	0.0300	30.49	4.27	0.691	0.072	0.743	3570	137	3503	129	3386	268	5.4	111	269000
avr15-368	0.3430	0.0145	36.37	2.49	0.769	0.041	0.787	3676	63	3677	66	3677	149	0.0	5.3	51800
avr15-375	0.3436	0.0105	35.44	1.67	0.748	0.027	0.761	3679	46	3651	46	3600	99	2.2	7.7	20300
avr15-294	0.3579	0.0090	37.15	1.50	0.753	0.024	0.785	3741	38	3698	39	3618	87	3.4	5.9	90900
avr15-292	0.3582	0.0100	37.04	1.59	0.750	0.024	0.757	3742	42	3695	42	3608	89	3.7	10.3	71300
> 5% Disc.																
avr15-300	0.1282	0.0037	6.17	0.29	0.349	0.013	0.789	2073	50	2000	40	1929	61	7.5	10.7	87300
avr15-376*	0.1325	0.0043	6.68	0.33	0.366	0.014	0.755	2131	56	2070	43	2008	65	6.1	60	33000
avr15-376	0.1840	0.0055	9.95	0.69	0.392	0.024	0.901	2689	49	2430	62	2134	112	26.0	60	33000
avr15-369*	0.1390	0.0115	7.36	0.84	0.384	0.030	0.689	2215	137	2156	97	2095	139	5.7	496	129000
avr15-369	0.2190	0.0122	12.98	1.29	0.430	0.035	0.828	2973	87	2678	89	2306	157	29.0	496	129000
avr15-284	0.1602	0.0049	9.61	0.51	0.435	0.019	0.817	2458	51	2398	48	2328	84	5.6	79.9	345000
avr15-240	0.1710	0.0136	10.42	1.19	0.442	0.036	0.718	2567	127	2473	101	2360	160	8.8	28.8	82200
avr15-325	0.1721	0.0053	10.82	0.54	0.456	0.018	0.786	2578	51	2508	45	2422	78	6.5	21.2	53350
avr15-314	0.1727	0.0050	10.97	0.47	0.461	0.015	0.748	2584	47	2521	39	2444	65	5.7	13.4	44500
avr15-308	0.1747	0.0048	11.01	0.48	0.457	0.016	0.784	2603	45	2524	40	2426	69	7.3	12.4	114500
avr15-290*	0.1812	0.0075	11.84	0.80	0.474	0.025	0.786	2664	67	2592	61	2501	109	6.5	106	43900
avr15-290	0.2538	0.0097	18.08	1.37	0.517	0.034	0.865	3209	59	2994	71	2686	143	19.4	106	43900
avr15-302	0.1886	0.0057	12.54	0.57	0.482	0.017	0.751	2730	49	2646	42	2538	71	7.6	17.1	37800
avr15-256	0.2002	0.0065	13.55	0.70	0.491	0.020	0.783	2828	52	2719	48	2575	86	9.8	33.5	116300
avr15-273	0.2003	0.0053	13.78	0.61	0.499	0.018	0.801	2829	42	2735	41	2609	75	8.4	9.5	113400
avr15-260	0.2004	0.0052	13.95	0.65	0.505	0.020	0.830	2829	42	2747	43	2635	83	7.4	233	395000
avr15-309	0.2074	0.0057	14.40	0.61	0.503	0.016	0.762	2885	44	2776	40	2628	69	9.8	2.1	38000
avr15-281	0.2077	0.0059	14.63	0.67	0.511	0.018	0.785	2888	46	2792	43	2661	78	8.5	33.3	53000
avr15-298	0.2107	0.0059	15.51	0.70	0.534	0.019	0.784	2911	45	2847	42	2758	79	5.5	17.2	58700
avr15-251	0.2118	0.0085	15.54	0.90	0.532	0.022	0.720	2919	64	2849	54	2750	93	6.2	12.2	10020
avr15-383	0.2139	0.0062	15.87	0.79	0.538	0.022	0.811	2935	46	2869	46	2775	90	5.8	28.4	80200
avr15-206	0.2752	0.0072	23.49	0.96	0.619	0.019	0.768	3336	40	3247	39	3106	77	7.4	8.1	151800
avr15-268	0.2821	0.0080	24.95	1.04	0.642	0.020	0.732	3375	44	3306	40	3195	77	5.6	16.2	44600
avr15-225	0.2860	0.0121	25.47	1.63	0.646	0.031	0.753	3396	64	3327	61	3213	121	5.7	9.5	50100
avr15-201	0.2863	0.0078	25.32	1.06	0.641	0.020	0.763	3398	42	3320	40	3194	80	6.4	4.3	25500
avr15-205	0.2879	0.0080	25.27	1.06	0.637	0.020	0.747	3406	43	3319	40	3176	78	7.3	7	25880
avr15-286	0.2904	0.0105	25.51	1.60	0.637	0.033	0.818	3420	55	3328	59	3177	127	7.6	17	193700
avr15-215	0.3084	0.0108	27.77	1.60	0.653	0.030	0.792	3513	53	3411	55	3240	115	8.4	73	101500
avr15-279	0.3114	0.0098	27.65	1.32	0.644	0.023	0.756	3528	48	3407	46	3205	91	10.1	17.9	523000
avr15-370	0.3470	0.0225	32.58	3.20	0.681	0.050	0.749	3694	96	3568	92	3348	189	10.3	72	110500
avr15-339	0.3644	0.0106	37.10	1.59	0.739	0.023	0.737	3768	43	3696	41	3565	86	5.7	6.3	16760
avr15-398	0.3887	0.0101	40.94	1.64	0.764	0.023	0.760	3866	39	3794	39	3659	84	5.7	6.3	38700
avr15-310	0.3964	0.0104	40.98	1.67	0.750	0.023	0.765	3895	39	3795	40	3606	85	8.0	13	69700
> 10% Disc.																
avr15-322	0.1508	0.0045	7.42	0.40	0.357	0.016	0.828	2355	50	2164	47	1968	75	19.7	74	241000
avr15-217	0.1555	0.0068	8.30	0.60	0.387	0.022	0.794	2407	72	2264	63	2109	102	14.1	37	244000
avr15-390	0.1643	0.0045	9.04	0.45	0.399	0.017	0.835	2500	46	2342	45	2164	76	15.5	32.5	126500
avr15-267	0.1651	0.0043	9.42	0.43	0.414	0.016	0.823	2509	43	2380	41	2233	71	12.3	270	282000
avr15-229	0.1660	0.0117	9.48	1.03	0.414	0.034	0.761	2518	114	2385	95	2233	154	12.7	39.7	214000
avr15-214	0.1666	0.0048	9.07	0.45	0.395	0.016	0.814	2524	47	2345	44	2146	73	17.6	43.1	89500
avr15-323	0.1725	0.0051	9.49	0.53	0.399	0.019	0.848	2582	49	2387	50	2164	87	19.3	29	87000
avr15-265	0.1761	0.0047	10.66	0.46	0.439	0.015	0.793	2616	43	2494	40	2346	67	11.5	72	89400
avr15-334	0.1763	0.0054	10.77	0.53	0.443	0.017	0.781	2618	50	2503	44	2364	75	10.8	9.2	62800
avr15-242	0.1818	0.0096	10.93	0.84	0.436	0.024	0.728	2669	85	2517	69	2333	109	14.4	5.8	12890
avr15-228	0.1856	0.0081	11.62	0.90	0.454	0.029	0.827	2704	70	2574	70	2413	128	12.0	13.5	52400
avr15-211	0.1907	0.0058	11.34	0.53	0.431	0.015	0.759	2748	49	2551	43	2311	69	18.9	20	20350
avr15-255	0.1978	0.0094	12.08	0.76	0.443	0.018	0.657	2808	75	2611	57	2364	81	18.8	34	48100
avr15-346	0.1990	0.0054	13.03	0.55	0.475	0.015	0.759	2818	44	2682	39	2505	66	12.5	20.3	73600
avr15-243	0.1998	0.0058	12.10	0.56	0.439	0.016	0.781	2825	46	2612	42	2347	71	20.3	32.6	230500

avr15-289	0.2023	0.0078	13.33	0.81	0.478	0.023	0.778	2845	61	2704	56	2519	98	13.0	20.6	217000
avr15-254	0.2063	0.0054	13.95	0.57	0.490	0.015	0.769	2877	42	2746	38	2572	66	11.8	29.2	86500
avr15-349	0.2075	0.0061	13.93	0.81	0.487	0.024	0.864	2886	47	2745	54	2558	105	12.8	18.2	64600
avr15-277	0.2384	0.0083	16.53	0.90	0.503	0.021	0.766	3109	54	2908	51	2627	89	18.4	49.7	168300
avr15-244	0.2464	0.0077	18.01	1.05	0.530	0.026	0.844	3162	49	2990	54	2741	109	15.3	56.5	186200
avr15-269	0.2496	0.0074	17.45	0.80	0.507	0.018	0.765	3182	46	2960	43	2644	76	20.4	16.3	20510
avr15-218	0.2552	0.0083	19.70	1.09	0.560	0.025	0.808	3217	50	3077	52	2867	102	12.2	173	79100
avr15-293	0.2575	0.0066	20.28	0.85	0.571	0.019	0.794	3231	40	3105	40	2913	78	10.9	23.3	168000
avr15-335	0.2648	0.0103	20.63	1.22	0.565	0.025	0.751	3275	60	3121	56	2887	102	13.4	18.2	43000
avr15-330	0.2735	0.0078	22.27	0.95	0.591	0.019	0.743	3326	44	3196	41	2992	76	11.2	6.6	37000
avr15-318	0.2811	0.0108	21.36	1.29	0.551	0.026	0.771	3369	59	3155	57	2829	105	19.1	25.4	87100
avr15-230	0.3020	0.0231	26.07	3.13	0.626	0.058	0.770	3481	114	3349	111	3134	226	11.1	27.3	305000
avr15-263	0.3097	0.0081	26.50	1.10	0.621	0.020	0.780	3519	40	3365	40	3112	80	13.1	12.6	33400
avr15-257	0.3164	0.0095	25.43	1.23	0.583	0.022	0.781	3552	46	3325	46	2961	89	20.0	15.4	260000
avr15-312	0.3233	0.0087	27.66	1.17	0.620	0.020	0.775	3586	41	3407	41	3112	81	15.2	12.2	50300
avr15-350	0.3610	0.0139	34.15	2.19	0.686	0.035	0.799	3754	57	3614	61	3367	133	11.5	8	17300
avr15-207	0.3621	0.0100	34.65	1.55	0.694	0.024	0.788	3759	41	3629	43	3398	92	10.6	17	178500
> 20% Disc.																
avr15-327	0.1370	0.0035	5.49	0.24	0.290	0.010	0.805	2190	44	1898	36	1644	50	33.2	25.6	135100
avr15-219	0.1426	0.0039	6.19	0.28	0.315	0.011	0.798	2259	46	2003	39	1765	55	28.0	33	166800
avr15-397	0.1476	0.0038	4.52	0.20	0.222	0.008	0.806	2318	43	1734	36	1292	41	79.4	34.2	157700
avr15-394	0.1501	0.0045	6.00	0.28	0.290	0.010	0.760	2347	51	1976	40	1641	51	43.0	216	177400
avr15-332	0.1509	0.0039	6.88	0.28	0.331	0.011	0.776	2356	44	2096	36	1841	51	28.0	146	160500
avr15-216	0.1511	0.0095	3.56	0.31	0.171	0.010	0.681	2358	104	1541	66	1018	55	131.8	106	88000
avr15-208	0.1519	0.0041	6.03	0.33	0.288	0.014	0.873	2367	45	1980	47	1632	69	45.1	197	183700
avr15-313	0.1580	0.0107	6.47	0.76	0.297	0.028	0.816	2434	110	2042	98	1676	139	45.2	41.8	137000
avr15-331	0.1595	0.0046	6.66	0.29	0.303	0.010	0.749	2450	48	2067	38	1705	49	43.7	19.4	78400
avr15-324	0.1595	0.0050	6.21	0.30	0.282	0.011	0.768	2450	52	2006	42	1603	53	52.8	560	294000
avr15-389	0.1603	0.0042	4.55	0.28	0.206	0.012	0.907	2459	44	1741	51	1207	62	103.6	26.6	58100
avr15-253	0.1622	0.0051	8.25	0.46	0.369	0.017	0.822	2479	52	2259	49	2025	79	22.4	88	173900
avr15-304	0.1648	0.0053	7.82	0.55	0.344	0.021	0.889	2506	53	2210	61	1906	102	31.5	62	67600
avr15-282	0.1653	0.0055	8.30	0.42	0.364	0.014	0.745	2511	55	2264	44	2002	64	25.4	49	196900
avr15-382	0.1664	0.0049	7.28	0.37	0.317	0.013	0.815	2522	49	2147	45	1777	65	41.9	14.1	48740
avr15-278	0.1679	0.0046	6.64	0.55	0.287	0.023	0.944	2537	46	2065	71	1627	112	56.0	84	92200
avr15-213	0.1682	0.0051	8.47	0.41	0.365	0.014	0.777	2540	50	2282	43	2006	64	26.6	67	76200
avr15-222	0.1696	0.0047	4.33	0.56	0.185	0.024	0.977	2554	45	1698	102	1094	127	133.4	32.4	137000
avr15-248	0.1720	0.0127	9.06	1.04	0.382	0.034	0.769	2577	118	2344	100	2086	156	23.6	46.3	110800
avr15-204	0.1749	0.0052	8.46	0.54	0.351	0.020	0.884	2605	49	2282	56	1939	94	34.3	9.2	31100
avr15-306	0.1752	0.0050	9.53	0.44	0.394	0.014	0.782	2608	47	2390	41	2143	65	21.7	42.1	126900
avr15-320	0.1759	0.0073	9.36	0.68	0.386	0.023	0.819	2615	67	2374	64	2104	106	24.3	25.4	146000
avr15-275	0.1772	0.0048	9.31	0.49	0.381	0.017	0.856	2627	44	2369	47	2081	79	26.2	83	178700
avr15-223	0.1782	0.0062	9.21	0.51	0.375	0.016	0.780	2636	56	2359	49	2053	75	28.4	10.6	13800
avr15-276	0.1794	0.0050	9.71	0.44	0.393	0.014	0.793	2647	45	2408	41	2134	65	24.0	35.5	65500
avr15-384	0.1794	0.0058	9.62	0.69	0.389	0.025	0.890	2647	53	2399	64	2118	114	25.0	21.2	170700
avr15-288	0.1834	0.0069	9.38	0.73	0.371	0.025	0.875	2684	61	2376	69	2034	118	31.9	68	120800
avr15-354	0.1855	0.0054	6.13	0.28	0.240	0.009	0.779	2703	47	1994	39	1384	45	95.3	212	82400
avr15-348	0.1883	0.0066	6.80	0.35	0.262	0.010	0.722	2727	57	2086	44	1500	49	81.8	47	107500
avr15-246	0.1890	0.0119	10.61	0.96	0.407	0.027	0.723	2733	100	2489	81	2201	121	24.2	97	114900
avr15-341	0.1895	0.0050	10.77	0.46	0.412	0.014	0.787	2738	43	2504	39	2225	63	23.0	41.9	86500
avr15-343	0.1912	0.0075	7.67	0.69	0.291	0.024	0.900	2753	63	2193	78	1647	117	67.2	127	79000
avr15-238	0.1920	0.0138	10.32	1.05	0.390	0.028	0.712	2759	113	2464	90	2123	130	30.0	173	108800
avr15-241	0.1928	0.0068	9.20	0.76	0.346	0.026	0.906	2766	56	2358	73	1915	123	44.4	990	355000
avr15-356	0.1940	0.0110	10.03	0.91	0.375	0.026	0.778	2776	90	2438	80	2053	122	35.2	19.5	98900
avr15-285	0.1970	0.0061	7.80	0.42	0.287	0.013	0.823	2802	50	2209	48	1628	64	72.1	356	133000
avr15-212	0.1990	0.0111	6.59	0.53	0.240	0.014	0.721	2818	88	2057	68	1387	72	103.2	477	186400
avr15-249	0.1991	0.0102	10.27	0.86	0.374	0.025	0.787	2819	82	2459	74	2048	114	37.6	148	245000
avr15-297	0.2018	0.0080	4.79	0.39	0.172	0.012	0.871	2841	63	1782	66	1023	66	177.7	171	194000
avr15-291	0.2051	0.0104	11.06	1.00	0.391	0.029	0.828	2867	80	2528	81	2127	134	34.8	620	267000
avr15-259	0.2104	0.0055	9.60	0.42	0.331	0.012	0.802	2909	42	2397	39	1842	56	57.9	15.7	201800
avr15-393	0.2168	0.0069	12.73	0.69	0.426	0.019	0.809	2957	50	2660	50	2288	84	29.3	60.8	189900
avr15-209	0.2248	0.0078	12.27	0.83	0.396	0.023	0.859	3015	55	2626	62	2151	106	40.2	35.3	91000
avr15-361	0.2262	0.0071	13.19	0.86	0.423	0.024	0.877	3025	50	2694	60	2274	109	33.0	29.2	134100
avr15-272	0.2311	0.0067	11.06	0.51	0.347	0.012	0.775	3060	46	2528	42	1921	59	59.3	28.6	151800
avr15-250	0.2472	0.0071	5.11	0.43	0.150	0.012	0.940	3167	45	1838	69	901	66	251.5	470	79000
avr15-391	0.2574	0.0075	15.15	0.92	0.427	0.023	0.878	3231	45	2825	56	2292	102	41.0	32	338200
avr15-342	0.2647	0.0070	17.48	1.32	0.479	0.034	0.937	3275	41	2962	70	2523	146	29.8	39	213000
avr15-381	0.2657	0.0093	18.35	0.92	0.501	0.018	0.722	3281	54	3008	47	2618	78	25.3	32	98100

avr15-344	0.2757	0.0081	20.34	1.16	0.535	0.026	0.857	3339	45	3108	54	2762	109	20.9	33.6	57700
avr15-395	0.2766	0.0077	16.61	0.74	0.435	0.015	0.778	3344	43	2912	42	2330	67	43.5	65.4	289300
avr15-226	0.2770	0.0128	16.65	1.29	0.436	0.027	0.803	3346	70	2915	72	2333	121	43.4	25	125400
avr15-340	0.2771	0.0099	12.72	0.85	0.333	0.019	0.844	3347	55	2659	61	1853	90	80.6	750	87000
avr15-379	0.2790	0.0082	18.85	0.90	0.490	0.019	0.790	3357	45	3034	45	2571	80	30.6	10.2	10560
avr15-396	0.2797	0.0072	20.17	0.95	0.523	0.021	0.837	3361	40	3100	45	2712	87	23.9	8.8	37900
avr15-203	0.2803	0.0077	12.29	1.19	0.318	0.029	0.958	3365	42	2627	87	1780	143	89.0	442	363000
avr15-362	0.2809	0.0076	11.93	0.84	0.308	0.020	0.924	3368	42	2599	64	1731	98	94.6	185	45500
avr15-374	0.2820	0.0137	15.36	1.12	0.395	0.021	0.743	3374	74	2838	67	2146	98	57.2	600	79000
avr15-359	0.2876	0.0099	11.82	0.99	0.298	0.023	0.911	3405	53	2590	75	1681	112	102.5	188	108800
avr15-326	0.2876	0.0084	10.46	0.58	0.264	0.012	0.846	3405	45	2477	50	1510	62	125.5	568	65300
avr15-245	0.2930	0.0130	13.05	0.95	0.323	0.019	0.791	3434	67	2683	66	1804	90	90.3	488	77500
avr15-234	0.2960	0.0386	16.32	2.93	0.400	0.049	0.687	3449	189	2896	159	2169	223	59.0	351	113000
avr15-295	0.2990	0.0115	22.88	1.45	0.555	0.028	0.795	3465	58	3222	60	2846	115	21.8	16.3	140700
avr15-221	0.3031	0.0078	22.86	0.96	0.547	0.018	0.788	3486	39	3221	40	2813	75	23.9	17.9	283500
avr15-261	0.3083	0.0117	8.68	0.56	0.204	0.011	0.806	3512	58	2305	57	1198	56	193.1	1089	94700
avr15-387	0.3133	0.0082	24.75	1.79	0.573	0.039	0.933	3537	40	3298	68	2920	157	21.1	32	86000
avr15-315	0.3140	0.0141	10.31	0.65	0.238	0.010	0.700	3541	68	2463	57	1377	54	157.1	1172	106300
avr15-347	0.3168	0.0084	24.77	1.15	0.567	0.022	0.822	3554	40	3299	44	2895	88	22.8	17.3	221500
avr15-333	0.3290	0.0187	12.60	0.91	0.278	0.012	0.612	3612	85	2650	65	1580	61	128.6	810	65300
avr15-355	0.3460	0.0198	27.19	2.76	0.570	0.048	0.827	3689	85	3390	95	2908	194	26.9	13	55600
avr15-258	0.3586	0.0099	22.74	1.21	0.460	0.021	0.853	3744	42	3216	50	2440	91	53.5	227	131600
avr15-287	0.3590	0.0217	10.39	1.06	0.210	0.017	0.803	3746	89	2471	90	1229	91	204.8	1860	121000
avr15-237	0.3710	0.0341	21.23	3.04	0.415	0.046	0.767	3796	133	3149	130	2238	205	69.6	12.5	42900
avr15-358	0.5243	0.0146	48.87	3.68	0.676	0.047	0.929	4311	40	3970	72	3329	179	29.5	4080	145700

AVR 16 14 > 1mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr14-039	0.1688	0.0086	12.34	0.99	0.530	0.033	0.773	2546	83	2630	73	2741	137	-7.1	5	54600
avr14-118	0.1807	0.0069	13.68	0.73	0.549	0.021	0.700	2659	62	2728	49	2821	85	-5.7	6	7810
avr14-134	0.2030	0.0129	16.99	1.92	0.607	0.057	0.827	2850	100	2934	103	3058	224	-6.8	6	58800
> -5% Disc.																
avr14-158	0.1652	0.0057	10.25	0.59	0.450	0.021	0.801	2510	57	2458	52	2395	91	4.8	42	203100
avr14-186	0.1660	0.0155	10.71	1.71	0.468	0.061	0.811	2518	149	2498	138	2475	260	1.7	8	49500
avr14-123	0.1669	0.0090	11.11	1.04	0.483	0.037	0.816	2527	88	2533	83	2540	158	-0.5	10	44800
avr14-061	0.1676	0.0054	11.37	0.62	0.492	0.021	0.803	2534	53	2554	49	2579	92	-1.8	19	51000
avr14-073	0.1713	0.0052	12.19	0.57	0.516	0.019	0.766	2570	50	2619	43	2682	78	-4.2	4	38500
avr14-107	0.1715	0.0051	12.22	0.56	0.517	0.018	0.756	2572	49	2621	42	2686	75	-4.2	7	30500
avr14-075	0.1717	0.0064	12.05	0.74	0.509	0.025	0.793	2574	61	2608	56	2652	105	-2.9	2	64800
avr14-140	0.1720	0.0146	11.10	1.41	0.468	0.044	0.744	2577	135	2531	112	2475	191	4.1	12	93200
avr14-169	0.1727	0.0056	11.17	0.56	0.469	0.018	0.767	2584	53	2537	46	2479	79	4.2	6	125000
avr14-166	0.1744	0.0047	11.59	0.52	0.482	0.017	0.796	2600	44	2572	41	2536	74	2.5	23	78600
avr14-051	0.1765	0.0054	12.31	0.64	0.506	0.021	0.802	2620	50	2629	47	2640	89	-0.7	9	36300
avr14-117	0.1767	0.0054	12.71	0.57	0.522	0.017	0.732	2622	50	2658	41	2706	72	-3.1	3	14610
avr14-035	0.1780	0.0118	11.68	1.14	0.476	0.034	0.733	2634	106	2579	87	2510	146	5.0	8	22500
avr14-041	0.1807	0.0088	12.93	0.95	0.519	0.028	0.746	2659	79	2675	67	2695	119	-1.3	6	16780
avr14-128	0.1824	0.0087	12.42	0.88	0.494	0.026	0.746	2675	76	2637	65	2588	112	3.4	38	45000
avr14-191	0.1830	0.0118	13.20	1.16	0.523	0.031	0.676	2680	103	2694	79	2712	130	-1.2	1	37700
avr14-015	0.1831	0.0066	12.45	0.70	0.493	0.021	0.769	2681	59	2639	52	2584	92	3.8	14	20600
avr14-005	0.1845	0.0061	12.41	0.59	0.488	0.017	0.725	2694	53	2636	44	2562	73	5.1	7	17900
avr14-106	0.1866	0.0077	13.69	0.78	0.532	0.021	0.688	2712	66	2728	52	2750	87	-1.4	2	5040
avr14-114	0.1866	0.0064	13.04	0.70	0.507	0.021	0.768	2712	56	2683	50	2644	89	2.6	11	18500
avr14-139	0.1870	0.0156	13.48	1.85	0.523	0.057	0.794	2716	132	2714	122	2712	237	0.1	27	48900
avr14-172	0.1913	0.0050	13.30	0.54	0.504	0.016	0.765	2753	42	2701	37	2632	66	4.6	9	89200
avr14-053	0.1931	0.0067	13.39	0.88	0.503	0.028	0.849	2769	56	2708	60	2627	119	5.4	62	23300
avr14-159	0.1956	0.0067	14.05	0.76	0.521	0.022	0.778	2790	55	2753	50	2703	93	3.2	13	76100
avr14-160	0.1971	0.0069	14.21	0.79	0.523	0.023	0.779	2802	56	2764	52	2712	96	3.3	4	110700
avr14-104	0.1998	0.0067	15.73	0.86	0.571	0.024	0.786	2825	54	2861	51	2912	99	-3.0	5	141200
avr14-135	0.2021	0.0060	15.83	0.83	0.568	0.024	0.823	2843	47	2866	49	2900	99	-1.9	4	40900
avr14-038	0.2050	0.0129	16.08	1.71	0.569	0.049	0.806	2866	99	2882	97	2904	198	-1.3	15	20200
avr14-099	0.2060	0.0104	15.00	0.95	0.528	0.020	0.601	2874	80	2815	58	2733	84	5.2	39	12280
avr14-198	0.2076	0.0055	15.67	0.64	0.548	0.017	0.764	2887	42	2857	38	2815	71	2.5	1	48410
avr14-144	0.2110	0.0314	17.37	3.69	0.597	0.091	0.714	2913	223	2955	186	3018	356	-3.5	32	105000
avr14-184	0.2140	0.0168	17.26	2.04	0.585	0.052	0.749	2936	121	2949	108	2969	207	-1.1	4	64000
avr14-088	0.2197	0.0075	17.93	0.99	0.592	0.026	0.785	2978	54	2986	52	2998	103	-0.6	37	43200

avr14-145	0.2300	0.0169	20.20	2.12	0.637	0.048	0.714	3052	113	3101	97	3177	185	-3.9	7	19500
avr14-148	0.2320	0.0198	19.13	2.48	0.598	0.059	0.755	3066	130	3048	118	3022	232	1.5	9	36100
avr14-138	0.2440	0.0199	21.53	2.74	0.640	0.063	0.770	3146	124	3163	117	3189	242	-1.3	5	52400
avr14-147	0.2470	0.0199	21.69	2.47	0.637	0.051	0.708	3166	122	3170	105	3177	199	-0.4	51	54500
avr14-054	0.2471	0.0080	21.36	1.00	0.627	0.021	0.722	3166	51	3155	45	3138	84	0.9	8	12940
avr14-021	0.2476	0.0090	21.37	1.53	0.626	0.039	0.862	3169	56	3156	67	3134	151	1.1	8	171100
avr14-018	0.2540	0.0247	21.26	3.57	0.607	0.083	0.814	3210	146	3150	151	3058	324	5.0	12	28700
avr14-087	0.2542	0.0101	21.27	1.53	0.607	0.037	0.835	3211	61	3151	68	3058	145	5.0	12	63200
avr14-149	0.2550	0.0180	21.76	2.42	0.619	0.053	0.772	3216	107	3173	103	3106	208	3.5	45	119500
avr14-029	0.2590	0.0219	22.21	2.62	0.622	0.051	0.698	3241	127	3193	109	3118	201	3.9	12	129100
avr14-089	0.2639	0.0071	24.63	1.13	0.677	0.025	0.813	3270	41	3294	44	3333	96	-1.9	14	95000
avr14-092	0.2650	0.0074	22.69	1.15	0.621	0.026	0.834	3277	43	3214	48	3114	103	5.2	11	76000
avr14-083	0.2720	0.0091	23.78	1.36	0.634	0.029	0.812	3318	51	3259	54	3165	115	4.8	12	35200
avr14-129	0.2740	0.0113	24.44	1.67	0.647	0.035	0.799	3329	63	3286	65	3216	137	3.5	9	33000
avr14-026	0.2740	0.0220	24.33	2.66	0.644	0.048	0.679	3329	120	3282	101	3205	185	3.9	6	14000
avr14-069	0.2768	0.0080	25.04	1.14	0.656	0.023	0.772	3345	44	3310	43	3252	89	2.9	4	12870
avr14-093	0.2773	0.0074	26.53	1.13	0.694	0.023	0.776	3348	41	3366	41	3398	87	-1.5	3	60400
avr14-090	0.2781	0.0102	27.07	1.39	0.706	0.025	0.699	3352	56	3386	49	3443	95	-2.6	4	9210
avr14-079	0.2784	0.0119	26.49	1.81	0.690	0.037	0.781	3354	65	3365	65	3383	139	-0.8	1	5480
avr14-036	0.2790	0.0201	27.58	3.01	0.717	0.059	0.751	3357	108	3404	102	3485	217	-3.7	6	30800
avr14-065	0.2793	0.0085	25.53	1.22	0.663	0.024	0.769	3359	47	3329	46	3279	94	2.4	4	36300
avr14-156	0.2810	0.0173	25.11	2.58	0.648	0.053	0.801	3368	93	3312	96	3220	206	4.6	10	99300
avr14-056	0.2812	0.0092	26.48	1.49	0.683	0.031	0.811	3370	50	3364	53	3356	118	0.4	9	21540
avr14-072	0.2815	0.0085	27.67	1.35	0.713	0.027	0.786	3371	46	3408	47	3470	102	-2.8	3	16870
avr14-101	0.2822	0.0087	27.86	1.32	0.716	0.026	0.757	3375	47	3414	45	3481	95	-3.0	4	10440
avr14-049	0.2829	0.0093	26.64	1.45	0.683	0.030	0.796	3379	50	3370	52	3356	112	0.7	1	72700
avr14-037	0.2830	0.0220	28.68	3.54	0.735	0.070	0.775	3380	116	3443	114	3552	256	-4.9	8	39900
avr14-130	0.2830	0.0137	27.51	1.99	0.705	0.038	0.743	3380	74	3402	69	3440	142	-1.7	8	128700
avr14-127	0.2830	0.0129	26.38	2.03	0.676	0.042	0.806	3380	69	3361	73	3329	159	1.5	18	56800
avr14-080	0.2830	0.0104	25.32	1.58	0.649	0.033	0.811	3380	56	3321	59	3224	127	4.8	4	21990
avr14-059	0.2837	0.0075	27.56	1.12	0.705	0.022	0.762	3383	40	3404	39	3438	82	-1.6	6	50800
avr14-102	0.2843	0.0080	26.62	1.15	0.679	0.022	0.754	3387	43	3369	41	3341	84	1.4	7	71100
avr14-163	0.2847	0.0082	25.87	1.32	0.659	0.028	0.824	3389	44	3342	49	3263	106	3.8	8	99900
avr14-096	0.2868	0.0084	27.29	1.19	0.690	0.022	0.740	3400	45	3394	42	3383	85	0.5	8	13520
avr14-151	0.2868	0.0107	26.14	1.95	0.661	0.043	0.865	3400	57	3352	70	3271	163	4.0	14	35500
avr14-071	0.2881	0.0091	26.38	1.21	0.664	0.022	0.724	3407	49	3361	44	3283	85	3.8	28	24740
avr14-057	0.2885	0.0085	26.97	1.26	0.678	0.025	0.777	3410	45	3382	45	3337	94	2.2	7	36540
avr14-122	0.2920	0.0250	29.43	3.65	0.731	0.066	0.723	3428	127	3468	115	3537	239	-3.1	12	40100
avr14-143	0.2940	0.0212	29.39	3.55	0.725	0.070	0.802	3439	108	3467	112	3515	257	-2.2	16	73000
avr14-042	0.2981	0.0095	27.58	1.87	0.671	0.040	0.882	3460	49	3404	64	3310	153	4.6	9	85000
> 5% Disc.																
avr14-194	0.1724	0.0068	10.72	0.62	0.451	0.019	0.730	2581	65	2499	53	2400	84	7.6	17	58200
avr14-167	0.1733	0.0051	10.86	0.49	0.454	0.016	0.765	2590	48	2511	41	2415	70	7.2	14	62500
avr14-055	0.1792	0.0050	11.63	0.49	0.471	0.015	0.755	2645	45	2575	39	2487	66	6.4	45	52900
avr14-003	0.1868	0.0055	12.15	0.54	0.472	0.016	0.750	2714	47	2616	41	2491	68	9.0	24	53620
avr14-028	0.1880	0.0195	12.57	1.93	0.485	0.055	0.737	2725	161	2648	135	2549	234	6.9	16	17000
avr14-108*	0.1890	0.0254	12.74	1.97	0.489	0.038	0.498	2733	206	2661	136	2566	161	6.5	770	94200
aur14-108	0.2640	0.02869	19.94	2.91	0.548	0.053	0.668	3271	161.2	3088	132	2817	219	16.1	770	94200
avr14-125	0.2047	0.0108	14.00	1.18	0.496	0.032	0.776	2864	84	2750	77	2597	138	10.3	15	33600
avr14-068	0.2114	0.0063	15.07	0.75	0.517	0.020	0.800	2916	47	2820	46	2686	86	8.6	31	181000
avr14-170	0.2200	0.0059	16.60	0.70	0.547	0.018	0.776	2981	42	2912	40	2813	74	6.0	22	38840
avr14-155	0.2396	0.0089	18.24	1.41	0.552	0.038	0.879	3117	58	3002	72	2833	154	10.0	18	142000
avr14-058	0.2401	0.0110	18.51	1.12	0.559	0.022	0.653	3121	71	3016	57	2862	91	9.0	7	21120
avr14-033	0.2440	0.0199	19.71	2.35	0.586	0.051	0.730	3146	124	3077	109	2973	204	5.8	24	118300
avr14-164	0.2470	0.0090	19.38	1.15	0.569	0.027	0.791	3166	56	3061	56	2904	109	9.0	11	80700
avr14-070	0.2531	0.0067	19.93	0.89	0.571	0.020	0.804	3204	41	3088	42	2912	83	10.0	6	131000
avr14-086	0.2566	0.0104	21.09	1.55	0.596	0.036	0.832	3226	63	3143	69	3014	145	7.0	11	66900
avr14-150	0.2650	0.0200	22.07	2.48	0.604	0.050	0.740	3277	114	3187	104	3046	198	7.6	23	64000
avr14-084	0.2656	0.0104	22.41	1.58	0.612	0.036	0.830	3280	60	3202	66	3078	141	6.6	22	86000
avr14-085	0.2680	0.0127	22.13	1.54	0.599	0.030	0.731	3294	72	3190	65	3026	121	8.9	11	73100
avr14-047	0.2699	0.0095	22.18	1.28	0.596	0.027	0.792	3305	54	3192	54	3014	109	9.7	14	191000
avr14-074	0.2723	0.0087	23.39	1.54	0.623	0.036	0.874	3319	49	3243	62	3122	141	6.3	7	36800
avr14-132	0.2740	0.0239	22.67	2.62	0.600	0.045	0.656	3329	130	3213	107	3030	181	9.9	7	98000
avr14-181	0.2741	0.0069	23.43	1.09	0.620	0.024	0.837	3330	39	3245	44	3110	95	7.1	9	78500
avr14-112	0.2748	0.0080	23.30	1.15	0.615	0.025	0.808	3334	45	3240	47	3090	97	7.9	8	35600
avr14-152	0.2750	0.0173	23.96	2.35	0.632	0.048	0.768	3335	95	3267	91	3157	186	5.6	27	105200
avr14-052	0.2757	0.0083	24.06	1.07	0.633	0.021	0.739	3339	46	3271	43	3161	82	5.6	6	65500

avr14-190	0.2790	0.0155	24.50	2.23	0.637	0.046	0.792	3357	84	3289	85	3177	178	5.7	32	189200
avr14-133	0.2800	0.0201	24.71	2.53	0.640	0.047	0.713	3363	108	3297	95	3189	181	5.5	22	89800
avr14-020	0.2839	0.0116	23.96	1.50	0.612	0.029	0.759	3385	62	3267	59	3078	115	10.0	12	32400
avr14-197	0.2890	0.0147	25.58	1.63	0.642	0.025	0.601	3412	77	3331	60	3197	96	6.7	640	92100
avr14-187	0.2890	0.0221	24.55	3.12	0.616	0.063	0.799	3412	114	3290	117	3094	245	10.3	8	43400
avr14-034	0.3110	0.0319	29.12	4.56	0.679	0.080	0.756	3526	150	3457	143	3341	302	5.5	23	19800
> 10% Disc.																
avr14-196	0.1553	0.0042	7.82	0.39	0.365	0.015	0.838	2405	46	2210	44	2006	72	19.9	20	199800
avr14-095	0.1665	0.0053	9.60	0.60	0.418	0.023	0.862	2523	52	2397	56	2251	102	12.1	10	147000
avr14-109	0.1683	0.0044	9.13	0.40	0.394	0.014	0.800	2541	43	2351	39	2139	63	18.8	25	128900
avr14-110	0.1701	0.0047	9.69	0.47	0.413	0.016	0.819	2559	45	2405	43	2229	74	14.8	15	48900
avr14-161	0.1736	0.0067	10.16	0.54	0.425	0.016	0.688	2593	63	2450	48	2281	70	13.7	4	9770
avr14-030	0.2450	0.0237	17.97	2.70	0.532	0.061	0.764	3153	146	2988	135	2750	252	14.7	23	133000
avr14-097	0.2486	0.0071	19.23	0.87	0.561	0.020	0.774	3176	45	3053	43	2871	80	10.6	6	85500
avr14-031	0.2550	0.0267	18.21	2.94	0.518	0.064	0.762	3216	156	3001	145	2691	265	19.5	11	206000
avr14-043	0.2577	0.0095	19.19	1.29	0.540	0.030	0.836	3233	57	3051	63	2783	126	16.1	14	73500
avr14-119	0.2600	0.0069	20.25	0.89	0.565	0.020	0.796	3247	41	3104	42	2887	81	12.4	31	79400
avr14-124	0.2670	0.0181	20.76	2.18	0.564	0.045	0.762	3288	103	3128	97	2883	183	14.1	20	71400
avr14-014	0.2693	0.0087	21.72	1.23	0.585	0.027	0.817	3302	50	3171	53	2969	109	11.2	10	124900
avr14-019	0.2740	0.0093	22.25	1.20	0.589	0.025	0.778	3329	52	3195	51	2985	100	11.5	19	108400
avr14-048	0.2781	0.0105	22.16	1.45	0.578	0.031	0.817	3352	58	3191	62	2941	125	14.0	28	87800
avr14-162	0.2786	0.0080	22.32	1.10	0.581	0.023	0.813	3355	44	3198	47	2953	94	13.6	30	221000
avr14-157	0.2802	0.0096	21.44	1.34	0.555	0.029	0.834	3364	53	3159	59	2846	119	18.2	39	120000
avr14-137	0.2840	0.0155	23.34	1.86	0.596	0.035	0.728	3385	83	3241	75	3014	138	12.3	70	74400
avr14-141	0.3010	0.0260	25.19	3.90	0.607	0.078	0.830	3475	128	3316	141	3058	306	13.6	26	41300
avr14-023	0.3070	0.0328	25.36	4.11	0.599	0.073	0.752	3506	156	3322	147	3026	288	15.9	187	64700
avr14-060	0.3124	0.0084	27.31	1.28	0.634	0.024	0.821	3533	41	3395	45	3165	95	11.6	23	94700
avr14-024	0.3140	0.0417	27.28	6.03	0.630	0.112	0.800	3541	191	3393	196	3150	427	12.4	88	51200
avr14-177	0.3269	0.0085	29.52	1.49	0.655	0.028	0.856	3603	39	3471	48	3248	109	10.9	25	72100
> 20% Disc.																
avr14-081	0.1164	0.0072	4.12	0.41	0.257	0.020	0.791	1902	106	1659	79	1474	104	29.0	33	115400
avr14-062	0.1433	0.0042	6.15	0.27	0.311	0.010	0.733	2267	50	1997	37	1747	48	29.8	64	143900
avr14-025	0.1470	0.0135	5.74	0.84	0.283	0.032	0.778	2311	149	1937	119	1606	159	43.9	65	228000
avr14-116	0.1495	0.0052	4.47	0.50	0.217	0.023	0.950	2340	58	1726	88	1266	120	84.9	28	70900
avr14-013	0.1521	0.0049	4.98	0.29	0.237	0.011	0.828	2370	54	1816	48	1373	59	72.6	176	180000
avr14-045	0.1579	0.0087	5.97	0.61	0.274	0.023	0.839	2433	91	1971	85	1561	117	55.9	57	95600
avr14-180	0.1584	0.0040	6.48	0.29	0.297	0.011	0.820	2439	42	2043	38	1674	53	45.7	15	110200
avr14-165	0.1592	0.0056	8.11	0.43	0.370	0.015	0.742	2447	59	2244	47	2028	68	20.7	13	36000
avr14-121	0.1623	0.0090	5.84	0.58	0.261	0.021	0.829	2480	90	1952	82	1495	108	65.9	61	92800
avr14-113	0.1644	0.0043	7.73	0.34	0.341	0.012	0.795	2501	44	2200	38	1891	56	32.3	33	71600
avr14-154	0.1670	0.0136	6.61	0.72	0.287	0.021	0.664	2528	130	2060	92	1627	103	55.4	129	130600
avr14-179	0.1675	0.0044	8.55	0.40	0.370	0.014	0.825	2533	43	2291	41	2029	66	24.8	27	121500
avr14-103	0.1734	0.0051	9.32	0.54	0.390	0.020	0.861	2591	49	2370	52	2123	90	22.0	83	64000
avr14-171	0.1739	0.0055	6.21	0.32	0.259	0.010	0.789	2596	51	2007	44	1486	53	74.7	77	62200
avr14-044	0.1750	0.0185	9.02	1.40	0.374	0.042	0.732	2606	166	2340	133	2048	196	27.2	50	91000
avr14-192	0.1758	0.0101	8.19	0.86	0.338	0.030	0.837	2614	93	2253	91	1877	141	39.2	20	20300
avr14-082	0.1762	0.0081	8.92	0.74	0.367	0.025	0.834	2617	74	2329	73	2015	118	29.9	161	131400
avr14-094	0.1794	0.0074	6.00	0.32	0.242	0.008	0.618	2647	67	1975	45	1399	41	89.2	125	63000
avr14-173	0.1800	0.0047	9.33	0.41	0.376	0.013	0.800	2653	43	2371	39	2057	61	29.0	27	89800
avr14-100	0.1807	0.0052	8.31	0.41	0.333	0.013	0.814	2659	47	2265	44	1855	64	43.4	22	26660
avr14-199	0.1814	0.0051	8.69	0.38	0.348	0.012	0.770	2666	46	2306	39	1923	56	38.6	28	162800
avr14-115	0.1816	0.0075	9.94	0.60	0.397	0.017	0.725	2668	67	2429	54	2155	80	23.8	63	65000
avr14-067	0.1820	0.0065	9.96	0.56	0.397	0.017	0.773	2671	58	2431	51	2155	80	23.9	26	172600
avr14-002	0.1820	0.0052	8.08	0.41	0.322	0.014	0.827	2671	47	2240	45	1799	66	48.4	70	213400
avr14-120	0.1878	0.0072	6.81	0.43	0.263	0.013	0.798	2723	62	2087	55	1505	68	80.9	38	56900
avr14-001	0.1889	0.0065	5.89	0.49	0.226	0.017	0.912	2733	55	1959	70	1314	90	108.0	126	193200
avr14-027	0.1980	0.0205	6.39	0.80	0.234	0.016	0.561	2810	160	2031	104	1355	85	107.3	560	156900
avr14-008	0.2002	0.0053	11.93	0.53	0.432	0.015	0.806	2828	42	2599	41	2316	69	22.1	54	187700
avr14-091	0.2044	0.0067	11.48	0.56	0.407	0.015	0.746	2862	52	2563	45	2202	68	30.0	37	239000
avr14-176	0.2056	0.0055	10.66	0.58	0.376	0.018	0.869	2871	43	2494	49	2058	83	39.5	6	52900
avr14-185	0.2090	0.0177	10.46	1.40	0.363	0.038	0.773	2898	131	2476	117	1996	175	45.2	29	124000
avr14-040	0.2095	0.0086	11.24	0.81	0.389	0.023	0.822	2902	65	2543	65	2118	106	37.0	12	102600
avr14-004	0.2099	0.0082	12.47	0.70	0.431	0.017	0.718	2905	62	2641	51	2310	77	25.7	33	157800
avr14-009	0.2104	0.0069	9.89	0.51	0.341	0.013	0.769	2909	52	2424	46	1891	65	53.9	172	170300
avr14-050	0.2203	0.0066	11.48	0.95	0.378	0.029	0.933	2983	47	2563	74	2067	135	44.3	47	109400
avr14-078	0.2210	0.0140	9.63	1.02	0.316	0.027	0.799	2988	99	2400	93	1770	129	68.8	460	75100
avr14-076	0.2230	0.0113	12.33	0.95	0.401	0.023	0.751	3002	79	2630	70	2174	106	38.1	16	82300

avr14-010	0.2303	0.0065	14.78	0.65	0.465	0.016	0.772	3054	44	2801	41	2463	69	24.0	27	205800
avr14-168	0.2409	0.0083	14.12	0.81	0.425	0.019	0.797	3126	54	2758	53	2283	87	36.9	32	34500
avr14-195	0.2420	0.0142	14.75	1.19	0.442	0.025	0.688	3133	90	2799	74	2360	109	32.8	91	204200
avr14-111	0.2448	0.0089	16.78	1.15	0.497	0.029	0.847	3151	57	2922	64	2601	123	21.2	8	34900
avr14-022	0.2450	0.0142	13.17	1.09	0.390	0.023	0.712	3153	89	2692	75	2123	106	48.5	47	326000
avr14-182	0.2470	0.0125	15.84	1.25	0.465	0.028	0.771	3166	78	2867	73	2462	124	28.6	61	145700
avr14-136	0.2493	0.0113	15.43	1.19	0.449	0.028	0.811	3180	70	2842	71	2391	124	33.0	98	248600
avr14-183	0.2500	0.0306	12.86	2.29	0.373	0.048	0.726	3185	181	2669	155	2044	223	55.8	20	196000
avr14-142	0.2510	0.0180	10.21	1.05	0.295	0.022	0.717	3191	109	2454	91	1666	107	91.5	750	102300
avr14-007	0.2614	0.0068	16.76	0.78	0.465	0.018	0.831	3255	40	2921	44	2462	79	32.2	36	282000
avr14-175	0.2615	0.0079	16.95	1.09	0.470	0.027	0.883	3256	47	2932	60	2484	116	31.1	42	17300
avr14-126	0.2630	0.0126	18.28	1.20	0.504	0.022	0.679	3265	74	3004	61	2631	95	24.1	36	212800
avr14-046	0.2640	0.0181	17.00	1.65	0.467	0.032	0.707	3271	104	2935	89	2470	139	32.4	24	193000
avr14-193	0.2700	0.0154	16.53	1.36	0.444	0.026	0.721	3306	87	2908	76	2369	117	39.6	330	105900
avr14-077	0.2700	0.0145	11.13	1.01	0.299	0.022	0.805	3306	82	2534	81	1686	107	96.0	262	43600
avr14-012	0.2709	0.0074	14.42	0.86	0.386	0.020	0.888	3311	42	2778	55	2104	94	57.4	82	114000
avr14-016	0.2774	0.0119	15.95	1.12	0.417	0.023	0.795	3348	65	2874	65	2247	105	49.0	155	114900
avr14-006	0.2790	0.0095	17.85	1.01	0.464	0.021	0.796	3357	52	2982	53	2457	91	36.6	215	182300
avr14-064	0.2846	0.0083	17.47	0.81	0.445	0.016	0.781	3388	45	2961	44	2373	72	42.8	31	32700
avr14-017	0.2900	0.0221	18.99	2.09	0.475	0.038	0.721	3418	114	3041	101	2505	162	36.4	137	75200
avr14-200	0.2931	0.0093	18.65	0.88	0.462	0.016	0.743	3434	48	3024	45	2446	71	40.4	57	87700
avr14-066	0.2970	0.0203	8.35	1.03	0.204	0.021	0.832	3455	102	2270	106	1197	111	188.7	313	111000
avr14-131	0.3004	0.0100	20.79	1.23	0.502	0.025	0.829	3472	50	3129	56	2622	105	32.4	117	34400
avr14-178	0.3051	0.0097	17.42	1.01	0.414	0.020	0.835	3496	48	2958	54	2233	90	56.6	263	69300
avr14-032	0.3080	0.0213	23.44	2.63	0.552	0.049	0.787	3511	103	3245	104	2833	199	23.9	247	64500
avr14-011	0.3190	0.0168	13.02	1.39	0.296	0.027	0.869	3565	79	2681	96	1671	135	113.3	387	67700
avr14-146	0.3200	0.0300	21.80	2.83	0.494	0.044	0.692	3570	137	3175	119	2588	189	37.9	182	38300
avr14-105	0.3290	0.0127	19.78	1.35	0.436	0.024	0.825	3612	58	3081	64	2333	109	54.9	503	77700
avr14-174	0.3406	0.0103	14.66	0.64	0.312	0.010	0.718	3665	45	2793	40	1751	48	109.3	381	43440
avr14-098	0.3537	0.0104	9.66	0.67	0.198	0.012	0.906	3723	44	2403	62	1165	66	219.7	440	39300
avr14-189	0.4040	0.0204	14.93	1.93	0.268	0.032	0.921	3924	74	2811	116	1531	160	156.4	1250	67300
avr14-153	0.4105	0.0136	12.81	0.74	0.226	0.011	0.822	3948	49	2666	53	1316	57	200.1	1435	76100
avr14-188	0.4142	0.0126	9.51	0.49	0.167	0.007	0.804	3961	45	2389	46	993	38	298.8	962	48100
avr14-063	0.5080	0.0268	11.49	0.86	0.164	0.009	0.709	4265	76	2564	68	979	48	335.6	1706	62600

Standards AVR16-16,-15,-14, >1mm

og1-1	0.2960	0.0034	26.91	0.42	0.659	0.007	0.679	3449	18	3380	15	3265	27	5.7	3.6	43210
og1-2	0.2957	0.0040	27.83	0.54	0.683	0.009	0.713	3448	21	3413	19	3354	36	2.8	4.7	28400
og1-3	0.2960	0.0057	28.73	0.71	0.704	0.011	0.630	3449	30	3444	24	3436	41	0.4	4.5	21770
og1-4	0.2993	0.0050	29.56	0.60	0.716	0.008	0.565	3467	26	3472	20	3483	31	-0.5	6.2	23300
og1-5	0.2980	0.0055	29.79	0.83	0.725	0.015	0.746	3460	28	3480	27	3515	56	-1.6	1.3	17390
og1-6	0.2968	0.0064	28.52	0.81	0.697	0.013	0.654	3454	33	3437	28	3409	49	1.3	2.5	17230
og1-7	0.2945	0.0063	27.61	0.91	0.680	0.017	0.760	3442	33	3405	32	3344	65	2.9	4.2	30300
og1-8	0.2970	0.0035	28.21	0.53	0.689	0.010	0.776	3455	18	3427	18	3379	38	2.2	5.3	41160
og1-9	0.2995	0.0087	28.58	1.14	0.692	0.019	0.687	3468	44	3439	38	3390	72	2.3	6.3	17250
og1-10	0.2984	0.0055	28.92	0.76	0.703	0.013	0.708	3462	28	3451	25	3432	49	0.9	5.4	17900
og1-11	0.3008	0.0087	28.58	0.99	0.689	0.013	0.546	3474	44	3439	33	3379	49	2.8	4.8	43600
og1-12	0.2975	0.0052	28.30	0.70	0.690	0.012	0.705	3457	27	3430	24	3383	46	2.2	1.8	27500
og1-13	0.2982	0.0080	28.90	0.99	0.703	0.015	0.622	3461	41	3450	33	3432	57	0.8	20.1	27030
og1-14	0.3080	0.0210	27.90	2.70	0.657	0.045	0.709	3511	101	3416	91	3255	173	7.8	10.5	3300
og1-15	0.2980	0.0048	27.73	0.61	0.675	0.010	0.677	3460	25	3410	21	3325	38	4.1	1.8	67160
og1-16	0.2322	0.0049	11.37	0.80	0.355	0.024	0.955	3067	33	2554	64	1958	113	56.6	16.2	121200
og1-17	0.2934	0.0045	26.58	0.73	0.657	0.015	0.830	3436	24	3368	27	3255	58	5.5	6.9	28800
og1-18	0.2968	0.0053	27.75	0.67	0.678	0.011	0.672	3454	27	3410	23	3337	42	3.5	-0.5	36070
og1-19	0.2968	0.0056	28.61	0.73	0.699	0.012	0.673	3454	29	3440	25	3417	45	1.1	1.9	28610
og1-20	0.2962	0.0047	28.55	0.64	0.699	0.011	0.704	3450	24	3438	22	3417	42	1.0	-0.8	21100

AVR 16 13 > 1mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr13-131	0.1471	0.0043	8.84	0.43	0.436	0.017	0.800	2312	50	2322	44	2333	76	-0.9	95	274000
avr13-076	0.1727	0.0051	11.63	0.51	0.488	0.016	0.734	2584	49	2575	40	2563	67	0.8	8	15500
avr13-055	0.1744	0.0034	11.88	0.56	0.494	0.021	0.911	2600	32	2595	43	2588	91	0.5	5.7	32500
avr13-141	0.1746	0.0036	11.24	0.42	0.467	0.015	0.835	2602	34	2543	34	2470	64	5.4	11.8	106600
avr13-053	0.1782	0.0032	12.23	0.46	0.498	0.016	0.877	2636	30	2622	35	2604	70	1.2	6.4	223900

avr13-153	0.1816	0.0037	12.24	0.46	0.489	0.015	0.842	2668	33	2623	34	2565	66	4.0	12.9	56290
avr13-001	0.1859	0.0047	13.35	0.63	0.521	0.021	0.846	2706	41	2705	44	2703	88	0.1	15.8	50600
avr13-056	0.1860	0.0039	12.80	0.54	0.499	0.018	0.869	2707	34	2665	39	2609	79	3.7	24.7	385000
avr13-025	0.1997	0.0048	15.77	0.64	0.573	0.019	0.802	2824	39	2863	38	2919	76	-3.3	4.6	25840
avr13-007	0.2603	0.0051	23.19	0.89	0.646	0.021	0.856	3249	31	3235	37	3213	82	1.1	5.7	60000
avr13-158	0.2675	0.0057	24.67	1.01	0.669	0.023	0.853	3291	33	3295	39	3302	90	-0.3	4.1	45500
avr13-099	0.2687	0.0047	23.45	0.88	0.633	0.021	0.882	3298	27	3246	36	3161	82	4.3	7.7	288000
avr13-033	0.2743	0.0058	24.51	1.12	0.648	0.026	0.887	3331	33	3289	44	3220	102	3.4	21.8	196000
avr13-023	0.2758	0.0048	24.49	0.91	0.644	0.021	0.883	3339	27	3288	36	3205	82	4.2	8.6	148000
avr13-095	0.2760	0.0049	24.86	0.87	0.653	0.020	0.864	3340	27	3303	34	3241	76	3.1	12	216700
avr13-186	0.2768	0.0057	24.31	1.04	0.637	0.024	0.878	3345	32	3281	41	3177	94	5.3	13.4	158200
avr13-179	0.2769	0.0055	25.82	0.94	0.676	0.021	0.837	3346	31	3340	35	3331	79	0.5	5.8	295000
avr13-020	0.2770	0.0073	26.51	1.28	0.694	0.028	0.835	3346	41	3365	46	3398	105	-1.5	7.6	27000
avr13-118	0.2773	0.0053	25.49	0.92	0.667	0.020	0.846	3348	30	3327	35	3294	78	1.6	3.9	130000
avr13-098	0.2774	0.0047	24.82	0.95	0.649	0.022	0.897	3348	26	3301	37	3224	87	3.8	7.3	115300
avr13-161	0.2779	0.0047	24.50	0.84	0.639	0.019	0.870	3351	26	3288	33	3187	75	5.2	7.3	131800
avr13-037	0.2785	0.0093	25.96	1.43	0.676	0.030	0.798	3355	51	3345	53	3329	114	0.8	10.8	43300
avr13-170	0.2785	0.0055	25.27	0.93	0.658	0.020	0.840	3355	31	3319	35	3260	78	2.9	4.3	57800
avr13-157	0.2793	0.0049	26.23	0.93	0.681	0.021	0.869	3359	27	3355	34	3349	80	0.3	6.8	192100
avr13-036	0.2797	0.0049	25.84	0.97	0.670	0.022	0.885	3361	27	3340	36	3306	85	1.7	17.1	77000
avr13-046	0.2801	0.0056	26.26	1.05	0.680	0.024	0.868	3363	31	3356	38	3344	90	0.6	15.9	78200
avr13-100	0.2801	0.0053	26.07	1.12	0.675	0.026	0.899	3363	29	3349	41	3325	100	1.2	14	123500
avr13-070	0.2801	0.0051	25.87	0.89	0.670	0.020	0.851	3363	28	3342	33	3305	76	1.8	4.8	578000
avr13-031	0.2804	0.0086	26.68	1.35	0.690	0.028	0.797	3365	47	3372	48	3383	105	-0.5	10.9	43700
avr13-155	0.2808	0.0054	25.05	1.10	0.647	0.026	0.900	3367	29	3310	42	3216	99	4.7	5.1	95100
avr13-016	0.2816	0.0051	26.94	0.95	0.694	0.021	0.856	3372	28	3381	34	3397	79	-0.7	13.4	75400
avr13-061	0.2818	0.0052	25.33	0.91	0.652	0.020	0.857	3373	29	3321	35	3235	78	4.3	1.9	49100
avr13-075	0.2823	0.0049	26.06	0.90	0.669	0.020	0.865	3376	27	3349	33	3304	77	2.2	23.3	92300
avr13-077	0.2824	0.0051	26.45	0.91	0.679	0.020	0.855	3376	28	3363	33	3342	76	1.0	11.9	108300
avr13-044	0.2824	0.0057	25.93	1.03	0.666	0.023	0.860	3376	31	3344	38	3290	87	2.6	27.4	56900
avr13-150	0.2824	0.0073	25.23	1.17	0.648	0.025	0.830	3376	40	3317	44	3220	97	4.8	2.6	95800
avr13-078	0.2825	0.0055	27.20	0.98	0.698	0.021	0.841	3377	30	3391	35	3415	80	-1.1	12	121000
avr13-132	0.2827	0.0046	26.66	0.94	0.684	0.021	0.886	3378	25	3371	34	3360	81	0.5	12.3	99900
avr13-123	0.2827	0.0072	26.52	1.07	0.681	0.021	0.776	3378	39	3366	39	3346	81	0.9	12	58800
avr13-026	0.2828	0.0054	27.76	1.03	0.712	0.023	0.859	3378	29	3411	36	3466	85	-2.5	13.1	59300
avr13-190	0.2828	0.0078	25.54	1.30	0.655	0.028	0.839	3378	42	3329	48	3248	108	4.0	3.1	121800
avr13-101	0.2830	0.0050	26.55	0.93	0.680	0.021	0.864	3380	27	3367	34	3346	79	1.0	11	84900
avr13-154	0.2830	0.0075	26.03	1.21	0.667	0.025	0.818	3380	41	3348	44	3294	97	2.6	13	77000
avr13-129	0.2831	0.0075	26.97	1.22	0.691	0.025	0.806	3380	41	3382	43	3386	95	-0.2	30	95300
avr13-057	0.2833	0.0048	25.39	0.88	0.650	0.020	0.873	3381	26	3323	33	3229	76	4.7	12.4	62100
avr13-083	0.2834	0.0052	26.88	1.01	0.688	0.023	0.874	3382	28	3379	36	3375	86	0.2	82	139600
avr13-009	0.2835	0.0049	25.99	0.94	0.665	0.021	0.877	3382	27	3346	35	3287	81	2.9	5	162600
avr13-080	0.2837	0.0064	26.07	0.98	0.667	0.020	0.801	3383	35	3349	36	3292	77	2.8	13.3	18390
avr13-029	0.2838	0.0051	27.94	1.10	0.714	0.025	0.888	3384	28	3417	38	3474	93	-2.6	2.6	86700
avr13-021	0.2839	0.0050	27.95	1.04	0.714	0.023	0.880	3385	27	3417	36	3474	87	-2.6	27.5	158400
avr13-096	0.2841	0.0059	26.95	0.98	0.688	0.021	0.823	3386	32	3382	35	3375	78	0.3	13.7	102700
avr13-034	0.2844	0.0062	27.65	1.19	0.705	0.026	0.862	3387	33	3407	41	3440	98	-1.5	50.6	345000
avr13-066	0.2844	0.0046	26.24	0.89	0.669	0.020	0.876	3387	25	3355	33	3302	76	2.6	10.2	157000
avr13-146	0.2844	0.0047	25.83	0.88	0.659	0.020	0.877	3387	25	3340	33	3262	76	3.8	3.7	113800
avr13-191	0.2846	0.0073	27.31	1.35	0.696	0.029	0.854	3388	39	3395	47	3405	111	-0.5	5.6	296000
avr13-205	0.2846	0.0063	26.45	1.39	0.674	0.032	0.906	3388	34	3363	50	3321	123	2.0	41	146900
avr13-035	0.2847	0.0066	27.91	1.19	0.711	0.026	0.841	3389	36	3416	41	3462	96	-2.1	8.3	138200
avr13-112	0.2847	0.0059	26.65	1.08	0.679	0.024	0.859	3389	32	3371	39	3341	90	1.4	8.3	50000
avr13-106	0.2848	0.0054	25.45	0.93	0.648	0.020	0.855	3389	29	3325	35	3220	79	5.2	45	106500
avr13-203	0.2850	0.0057	26.17	1.30	0.666	0.030	0.916	3391	31	3353	48	3290	117	3.0	18.9	124800
avr13-108	0.2852	0.0050	26.94	0.97	0.685	0.022	0.873	3392	27	3381	35	3364	82	0.8	3	94800
avr13-120	0.2856	0.0070	26.70	1.20	0.678	0.025	0.838	3394	38	3372	43	3337	97	1.7	13.8	57100
avr13-040	0.2860	0.0097	28.08	1.51	0.712	0.030	0.776	3396	52	3422	51	3466	111	-2.0	-0.7	42000
avr13-004	0.2860	0.0127	27.88	1.81	0.707	0.033	0.730	3396	67	3415	62	3447	125	-1.5	12	68400
avr13-182	0.2860	0.0064	27.17	1.08	0.689	0.023	0.826	3396	35	3390	38	3379	86	0.5	6.8	46600
avr13-107	0.2861	0.0053	26.35	0.95	0.668	0.021	0.859	3397	28	3360	35	3298	80	3.0	18.5	114900
avr13-074	0.2866	0.0064	27.34	1.04	0.692	0.021	0.813	3399	34	3396	37	3390	81	0.3	5.2	25220
avr13-086	0.2869	0.0055	26.91	0.97	0.680	0.021	0.848	3401	29	3380	35	3346	80	1.7	19.4	68890
avr13-084	0.2870	0.0046	25.96	0.86	0.656	0.019	0.878	3401	25	3345	32	3252	74	4.6	31.5	226700
avr13-171	0.2873	0.0054	27.65	1.04	0.698	0.023	0.870	3403	29	3407	36	3413	86	-0.3	20.6	762000
avr13-013	0.2873	0.0048	27.06	0.94	0.683	0.021	0.880	3403	26	3386	34	3356	80	1.4	14.5	123000
avr13-002	0.2875	0.0103	26.88	1.65	0.678	0.034	0.811	3404	55	3379	58	3337	129	2.0	20.5	109700

avr13-137	0.2875	0.0046	26.13	0.89	0.659	0.020	0.884	3404	25	3351	33	3264	77	4.3	4.7	20060
avr13-018	0.2880	0.0056	28.31	1.16	0.713	0.026	0.878	3407	30	3430	39	3470	96	-1.8	6.8	61200
avr13-149	0.2880	0.0058	27.04	1.05	0.681	0.023	0.855	3407	31	3385	37	3348	86	1.8	36	34100
avr13-176	0.2882	0.0050	26.71	0.91	0.672	0.020	0.860	3408	27	3373	33	3314	75	2.8	11.5	168100
avr13-014	0.2884	0.0049	27.87	0.98	0.701	0.022	0.873	3409	26	3415	34	3424	81	-0.5	13.8	110800
avr13-102	0.2885	0.0046	27.25	0.91	0.685	0.020	0.879	3410	25	3393	32	3364	77	1.4	6	123400
avr13-019	0.2890	0.0108	27.85	1.53	0.699	0.028	0.731	3412	57	3414	52	3417	105	-0.1	0.6	9630
avr13-069	0.2891	0.0047	26.69	0.90	0.670	0.020	0.878	3413	25	3372	33	3304	76	3.3	64	183900
avr13-199	0.2891	0.0046	26.44	0.89	0.663	0.020	0.881	3413	25	3363	32	3280	76	4.1	3	82700
avr13-060	0.2891	0.0048	26.38	0.89	0.662	0.019	0.870	3413	26	3361	32	3274	75	4.2	10.2	132000
avr13-082	0.2893	0.0047	26.99	0.90	0.677	0.020	0.871	3414	25	3383	32	3332	75	2.5	10.8	193200
avr13-147	0.2895	0.0053	26.62	0.96	0.667	0.021	0.863	3415	28	3370	35	3294	80	3.7	8.9	79500
avr13-005	0.2903	0.0057	27.14	1.04	0.678	0.022	0.862	3419	30	3388	37	3337	86	2.5	22.8	174600
avr13-038	0.2907	0.0094	27.22	1.51	0.679	0.031	0.811	3421	50	3391	53	3341	117	2.4	5.9	21600
avr13-030	0.2911	0.0076	28.58	1.41	0.712	0.030	0.847	3423	40	3439	47	3466	111	-1.2	26.5	105500
avr13-010	0.2934	0.0065	28.52	1.23	0.705	0.026	0.858	3436	34	3437	41	3440	98	-0.1	61.5	73200
avr13-166	0.3129	0.0049	30.10	1.02	0.698	0.021	0.886	3535	24	3490	33	3412	79	3.6	10.6	89700
avr13-116	0.3132	0.0067	31.39	1.28	0.727	0.025	0.853	3537	32	3531	39	3522	94	0.4	8	76400
avr13-079	0.3133	0.0049	31.45	1.15	0.728	0.024	0.906	3537	24	3533	35	3526	90	0.3	11.9	192000
avr13-065	0.3146	0.0052	30.23	1.03	0.697	0.021	0.878	3544	25	3494	33	3409	79	4.0	21.6	205700
avr13-085	0.3157	0.0054	30.73	1.06	0.706	0.021	0.870	3549	26	3510	33	3443	80	3.1	12.1	108300
avr13-041	0.3175	0.0079	31.91	1.65	0.729	0.033	0.877	3558	38	3548	50	3530	122	0.8	30.2	120000
avr13-172	0.3178	0.0056	31.77	1.16	0.725	0.023	0.874	3559	27	3543	35	3515	86	1.3	7.7	205000
avr13-048	0.3212	0.0051	32.86	1.35	0.742	0.028	0.922	3576	24	3576	40	3578	103	-0.1	36.5	338000
avr13-094	0.3526	0.0062	36.78	1.28	0.757	0.023	0.862	3718	27	3688	34	3632	82	2.4	7.7	115300
avr13-187	0.3541	0.0077	38.23	1.62	0.783	0.028	0.856	3725	33	3726	41	3728	102	-0.1	20.8	96000
avr13-111	0.3628	0.0064	38.57	1.41	0.771	0.025	0.877	3762	26	3735	36	3684	89	2.1	7	375000
avr13-045	0.3719	0.0075	41.59	1.58	0.811	0.026	0.847	3799	30	3809	37	3828	92	-0.8	16.9	175800
avr13-093	0.3747	0.0080	38.95	1.53	0.754	0.025	0.839	3811	32	3744	38	3622	90	5.2	8	118900
avr13-163	0.3852	0.0058	40.63	1.34	0.765	0.022	0.889	3852	23	3786	32	3663	82	5.2	23.1	96500
avr13-181	0.3894	0.0087	42.20	1.74	0.786	0.027	0.841	3869	33	3824	40	3739	97	3.5	4	154000
> 5% Disc.																
avr13-126	0.1840	0.0054	12.15	0.59	0.479	0.019	0.801	2689	47	2616	45	2523	81	6.6	19.2	36300
avr13-008	0.2085	0.0049	14.86	0.64	0.517	0.019	0.840	2894	38	2806	40	2686	79	7.7	43.4	84100
avr13-043	0.2302	0.0090	17.08	1.00	0.538	0.023	0.744	3053	61	2939	55	2775	98	10.0	19	577000
avr13-195	0.2602	0.0052	21.85	0.83	0.609	0.020	0.851	3248	31	3177	36	3066	79	5.9	12.6	34700
avr13-114	0.2648	0.0049	22.09	0.86	0.605	0.021	0.882	3275	29	3188	37	3050	83	7.4	29	252600
avr13-148	0.2654	0.0050	21.70	0.92	0.593	0.022	0.895	3279	29	3170	40	3002	90	9.2	2.4	61600
avr13-194	0.2686	0.0044	22.80	0.78	0.616	0.018	0.876	3298	26	3219	33	3093	73	6.6	42	301000
avr13-015	0.2714	0.0049	23.42	0.82	0.626	0.019	0.860	3314	28	3244	34	3133	75	5.8	15.7	141100
avr13-178	0.2718	0.0046	22.26	0.78	0.594	0.018	0.873	3316	26	3195	33	3006	73	10.3	103	329000
avr13-047	0.2740	0.0049	23.29	0.84	0.617	0.019	0.869	3329	28	3239	35	3096	77	7.5	28	216400
avr13-039	0.2749	0.0072	22.78	1.16	0.601	0.026	0.856	3334	41	3218	48	3034	104	9.9	13.2	149500
avr13-088	0.2764	0.0069	24.18	0.95	0.635	0.019	0.771	3343	39	3276	38	3168	75	5.5	65	290000
avr13-115	0.2771	0.0068	23.73	1.03	0.621	0.022	0.828	3347	38	3257	41	3114	88	7.5	0.9	16400
avr13-175	0.2779	0.0051	23.41	0.82	0.611	0.018	0.852	3351	28	3244	33	3074	72	9.0	21.1	106700
avr13-032	0.2803	0.0069	24.00	1.18	0.621	0.027	0.867	3365	38	3268	47	3114	105	8.1	14.3	105000
avr13-054	0.2806	0.0065	24.72	1.21	0.639	0.028	0.882	3366	35	3297	47	3185	108	5.7	24.8	285900
avr13-003	0.2829	0.0052	25.00	0.92	0.641	0.021	0.868	3379	28	3308	35	3193	80	5.8	4.1	302000
avr13-105	0.2829	0.0045	24.85	0.91	0.637	0.021	0.901	3379	24	3302	35	3177	82	6.4	20.1	247000
avr13-012	0.2833	0.0048	24.88	0.98	0.637	0.023	0.902	3381	26	3304	38	3177	89	6.4	26.6	112700
avr13-185	0.2841	0.0049	24.04	0.85	0.614	0.019	0.874	3386	27	3270	34	3085	76	9.8	12	100500
avr13-198	0.2848	0.0047	24.65	0.87	0.628	0.020	0.885	3389	25	3294	34	3140	77	7.9	28.9	135500
avr13-068	0.2853	0.0048	25.18	0.93	0.640	0.021	0.890	3392	26	3315	35	3189	82	6.4	17.7	108600
avr13-089	0.2855	0.0048	25.44	0.90	0.646	0.020	0.879	3393	26	3325	34	3213	78	5.6	110	222000
avr13-090	0.2863	0.0047	24.66	0.89	0.625	0.020	0.889	3398	25	3295	34	3129	79	8.6	37.6	111200
avr13-071	0.2869	0.0044	25.12	0.91	0.635	0.021	0.905	3401	24	3313	35	3169	82	7.3	45	222000
avr13-072	0.2877	0.0053	25.39	1.02	0.640	0.023	0.888	3405	28	3323	38	3189	89	6.8	35	73800
avr13-138	0.2878	0.0046	25.27	0.85	0.637	0.019	0.877	3406	25	3319	32	3176	73	7.2	21	170100
avr13-180	0.2906	0.0058	26.15	0.97	0.653	0.020	0.842	3421	31	3352	36	3239	79	5.6	6.8	82000
avr13-192	0.2926	0.0100	25.90	1.45	0.642	0.028	0.792	3431	52	3343	53	3197	111	7.3	15.8	64300
avr13-174	0.3095	0.0050	27.35	1.02	0.641	0.022	0.900	3518	25	3396	36	3193	84	10.2	10	126000
avr13-113	0.3100	0.0057	28.81	1.11	0.674	0.023	0.881	3521	28	3447	37	3321	88	6.0	32	337700
avr13-122	0.3102	0.0053	28.75	1.00	0.672	0.020	0.874	3522	26	3445	34	3314	79	6.3	19.2	307100
avr13-058	0.3138	0.0050	29.43	1.00	0.680	0.020	0.883	3540	24	3468	33	3345	78	5.8	16.5	108400
avr13-062	0.3174	0.0051	29.62	1.02	0.677	0.021	0.884	3557	24	3474	33	3332	78	6.8	32.9	206000
avr13-119	0.3177	0.0058	29.22	1.03	0.667	0.020	0.858	3559	28	3461	34	3295	78	8.0	20	78200

avr13-134	0.3564	0.0058	35.62	1.21	0.725	0.022	0.879	3735	24	3656	33	3514	80	6.3	16.3	290000
avr13-011	0.3629	0.0065	36.13	1.30	0.722	0.023	0.867	3762	27	3670	35	3504	84	7.4	24.4	241000
avr13-063	0.3884	0.0062	40.38	1.47	0.754	0.025	0.901	3865	24	3780	36	3622	90	6.7	17	153600
> 10% Disc.																
avr13-110	0.1717	0.0032	10.12	0.38	0.427	0.014	0.869	2574	31	2445	34	2294	63	12.2	65	132000
avr13-064	0.1785	0.0040	10.83	0.42	0.440	0.014	0.821	2639	37	2509	36	2351	63	12.2	93	173000
avr13-152	0.1990	0.0046	13.17	0.65	0.480	0.021	0.885	2818	37	2692	45	2527	90	11.5	6.5	384000
avr13-177	0.2210	0.0048	15.89	0.62	0.521	0.017	0.832	2988	34	2870	36	2705	71	10.5	3.2	18200
avr13-051	0.2621	0.0048	20.02	0.78	0.554	0.019	0.884	3259	28	3092	37	2842	78	14.7	11	172200
avr13-109	0.2685	0.0053	21.77	0.82	0.588	0.019	0.853	3297	31	3173	36	2981	77	10.6	32.6	133500
avr13-167	0.2690	0.0043	21.22	0.73	0.572	0.017	0.887	3300	25	3149	33	2917	71	13.1	4	197300
avr13-196	0.2702	0.0047	21.75	0.75	0.584	0.017	0.859	3307	27	3173	33	2965	70	11.6	12.7	194500
avr13-121	0.2708	0.0047	21.54	0.79	0.577	0.018	0.877	3311	27	3163	35	2936	75	12.7	17.2	142300
avr13-151	0.2764	0.0057	20.81	1.08	0.546	0.026	0.917	3343	32	3130	49	2809	107	19.0	16	50500
avr13-136	0.2771	0.0054	21.93	0.92	0.574	0.021	0.886	3347	30	3181	40	2924	87	14.4	11.7	58500
avr13-165	0.2780	0.0044	23.01	0.78	0.600	0.018	0.883	3352	25	3228	32	3031	72	10.6	19.2	110200
avr13-124	0.2784	0.0066	21.50	1.40	0.560	0.034	0.931	3354	37	3161	61	2867	138	17.0	7.2	206000
avr13-103	0.2819	0.0047	22.35	0.91	0.575	0.021	0.912	3373	26	3199	39	2928	87	15.2	79	151600
avr13-052	0.2823	0.0051	23.26	0.84	0.598	0.019	0.867	3376	28	3238	34	3021	75	11.8	44.7	95300
avr13-197	0.2829	0.0048	23.45	0.81	0.601	0.018	0.874	3379	26	3246	33	3035	73	11.3	86	148300
avr13-143	0.2834	0.0056	21.34	0.94	0.546	0.021	0.893	3382	30	3154	42	2809	89	20.4	17.8	186000
avr13-059	0.2846	0.0062	23.82	0.97	0.607	0.021	0.844	3388	33	3261	39	3058	83	10.8	9.6	183000
avr13-073	0.2846	0.0057	23.59	0.87	0.601	0.019	0.842	3388	31	3252	35	3035	75	11.7	23.1	183100
avr13-202	0.2875	0.0084	23.31	1.40	0.588	0.031	0.872	3404	45	3240	57	2981	124	14.2	103	79200
avr13-067	0.2900	0.0045	24.57	0.85	0.615	0.019	0.893	3418	24	3291	33	3088	75	10.7	149	136000
avr13-042	0.2905	0.0058	24.35	1.01	0.608	0.022	0.876	3420	31	3283	40	3062	88	11.7	22.5	97000
avr13-091	0.2939	0.0048	23.30	0.83	0.575	0.018	0.889	3438	25	3240	34	2928	74	17.4	58	222000
avr13-104	0.2940	0.0052	23.51	1.04	0.580	0.024	0.917	3439	27	3248	42	2949	95	16.6	11.3	292000
avr13-028	0.3032	0.0051	24.50	1.02	0.586	0.022	0.915	3487	26	3288	40	2973	90	17.3	3.7	413000
avr13-027	0.3043	0.0097	25.26	1.31	0.602	0.025	0.789	3492	48	3318	49	3038	98	15.0	131	201000
avr13-145	0.3050	0.0056	24.26	0.95	0.577	0.020	0.886	3496	28	3279	38	2936	82	19.0	33.6	162000
avr13-204	0.3637	0.0095	34.10	1.85	0.680	0.032	0.876	3765	39	3613	52	3344	122	12.6	37.6	158000
avr13-201	0.4109	0.0076	38.19	1.54	0.674	0.024	0.888	3949	27	3725	39	3321	92	18.9	17.3	90900
> 20% Disc.																
avr13-142	0.1793	0.0031	9.57	0.45	0.387	0.017	0.932	2646	28	2394	42	2109	78	25.5	39	178000
avr13-164	0.1848	0.0032	7.41	0.30	0.291	0.011	0.901	2696	29	2163	35	1647	52	63.8	38.9	332900
avr13-189	0.1959	0.0047	6.96	0.35	0.258	0.011	0.876	2792	39	2106	43	1478	57	89.0	356	414000
avr13-006	0.1977	0.0062	6.57	0.56	0.241	0.019	0.931	2807	50	2055	73	1392	99	101.7	254	1330000
avr13-139	0.1979	0.0038	4.78	0.25	0.175	0.008	0.930	2809	31	1782	42	1041	46	169.8	230	342000
avr13-130	0.1980	0.0143	6.80	1.04	0.249	0.034	0.883	2810	113	2085	127	1433	172	96.0	59.2	649000
avr13-117	0.2298	0.0078	6.22	0.35	0.196	0.009	0.795	3051	53	2007	48	1155	47	164.2	622	125200
avr13-049	0.2417	0.0078	11.00	0.74	0.330	0.019	0.876	3131	50	2523	60	1838	93	70.3	136	116200
avr13-050	0.2429	0.0041	13.40	0.95	0.400	0.027	0.970	3139	27	2708	65	2169	125	44.7	33.7	124800
avr13-140	0.2477	0.0041	15.01	0.54	0.439	0.014	0.886	3170	26	2816	34	2348	62	35.0	22.9	485000
avr13-092	0.2603	0.0051	16.13	0.66	0.449	0.016	0.874	3249	31	2884	38	2392	71	35.8	18	73000
avr13-159	0.2642	0.0051	18.03	1.04	0.495	0.027	0.943	3272	30	2991	54	2592	115	26.2	458	809000
avr13-087	0.2670	0.0044	15.47	0.56	0.420	0.014	0.893	3288	25	2844	34	2261	62	45.4	146	180000
avr13-125	0.2710	0.0047	19.13	0.75	0.512	0.018	0.896	3312	27	3048	37	2665	77	24.3	41.1	330000
avr13-173	0.2725	0.0048	19.91	0.80	0.530	0.019	0.897	3320	27	3087	38	2741	80	21.1	18.2	420000
avr13-128	0.2735	0.0052	19.42	0.70	0.515	0.016	0.850	3326	30	3063	34	2678	67	24.2	206	232000
avr13-200	0.2840	0.0117	17.39	1.31	0.444	0.028	0.836	3385	63	2956	70	2369	123	42.9	23.5	94800
avr13-144	0.2864	0.0053	16.51	0.63	0.418	0.014	0.874	3398	28	2907	36	2251	63	50.9	17.7	170100
avr13-168	0.2880	0.0108	18.27	1.28	0.460	0.027	0.845	3407	57	3004	65	2440	119	39.7	18.5	73000
avr13-081	0.2900	0.0050	19.67	1.26	0.492	0.030	0.963	3418	26	3075	60	2579	130	32.5	145	547600
avr13-160	0.2906	0.0047	21.64	0.78	0.540	0.017	0.894	3421	25	3168	34	2784	73	22.9	244	197300
avr13-156	0.2917	0.0047	12.55	0.90	0.312	0.022	0.975	3427	25	2646	65	1751	106	95.8	270	115100
avr13-024	0.2941	0.0052	21.16	0.80	0.522	0.017	0.881	3439	27	3146	36	2707	73	27.0	14.6	150600
avr13-169	0.2947	0.0047	22.47	0.85	0.553	0.019	0.908	3443	24	3204	36	2838	78	21.3	42.9	301000
avr13-022	0.2954	0.0054	21.46	0.94	0.527	0.021	0.910	3446	28	3160	42	2729	88	26.3	10	264000
avr13-184	0.2976	0.0083	22.32	1.12	0.544	0.023	0.834	3458	42	3198	48	2800	95	23.5	23.7	45300
avr13-188	0.3000	0.0071	20.76	0.93	0.502	0.019	0.850	3470	36	3128	43	2622	82	32.3	24.3	1210000
avr13-183	0.3040	0.0050	23.07	0.82	0.550	0.017	0.889	3491	25	3230	34	2826	72	23.5	20.1	209000
avr13-133	0.3074	0.0055	20.77	0.91	0.490	0.020	0.912	3508	27	3128	42	2571	84	36.5	19.1	177900
avr13-162	0.3152	0.0049	25.02	0.86	0.576	0.018	0.891	3547	24	3309	33	2931	72	21.0	27.4	181300
avr13-017	0.3183	0.0105	9.57	0.97	0.218	0.021	0.946	3562	50	2394	89	1271	110	180.2	406	65100
avr13-193	0.3185	0.0054	22.18	1.14	0.505	0.024	0.945	3563	26	3192	49	2635	104	35.2	133	386000
avr13-097	0.3206	0.0052	21.57	1.09	0.488	0.023	0.947	3573	25	3165	48	2562	101	39.4	109	121200

avr13-127	0.3452	0.0062	26.30	0.98	0.553	0.018	0.876	3686	27	3358	36	2836	74	30.0	16.3	211000
avr13-135	0.3535	0.0065	28.61	1.12	0.587	0.020	0.883	3722	28	3440	38	2977	82	25.0	112	163300
Standards AVR13-13, >1mm																
og1-1	0.2987	0.0045	27.80	0.62	0.675	0.011	0.734	3463	23	3412	22	3325	42	4.2	12.1	49200
og1-2	0.2999	0.0041	30.11	0.56	0.728	0.009	0.679	3470	21	3490	18	3526	34	-1.6	4.3	44070
og1-3	0.2954	0.0058	28.88	0.70	0.709	0.010	0.583	3446	30	3449	23	3455	38	-0.2	9	57300
og1-4	0.2953	0.0060	28.46	0.97	0.699	0.019	0.801	3446	31	3435	33	3417	72	0.8	4.4	49000
og1-5	0.2991	0.0036	28.87	0.60	0.700	0.012	0.818	3466	19	3449	20	3421	45	1.3	2.2	61300
og1-6	0.2983	0.0033	27.71	0.50	0.674	0.010	0.793	3461	17	3409	18	3321	37	4.2	31	39300
og1-7	0.3001	0.0069	29.25	0.92	0.707	0.015	0.678	3471	35	3462	30	3447	56	0.7	18	59200
og1-8	0.2997	0.0023	27.29	0.41	0.660	0.008	0.856	3469	12	3394	14	3268	33	6.1	44.5	112100
og1-9	0.2959	0.0057	27.75	0.62	0.680	0.008	0.507	3449	30	3410	22	3345	29	3.1	1.8	57810
og1-10	0.2998	0.0045	28.55	0.54	0.691	0.008	0.611	3469	23	3438	18	3385	30	2.5	8.8	70200
og1-11	0.2987	0.0051	27.71	0.60	0.673	0.009	0.617	3463	26	3409	21	3317	35	4.4	2.2	55410

AVR 16 12 > 1mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr12-396	0.1141	0.0043	5.09	0.27	0.324	0.012	0.707	1866	67	1834	45	1807	60	3.3	25	87800
avr12-255	0.1147	0.0019	5.14	0.18	0.325	0.010	0.887	1875	30	1842	30	1814	50	3.4	20	188800
avr12-238	0.1151	0.0026	5.39	0.25	0.340	0.013	0.867	1881	40	1883	38	1884	64	-0.1	4	129700
avr12-245	0.1153	0.0021	5.21	0.20	0.328	0.011	0.871	1885	33	1854	32	1827	52	3.1	14	163700
avr12-337	0.1158	0.0029	5.42	0.24	0.340	0.012	0.826	1892	44	1888	37	1885	59	0.4	31	112000
avr12-338	0.1159	0.0024	5.37	0.21	0.336	0.011	0.852	1894	37	1880	33	1867	54	1.4	10	125300
avr12-226	0.1159	0.0028	5.19	0.24	0.325	0.013	0.860	1894	43	1851	39	1813	64	4.5	22	67500
avr12-302	0.1164	0.0021	5.35	0.20	0.334	0.011	0.876	1902	33	1877	32	1855	54	2.5	12	119800
avr12-216	0.1168	0.0021	5.49	0.29	0.341	0.017	0.940	1908	32	1899	44	1891	80	0.9	74	297000
avr12-214	0.1170	0.0023	5.27	0.20	0.327	0.011	0.849	1911	36	1864	32	1822	51	4.9	21	85000
avr12-333	0.1179	0.0028	5.54	0.24	0.341	0.012	0.834	1925	42	1907	36	1891	59	1.8	43	132500
avr12-223	0.1207	0.0027	5.79	0.23	0.348	0.012	0.832	1967	39	1945	34	1925	55	2.2	11	69600
avr12-291	0.1560	0.0027	9.29	0.46	0.432	0.020	0.936	2413	29	2367	45	2315	90	4.2	28	409000
avr12-386	0.1596	0.0026	10.20	0.39	0.463	0.016	0.904	2451	27	2453	34	2454	70	-0.1	82	705000
avr12-241	0.1625	0.0030	10.00	0.41	0.446	0.016	0.888	2482	31	2434	37	2378	72	4.4	33	103000
avr12-316	0.1644	0.0044	10.36	0.61	0.457	0.024	0.889	2501	45	2467	53	2426	104	3.1	59	452000
avr12-312	0.1656	0.0031	10.69	0.49	0.468	0.020	0.910	2514	32	2496	42	2475	85	1.6	55	268400
avr12-361	0.1686	0.0032	11.24	0.43	0.483	0.016	0.871	2544	31	2543	35	2542	70	0.1	0	75600
avr12-368	0.1696	0.0035	10.74	0.43	0.459	0.016	0.861	2554	34	2501	37	2436	69	4.8	21	71600
avr12-295	0.1721	0.0030	11.04	0.40	0.465	0.015	0.879	2578	29	2527	33	2463	65	4.7	21	86900
avr12-313	0.1728	0.0030	11.27	0.43	0.473	0.016	0.890	2585	29	2546	35	2497	70	3.5	17	155300
avr12-326	0.1734	0.0034	11.17	0.44	0.467	0.016	0.868	2591	32	2538	36	2472	69	4.8	23	60400
avr12-364	0.1738	0.0032	11.49	0.44	0.480	0.016	0.875	2595	31	2564	35	2525	70	2.8	15	62400
avr12-207	0.1747	0.0031	11.38	0.42	0.473	0.015	0.880	2603	29	2555	34	2495	67	4.4	10	89700
avr12-344	0.1751	0.0043	12.03	0.52	0.498	0.018	0.822	2607	41	2606	40	2606	76	0.1	15	29000
avr12-217	0.1765	0.0033	11.47	0.46	0.471	0.017	0.884	2620	31	2562	37	2489	74	5.3	73	191300
avr12-370	0.1772	0.0031	12.05	0.51	0.493	0.019	0.912	2627	28	2608	39	2584	81	1.7	219	363000
avr12-394	0.1791	0.0039	12.03	0.53	0.487	0.019	0.870	2645	36	2606	41	2558	81	3.4	67	111900
avr12-342	0.1799	0.0053	12.53	0.60	0.505	0.019	0.791	2652	48	2645	44	2635	82	0.6	32	89800
avr12-202	0.1816	0.0044	12.22	0.53	0.488	0.017	0.826	2668	40	2622	40	2563	75	4.1	3	20670
avr12-266	0.1821	0.0029	12.93	0.48	0.515	0.017	0.901	2672	26	2675	34	2678	73	-0.2	0	141900
avr12-270	0.1824	0.0037	12.29	0.48	0.489	0.016	0.857	2675	33	2627	36	2565	70	4.3	9	104200
avr12-388	0.1828	0.0031	12.59	0.46	0.500	0.016	0.890	2678	28	2649	34	2612	70	2.6	76	97400
avr12-367	0.1829	0.0045	12.50	0.52	0.496	0.017	0.809	2679	40	2643	39	2596	72	3.2	16	86900
avr12-229	0.1836	0.0035	13.16	0.65	0.520	0.024	0.920	2686	32	2691	45	2699	99	-0.5	14	99000
avr12-242	0.1870	0.0050	13.46	0.64	0.522	0.020	0.823	2716	44	2712	44	2708	85	0.3	15	27600
avr12-378	0.1971	0.0051	14.02	0.72	0.516	0.023	0.862	2802	42	2751	47	2682	96	4.5	25	217000
avr12-351*	0.2110	0.0173	16.18	1.37	0.556	0.022	0.298	2913	127	2887	78	2850	92	2.2	740	451600
avr12-351	0.2877	0.0055	24.42	1.03	0.616	0.023	0.892	3405	29	3285	40	3094	92	10.1	740	451600
avr12-259	0.2502	0.0051	22.04	1.32	0.639	0.036	0.940	3186	32	3186	57	3185	140	0.0	47	407000
avr12-348	0.2520	0.0046	22.24	1.11	0.640	0.030	0.930	3197	29	3194	47	3189	116	0.3	193	831000
avr12-380	0.2734	0.0073	25.71	1.37	0.682	0.031	0.865	3326	41	3336	51	3352	119	-0.8	38	213000
avr12-358	0.2740	0.0060	25.35	1.04	0.671	0.023	0.847	3329	34	3322	39	3310	89	0.6	208	160200
avr12-208	0.2766	0.0052	24.27	0.93	0.636	0.021	0.874	3344	29	3279	37	3175	84	5.3	28	214000
avr12-319	0.2776	0.0064	24.69	1.12	0.645	0.025	0.862	3349	35	3296	43	3209	98	4.4	22	87300
avr12-278	0.2825	0.0044	25.63	0.94	0.658	0.022	0.904	3377	24	3332	35	3259	84	3.6	-2	199400

avr12-225	0.2828	0.0083	26.20	1.46	0.672	0.032	0.850	3378	45	3354	53	3314	122	2.0	29	128800
avr12-335	0.2832	0.0045	25.33	0.91	0.649	0.021	0.898	3381	25	3321	35	3223	82	4.9	11	321000
avr12-307	0.2839	0.0047	25.75	0.94	0.658	0.021	0.890	3385	26	3337	35	3258	82	3.9	6	168800
avr12-310	0.2863	0.0050	27.40	1.08	0.694	0.024	0.893	3398	27	3398	38	3398	92	0.0	19	136500
avr12-300	0.2864	0.0046	25.89	0.93	0.656	0.021	0.894	3398	25	3342	34	3250	81	4.5	12	82600
avr12-384	0.2890	0.0049	26.78	1.03	0.672	0.023	0.897	3412	26	3375	37	3314	89	3.0	36	102900
avr12-304	0.2980	0.0051	27.28	1.02	0.664	0.022	0.887	3460	26	3394	36	3283	85	5.4	24	126000
avr12-331	0.3074	0.0052	29.67	1.23	0.700	0.027	0.913	3508	26	3476	40	3421	100	2.6	13	217000
avr12-325	0.3140	0.0050	31.83	1.17	0.735	0.024	0.901	3541	24	3545	36	3552	90	-0.3	6	433000
avr12-318	0.3141	0.0070	30.49	1.48	0.704	0.030	0.888	3541	34	3503	47	3436	114	3.1	9	33900
avr12-272	0.3186	0.0053	32.46	1.25	0.739	0.026	0.903	3563	25	3564	37	3567	94	-0.1	17	243000
avr12-317	0.3187	0.0062	32.62	1.25	0.742	0.025	0.865	3564	29	3569	37	3579	91	-0.4	7	48800
avr12-374	0.3190	0.0078	31.40	1.55	0.714	0.031	0.870	3565	37	3532	47	3474	114	2.6	10	96500
avr12-204	0.3200	0.0058	31.29	1.17	0.709	0.023	0.875	3570	28	3528	36	3455	87	3.3	15	80500
avr12-261	0.3208	0.0052	31.20	1.12	0.705	0.023	0.894	3574	24	3525	35	3441	85	3.9	14	84800
avr12-201	0.3215	0.0075	32.94	1.79	0.743	0.036	0.903	3577	35	3579	52	3582	133	-0.1	2500	208500
avr12-371	0.3218	0.0061	30.93	1.22	0.697	0.024	0.875	3578	29	3517	38	3409	91	5.0	12	65600
avr12-327	0.3339	0.0062	33.97	1.27	0.738	0.024	0.868	3635	28	3609	36	3562	88	2.0	20	255100
avr12-332	0.3384	0.0090	34.71	1.61	0.744	0.028	0.819	3656	40	3631	45	3585	104	2.0	14	386900
avr12-345	0.3442	0.0061	35.57	1.35	0.750	0.025	0.883	3682	27	3655	37	3606	92	2.1	9	300800
avr12-341	0.3490	0.0063	35.00	1.30	0.727	0.024	0.876	3703	27	3639	36	3523	88	5.1	28	167100
avr12-253	0.3505	0.0056	35.48	1.32	0.734	0.025	0.902	3709	24	3652	36	3549	91	4.5	23	514000
avr12-200	0.3538	0.0056	36.25	1.33	0.743	0.025	0.901	3723	24	3673	36	3582	91	3.9	15	270200
avr12-275	0.3539	0.0054	36.37	1.29	0.745	0.024	0.903	3724	23	3676	35	3590	88	3.7	7	630000
avr12-267	0.3601	0.0056	37.30	1.34	0.751	0.024	0.903	3750	23	3702	35	3612	89	3.8	7	203600
avr12-199	0.3606	0.0060	38.69	1.42	0.778	0.025	0.890	3752	25	3738	36	3711	92	1.1	18	237400
avr12-308	0.3784	0.0070	40.85	1.59	0.783	0.027	0.881	3825	28	3792	38	3728	96	2.6	30	229100
avr12-376	0.3880	0.0142	43.17	2.66	0.807	0.040	0.805	3863	54	3846	59	3814	141	1.3	25	177000
> 5% Disc.																
avr12-289	0.1132	0.0021	4.87	0.19	0.312	0.011	0.877	1851	33	1797	32	1751	52	5.8	20	149000
avr12-320	0.1153	0.0021	4.90	0.22	0.308	0.012	0.907	1885	33	1802	36	1731	60	8.9	32	156200
avr12-240*	0.1208	0.0027	5.56	0.15	0.334	0.013	0.770	1968	40	1911	23	1858	61	5.9	44	39200
avr12-240	0.1717	0.0034	8.44	0.36	0.357	0.013	0.884	2574	33	2279	38	1966	63	31.0	44	39200
avr12-222	0.1213	0.0022	5.39	0.20	0.322	0.011	0.877	1975	32	1883	32	1800	52	9.7	37	154500
avr12-305*	0.1319	0.0025	6.56	0.12	0.361	0.012	0.753	2123	33	2054	16	1985	58	6.9	501	197400
avr12-305	0.1958	0.0032	10.52	0.41	0.390	0.014	0.906	2792	26	2482	35	2122	63	31.5	501	197400
avr12-236	0.1588	0.0046	9.46	0.49	0.432	0.019	0.830	2443	49	2384	47	2315	84	5.5	19	287000
avr12-346	0.1619	0.0031	9.69	0.37	0.434	0.014	0.865	2476	32	2406	35	2325	64	6.5	39	152400
avr12-343	0.1649	0.0030	10.13	0.38	0.446	0.015	0.881	2507	30	2447	34	2376	66	5.5	16	149400
avr12-296	0.1666	0.0028	10.15	0.37	0.442	0.014	0.888	2524	28	2449	33	2359	63	7.0	13	168100
avr12-328	0.1666	0.0030	10.06	0.46	0.438	0.018	0.919	2524	30	2440	41	2342	81	7.8	26	298400
avr12-277	0.1707	0.0034	10.58	0.43	0.450	0.016	0.870	2565	33	2487	37	2393	70	7.2	24	319000
avr12-232	0.1721	0.0038	10.89	0.49	0.459	0.018	0.870	2578	37	2514	41	2435	79	5.9	14	157000
avr12-279	0.1734	0.0032	10.49	0.41	0.439	0.015	0.883	2591	30	2479	36	2346	67	10.4	38	200000
avr12-248	0.1764	0.0037	11.27	0.44	0.463	0.015	0.842	2619	35	2546	36	2455	67	6.7	18	29200
avr12-243	0.1783	0.0033	11.06	0.62	0.450	0.024	0.943	2637	30	2528	51	2395	104	10.1	24	278300
avr12-294	0.1805	0.0034	11.80	0.45	0.474	0.016	0.873	2657	31	2589	35	2502	69	6.2	13	42330
avr12-306	0.1822	0.0041	12.00	0.49	0.478	0.016	0.836	2673	37	2605	38	2518	71	6.2	25	62200
avr12-323	0.2102	0.0034	14.81	0.64	0.511	0.021	0.927	2907	26	2803	41	2661	87	9.3	942	900000
avr12-228	0.2164	0.0052	15.99	0.79	0.536	0.023	0.875	2954	38	2876	46	2767	97	6.8	51	95000
avr12-203	0.2445	0.0038	19.75	0.73	0.586	0.020	0.910	3149	24	3079	35	2972	80	6.0	78	462200
avr12-298	0.2748	0.0045	22.65	0.83	0.598	0.020	0.896	3334	25	3212	35	3021	79	10.4	91	172300
avr12-283	0.2754	0.0049	23.00	0.89	0.606	0.021	0.890	3337	27	3227	37	3052	83	9.3	22	120000
avr12-231	0.2765	0.0044	22.94	0.86	0.602	0.021	0.908	3343	24	3224	36	3036	82	10.1	18	550000
avr12-285	0.2824	0.0046	24.79	0.93	0.637	0.021	0.898	3376	25	3300	36	3176	84	6.3	20	114700
avr12-219	0.2829	0.0044	23.91	0.88	0.613	0.020	0.905	3379	24	3265	35	3082	81	9.6	91	347600
avr12-234	0.2850	0.0127	24.56	1.92	0.625	0.040	0.821	3391	68	3291	73	3130	157	8.3	9	66300
avr12-359	0.2877	0.0046	25.04	0.95	0.631	0.022	0.910	3405	24	3310	37	3154	86	8.0	19	442000
avr12-254	0.2879	0.0047	25.70	0.94	0.647	0.021	0.894	3406	25	3335	35	3218	82	5.9	33	99710
avr12-209	0.2970	0.0049	26.15	0.96	0.639	0.021	0.892	3455	25	3352	35	3184	82	8.5	32	246500
avr12-324	0.3001	0.0049	26.34	0.95	0.637	0.021	0.893	3471	25	3359	35	3176	81	9.3	100	512400
avr12-379	0.3109	0.0096	28.34	1.64	0.661	0.032	0.847	3525	47	3431	55	3271	125	7.8	27	392000
avr12-347	0.3123	0.0058	28.51	1.08	0.662	0.022	0.872	3532	28	3437	36	3276	84	7.8	18	234000
avr12-206	0.3131	0.0049	29.03	1.10	0.673	0.023	0.909	3536	24	3455	36	3316	88	6.7	18	426000
avr12-365	0.3139	0.0059	29.24	1.14	0.676	0.023	0.876	3540	29	3462	38	3328	88	6.4	21	51400
avr12-244	0.3177	0.0053	30.12	1.09	0.688	0.022	0.888	3559	25	3491	35	3373	84	5.5	89	151200
avr12-280	0.3245	0.0058	30.69	1.25	0.686	0.025	0.899	3591	27	3509	39	3367	95	6.7	78	199000

avr12-292	0.3398	0.0056	32.23	1.20	0.688	0.023	0.895	3662	25	3557	36	3375	87	8.5	30	324000
avr12-211	0.3443	0.0056	33.31	1.21	0.702	0.023	0.895	3682	25	3590	35	3427	86	7.4	32	311500
avr12-349	0.3493	0.0055	34.67	1.27	0.720	0.024	0.901	3704	24	3629	36	3496	88	6.0	29	306500
avr12-393	0.3505	0.0056	33.65	1.25	0.696	0.023	0.903	3709	24	3600	36	3406	88	8.9	38	456000
avr12-212	0.3701	0.0060	37.05	1.40	0.726	0.025	0.903	3792	24	3695	37	3518	92	7.8	25	531000
avr12-352	0.3865	0.0064	39.81	1.59	0.747	0.027	0.911	3857	25	3766	39	3596	100	7.3	64	546000
avr12-385	0.4324	0.0095	46.80	2.66	0.785	0.041	0.922	4026	32	3927	55	3735	147	7.8	5680	616000
> 10% Disc.																
avr12-336	0.1167	0.0025	4.93	0.20	0.306	0.010	0.843	1906	38	1807	33	1723	50	10.6	16	113100
avr12-197	0.1186	0.0026	4.94	0.21	0.302	0.011	0.866	1935	38	1810	36	1703	56	13.7	60	120000
avr12-237	0.1207	0.0029	5.08	0.25	0.305	0.013	0.868	1967	42	1833	40	1717	63	14.5	72	159700
avr12-210	0.1210	0.0025	5.32	0.21	0.319	0.011	0.845	1971	37	1872	33	1784	51	10.5	61	114000
avr12-284	0.1239	0.0024	5.39	0.21	0.316	0.011	0.870	2013	33	1883	33	1768	52	13.9	39	118100
avr12-273	0.1398	0.0031	6.68	0.29	0.346	0.013	0.865	2225	38	2069	38	1917	63	16.1	570	798000
avr12-382	0.1493	0.0028	7.36	0.30	0.357	0.013	0.892	2338	31	2156	36	1969	62	18.7	31	155900
avr12-250	0.1525	0.0032	8.30	0.35	0.395	0.014	0.867	2374	35	2264	38	2145	66	10.7	39	123700
avr12-395	0.1548	0.0047	7.90	0.42	0.370	0.016	0.819	2400	51	2219	46	2029	75	18.2	34	73100
avr12-256	0.1655	0.0031	9.55	0.37	0.419	0.014	0.871	2513	32	2393	35	2255	64	11.4	26	158400
avr12-330	0.1656	0.0031	9.25	0.37	0.405	0.014	0.880	2514	32	2363	36	2192	65	14.7	5	321000
avr12-356	0.1677	0.0026	9.57	0.37	0.414	0.015	0.914	2535	26	2394	35	2233	67	13.5	27	306000
avr12-269	0.1683	0.0029	9.27	0.40	0.400	0.016	0.914	2541	29	2365	39	2167	72	17.3	199	308000
avr12-360	0.1819	0.0031	10.79	0.44	0.430	0.016	0.907	2670	28	2505	37	2306	71	15.8	36	70500
avr12-233	0.1845	0.0099	11.29	0.98	0.444	0.030	0.787	2694	86	2548	78	2369	134	13.7	130	171500
avr12-263	0.1981	0.0044	11.99	0.58	0.439	0.019	0.889	2811	36	2604	44	2346	84	19.8	166	404000
avr12-281	0.2008	0.0033	12.65	0.46	0.457	0.015	0.897	2833	26	2654	34	2426	66	16.8	277	323000
avr12-246	0.2085	0.0046	14.19	0.60	0.494	0.018	0.857	2894	35	2763	40	2587	77	11.9	47	192600
avr12-299	0.2099	0.0044	13.57	0.53	0.469	0.016	0.848	2905	33	2720	36	2479	68	17.2	268	212400
avr12-293	0.2246	0.0052	15.30	0.64	0.494	0.017	0.835	3014	37	2834	39	2589	74	16.4	188	114000
avr12-375	0.2440	0.0084	17.76	1.11	0.528	0.028	0.834	3146	54	2977	58	2733	115	15.1	49	420000
avr12-276	0.2600	0.0046	18.78	0.80	0.524	0.020	0.911	3247	27	3031	40	2716	85	19.5	57	412700
avr12-315	0.2854	0.0076	22.65	1.01	0.576	0.020	0.798	3393	41	3212	42	2931	83	15.8	69	68600
avr12-227	0.2858	0.0085	22.74	1.28	0.577	0.028	0.850	3395	46	3216	53	2936	112	15.6	43	271000
avr12-372	0.2863	0.0050	22.82	0.99	0.578	0.023	0.915	3398	27	3219	41	2941	93	15.5	22	145000
avr12-258	0.2929	0.0048	23.96	0.90	0.593	0.020	0.901	3433	25	3267	36	3003	81	14.3	25	418000
avr12-391	0.2984	0.0051	24.48	1.03	0.595	0.023	0.911	3462	26	3288	40	3010	91	15.0	25	341000
avr12-271	0.3001	0.0050	24.87	1.46	0.601	0.034	0.958	3471	26	3303	56	3034	134	14.4	107	435000
avr12-213	0.3097	0.0052	26.49	1.00	0.620	0.021	0.894	3519	26	3365	36	3112	83	13.1	51	245400
avr12-230	0.3108	0.0068	25.97	1.16	0.606	0.024	0.873	3525	33	3345	43	3054	94	15.4	-3	181000
avr12-265	0.3131	0.0062	26.03	1.08	0.603	0.022	0.877	3536	30	3348	40	3042	87	16.3	12	190700
avr12-355	0.3144	0.0052	26.36	1.00	0.608	0.021	0.901	3543	25	3360	37	3062	83	15.7	27	173000
avr12-350	0.3155	0.0050	27.64	1.05	0.635	0.022	0.908	3548	24	3406	37	3171	86	11.9	72	167900
avr12-353	0.3195	0.0056	27.53	1.10	0.625	0.022	0.900	3567	27	3403	38	3130	88	14.0	129	306000
avr12-249	0.3263	0.0059	29.47	1.18	0.655	0.023	0.890	3600	28	3469	38	3248	90	10.8	11	217300
avr12-282	0.3268	0.0052	28.54	1.09	0.634	0.022	0.911	3602	24	3438	37	3163	86	13.9	88	310200
avr12-381	0.3528	0.0075	31.76	1.52	0.653	0.028	0.896	3719	32	3543	46	3240	108	14.8	18	313000
avr12-260	0.3648	0.0059	33.65	1.29	0.669	0.023	0.907	3770	24	3600	37	3302	89	14.2	238	270000
avr12-218	0.3778	0.0068	35.11	1.89	0.674	0.034	0.942	3823	27	3642	52	3321	131	15.1	64	108000
> 20% Disc.																
avr12-262	0.1112	0.0019	3.99	0.18	0.260	0.011	0.924	1819	31	1632	36	1490	55	22.1	50	221500
avr12-251	0.1459	0.0036	6.27	0.29	0.312	0.012	0.849	2298	42	2014	40	1749	60	31.4	195	340000
avr12-340	0.1466	0.0025	6.92	0.31	0.342	0.014	0.925	2307	29	2101	39	1898	68	21.5	30	295000
avr12-354	0.1469	0.0034	5.21	0.27	0.257	0.012	0.898	2310	39	1854	44	1474	62	56.7	268	218000
avr12-334	0.1552	0.0028	5.93	0.23	0.277	0.010	0.889	2404	30	1965	33	1576	48	52.6	178	213300
avr12-257	0.1556	0.0028	7.61	0.30	0.355	0.013	0.894	2408	30	2186	35	1957	60	23.0	76	267500
avr12-363	0.1570	0.0122	7.43	0.64	0.343	0.013	0.428	2424	126	2165	74	1902	60	27.4	390	134700
avr12-288	0.1751	0.0034	9.30	0.36	0.385	0.013	0.858	2607	32	2368	35	2101	59	24.1	19	54000
avr12-221	0.1773	0.0031	9.35	0.36	0.383	0.013	0.892	2628	29	2373	35	2088	62	25.9	426	300000
avr12-301	0.1787	0.0030	9.46	0.35	0.384	0.012	0.886	2641	28	2384	33	2095	58	26.0	91	128700
avr12-268	0.1852	0.0030	9.86	0.40	0.386	0.015	0.918	2700	27	2422	37	2105	67	28.3	91	217000
avr12-357	0.1880	0.0104	4.25	0.58	0.164	0.021	0.916	2725	88	1684	107	979	113	178.3	30	270000
avr12-377	0.1883	0.0063	9.24	0.53	0.356	0.016	0.807	2727	54	2362	51	1963	77	38.9	308	343000
avr12-286	0.1887	0.0030	10.04	0.40	0.386	0.014	0.918	2731	26	2438	36	2104	65	29.8	127	557100
avr12-252	0.1917	0.0036	9.65	0.51	0.365	0.018	0.934	2757	31	2402	48	2006	85	37.4	34	504000
avr12-366	0.2102	0.0038	10.68	0.40	0.369	0.012	0.873	2907	29	2496	34	2023	57	43.7	92	395700
avr12-339	0.2293	0.0053	11.07	0.57	0.350	0.016	0.895	3047	37	2529	47	1935	77	57.5	197	274700
avr12-239	0.2303	0.0039	9.69	0.46	0.305	0.014	0.934	3054	27	2406	43	1718	67	77.8	39	199700
avr12-321	0.2334	0.0040	13.90	0.69	0.432	0.020	0.940	3076	27	2743	46	2315	90	32.9	110	571000

avr12-247	0.2385	0.0051	6.28	0.43	0.191	0.013	0.951	3110	34	2016	59	1127	67	176.0	432	51900
avr12-329	0.2393	0.0093	15.41	0.99	0.467	0.024	0.798	3115	60	2841	60	2470	104	26.1	114	482000
avr12-309	0.2546	0.0049	16.67	0.78	0.475	0.020	0.914	3214	30	2916	44	2505	89	28.3	108	744000
avr12-311	0.2577	0.0055	16.04	0.68	0.451	0.016	0.863	3233	33	2879	40	2401	73	34.6	95	264000
avr12-389	0.2718	0.0045	16.04	0.91	0.428	0.023	0.957	3316	25	2879	53	2297	104	44.4	25	261300
avr12-287	0.2733	0.0046	14.81	0.95	0.393	0.024	0.965	3325	26	2803	59	2137	112	55.6	128	437000
avr12-205	0.2774	0.0046	9.04	0.43	0.236	0.011	0.938	3348	26	2342	43	1367	55	144.9	217	161900
avr12-373	0.2787	0.0070	18.94	0.98	0.493	0.022	0.873	3356	39	3039	49	2584	95	29.9	46	297000
avr12-274	0.2795	0.0051	17.42	0.91	0.452	0.022	0.937	3360	28	2958	49	2404	97	39.8	68	274900
avr12-322	0.2800	0.0044	16.04	0.62	0.415	0.015	0.914	3363	24	2879	36	2240	67	50.2	240	483100
avr12-362	0.2826	0.0051	15.32	0.63	0.393	0.014	0.899	3377	28	2835	38	2138	67	58.0	1343	155200
avr12-369	0.2885	0.0049	21.24	0.99	0.534	0.023	0.932	3410	26	3150	44	2758	96	23.6	67	633000
avr12-215	0.2887	0.0094	11.58	1.05	0.291	0.025	0.934	3411	50	2571	82	1647	122	107.1	1000	101400
avr12-297	0.2888	0.0048	20.36	0.80	0.511	0.018	0.905	3411	26	3109	37	2663	77	28.1	37	399100
avr12-390	0.2909	0.0056	20.01	0.84	0.499	0.019	0.888	3422	30	3092	40	2609	79	31.2	213	214000
avr12-314	0.2926	0.0057	22.06	0.87	0.547	0.019	0.870	3431	30	3186	38	2812	78	22.0	171	167200
avr12-220	0.2926	0.0046	21.97	0.81	0.545	0.018	0.906	3431	24	3182	35	2802	76	22.5	12	203200
avr12-383	0.2936	0.0049	22.10	1.13	0.546	0.026	0.944	3437	26	3188	48	2809	109	22.4	182	493000
avr12-224	0.2942	0.0069	21.30	1.08	0.525	0.024	0.887	3440	36	3152	48	2720	99	26.5	27	211300
avr12-392	0.2958	0.0049	17.47	0.67	0.428	0.015	0.900	3448	26	2961	36	2298	66	50.1	87	412100
avr12-303	0.3065	0.0066	21.34	0.96	0.505	0.020	0.878	3503	33	3154	43	2635	84	32.9	61	470000
avr12-387	0.3153	0.0057	19.39	2.00	0.446	0.045	0.985	3547	27	3061	95	2377	198	49.2	16	223000
avr12-235	0.3178	0.0087	20.59	1.23	0.470	0.025	0.887	3559	42	3120	56	2484	108	43.3	46	408000
avr12-198	0.3212	0.0050	25.57	0.96	0.577	0.020	0.908	3576	24	3330	36	2938	80	21.7	81	420900
avr12-290	0.3257	0.0056	26.11	1.02	0.581	0.020	0.897	3597	26	3351	38	2954	83	21.7	52	302600
avr12-264	0.3457	0.0062	27.34	1.06	0.574	0.020	0.889	3688	27	3396	37	2923	81	26.2	27	445000

AVR 16 11 > 1mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr11-044*	0.1090	0.0052	5.18	0.40	0.345	0.021	0.790	1783	84	1850	64	1911	100	-6.7	4590	361900
avr11-044	0.3712	0.0063	25.63	1.68	0.501	0.032	0.966	3796	25	3333	62	2618	135	45.0	4590	361900
> -5% Disc.																
avr11-138*	0.1116	0.0057	5.22	0.34	0.339	0.013	0.601	1826	90	1856	53	1882	63	-3.0	491	138600
avr11-138	0.2113	0.0041	11.29	0.48	0.388	0.015	0.888	2916	31	2547	39	2112	67	38.1	491	138600
avr11-090	0.1142	0.0022	5.09	0.21	0.323	0.012	0.877	1867	35	1835	34	1806	56	3.4	13	208900
avr11-185	0.1664	0.0027	10.94	0.53	0.477	0.022	0.944	2522	27	2518	44	2514	95	0.3	223	884000
avr11-082	0.1689	0.0027	11.25	0.56	0.483	0.023	0.947	2547	27	2544	45	2540	98	0.3	237	539000
avr11-014	0.1722	0.0029	11.71	0.47	0.493	0.018	0.907	2579	28	2581	37	2584	78	-0.2	11	228000
avr11-172	0.1734	0.0028	11.40	0.48	0.477	0.019	0.923	2591	27	2557	39	2514	80	3.0	9	771000
avr11-074	0.1738	0.0030	11.86	0.45	0.495	0.017	0.891	2595	29	2594	35	2593	72	0.1	19	705000
avr11-011	0.1745	0.0043	12.01	0.77	0.499	0.029	0.922	2601	41	2605	58	2609	126	-0.3	20	399000
avr11-165	0.1752	0.0030	11.70	0.47	0.484	0.018	0.907	2608	28	2580	37	2546	76	2.5	7	324400
avr11-039	0.1752	0.0036	11.64	0.48	0.482	0.017	0.867	2608	34	2576	38	2536	74	2.9	46	222000
avr11-167	0.1755	0.0037	12.10	0.48	0.500	0.017	0.849	2611	34	2612	36	2615	72	-0.1	13	58700
avr11-048	0.1779	0.0028	12.36	0.59	0.504	0.022	0.942	2633	26	2632	44	2631	96	0.1	116	659000
avr11-047	0.1804	0.0031	12.74	0.53	0.512	0.019	0.909	2657	29	2660	39	2665	82	-0.3	16	104800
avr11-016	0.1825	0.0039	12.86	0.57	0.511	0.020	0.879	2676	35	2669	41	2661	85	0.6	100	379000
avr11-069	0.1825	0.0033	12.47	0.46	0.496	0.016	0.876	2676	29	2641	34	2595	69	3.1	16	102500
avr11-125	0.1825	0.0031	12.19	0.44	0.484	0.015	0.885	2676	28	2619	33	2546	67	5.1	14	85900
avr11-030	0.1838	0.0034	12.70	0.50	0.501	0.017	0.881	2687	30	2658	36	2619	74	2.6	35	73500
avr11-022	0.1846	0.0034	12.85	0.50	0.505	0.017	0.884	2695	30	2669	36	2634	74	2.3	52	160200
avr11-140	0.1848	0.0036	12.61	0.59	0.495	0.021	0.907	2696	32	2651	43	2592	89	4.0	66	115000
avr11-029	0.1853	0.0035	13.10	0.52	0.513	0.018	0.878	2701	31	2687	37	2668	75	1.2	48	141800
avr11-136	0.1873	0.0035	12.94	0.49	0.501	0.016	0.868	2719	31	2676	35	2619	70	3.8	72	94000
avr11-075	0.1883	0.0042	12.99	0.54	0.501	0.018	0.847	2727	36	2679	38	2616	75	4.3	45	83900
avr11-035	0.1885	0.0039	13.63	0.56	0.525	0.019	0.865	2729	33	2725	38	2719	78	0.4	70	102400
avr11-018	0.1901	0.0049	14.13	0.69	0.539	0.023	0.853	2743	42	2758	46	2779	94	-1.3	86	133200
avr11-025	0.1901	0.0042	13.80	0.56	0.527	0.018	0.842	2743	36	2736	38	2727	76	0.6	98	150100
avr11-051	0.1943	0.0035	14.33	0.55	0.535	0.018	0.884	2779	29	2772	36	2762	76	0.6	118	101200
avr11-070	0.1970	0.0033	14.46	0.54	0.532	0.018	0.893	2802	27	2780	35	2751	74	1.8	31	72700
avr11-005	0.1977	0.0049	14.42	0.74	0.529	0.024	0.874	2807	40	2778	48	2737	99	2.6	100	335000
avr11-026	0.1992	0.0056	14.52	0.65	0.529	0.018	0.775	2820	45	2784	42	2736	77	3.1	74	36470
avr11-151*	0.2030	0.0104	14.64	1.22	0.523	0.034	0.786	2850	81	2792	76	2712	143	5.1	820	269900
avr11-151	0.2498	0.0080	18.80	1.24	0.546	0.032	0.875	3183	50	3031	62	2809	131	13.4	820	269900
avr11-037	0.2069	0.0036	15.84	0.61	0.555	0.019	0.888	2881	28	2867	36	2847	78	1.2	8	221600

avr11-085	0.2079	0.0046	15.56	0.66	0.543	0.020	0.850	2889	36	2850	40	2795	81	3.4	84	324400
avr11-115	0.2089	0.0040	16.37	0.62	0.568	0.019	0.862	2897	31	2899	36	2901	76	-0.1	20	78500
avr11-190	0.2101	0.0036	15.81	0.59	0.546	0.018	0.886	2906	28	2866	35	2808	75	3.5	6	111100
avr11-080	0.2102	0.0038	15.91	0.62	0.549	0.019	0.883	2907	29	2871	37	2821	78	3.1	14	47700
avr11-095	0.2107	0.0037	15.88	0.60	0.547	0.018	0.886	2911	28	2869	35	2811	76	3.6	41	241500
avr11-098	0.2121	0.0034	15.85	0.57	0.542	0.017	0.894	2922	26	2868	34	2792	72	4.6	5	137600
avr11-021	0.2155	0.0037	17.31	0.67	0.583	0.020	0.893	2947	28	2952	36	2959	81	-0.4	1	216800
avr11-052	0.2210	0.0037	17.09	0.68	0.561	0.020	0.908	2988	26	2940	37	2871	83	4.1	69	640000
avr11-064	0.2409	0.0047	20.37	0.78	0.613	0.020	0.859	3126	31	3109	36	3083	80	1.4	43	89900
avr11-031	0.2440	0.0042	21.14	0.80	0.628	0.021	0.893	3146	27	3145	36	3143	83	0.1	20	196400
avr11-006	0.2463	0.0067	21.60	1.10	0.636	0.028	0.848	3161	42	3166	48	3173	108	-0.4	26	87200
avr11-104	0.2571	0.0045	22.94	1.11	0.647	0.029	0.933	3229	27	3224	46	3216	113	0.4	36	850200
avr11-038	0.2665	0.0043	24.47	0.88	0.666	0.021	0.894	3286	25	3287	34	3290	82	-0.1	24	294000
avr11-046	0.2672	0.0043	24.65	0.90	0.669	0.022	0.898	3290	25	3294	35	3302	84	-0.4	108	229900
avr11-045	0.2696	0.0043	24.76	1.08	0.666	0.027	0.930	3304	25	3299	42	3290	103	0.4	22	694000
avr11-161	0.2739	0.0046	24.57	0.90	0.651	0.021	0.889	3328	26	3291	35	3230	82	3.0	4	225000
avr11-063	0.2769	0.0044	25.85	1.26	0.677	0.031	0.945	3346	25	3341	47	3333	119	0.4	5220	668000
avr11-003	0.2777	0.0045	25.71	0.95	0.672	0.022	0.897	3350	25	3336	35	3312	85	1.2	131	119000
avr11-163	0.3027	0.0062	29.26	1.45	0.701	0.032	0.912	3484	31	3462	48	3424	119	1.7	1840	599000
avr11-088	0.3204	0.0060	30.97	1.25	0.701	0.025	0.886	3572	28	3518	39	3424	94	4.3	8	69600
avr11-191	0.3288	0.0060	32.46	1.25	0.716	0.024	0.880	3611	28	3564	37	3481	90	3.8	22	98000
avr11-187	0.3501	0.0060	35.82	1.33	0.742	0.024	0.888	3707	26	3661	36	3578	90	3.6	38	140100
avr11-017	0.3526	0.0082	38.55	1.74	0.793	0.031	0.858	3718	35	3734	44	3764	109	-1.2	21	176000
avr11-049	0.3530	0.0057	36.64	1.36	0.753	0.025	0.902	3720	24	3684	36	3617	92	2.8	18	280800
avr11-109	0.3534	0.0063	36.36	1.36	0.746	0.025	0.881	3722	27	3676	36	3593	90	3.6	11	167900
avr11-186	0.3557	0.0056	37.34	1.33	0.761	0.024	0.896	3732	24	3703	35	3649	88	2.3	-3	192200
avr11-062	0.3559	0.0056	37.12	1.37	0.757	0.025	0.906	3732	24	3697	36	3631	92	2.8	19	314100
avr11-032	0.3569	0.0061	38.80	1.43	0.789	0.026	0.886	3737	26	3741	36	3748	92	-0.3	8	132700
avr11-033	0.3577	0.0060	38.77	1.52	0.786	0.028	0.904	3740	25	3740	38	3739	100	0.0	5	197800
avr11-034	0.3581	0.0063	39.06	1.54	0.791	0.028	0.896	3742	26	3747	38	3757	100	-0.4	19	233000
avr11-129	0.3588	0.0059	37.08	1.35	0.750	0.024	0.894	3745	25	3696	35	3606	90	3.9	20	163200
avr11-192	0.3593	0.0059	36.99	1.33	0.747	0.024	0.891	3747	25	3693	35	3595	88	4.2	22	284700
avr11-020	0.3600	0.0064	39.36	1.58	0.793	0.028	0.896	3750	27	3755	39	3764	102	-0.4	19	157100
avr11-146	0.3610	0.0064	37.73	1.45	0.758	0.026	0.886	3754	27	3713	37	3637	94	3.2	8	224900
avr11-012	0.3615	0.0071	39.48	1.92	0.792	0.035	0.915	3756	29	3758	47	3760	125	-0.1	12	235000
avr11-189	0.3617	0.0057	37.22	1.34	0.746	0.024	0.899	3757	24	3700	35	3594	88	4.5	82	340000
avr11-060	0.3619	0.0060	38.15	1.38	0.765	0.025	0.890	3758	25	3724	35	3661	89	2.6	47	188400
avr11-013	0.3644	0.0069	39.84	1.71	0.793	0.031	0.899	3768	28	3767	42	3764	109	0.1	143	235300
avr11-078	0.3658	0.0075	39.51	1.53	0.783	0.026	0.851	3774	31	3758	38	3729	93	1.2	126	151700
avr11-145	0.3669	0.0068	37.89	1.50	0.749	0.026	0.886	3779	28	3717	39	3604	96	4.9	387	246100
> 5% Disc.																
avr11-181	0.1747	0.0030	10.97	0.40	0.456	0.015	0.885	2603	28	2521	33	2420	65	7.6	28	142300
avr11-155	0.1758	0.0030	11.18	0.46	0.461	0.017	0.906	2614	28	2538	37	2444	75	6.9	77	203900
avr11-117	0.1762	0.0030	11.24	0.42	0.463	0.016	0.892	2617	28	2543	34	2451	68	6.8	26	200000
avr11-010	0.1778	0.0046	11.29	0.49	0.461	0.016	0.800	2632	42	2548	40	2443	70	7.8	33	37000
avr11-160*	0.1780	0.0031	11.15	0.41	0.454	0.015	0.886	2634	28	2536	34	2414	66	9.1	51	94300
avr11-160	0.1890	0.0032	11.95	0.46	0.459	0.016	0.898	2733	28	2600	35	2434	70	12.3	51	94300
avr11-067	0.1792	0.0031	11.17	0.46	0.452	0.017	0.909	2645	28	2537	38	2404	75	10.0	139	367200
avr11-143*	0.1802	0.0032	11.36	0.44	0.457	0.016	0.890	2655	29	2553	36	2427	70	9.4	64	139400
avr11-143	0.1872	0.0032	11.90	0.47	0.461	0.016	0.900	2718	28	2597	36	2445	72	11.1	64	139400
avr11-092	0.1819	0.0060	11.44	0.61	0.456	0.019	0.788	2670	54	2559	49	2422	85	10.3	18	76300
avr11-176	0.1826	0.0033	11.67	0.44	0.464	0.015	0.875	2677	30	2579	35	2456	67	9.0	1	38600
avr11-111	0.1830	0.0036	12.00	0.47	0.476	0.016	0.866	2680	32	2605	36	2509	70	6.8	18	82300
avr11-106	0.1839	0.0031	12.13	0.45	0.478	0.016	0.891	2688	27	2615	34	2520	68	6.7	69	243100
avr11-007	0.1847	0.0042	12.10	0.57	0.475	0.020	0.878	2696	37	2612	43	2505	86	7.6	38	50100
avr11-180	0.1850	0.0033	11.91	0.50	0.467	0.018	0.904	2698	29	2598	39	2470	77	9.2	49	105100
avr11-043	0.1851	0.0040	11.83	0.49	0.463	0.016	0.850	2699	36	2591	38	2455	72	10.0	13	52600
avr11-068	0.1868	0.0046	12.64	0.53	0.491	0.017	0.813	2714	40	2653	39	2574	73	5.5	18	56900
avr11-154	0.1934	0.0052	12.98	0.59	0.487	0.018	0.807	2771	44	2678	42	2556	78	8.4	22	30100
avr11-071*	0.2022	0.0042	14.16	0.64	0.508	0.021	0.889	2844	34	2761	42	2648	87	7.4	515	396000
avr11-071	0.2209	0.0037	15.80	0.69	0.519	0.021	0.925	2987	26	2865	41	2695	88	10.8	515	396000
avr11-093*	0.2081	0.0037	14.53	0.58	0.506	0.018	0.898	2891	28	2785	37	2641	77	9.4	177	346000
avr11-093	0.2153	0.0036	15.17	0.62	0.511	0.019	0.910	2946	27	2826	38	2663	80	10.6	177	346000
avr11-175	0.2232	0.0036	16.50	0.61	0.536	0.018	0.900	3004	26	2906	35	2768	74	8.5	30	398200
avr11-009	0.2791	0.0059	23.67	1.18	0.615	0.028	0.907	3358	32	3255	47	3090	110	8.7	65	201300
avr11-193	0.3017	0.0063	27.63	1.06	0.664	0.021	0.839	3479	32	3406	37	3283	82	6.0	21	162600
avr11-077	0.3075	0.0057	27.44	1.08	0.647	0.023	0.882	3508	28	3399	38	3218	87	9.0	41	578000

avr11-065	0.3433	0.0056	32.99	1.20	0.697	0.023	0.892	3678	25	3580	35	3409	85	7.9	249	358000
avr11-073	0.3546	0.0063	35.44	1.34	0.725	0.024	0.882	3727	27	3651	37	3514	90	6.0	178	237000
avr11-178	0.3559	0.0061	34.05	1.27	0.694	0.023	0.888	3732	26	3611	36	3397	87	9.9	378	183500
avr11-150	0.3608	0.0107	36.32	2.10	0.730	0.036	0.858	3753	44	3675	55	3533	133	6.2	26	359000
avr11-159	0.3631	0.0100	36.40	1.88	0.727	0.032	0.844	3763	41	3677	50	3522	117	6.8	189	167600
avr11-036	0.3750	0.0169	37.90	2.19	0.733	0.026	0.623	3812	67	3717	56	3545	97	7.5	450	64300
avr11-057	0.3870	0.0077	40.13	1.60	0.752	0.026	0.867	3859	30	3774	39	3615	95	6.8	19	414000
avr11-174	0.4063	0.0063	42.50	1.52	0.759	0.025	0.901	3933	23	3831	35	3639	89	8.1	26	342300
> 10% Disc.																
avr11-055	0.1425	0.0024	6.72	0.28	0.342	0.013	0.920	2258	28	2076	37	1897	64	19.0	121	754000
avr11-019	0.1765	0.0041	10.39	0.56	0.427	0.021	0.902	2620	38	2470	49	2292	93	14.3	73	190000
avr11-015	0.1770	0.0036	10.30	0.47	0.422	0.017	0.894	2625	33	2462	41	2270	77	15.7	103	251000
avr11-079	0.1795	0.0034	10.37	0.44	0.419	0.016	0.894	2648	31	2469	38	2257	71	17.3	215	541000
avr11-119	0.1808	0.0033	10.58	0.39	0.424	0.014	0.875	2660	30	2487	34	2280	62	16.7	61	132100
avr11-122	0.1823	0.0031	10.42	0.39	0.415	0.014	0.891	2674	28	2473	34	2236	63	19.6	39	125500
avr11-061	0.1839	0.0032	11.03	0.43	0.435	0.015	0.895	2688	28	2525	36	2328	68	15.5	104	243500
avr11-169	0.1845	0.0034	10.79	0.56	0.424	0.021	0.937	2694	30	2505	47	2279	93	18.2	19	85300
avr11-126	0.1877	0.0032	11.64	0.43	0.450	0.014	0.881	2722	28	2576	34	2395	64	13.7	75	109700
avr11-133	0.1906	0.0040	11.91	0.46	0.453	0.015	0.847	2747	34	2597	36	2409	66	14.0	65	62000
avr11-096	0.2001	0.0032	13.24	0.62	0.480	0.021	0.940	2827	26	2697	43	2527	92	11.9	106	451000
avr11-195	0.2030	0.0036	12.68	0.48	0.453	0.015	0.878	2850	29	2656	35	2409	66	18.3	380	323600
avr11-102	0.2041	0.0035	12.76	0.46	0.454	0.015	0.882	2859	28	2662	34	2411	64	18.6	52	253200
avr11-024	0.2406	0.0047	17.06	0.70	0.514	0.019	0.880	3124	31	2938	39	2675	79	16.8	576	287900
avr11-164	0.2651	0.0046	20.56	0.80	0.562	0.020	0.898	3277	27	3118	37	2877	81	13.9	371	271400
avr11-087	0.2655	0.0054	19.82	0.82	0.541	0.019	0.869	3280	32	3082	39	2789	81	17.6	112	412000
avr11-097	0.2657	0.0046	20.66	0.84	0.564	0.021	0.906	3281	27	3123	39	2883	85	13.8	20	328000
avr11-004	0.2670	0.0044	21.08	0.77	0.573	0.019	0.896	3288	25	3142	35	2918	77	12.7	64	469000
avr11-130	0.2800	0.0046	22.85	0.89	0.592	0.021	0.909	3363	25	3220	37	2997	84	12.2	13	437000
avr11-153	0.3084	0.0050	26.41	0.97	0.621	0.021	0.897	3513	25	3362	35	3114	81	12.8	11	415000
avr11-149	0.3182	0.0077	27.07	1.28	0.617	0.025	0.860	3561	37	3386	45	3098	99	15.0	63	282000
avr11-135	0.3250	0.0059	26.71	0.99	0.596	0.019	0.874	3594	27	3373	36	3014	78	19.2	82	147600
avr11-107	0.3357	0.0057	30.80	1.18	0.665	0.023	0.895	3643	26	3513	37	3288	87	10.8	321	274000
avr11-023	0.3394	0.0056	30.29	1.15	0.647	0.022	0.901	3660	25	3496	36	3217	86	13.8	36	150800
avr11-112	0.3412	0.0054	31.34	1.15	0.666	0.022	0.901	3668	24	3530	36	3291	85	11.5	475	348300
avr11-103	0.3719	0.0067	35.13	1.37	0.685	0.024	0.886	3799	27	3642	38	3364	90	13.0	203	356000
avr11-170	0.3764	0.0075	33.79	1.29	0.651	0.021	0.854	3817	30	3604	37	3232	82	18.1	9	95200
> 20% Disc.																
avr11-040	0.0853	0.0017	0.97	0.04	0.083	0.003	0.897	1322	37	690	22	513	19	157.9	238	230200
avr11-148	0.1502	0.0039	6.50	0.35	0.314	0.015	0.876	2348	44	2046	46	1760	72	33.4	39	250000
avr11-116	0.1617	0.0032	7.49	0.42	0.336	0.018	0.936	2474	33	2172	49	1867	84	32.5	55	197500
avr11-105	0.1621	0.0035	7.31	0.40	0.327	0.017	0.919	2478	36	2150	48	1824	80	35.9	139	318000
avr11-132	0.1625	0.0031	8.09	0.40	0.361	0.016	0.922	2482	32	2241	44	1987	78	24.9	177	614000
avr11-156	0.1693	0.0034	7.52	0.40	0.322	0.016	0.925	2551	33	2175	46	1799	76	41.7	165	275000
avr11-100	0.1740	0.0030	5.98	0.26	0.249	0.010	0.922	2596	28	1972	38	1434	52	81.1	26	128200
avr11-058	0.1755	0.0031	8.01	0.41	0.331	0.016	0.937	2611	30	2232	45	1843	76	41.6	45	81200
avr11-001	0.1791	0.0069	8.10	0.51	0.328	0.017	0.794	2645	63	2242	56	1829	80	44.6	479	317700
avr11-162	0.1808	0.0036	4.36	0.25	0.175	0.009	0.937	2660	33	1705	47	1040	52	155.9	33	55300
avr11-114	0.1818	0.0046	9.68	0.48	0.386	0.016	0.860	2669	41	2404	44	2104	76	26.9	40	42800
avr11-118	0.1863	0.0034	10.63	0.40	0.414	0.014	0.877	2710	30	2492	34	2233	62	21.3	35	87600
avr11-137	0.1876	0.0034	10.60	0.41	0.410	0.014	0.881	2721	30	2488	35	2214	63	22.9	101	84900
avr11-076	0.1886	0.0035	9.65	0.47	0.371	0.017	0.923	2730	31	2402	44	2034	78	34.2	406	384000
avr11-127	0.1891	0.0033	8.03	0.43	0.308	0.015	0.944	2734	28	2234	47	1731	75	58.0	397	515000
avr11-168	0.1893	0.0033	8.88	0.34	0.340	0.012	0.893	2736	28	2326	34	1889	56	44.9	158	128100
avr11-113	0.1894	0.0034	7.40	0.29	0.283	0.010	0.890	2737	29	2161	34	1608	49	70.2	383	165000
avr11-108	0.1925	0.0059	2.49	0.13	0.094	0.004	0.796	2764	50	1268	36	577	22	378.6	1187	186200
avr11-173	0.1938	0.0034	9.34	0.36	0.350	0.012	0.886	2775	29	2372	34	1933	56	43.6	58	263000
avr11-050	0.1957	0.0039	10.11	0.40	0.375	0.013	0.867	2791	32	2444	36	2051	60	36.1	323	210300
avr11-072	0.1986	0.0034	9.72	0.48	0.355	0.016	0.937	2815	28	2409	44	1958	77	43.7	56	431800
avr11-086	0.1987	0.0080	8.38	0.83	0.306	0.028	0.913	2816	65	2273	86	1721	135	63.6	49	325000
avr11-101	0.2002	0.0042	11.04	0.53	0.400	0.017	0.900	2828	34	2527	44	2169	79	30.4	123	488000
avr11-056	0.2071	0.0036	12.00	0.46	0.420	0.014	0.890	2883	28	2605	35	2262	64	27.4	184	541800
avr11-053	0.2159	0.0046	11.22	0.54	0.377	0.016	0.896	2950	34	2542	44	2062	75	43.1	127	366000
avr11-059	0.2164	0.0041	10.80	0.58	0.362	0.018	0.934	2954	30	2506	48	1992	85	48.3	96	86190
avr11-188	0.2217	0.0036	10.64	0.50	0.348	0.015	0.940	2993	26	2492	43	1925	74	55.5	2126	477000
avr11-008	0.2301	0.0050	15.27	0.62	0.481	0.016	0.843	3053	34	2832	38	2533	71	20.5	30	335300
avr11-027	0.2305	0.0049	8.96	0.49	0.282	0.014	0.921	3056	33	2334	48	1601	71	90.8	728	227500
avr11-054	0.2310	0.0037	13.21	0.50	0.415	0.014	0.906	3059	25	2695	35	2236	64	36.8	159	304700

avr11-152	0.2336	0.0076	9.50	0.56	0.295	0.014	0.831	3077	51	2388	52	1666	71	84.6	1001	344400
avr11-124	0.2341	0.0039	10.94	0.57	0.339	0.017	0.947	3080	27	2518	47	1882	80	63.7	126	353000
avr11-094	0.2342	0.0066	13.00	0.62	0.403	0.015	0.808	3081	44	2680	44	2181	71	41.3	2100	524000
avr11-120	0.2345	0.0040	10.44	0.56	0.323	0.016	0.949	3083	27	2475	49	1804	80	70.9	497	447600
avr11-041	0.2366	0.0042	15.43	0.60	0.473	0.016	0.890	3097	28	2842	36	2497	71	24.1	686	474400
avr11-184	0.2380	0.0040	16.11	0.59	0.491	0.016	0.888	3107	27	2883	35	2575	69	20.6	496	255300
avr11-084	0.2412	0.0046	10.38	0.77	0.312	0.022	0.966	3128	30	2469	66	1751	108	78.7	191	382300
avr11-131	0.2478	0.0057	15.92	1.00	0.466	0.027	0.930	3171	36	2872	58	2466	119	28.6	86	398900
avr11-121	0.2515	0.0045	11.02	0.46	0.318	0.012	0.905	3194	28	2525	38	1779	58	79.5	269	385500
avr11-147	0.2540	0.0044	16.65	0.68	0.476	0.018	0.906	3210	27	2915	38	2508	76	28.0	14	116100
avr11-081	0.2544	0.0044	13.86	0.65	0.395	0.017	0.930	3212	27	2740	43	2146	79	49.7	118	300000
avr11-166	0.2546	0.0042	16.08	0.78	0.458	0.021	0.939	3214	26	2881	45	2431	91	32.2	110	483000
avr11-141	0.2569	0.0080	15.27	0.80	0.431	0.018	0.804	3228	48	2832	48	2310	81	39.7	114	552000
avr11-139	0.2576	0.0058	17.16	0.81	0.483	0.020	0.878	3232	35	2944	44	2540	86	27.2	63	489000
avr11-066	0.2643	0.0049	18.40	0.84	0.505	0.021	0.914	3273	29	3011	43	2635	90	24.2	36	263900
avr11-123	0.2647	0.0047	18.16	0.71	0.498	0.018	0.894	3275	27	2998	37	2603	75	25.8	16	142000
avr11-042	0.2662	0.0045	11.52	0.69	0.314	0.018	0.959	3284	26	2567	54	1760	87	86.5	208	375000
avr11-002	0.2770	0.0117	17.61	1.11	0.461	0.022	0.741	3346	65	2969	59	2444	94	36.9	190	196000
avr11-128	0.2800	0.0057	14.63	0.82	0.379	0.020	0.933	3363	31	2792	52	2072	92	62.3	113	442000
avr11-083	0.2841	0.0051	18.63	0.77	0.476	0.018	0.899	3386	28	3023	39	2508	76	35.0	222	270000
avr11-091	0.2888	0.0053	11.19	0.44	0.281	0.010	0.882	3411	28	2539	36	1596	48	113.7	961	101800
avr11-177	0.2896	0.0047	18.13	0.90	0.454	0.021	0.946	3415	25	2997	47	2413	94	41.5	2958	466000
avr11-028	0.2954	0.0055	20.08	0.93	0.493	0.021	0.915	3446	29	3095	44	2584	89	33.4	201	569000
avr11-099	0.3142	0.0049	24.74	1.01	0.571	0.022	0.923	3542	24	3298	39	2912	88	21.6	57	176200
avr11-158	0.3180	0.0100	25.21	1.57	0.575	0.031	0.861	3560	48	3316	59	2928	125	21.6	653	176000
avr11-194	0.3214	0.0069	25.70	1.18	0.580	0.024	0.883	3577	33	3335	44	2949	95	21.3	17	286000
avr11-171	0.3321	0.0056	25.90	0.99	0.566	0.019	0.899	3627	25	3343	37	2890	80	25.5	34	334000
avr11-134	0.3342	0.0056	26.77	1.02	0.581	0.020	0.897	3636	26	3375	37	2953	81	23.2	30	301000
avr11-142	0.3356	0.0062	26.79	1.17	0.579	0.023	0.907	3643	28	3376	42	2945	93	23.7	33	307000
avr11-196	0.3398	0.0058	27.01	1.05	0.576	0.020	0.897	3662	26	3384	37	2934	81	24.8	12	578900
avr11-110	0.3844	0.0067	18.19	0.77	0.343	0.013	0.910	3849	26	3000	40	1902	63	102.4	1480	162300
avr11-157	0.3990	0.0107	5.02	0.35	0.091	0.006	0.925	3905	40	1823	58	563	35	593.4	1820	100400
avr11-183	0.4380	0.0201	37.08	3.65	0.614	0.054	0.885	4045	67	3696	93	3086	210	31.1	3530	249000
avr11-144	0.4598	0.0083	20.98	0.98	0.331	0.014	0.921	4117	27	3138	44	1843	68	123.4	3420	177300
avr11-182	0.4925	0.0120	43.05	2.71	0.634	0.037	0.922	4219	36	3844	61	3165	144	33.3	14620	558000
avr11-179	0.6700	0.0223	61.52	4.72	0.666	0.046	0.901	4668	47	4199	74	3290	176	41.9	8400	235000
Standards AVR16-12,-11, >1mm																
og1-1	0.2996	0.0036	28.97	0.51	0.701	0.009	0.730	3468	18	3452	17	3426	34	1.2	18.4	63700
og1-2	0.3001	0.0042	29.56	0.54	0.714	0.009	0.648	3471	22	3472	18	3475	32	-0.1	2.9	61100
og1-3	0.2990	0.0036	29.44	0.50	0.714	0.009	0.703	3465	19	3468	16	3474	32	-0.3	5.6	60180
og1-4	0.2987	0.0027	26.67	0.35	0.648	0.006	0.722	3463	14	3371	13	3219	24	7.6	16.1	101200
og1-5	0.3028	0.0034	27.80	0.42	0.666	0.007	0.678	3485	17	3412	15	3290	27	5.9	29	61820
og1-6	0.3057	0.0036	27.75	0.41	0.658	0.006	0.612	3499	18	3410	14	3261	23	7.3	22.8	58300
og1-7	0.2994	0.0019	28.46	0.34	0.689	0.007	0.845	3467	10	3435	12	3380	26	2.6	14.1	76900
og1-8	0.3014	0.0039	28.01	0.54	0.674	0.010	0.744	3477	20	3419	19	3321	37	4.7	8.7	58700
og1-9	0.3022	0.0027	28.41	0.39	0.682	0.007	0.759	3482	14	3433	13	3352	27	3.9	20.7	67100
og1-10	0.3083	0.0039	29.59	0.60	0.696	0.011	0.781	3512	19	3473	20	3405	42	3.1	56	58300
og1-11	0.3031	0.0026	28.68	0.44	0.686	0.009	0.825	3486	13	3443	15	3368	33	3.5	11	118600
og1-12	0.2988	0.0029	28.94	0.41	0.703	0.007	0.721	3464	15	3452	14	3430	27	1.0	13	93700
og1-13	0.3009	0.0034	29.09	0.43	0.701	0.007	0.651	3475	17	3457	15	3425	26	1.4	10	96800
og1-14	0.3022	0.0028	28.83	0.49	0.692	0.010	0.842	3482	14	3448	17	3390	38	2.7	1.1	114600
og1-15	0.2934	0.0078	21.97	0.93	0.543	0.018	0.780	3436	41	3182	40	2796	75	22.9	250	94100
og1-16	0.2996	0.0027	29.15	0.36	0.706	0.006	0.680	3468	14	3459	12	3442	22	0.8	16.8	82100
og1-17	0.3007	0.0031	29.37	0.46	0.708	0.008	0.747	3474	16	3466	15	3452	31	0.6	15.1	71500
og1-18	0.2972	0.0021	27.23	0.29	0.665	0.005	0.742	3456	11	3392	10	3285	20	5.2	21.9	106900
og1-19	0.2994	0.0034	29.27	0.40	0.709	0.006	0.564	3467	17	3463	13	3455	21	0.4	16.1	66400
og1-20	0.2965	0.0059	28.98	0.78	0.709	0.013	0.678	3452	31	3453	26	3455	49	-0.1	11	31200

AVR 16 16 ≤ 250µm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr16-144	0.1834	0.0066	14.69	0.87	0.581	0.027	0.795	2684	58	2795	55	2953	111	-9.1	6	55400
> -5% Disc.																
avr16-156*	0.1534	0.0036	8.92	0.28	0.422	0.009	0.676	2384	40	2330	29	2268	41	5.1	1002	424900

avr16-156	0.1857	0.0036	11.20	0.32	0.438	0.009	0.738	2704	32	2540	26	2340	41	15.6	1002	424900
avr16-016	0.1714	0.0039	11.67	0.41	0.494	0.013	0.758	2571	38	2579	32	2588	57	-0.6	15	157800
avr16-004*	0.1724	0.0095	11.86	1.60	0.499	0.061	0.913	2581	89	2594	119	2609	259	-1.1	26	41200
avr16-004	0.1870	0.0123	13.12	1.72	0.509	0.057	0.864	2716	105	2689	116	2652	241	2.4	26	41200
avr16-044	0.1726	0.0039	11.24	0.38	0.473	0.012	0.741	2583	38	2544	31	2495	52	3.5	22	147800
avr16-158	0.1736	0.0039	11.74	0.37	0.491	0.011	0.712	2593	37	2584	29	2573	48	0.8	12	64900
avr16-204	0.1758	0.0044	11.93	0.44	0.492	0.013	0.726	2614	41	2599	34	2579	57	1.3	3	137700
avr16-205	0.1759	0.0044	11.79	0.44	0.486	0.013	0.729	2615	41	2588	34	2553	57	2.4	9	49180
avr16-197	0.1795	0.0044	12.20	0.51	0.493	0.017	0.809	2648	40	2620	38	2584	71	2.5	5	36900
avr16-084	0.1800	0.0047	12.36	0.51	0.498	0.016	0.770	2653	43	2632	38	2605	68	1.8	-2	62300
avr16-186	0.1824	0.0060	12.88	0.58	0.512	0.016	0.689	2675	53	2671	42	2665	67	0.4	23	93400
avr16-064	0.1827	0.0048	13.05	0.60	0.518	0.020	0.819	2678	43	2683	43	2691	82	-0.5	9	94900
avr16-074	0.1847	0.0054	12.94	0.56	0.508	0.016	0.727	2696	48	2675	40	2648	67	1.8	32	135000
avr16-041*	0.1867	0.0038	13.18	0.41	0.512	0.012	0.753	2713	33	2693	29	2665	51	1.8	22	38000
avr16-041	0.1887	0.0046	13.35	0.44	0.513	0.012	0.684	2731	39	2705	31	2669	49	2.3	22	38000
avr16-159*	0.1873	0.0054	12.94	0.55	0.501	0.016	0.740	2719	47	2675	39	2618	68	3.8	17	26380
avr16-159	0.1911	0.0068	13.28	0.63	0.504	0.016	0.661	2752	57	2700	44	2631	67	4.6	17	26380
avr16-032	0.1950	0.0047	14.81	0.58	0.551	0.017	0.789	2785	39	2803	37	2829	70	-1.6	5	60300
avr16-194	0.2013	0.0063	14.71	0.65	0.530	0.017	0.716	2837	50	2797	41	2741	71	3.5	7	19700
avr16-108	0.2056	0.0051	14.94	0.55	0.527	0.014	0.736	2871	40	2811	34	2729	60	5.2	26	177300
avr16-030	0.2122	0.0072	17.20	0.91	0.588	0.024	0.763	2922	54	2946	49	2981	95	-2.0	11	285000
avr16-148	0.2123	0.0043	16.89	0.59	0.577	0.016	0.815	2923	32	2929	33	2936	66	-0.5	5	174700
avr16-017	0.2128	0.0063	16.37	0.66	0.558	0.015	0.683	2927	47	2899	38	2858	63	2.4	12	32600
avr16-006*	0.2160	0.0124	18.46	2.05	0.620	0.059	0.855	2951	90	3014	101	3110	229	-5.1	30	13980
avr16-006	0.2260	0.0115	19.54	2.03	0.627	0.057	0.872	3024	79	3069	96	3138	221	-3.6	30	13980
avr16-029	0.2161	0.0068	17.31	0.77	0.581	0.018	0.704	2952	50	2952	42	2953	73	0.0	17	63100
avr16-198	0.2205	0.0050	17.20	0.55	0.566	0.013	0.708	2984	36	2946	30	2890	53	3.3	18	99200
avr16-176	0.2219	0.0059	17.23	0.60	0.563	0.012	0.641	2995	42	2947	33	2879	51	4.0	37	91000
avr16-123*	0.2431	0.0055	20.25	1.03	0.604	0.027	0.894	3140	36	3103	48	3046	109	3.1	39	71800
avr16-123	0.2505	0.0071	21.03	1.07	0.609	0.026	0.828	3188	44	3140	48	3066	102	4.0	39	71800
avr16-126	0.2465	0.0055	21.89	0.82	0.644	0.019	0.804	3162	35	3179	36	3205	76	-1.3	1	83800
avr16-093	0.2477	0.0064	21.38	0.93	0.626	0.022	0.807	3170	40	3156	41	3134	87	1.2	17	43800
avr16-040	0.2639	0.0061	23.54	1.49	0.647	0.038	0.931	3270	36	3250	60	3216	148	1.7	15	201600
avr16-185	0.2737	0.0100	24.00	2.14	0.636	0.052	0.913	3327	56	3268	83	3173	201	4.9	35	71500
avr16-038	0.2747	0.0098	25.98	1.60	0.686	0.034	0.816	3333	55	3346	59	3367	131	-1.0	2	52000
avr16-190	0.2750	0.0082	26.39	1.32	0.696	0.028	0.803	3335	46	3361	48	3405	105	-2.1	10	69800
avr16-010	0.2797	0.0072	27.57	1.39	0.715	0.031	0.858	3361	40	3404	48	3477	115	-3.3	6	172200
avr16-021	0.2812	0.0057	26.40	0.83	0.681	0.016	0.764	3370	31	3362	30	3348	62	0.6	5	55100
avr16-116	0.2812	0.0084	25.28	0.98	0.652	0.016	0.637	3370	46	3319	37	3236	63	4.1	11	59400
avr16-166	0.2820	0.0127	26.05	1.62	0.670	0.029	0.689	3374	69	3348	59	3306	110	2.1	21	53800
avr16-075	0.2824	0.0083	26.67	1.15	0.685	0.021	0.728	3376	45	3372	41	3364	82	0.4	24	59700
avr16-179	0.2829	0.0072	25.74	0.91	0.660	0.016	0.696	3379	39	3337	34	3267	63	3.4	4	17030
avr16-055	0.2830	0.0127	25.32	1.50	0.649	0.025	0.649	3380	68	3321	56	3224	97	4.8	25	52500
avr16-219	0.2833	0.0070	26.25	0.93	0.672	0.017	0.717	3381	38	3356	34	3314	66	2.0	11	110200
avr16-165	0.2846	0.0069	26.88	0.99	0.685	0.019	0.749	3388	37	3379	35	3364	72	0.7	27	60100
avr16-118	0.2853	0.0075	26.59	1.07	0.676	0.021	0.756	3392	40	3369	39	3329	79	1.9	13	89900
avr16-070*	0.2855	0.0061	25.82	0.95	0.656	0.020	0.812	3393	33	3340	35	3252	76	4.4	35	67700
avr16-070	0.2896	0.0080	26.31	1.04	0.659	0.019	0.718	3415	42	3358	38	3263	72	4.7	35	67700
avr16-169	0.2860	0.0175	26.50	3.19	0.672	0.070	0.861	3396	92	3365	112	3314	263	2.5	16	57000
avr16-178	0.2866	0.0079	26.00	1.19	0.658	0.024	0.800	3399	42	3347	44	3259	93	4.3	29	136400
avr16-131	0.2873	0.0070	26.26	0.93	0.663	0.017	0.727	3403	37	3356	34	3279	66	3.8	12	231900
avr16-106	0.2874	0.0062	26.95	0.95	0.680	0.019	0.789	3404	33	3382	34	3344	72	1.8	10	116200
avr16-013	0.2886	0.0061	26.46	0.91	0.665	0.018	0.784	3410	33	3364	33	3287	69	3.8	10	125900
avr16-101	0.2888	0.0108	26.76	1.92	0.672	0.041	0.854	3411	57	3375	68	3314	157	2.9	4	18500
avr16-163	0.2889	0.0066	27.45	1.18	0.689	0.025	0.848	3412	35	3399	41	3379	95	1.0	26	64400
avr16-011	0.2916	0.0081	26.70	1.34	0.664	0.028	0.831	3426	43	3372	48	3283	107	4.4	58	140800
avr16-102	0.2929	0.0069	26.90	1.04	0.666	0.020	0.792	3433	36	3380	37	3290	79	4.3	2	73200
avr16-051	0.2950	0.0156	27.74	2.51	0.682	0.050	0.811	3444	80	3410	85	3352	189	2.7	9	41600
avr16-095	0.2980	0.0082	27.49	1.10	0.669	0.020	0.729	3460	42	3401	39	3302	75	4.8	16	46800
avr16-097	0.3139	0.0094	31.29	2.25	0.723	0.047	0.908	3540	46	3528	68	3507	174	0.9	-2	128800
avr16-037	0.3182	0.0099	32.47	1.97	0.740	0.039	0.859	3561	47	3565	58	3571	141	-0.3	9	33300
avr16-058	0.3276	0.0092	35.68	1.73	0.790	0.031	0.815	3606	42	3658	47	3753	111	-3.9	4	70700
avr16-139	0.3276	0.0101	33.29	1.33	0.737	0.018	0.629	3606	47	3589	39	3559	68	1.3	7	14890
avr16-062	0.3399	0.0108	34.31	2.11	0.732	0.039	0.855	3662	48	3619	59	3541	142	3.4	22	85700
> 5% Disc.																
avr16-073*	0.1561	0.0043	8.77	0.33	0.408	0.011	0.686	2414	46	2315	34	2204	48	9.5	9	22100
avr16-073	0.1763	0.0047	10.08	0.36	0.415	0.010	0.670	2618	44	2442	33	2237	45	17.1	9	22100

avr16-122	0.1575	0.0055	9.14	0.57	0.421	0.022	0.829	2429	58	2352	56	2265	99	7.2	9	37100
avr16-111	0.1712	0.0052	10.41	0.46	0.441	0.015	0.737	2569	50	2472	41	2355	65	9.1	19	170000
avr16-050	0.1733	0.0031	11.07	0.34	0.463	0.012	0.817	2590	29	2529	28	2455	51	5.5	12	182700
avr16-129	0.1751	0.0050	11.08	0.48	0.459	0.015	0.743	2607	47	2530	39	2435	64	7.1	17	73800
avr16-048*	0.1764	0.0048	11.25	0.42	0.463	0.012	0.691	2619	44	2544	34	2451	53	6.9	27	43800
avr16-048	0.1888	0.0043	12.27	0.39	0.471	0.011	0.705	2732	37	2625	29	2489	46	9.7	27	43800
avr16-155	0.1771	0.0065	11.31	0.61	0.463	0.018	0.735	2626	59	2549	49	2453	80	7.1	16	180300
avr16-109	0.1777	0.0044	11.49	0.46	0.469	0.015	0.786	2632	40	2564	37	2479	64	6.1	41	112800
avr16-027	0.1849	0.0095	11.78	1.11	0.462	0.037	0.839	2697	82	2587	85	2448	160	10.2	10	32300
avr16-222	0.1863	0.0042	12.49	0.42	0.486	0.012	0.737	2710	37	2642	31	2554	52	6.1	37	77000
avr16-202	0.1922	0.0049	13.20	0.45	0.498	0.011	0.663	2761	41	2694	32	2606	48	5.9	50	145000
avr16-068	0.2012	0.0041	13.76	0.46	0.496	0.013	0.794	2836	33	2733	31	2597	57	9.2	27	206200
avr16-160	0.2037	0.0042	14.57	0.46	0.519	0.012	0.760	2856	33	2788	30	2695	53	6.0	16	175700
avr16-207	0.2112	0.0043	15.13	0.45	0.519	0.012	0.740	2915	32	2823	28	2697	49	8.1	37	123700
avr16-174	0.2280	0.0063	17.54	0.72	0.558	0.017	0.743	3038	44	2965	39	2858	70	6.3	31	204000
avr16-043	0.2474	0.0058	19.85	0.68	0.582	0.015	0.733	3168	37	3084	33	2957	60	7.1	23	134700
avr16-031	0.2679	0.0054	22.72	0.96	0.615	0.023	0.880	3294	31	3215	40	3090	91	6.6	25	174000
avr16-066*	0.2711	0.0069	22.35	0.97	0.598	0.021	0.809	3312	39	3199	41	3022	84	9.6	19	122600
avr16-066	0.2751	0.0080	22.76	1.01	0.600	0.020	0.753	3335	45	3217	42	3030	80	10.1	19	122600
avr16-088	0.2727	0.0077	23.69	1.33	0.630	0.030	0.862	3322	44	3256	53	3150	119	5.5	7	23900
avr16-143*	0.2755	0.0089	22.98	1.25	0.605	0.027	0.805	3338	50	3226	52	3050	106	9.4	68	76700
avr16-143	0.2910	0.0097	24.64	1.26	0.614	0.024	0.757	3423	51	3294	49	3086	94	10.9	68	76700
avr16-200	0.2758	0.0062	24.00	0.76	0.631	0.014	0.714	3339	34	3268	31	3154	56	5.9	12	68100
avr16-216	0.2772	0.0052	23.49	0.64	0.615	0.012	0.731	3347	29	3248	26	3089	49	8.4	11	141000
avr16-098	0.2773	0.0102	24.01	1.29	0.628	0.025	0.732	3348	56	3269	51	3142	97	6.6	10	41500
avr16-114	0.2773	0.0078	23.13	1.17	0.605	0.026	0.833	3348	43	3232	48	3050	102	9.8	25	121500
avr16-153*	0.2779	0.0063	24.14	1.04	0.630	0.023	0.848	3351	35	3274	41	3150	90	6.4	188	122600
avr16-153	0.2979	0.0062	26.45	0.97	0.644	0.019	0.822	3459	32	3363	35	3205	76	7.9	188	122600
avr16-078	0.2787	0.0062	23.59	0.83	0.614	0.017	0.773	3356	34	3252	34	3086	66	8.7	27	64000
avr16-189	0.2795	0.0061	24.51	0.84	0.636	0.017	0.770	3360	34	3289	33	3173	66	5.9	26	139900
avr16-024	0.2822	0.0082	24.71	0.97	0.635	0.017	0.675	3375	44	3297	38	3169	66	6.5	25	114000
avr16-063	0.2827	0.0075	24.67	0.95	0.633	0.018	0.725	3378	41	3295	37	3161	69	6.8	8	177500
avr16-008	0.2828	0.0102	24.33	1.86	0.624	0.042	0.881	3378	55	3282	72	3126	165	8.1	8	53200
avr16-135	0.2834	0.0064	23.76	0.79	0.608	0.015	0.737	3382	35	3259	32	3062	60	10.4	53	146000
avr16-223	0.2837	0.0060	25.15	0.80	0.643	0.015	0.745	3383	33	3314	31	3201	60	5.7	18	84900
avr16-019	0.2845	0.0076	25.30	1.04	0.645	0.020	0.763	3388	41	3320	40	3209	79	5.6	6	166600
avr16-173	0.2847	0.0058	24.38	0.75	0.621	0.014	0.747	3389	31	3284	30	3114	56	8.8	13	65900
avr16-113	0.2855	0.0058	24.14	0.71	0.613	0.013	0.730	3393	31	3274	28	3083	53	10.1	28	112100
avr16-090	0.2880	0.0273	25.53	3.71	0.643	0.071	0.757	3407	140	3329	133	3201	271	6.4	8	32400
avr16-105	0.2881	0.0072	25.26	0.90	0.636	0.016	0.709	3407	38	3318	34	3173	63	7.4	8	48300
avr16-177	0.2882	0.0061	25.70	0.76	0.647	0.013	0.696	3408	33	3335	29	3216	52	6.0	32	127200
avr16-059	0.2885	0.0067	24.82	0.88	0.624	0.017	0.757	3410	35	3301	34	3126	66	9.1	22	95200
avr16-053	0.2890	0.0109	25.66	1.87	0.644	0.040	0.856	3412	57	3334	69	3205	155	6.5	13	77000
avr16-181	0.2893	0.0082	25.29	1.03	0.634	0.018	0.717	3414	43	3319	39	3165	73	7.8	23	77100
avr16-125*	0.3182	0.0070	29.00	1.23	0.661	0.024	0.857	3561	33	3454	41	3271	93	8.9	90	122000
avr16-125	0.3216	0.0074	29.49	1.19	0.665	0.022	0.825	3578	35	3470	39	3287	86	8.9	90	122000
avr16-082	0.3306	0.0110	31.13	1.49	0.683	0.023	0.714	3620	50	3523	46	3356	88	7.9	8	20630
avr16-046	0.3370	0.0139	31.83	2.21	0.685	0.038	0.804	3649	62	3545	66	3364	145	8.5	33	167900
> 10% Disc.																
avr16-112	0.1304	0.0042	6.15	0.29	0.342	0.012	0.741	2103	55	1997	41	1896	58	10.9	28	254800
avr16-072	0.1385	0.0036	6.53	0.21	0.342	0.007	0.612	2209	44	2051	28	1897	33	16.4	8	199900
avr16-071	0.1436	0.0038	6.75	0.39	0.341	0.018	0.889	2271	45	2079	50	1891	85	20.1	18	183600
avr16-225	0.1569	0.0032	8.02	0.25	0.371	0.008	0.745	2423	34	2233	27	2032	40	19.2	31	263000
avr16-100	0.1704	0.0047	9.99	0.41	0.425	0.013	0.731	2562	46	2433	37	2283	57	12.2	36	146600
avr16-208	0.1760	0.0038	10.60	0.34	0.437	0.011	0.749	2616	35	2489	29	2336	47	12.0	8	28500
avr16-028	0.1772	0.0040	10.38	0.63	0.425	0.024	0.928	2627	37	2470	54	2283	107	15.1	23	101000
avr16-175	0.1826	0.0051	10.64	0.39	0.423	0.010	0.658	2677	45	2492	34	2273	46	17.8	9	44400
avr16-203	0.1859	0.0036	10.82	0.31	0.422	0.009	0.729	2706	32	2508	26	2270	39	19.2	105	110500
avr16-049	0.1862	0.0049	11.71	0.40	0.456	0.010	0.642	2709	42	2581	31	2422	44	11.9	30	67500
avr16-209	0.1869	0.0039	11.66	0.34	0.453	0.009	0.698	2715	34	2578	27	2407	40	12.8	20	173200
avr16-085	0.1888	0.0069	11.04	0.52	0.424	0.013	0.632	2732	59	2526	43	2279	57	19.9	37	78200
avr16-161	0.1920	0.0043	12.46	0.41	0.471	0.012	0.740	2759	36	2639	31	2486	51	11.0	51	99500
avr16-157	0.2025	0.0038	13.64	0.40	0.489	0.011	0.765	2846	31	2725	28	2564	48	11.0	49	171400
avr16-150	0.2134	0.0060	14.24	0.59	0.484	0.015	0.736	2932	45	2766	39	2545	64	15.2	31	54900
avr16-192	0.2467	0.0057	18.57	0.63	0.546	0.014	0.732	3164	36	3020	32	2809	56	12.6	15	21400
avr16-171	0.2575	0.0067	19.56	0.70	0.551	0.014	0.689	3231	40	3070	34	2829	56	14.2	9	184000
avr16-119	0.2618	0.0051	19.28	0.61	0.534	0.013	0.792	3258	30	3056	30	2758	56	18.1	48	227800

avr16-076	0.2640	0.0107	19.87	1.28	0.546	0.027	0.775	3271	63	3085	60	2809	112	16.5	35	201300
avr16-162	0.2665	0.0062	21.54	0.69	0.586	0.013	0.685	3286	36	3163	31	2974	52	10.5	44	142000
avr16-067	0.2667	0.0076	20.78	0.84	0.565	0.016	0.710	3287	44	3128	39	2887	67	13.8	50	162700
avr16-001	0.2685	0.0060	19.62	0.94	0.530	0.022	0.884	3297	35	3073	45	2741	94	20.3	70	233700
avr16-184	0.2717	0.0063	20.75	0.75	0.554	0.015	0.768	3316	36	3127	34	2842	63	16.7	30	211000
avr16-152	0.2773	0.0055	22.75	0.70	0.595	0.014	0.763	3348	31	3216	30	3010	56	11.2	19	95000
avr16-183	0.2783	0.0059	23.02	0.75	0.600	0.015	0.760	3353	33	3228	31	3030	60	10.7	21	49000
avr16-039	0.2790	0.0095	21.58	1.11	0.561	0.022	0.751	3357	52	3165	49	2871	89	16.9	61	59600
avr16-020	0.2800	0.0075	22.93	0.98	0.594	0.020	0.784	3363	41	3224	41	3006	80	11.9	42	170300
avr16-132	0.2816	0.0076	23.37	0.98	0.602	0.019	0.761	3372	42	3243	40	3038	77	11.0	47	78100
avr16-170	0.2816	0.0073	22.21	1.14	0.572	0.025	0.863	3372	40	3193	49	2916	103	15.6	37	59800
avr16-211	0.2818	0.0064	23.35	0.74	0.601	0.013	0.696	3373	35	3242	31	3034	53	11.2	16	89600
avr16-104	0.2824	0.0072	23.52	0.93	0.604	0.018	0.767	3376	39	3249	38	3046	73	10.8	34	59100
avr16-220	0.2842	0.0059	23.59	0.76	0.602	0.015	0.767	3386	32	3252	31	3038	60	11.5	39	71000
avr16-096	0.2897	0.0071	23.77	1.24	0.595	0.027	0.882	3416	38	3259	50	3010	110	13.5	33	78900
avr16-142	0.2942	0.0085	24.54	1.32	0.605	0.027	0.843	3440	44	3290	51	3050	109	12.8	29	24800
avr16-191	0.2980	0.0073	23.79	1.03	0.579	0.021	0.826	3460	37	3260	41	2945	84	17.5	127	55500
avr16-012	0.3000	0.0100	23.74	1.65	0.574	0.035	0.877	3470	51	3258	66	2924	142	18.7	106	52900
> 20% Disc.																
avr16-196	0.1383	0.0036	2.86	0.13	0.150	0.006	0.820	2206	45	1372	34	901	32	144.9	172	105200
avr16-099	0.1437	0.0028	4.28	0.22	0.216	0.010	0.928	2272	33	1689	42	1261	55	80.2	107	211200
avr16-121	0.1517	0.0038	7.17	0.38	0.343	0.016	0.881	2365	42	2133	46	1901	75	24.4	48	178200
avr16-061	0.1589	0.0070	6.19	0.36	0.283	0.011	0.646	2444	73	2004	49	1605	53	52.3	33	160400
avr16-187	0.1590	0.0044	7.73	0.31	0.352	0.010	0.721	2445	46	2200	35	1946	48	25.6	42	248000
avr16-034	0.1656	0.0073	7.61	0.41	0.333	0.010	0.580	2514	72	2186	48	1854	51	35.6	74	166000
avr16-168	0.1664	0.0030	8.19	0.23	0.357	0.008	0.772	2522	30	2252	25	1967	37	28.2	31	236000
avr16-022	0.1684	0.0078	6.62	0.56	0.285	0.020	0.840	2542	76	2062	73	1616	102	57.2	32	203900
avr16-120	0.1756	0.0050	5.06	0.23	0.209	0.008	0.787	2612	47	1829	39	1223	41	113.6	114	142200
avr16-151	0.1770	0.0103	6.78	0.49	0.278	0.012	0.585	2625	94	2084	62	1581	59	66.0	87	98500
avr16-141	0.1785	0.0041	8.57	0.28	0.348	0.008	0.723	2639	37	2294	30	1927	40	37.0	55	131800
avr16-195	0.1791	0.0046	4.41	0.19	0.179	0.006	0.800	2645	42	1715	35	1060	34	149.5	217	114000
avr16-210	0.1801	0.0035	9.84	0.28	0.396	0.008	0.744	2654	32	2420	26	2152	39	23.3	17	229600
avr16-193	0.1810	0.0073	9.26	0.50	0.371	0.013	0.660	2662	65	2364	48	2034	62	30.9	13	166000
avr16-206	0.1829	0.0044	9.28	0.44	0.368	0.015	0.864	2679	39	2366	42	2020	70	32.6	29	87000
avr16-042	0.1847	0.0042	9.83	0.39	0.386	0.012	0.815	2696	37	2419	36	2104	57	28.1	39	40500
avr16-057	0.1850	0.0034	8.32	0.25	0.326	0.008	0.797	2698	30	2267	27	1820	38	48.2	63	289400
avr16-130	0.1880	0.0056	10.11	0.62	0.390	0.021	0.872	2725	49	2445	55	2123	96	28.4	49	36600
avr16-045	0.1920	0.0050	10.49	0.35	0.396	0.009	0.639	2759	42	2479	31	2152	39	28.2	41	28300
avr16-069	0.1929	0.0059	7.53	0.59	0.283	0.020	0.920	2767	50	2176	68	1606	102	72.2	335	215000
avr16-103	0.1947	0.0036	9.90	0.28	0.369	0.008	0.763	2782	30	2425	26	2023	38	37.5	21	196300
avr16-079	0.2013	0.0047	10.58	0.35	0.381	0.009	0.711	2837	37	2487	30	2082	42	36.3	44	251800
avr16-218	0.2027	0.0046	7.61	0.28	0.272	0.008	0.783	2848	37	2186	32	1552	39	83.5	44	162900
avr16-060	0.2115	0.0060	12.48	0.55	0.428	0.014	0.766	2917	45	2641	41	2297	65	27.0	177	135100
avr16-154	0.2156	0.0061	13.05	0.55	0.439	0.014	0.738	2948	45	2683	39	2346	61	25.7	45	83900
avr16-003	0.2189	0.0059	12.53	0.69	0.415	0.020	0.873	2973	43	2645	50	2238	90	32.8	95	64600
avr16-065	0.2192	0.0066	6.44	0.40	0.213	0.011	0.873	2975	47	2037	53	1245	60	139.0	66	22370
avr16-221	0.2209	0.0049	5.92	0.26	0.194	0.007	0.865	2987	35	1964	37	1145	40	160.9	423	115000
avr16-023	0.2211	0.0047	11.92	0.45	0.391	0.012	0.833	2989	33	2598	35	2127	57	40.5	85	229200
avr16-212	0.2316	0.0048	14.63	0.56	0.458	0.015	0.837	3063	33	2791	36	2431	64	26.0	23	141300
avr16-134	0.2332	0.0062	7.94	0.43	0.247	0.012	0.868	3074	42	2224	48	1423	60	116.0	155	199000
avr16-091	0.2341	0.0045	15.53	0.52	0.481	0.013	0.815	3080	31	2848	31	2532	57	21.7	22	235600
avr16-014	0.2348	0.0074	11.42	0.50	0.353	0.011	0.690	3085	49	2558	40	1947	50	58.5	43	174500
avr16-167	0.2376	0.0057	8.43	0.28	0.257	0.006	0.688	3104	38	2278	30	1476	30	110.4	173	117000
avr16-089	0.2440	0.0125	11.37	1.09	0.338	0.027	0.845	3146	79	2554	86	1877	131	67.6	62	68700
avr16-087	0.2450	0.0145	12.13	0.98	0.359	0.020	0.681	3153	91	2614	73	1977	93	59.4	36	9020
avr16-137	0.2463	0.0084	9.72	0.46	0.286	0.009	0.695	3161	53	2408	43	1622	47	94.9	103	102700
avr16-124	0.2468	0.0079	16.95	1.07	0.498	0.027	0.861	3164	50	2932	59	2605	115	21.5	12	42900
avr16-036	0.2475	0.0066	16.21	0.59	0.475	0.012	0.672	3169	42	2889	34	2506	50	26.5	152	212700
avr16-224	0.2480	0.0057	9.57	0.49	0.280	0.013	0.891	3172	36	2395	46	1591	64	99.3	291	163700
avr16-138	0.2509	0.0068	16.81	0.69	0.486	0.015	0.747	3190	42	2924	38	2553	64	25.0	69	191800
avr16-077	0.2593	0.0061	17.29	0.59	0.484	0.012	0.723	3242	36	2951	32	2543	51	27.5	24	59500
avr16-199	0.2594	0.0055	17.63	0.60	0.493	0.013	0.784	3243	33	2970	32	2584	57	25.5	31	172600
avr16-213	0.2655	0.0081	18.67	1.17	0.510	0.028	0.874	3280	47	3025	59	2657	118	23.5	194	204000
avr16-083	0.2658	0.0063	9.93	0.34	0.271	0.007	0.718	3281	37	2428	31	1546	33	112.3	148	130100
avr16-115	0.2666	0.0050	12.35	0.50	0.336	0.012	0.885	3286	29	2631	37	1867	58	76.0	197	131700
avr16-127	0.2726	0.0067	16.20	0.67	0.431	0.014	0.808	3321	38	2889	39	2310	65	43.8	71	113700
avr16-086	0.2764	0.0059	17.64	0.79	0.463	0.018	0.881	3343	33	2971	42	2453	80	36.3	187	205000

avr16-214	0.2817	0.0090	17.93	0.72	0.462	0.011	0.600	3372	49	2986	38	2447	49	37.8	322	54700
avr16-201	0.2841	0.0082	12.93	0.60	0.330	0.012	0.785	3386	44	2674	43	1838	58	84.2	255	84000
avr16-092	0.2856	0.0067	16.03	0.80	0.407	0.018	0.883	3394	36	2878	47	2201	82	54.2	140	70200
avr16-133	0.2886	0.0074	13.14	0.54	0.330	0.011	0.784	3410	39	2689	38	1839	51	85.4	45	13920
avr16-015	0.2888	0.0085	15.45	0.75	0.388	0.015	0.799	3411	45	2843	45	2114	70	61.4	115	177700
avr16-080	0.2924	0.0081	17.34	0.78	0.430	0.015	0.791	3430	42	2954	42	2306	69	48.8	350	128100
avr16-081	0.2929	0.0058	12.92	0.42	0.320	0.008	0.788	3433	31	2674	30	1789	40	91.9	375	131400
avr16-110	0.2950	0.0065	7.47	0.30	0.184	0.006	0.834	3444	34	2169	35	1087	33	217.0	955	91200
avr16-188	0.2960	0.0097	15.30	0.76	0.375	0.014	0.756	3449	50	2834	46	2053	66	68.0	77	74200
avr16-172	0.2964	0.0072	16.46	0.59	0.403	0.011	0.737	3452	37	2904	34	2182	49	58.2	64	24760
avr16-145	0.3059	0.0078	17.55	0.60	0.416	0.009	0.666	3500	39	2965	32	2243	43	56.1	221	181900
avr16-140	0.3080	0.0138	11.76	0.84	0.277	0.016	0.782	3511	67	2586	65	1576	78	122.7	336	61700
avr16-035	0.3109	0.0099	14.49	0.92	0.338	0.019	0.866	3525	48	2782	59	1877	89	87.8	206	45600
avr16-182	0.3177	0.0054	20.15	0.50	0.460	0.008	0.719	3559	26	3099	24	2440	36	45.8	436	88500
avr16-215	0.3190	0.0157	14.69	0.90	0.334	0.012	0.590	3565	74	2795	56	1858	58	91.9	510	52700
avr16-146	0.3314	0.0067	16.63	0.48	0.364	0.008	0.716	3624	31	2914	27	2001	36	81.1	689	97000
avr16-147	0.4477	0.0117	10.20	0.58	0.165	0.008	0.887	4078	38	2453	51	986	46	313.7	959	53210

Standards (note: an error in targeting OG-1 zircons as a secondary standard caused the data to be unusable)

AVR 16 15 ≤ 250µm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr15-064	0.1721	0.0034	12.50	0.28	0.527	0.005	0.445	2578	33	2643	21	2728	22	-5.5	0	222600
avr15-177	0.1738	0.0034	13.54	0.35	0.565	0.009	0.635	2595	33	2718	24	2887	38	-10.1	153	164400
avr15-053	0.1837	0.0041	14.11	0.45	0.557	0.013	0.727	2687	36	2757	30	2854	54	-5.9	9	55700
avr15-101	0.1887	0.0064	14.96	0.76	0.575	0.022	0.750	2731	54	2813	47	2928	89	-6.7	18	22700
> -5% Disc.																
avr15-152*	0.1605	0.0064	9.69	0.56	0.438	0.018	0.718	2461	66	2406	51	2342	80	5.1	67	38400
avr15-152	0.1958	0.0051	12.36	0.64	0.458	0.020	0.862	2792	42	2632	47	2431	89	14.8	67	38400
avr15-109	0.1635	0.0048	10.91	0.46	0.484	0.015	0.727	2492	48	2516	39	2545	65	-2.1	3	53100
avr15-121*	0.1660	0.0046	10.64	0.36	0.465	0.009	0.565	2518	46	2492	31	2460	39	2.3	18	28800
avr15-121	0.1893	0.0043	12.34	0.46	0.473	0.014	0.800	2736	36	2630	35	2495	62	9.7	18	28800
avr15-118*	0.1688	0.0049	11.07	0.39	0.476	0.009	0.558	2546	48	2529	32	2509	40	1.5	30	26560
avr15-118	0.1832	0.0052	12.22	0.52	0.484	0.016	0.748	2682	46	2621	39	2543	67	5.5	30	26560
avr15-130*	0.1699	0.0046	10.82	0.36	0.462	0.009	0.566	2557	45	2507	30	2447	38	4.5	70	65800
avr15-130	0.1929	0.0040	12.62	0.48	0.475	0.015	0.834	2767	34	2652	35	2503	65	10.5	70	65800
avr15-127	0.1705	0.0035	11.95	0.27	0.508	0.005	0.451	2563	33	2601	21	2650	22	-3.3	3	116200
avr15-056	0.1712	0.0033	12.09	0.27	0.512	0.006	0.518	2569	31	2611	21	2665	25	-3.6	0	138600
avr15-135	0.1723	0.0039	11.76	0.35	0.495	0.010	0.646	2580	37	2585	27	2592	41	-0.5	12	68500
avr15-069	0.1725	0.0043	11.18	0.34	0.470	0.008	0.582	2582	41	2538	28	2483	36	4.0	5	32510
avr15-040	0.1727	0.0043	11.74	0.41	0.493	0.012	0.703	2584	41	2584	32	2584	52	0.0	-4	147900
avr15-031	0.1728	0.0038	12.16	0.33	0.510	0.009	0.606	2585	36	2617	25	2657	36	-2.7	12	97800
avr15-222	0.1736	0.0036	11.93	0.30	0.499	0.007	0.582	2593	34	2599	23	2607	31	-0.6	-2	94100
avr15-173	0.1736	0.0037	11.80	0.28	0.493	0.006	0.467	2593	35	2589	22	2584	24	0.3	9	79460
avr15-157	0.1738	0.0036	11.66	0.28	0.487	0.006	0.529	2595	34	2578	22	2556	27	1.5	20	110300
avr15-107	0.1739	0.0042	11.56	0.42	0.482	0.013	0.745	2596	40	2569	33	2536	56	2.3	9	47900
avr15-122	0.1742	0.0035	11.83	0.28	0.493	0.006	0.512	2598	33	2591	22	2581	25	0.7	50	153600
avr15-071	0.1744	0.0038	12.14	0.31	0.505	0.007	0.542	2600	36	2615	24	2634	30	-1.3	11	155000
avr15-181	0.1746	0.0038	11.71	0.33	0.487	0.009	0.630	2602	36	2582	26	2556	37	1.8	-3	73300
avr15-042	0.1750	0.0038	11.96	0.31	0.496	0.007	0.533	2606	36	2601	24	2594	29	0.4	9	150900
avr15-180	0.1752	0.0036	11.74	0.30	0.486	0.007	0.592	2608	34	2584	24	2553	32	2.1	10	75800
avr15-191	0.1754	0.0039	11.86	0.31	0.490	0.007	0.519	2610	37	2593	24	2572	29	1.5	4	68950
avr15-048	0.1756	0.0039	12.18	0.30	0.503	0.006	0.456	2612	36	2618	23	2627	24	-0.6	16	54700
avr15-094	0.1768	0.0042	12.41	0.38	0.509	0.010	0.641	2623	39	2636	28	2652	43	-1.1	3	25600
avr15-214	0.1772	0.0039	12.09	0.32	0.495	0.007	0.541	2627	36	2611	24	2591	30	1.4	17	73500
avr15-168	0.1787	0.0039	12.50	0.29	0.507	0.004	0.351	2641	35	2643	21	2646	18	-0.2	6	198500
avr15-057	0.1798	0.0038	12.68	0.32	0.512	0.007	0.548	2651	34	2656	23	2663	30	-0.5	27	71900
avr15-021	0.1799	0.0050	12.58	0.39	0.507	0.007	0.448	2652	46	2649	29	2645	30	0.3	6	54880
avr15-114	0.1813	0.0040	12.30	0.33	0.492	0.007	0.545	2665	36	2628	25	2580	31	3.3	14	34800
avr15-126	0.1818	0.0037	12.76	0.31	0.509	0.007	0.569	2669	33	2662	23	2653	30	0.6	6	34200
avr15-061*	0.1819	0.0048	12.82	0.47	0.511	0.013	0.693	2670	43	2666	34	2661	55	0.4	18	28100
avr15-061	0.1894	0.0058	13.48	0.62	0.516	0.018	0.751	2737	49	2714	43	2682	76	2.0	18	28100
avr15-085	0.1823	0.0043	13.19	0.39	0.525	0.009	0.592	2674	39	2693	27	2720	38	-1.7	10	40850
avr15-110	0.1827	0.0043	12.50	0.36	0.496	0.009	0.588	2678	38	2643	27	2597	37	3.1	-2	28700
avr15-129	0.1834	0.0047	13.08	0.38	0.517	0.007	0.474	2684	42	2685	27	2687	30	-0.1	8	31170

avr15-220	0.1840	0.0045	13.01	0.38	0.513	0.008	0.541	2689	40	2680	27	2669	34	0.8	2	34100
avr15-074	0.1849	0.0038	13.26	0.30	0.520	0.005	0.393	2697	34	2699	21	2700	19	-0.1	2	91700
avr15-171	0.1850	0.0057	12.99	0.45	0.509	0.008	0.434	2698	50	2679	32	2653	32	1.7	2	13230
avr15-007	0.1850	0.0044	12.93	0.38	0.507	0.009	0.594	2698	39	2675	28	2643	38	2.1	14	46500
avr15-158	0.1851	0.0041	12.80	0.33	0.502	0.007	0.519	2699	36	2665	24	2621	29	3.0	12	36900
avr15-029	0.1852	0.0041	12.47	0.34	0.488	0.008	0.577	2700	36	2640	25	2563	33	5.3	11	53000
avr15-187	0.1856	0.0050	13.38	0.40	0.523	0.007	0.434	2704	44	2707	28	2711	29	-0.3	-1	28450
avr15-115	0.1858	0.0049	12.93	0.40	0.505	0.008	0.517	2705	43	2675	29	2635	35	2.7	6	36290
avr15-104	0.1860	0.0076	13.80	0.83	0.538	0.024	0.738	2707	66	2736	56	2775	100	-2.4	17	43800
avr15-123*	0.1860	0.0060	12.75	0.51	0.497	0.012	0.600	2707	52	2661	37	2601	51	4.1	676	185900
avr15-123	0.2243	0.0047	16.05	0.61	0.519	0.017	0.835	3012	33	2880	36	2695	70	11.8	676	185900
avr15-196	0.1870	0.0038	13.58	0.34	0.527	0.008	0.589	2716	33	2721	23	2728	33	-0.4	12	110100
avr15-223	0.1871	0.0041	13.56	0.34	0.526	0.006	0.474	2717	36	2720	23	2724	26	-0.3	3	32300
avr15-192	0.1915	0.0038	13.69	0.31	0.518	0.006	0.489	2755	32	2728	21	2692	24	2.3	3	122200
avr15-079	0.1980	0.0039	14.84	0.34	0.544	0.006	0.489	2810	32	2805	21	2799	25	0.4	11	221000
avr15-058	0.2002	0.0040	14.38	0.37	0.521	0.008	0.620	2828	33	2775	24	2703	35	4.6	15	162300
avr15-066	0.2008	0.0039	15.44	0.34	0.558	0.006	0.456	2833	32	2843	21	2858	23	-0.9	12	164400
avr15-091	0.2030	0.0043	15.85	0.39	0.566	0.007	0.498	2850	34	2868	23	2893	28	-1.5	1	91600
avr15-052	0.2048	0.0054	15.53	0.61	0.550	0.016	0.743	2865	42	2848	37	2825	66	1.4	15	49200
avr15-072	0.2068	0.0049	16.20	0.45	0.568	0.008	0.517	2881	38	2888	26	2900	33	-0.7	2	132000
avr15-211	0.2068	0.0045	15.52	0.42	0.544	0.009	0.579	2881	35	2848	25	2802	35	2.8	11	167500
avr15-054	0.2069	0.0056	15.49	1.14	0.543	0.037	0.929	2881	43	2846	68	2796	153	3.1	13	116200
avr15-183	0.2071	0.0050	15.22	0.61	0.533	0.017	0.800	2883	38	2829	37	2754	71	4.7	17	105200
avr15-080	0.2072	0.0045	16.36	0.42	0.573	0.008	0.533	2884	35	2898	24	2919	32	-1.2	6	50500
avr15-133	0.2099	0.0044	15.89	0.44	0.549	0.010	0.656	2905	34	2870	26	2821	41	3.0	18	61500
avr15-194	0.2101	0.0043	15.74	0.37	0.543	0.006	0.471	2906	33	2861	22	2798	25	3.9	9	51300
avr15-039	0.2105	0.0047	16.42	0.42	0.566	0.007	0.488	2909	36	2902	24	2890	29	0.7	18	83830
avr15-038	0.2111	0.0047	16.86	0.44	0.579	0.008	0.525	2914	36	2927	25	2945	33	-1.1	6	27670
avr15-206	0.2119	0.0044	17.09	0.46	0.585	0.010	0.638	2920	33	2940	25	2969	41	-1.6	3	101800
avr15-134	0.2130	0.0053	16.62	0.54	0.566	0.012	0.648	2929	40	2913	31	2891	49	1.3	-1	28090
avr15-166	0.2138	0.0051	16.30	0.45	0.553	0.007	0.489	2935	38	2895	26	2838	31	3.4	2	24900
avr15-174	0.2161	0.0044	16.78	0.41	0.563	0.008	0.560	2952	33	2922	23	2879	32	2.5	47	107600
avr15-219	0.2176	0.0052	16.86	0.54	0.562	0.012	0.665	2963	38	2927	30	2875	49	3.1	6	43510
avr15-060	0.2193	0.0055	18.02	0.53	0.596	0.009	0.506	2976	40	2991	28	3013	35	-1.3	10	58400
avr15-010	0.2420	0.0051	21.08	0.50	0.632	0.007	0.436	3133	33	3142	23	3156	26	-0.7	4	92000
avr15-050	0.2427	0.0045	20.77	0.47	0.621	0.008	0.582	3138	29	3128	22	3113	33	0.8	4	156400
avr15-182*	0.2438	0.0052	20.44	0.98	0.608	0.026	0.896	3145	33	3112	45	3062	103	2.7	38	72900
avr15-182	0.2495	0.0060	21.05	1.15	0.612	0.030	0.900	3182	37	3141	52	3078	119	3.4	38	72900
avr15-049	0.2457	0.0050	21.07	0.54	0.622	0.010	0.623	3157	32	3142	25	3118	40	1.3	18	85100
avr15-019	0.2458	0.0084	22.00	0.82	0.649	0.010	0.401	3158	53	3184	36	3224	38	-2.1	1	9470
avr15-025	0.2471	0.0054	21.47	0.53	0.630	0.008	0.479	3166	34	3160	24	3150	30	0.5	3	26420
avr15-018	0.2474	0.0061	21.80	0.66	0.639	0.011	0.570	3168	39	3175	29	3185	43	-0.5	3	16810
avr15-001	0.2486	0.0053	20.98	0.56	0.612	0.010	0.610	3176	33	3138	26	3078	40	3.2	13	80100
avr15-078	0.2487	0.0052	21.35	0.51	0.623	0.007	0.481	3177	33	3155	23	3121	28	1.8	6	79900
avr15-212	0.2494	0.0057	21.56	0.76	0.627	0.017	0.766	3181	36	3164	34	3138	67	1.4	0	27460
avr15-065	0.2500	0.0059	21.26	0.59	0.617	0.009	0.518	3185	37	3151	26	3098	35	2.8	14	73000
avr15-028	0.2591	0.0070	23.51	0.79	0.658	0.013	0.589	3241	42	3248	32	3259	50	-0.6	14	115000
avr15-218	0.2638	0.0081	23.07	0.76	0.634	0.007	0.341	3270	48	3230	31	3167	28	3.3	8	42100
avr15-089	0.2780	0.0120	27.06	1.39	0.706	0.020	0.550	3352	66	3386	49	3443	75	-2.7	-1	5810
avr15-036	0.2829	0.0056	26.77	0.62	0.686	0.008	0.509	3379	31	3375	22	3369	31	0.3	4	41900
avr15-047	0.2834	0.0062	27.16	0.73	0.695	0.011	0.588	3382	34	3389	26	3402	42	-0.6	11	65910
avr15-034	0.2891	0.0056	28.42	0.66	0.713	0.009	0.552	3413	30	3434	23	3469	35	-1.6	2	185600
avr15-002	0.3079	0.0110	29.42	1.96	0.693	0.039	0.844	3510	54	3468	63	3394	147	3.4	3010	272000
avr15-005	0.3151	0.0081	29.80	1.36	0.686	0.026	0.828	3546	39	3480	44	3367	99	5.3	7	92800
avr15-172	0.3217	0.0059	32.60	0.71	0.735	0.009	0.533	3578	28	3569	21	3552	32	0.7	4	135700
avr15-138	0.3260	0.0068	33.17	0.82	0.738	0.010	0.540	3598	31	3586	24	3563	36	1.0	-2	137600
avr15-185	0.3284	0.0065	33.68	0.77	0.744	0.009	0.511	3610	30	3601	22	3585	32	0.7	8	79200
avr15-163	0.3419	0.0068	34.30	0.79	0.728	0.009	0.518	3671	30	3619	23	3525	32	4.2	6	118300
avr15-128	0.3521	0.0071	37.96	0.93	0.782	0.011	0.574	3716	30	3719	24	3724	40	-0.2	5	83400
avr15-209	0.3548	0.0073	36.20	0.98	0.740	0.013	0.648	3728	31	3672	26	3571	48	4.4	5	75200
avr15-155	0.3749	0.0094	40.47	1.19	0.783	0.012	0.523	3811	37	3782	29	3728	43	2.2	75	157900
avr15-120	0.3822	0.0082	41.95	1.07	0.796	0.011	0.543	3840	32	3818	25	3775	39	1.7	37	54600
avr15-043	0.3974	0.0078	45.64	1.05	0.833	0.010	0.523	3899	29	3902	23	3906	35	-0.2	5	118800
> 5% Disc.																
avr15-176	0.1558	0.0034	8.94	0.26	0.416	0.008	0.653	2411	37	2332	26	2242	36	7.5	13	98300
avr15-140*	0.1699	0.0042	10.25	0.32	0.438	0.009	0.615	2557	41	2458	29	2340	38	9.2	23	56350
avr15-140	0.1827	0.0040	11.19	0.44	0.444	0.015	0.833	2678	36	2539	36	2370	65	13.0	23	56350

avr15-103	0.1706	0.0059	10.44	0.63	0.444	0.022	0.818	2564	57	2475	55	2369	97	8.2	1	132700
avr15-100	0.1719	0.0051	10.45	0.61	0.441	0.022	0.859	2576	49	2476	52	2355	98	9.4	20	60600
avr15-073	0.1726	0.0040	10.75	0.33	0.452	0.009	0.639	2583	39	2502	28	2403	39	7.5	43	119000
avr15-195	0.1728	0.0041	10.65	0.35	0.447	0.010	0.681	2585	39	2493	30	2381	44	8.5	6	34770
avr15-095	0.1731	0.0039	10.74	0.38	0.450	0.012	0.763	2588	37	2501	32	2395	53	8.0	20	66400
avr15-086*	0.1802	0.0043	11.68	0.32	0.470	0.006	0.498	2655	39	2579	25	2484	28	6.9	39	46200
avr15-086	0.1888	0.0042	12.41	0.46	0.477	0.014	0.801	2732	36	2636	34	2512	61	8.7	39	46200
avr15-154	0.1853	0.0042	12.08	0.32	0.473	0.007	0.524	2701	37	2611	25	2496	29	8.2	20	43000
avr15-142	0.1861	0.0045	12.42	0.43	0.484	0.012	0.717	2708	39	2637	32	2545	52	6.4	0	22840
avr15-051*	0.1967	0.0050	13.15	0.43	0.485	0.010	0.626	2799	41	2691	31	2549	43	9.8	46	71000
avr15-051	0.1952	0.0041	13.07	0.52	0.486	0.016	0.844	2786	34	2684	37	2551	70	9.2	46	71000
avr15-102	0.2018	0.0063	14.25	0.65	0.512	0.017	0.728	2841	50	2766	42	2665	72	6.6	2	88300
avr15-105	0.2079	0.0052	14.82	0.61	0.517	0.017	0.793	2889	40	2804	39	2686	72	7.5	33	106700
avr15-208	0.2137	0.0043	15.57	0.36	0.528	0.006	0.480	2934	32	2851	22	2734	24	7.3	8	86700
avr15-046	0.2144	0.0047	15.93	1.38	0.539	0.045	0.967	2939	35	2873	79	2779	186	5.8	231	152000
avr15-160*	0.2312	0.0094	17.66	0.94	0.554	0.019	0.643	3060	64	2971	50	2842	78	7.7	47	11080
avr15-160	0.2761	0.0082	22.23	1.06	0.584	0.022	0.785	3341	46	3194	45	2965	89	12.7	47	11080
avr15-147*	0.2440	0.0057	18.81	0.67	0.559	0.015	0.756	3146	36	3032	34	2862	62	9.9	22	53700
avr15-147	0.2530	0.0060	19.67	0.84	0.564	0.020	0.834	3204	37	3075	41	2883	83	11.1	22	53700
avr15-190	0.2523	0.0062	20.49	0.58	0.589	0.008	0.488	3199	38	3115	27	2985	33	7.2	9	19440
avr15-131	0.2912	0.0062	26.14	0.91	0.651	0.018	0.794	3424	32	3352	33	3232	70	5.9	249	87100
avr15-113	0.3347	0.0090	31.15	0.96	0.675	0.010	0.483	3639	41	3524	30	3325	38	9.4	1	11700
avr15-144	0.5506	0.0128	68.70	2.37	0.905	0.023	0.738	4383	34	4310	34	4155	77	5.5	2520	84900
> 10% Disc.																
avr15-188	0.1523	0.0031	7.58	0.17	0.361	0.003	0.384	2372	35	2183	20	1988	15	19.3	21	129300
avr15-063	0.1557	0.0035	8.03	0.30	0.374	0.011	0.795	2409	38	2234	33	2048	51	17.6	80	263900
avr15-004	0.1634	0.0040	8.90	0.35	0.395	0.012	0.778	2491	41	2328	35	2146	55	16.1	14	185000
avr15-016	0.1655	0.0035	9.12	0.24	0.400	0.007	0.616	2513	35	2350	24	2167	30	15.9	11	107400
avr15-199	0.1694	0.0042	9.65	0.31	0.413	0.008	0.618	2552	41	2402	29	2230	37	14.4	19	141500
avr15-125	0.1706	0.0047	9.93	0.33	0.422	0.008	0.548	2564	45	2428	30	2270	34	12.9	13	48900
avr15-203	0.1758	0.0047	10.16	0.42	0.419	0.013	0.754	2614	44	2449	37	2256	59	15.9	55	167000
avr15-062	0.1768	0.0035	10.41	0.24	0.427	0.005	0.466	2623	33	2472	21	2293	20	14.4	46	159800
avr15-204	0.1821	0.0037	11.14	0.26	0.444	0.005	0.517	2672	33	2535	22	2366	24	12.9	33	79400
avr15-200	0.1847	0.0042	11.31	0.31	0.444	0.007	0.542	2696	37	2549	25	2369	29	13.8	8	24700
avr15-156	0.1915	0.0052	11.75	0.47	0.445	0.013	0.731	2755	44	2585	37	2373	58	16.1	16	184500
avr15-098	0.1935	0.0050	11.50	0.61	0.431	0.020	0.873	2772	42	2564	48	2310	89	20.0	632	446000
avr15-148	0.2179	0.0059	14.54	0.51	0.484	0.011	0.643	2965	43	2786	33	2545	48	16.5	101	76100
avr15-186	0.2244	0.0069	15.19	0.78	0.491	0.020	0.797	3013	49	2827	48	2575	86	17.0	17	234000
avr15-075	0.2287	0.0052	15.78	0.47	0.500	0.009	0.636	3043	36	2864	28	2616	40	16.3	17	123500
avr15-198	0.2713	0.0066	20.07	0.55	0.537	0.007	0.449	3314	38	3095	26	2769	28	19.7	35	178300
avr15-037	0.3022	0.0063	25.83	0.83	0.620	0.015	0.757	3482	32	3340	31	3110	59	11.9	24	148200
avr15-132	0.3175	0.0064	25.61	0.74	0.585	0.012	0.713	3558	31	3332	28	2969	49	19.8	40	103100
avr15-014	0.3279	0.0066	27.35	0.71	0.605	0.010	0.637	3607	30	3396	25	3050	40	18.3	5	213900
avr15-215	0.3312	0.0066	30.41	0.73	0.666	0.009	0.568	3623	30	3500	23	3290	35	10.1	10	124300
avr15-143	0.5116	0.0129	57.35	2.12	0.813	0.022	0.731	4275	37	4129	36	3836	78	11.5	1360	54900
> 20% Disc.																
avr15-027	0.1188	0.0039	2.98	0.39	0.182	0.023	0.967	1938	58	1403	95	1078	124	79.8	94	129000
avr15-081	0.1224	0.0043	4.66	0.39	0.276	0.021	0.907	1992	62	1760	68	1571	105	26.8	398	556000
avr15-032	0.1302	0.0030	4.22	0.11	0.235	0.003	0.488	2101	40	1678	21	1362	16	54.3	75	164000
avr15-170	0.1454	0.0030	6.32	0.18	0.315	0.006	0.680	2293	35	2021	24	1765	29	29.9	18	143100
avr15-033	0.1488	0.0035	6.51	0.19	0.317	0.006	0.588	2332	40	2048	26	1777	27	31.2	41	141800
avr15-175	0.1516	0.0032	7.23	0.20	0.346	0.007	0.666	2364	35	2140	25	1915	31	23.4	17	143000
avr15-097	0.1564	0.0036	7.44	0.29	0.345	0.011	0.813	2417	38	2166	35	1911	53	26.5	47	144600
avr15-106	0.1628	0.0049	7.60	0.29	0.339	0.008	0.606	2485	49	2185	33	1880	37	32.1	137	178000
avr15-084	0.1635	0.0055	7.26	0.30	0.322	0.008	0.572	2492	56	2144	36	1800	37	38.5	53	207000
avr15-116	0.1657	0.0033	7.85	0.19	0.344	0.005	0.586	2515	33	2214	22	1905	24	32.0	10	67800
avr15-141	0.1710	0.0040	6.54	0.22	0.278	0.007	0.727	2567	38	2052	29	1579	34	62.6	244	152100
avr15-207	0.1748	0.0034	8.23	0.20	0.341	0.005	0.569	2604	32	2256	21	1893	22	37.6	108	166600
avr15-030	0.1774	0.0037	9.71	0.40	0.397	0.014	0.860	2629	34	2408	37	2155	64	22.0	16	113100
avr15-139	0.1822	0.0052	10.32	0.35	0.411	0.007	0.533	2673	47	2464	31	2218	34	20.5	25	26020
avr15-153	0.1843	0.0044	8.92	0.35	0.351	0.011	0.796	2692	39	2330	35	1939	52	38.8	18	22000
avr15-024	0.1861	0.0045	9.69	0.26	0.378	0.004	0.402	2708	39	2406	24	2065	19	31.1	7	25300
avr15-197	0.1864	0.0046	7.56	0.28	0.294	0.008	0.742	2711	40	2181	33	1663	40	63.0	25	35320
avr15-112	0.1868	0.0043	8.29	0.34	0.322	0.011	0.830	2714	37	2264	37	1799	53	50.8	7	23270
avr15-179	0.1868	0.0044	7.92	0.27	0.308	0.008	0.740	2714	38	2222	31	1729	39	57.0	254	165000
avr15-165	0.1873	0.0049	9.80	0.32	0.380	0.008	0.605	2719	42	2416	30	2074	35	31.1	7	29840
avr15-026	0.1879	0.0042	8.52	0.68	0.329	0.025	0.959	2724	37	2288	70	1834	120	48.6	144	61800

avr15-162	0.1898	0.0041	8.78	0.23	0.336	0.005	0.571	2740	35	2315	24	1865	24	46.9	54	42300
avr15-013	0.1905	0.0047	8.27	0.28	0.315	0.007	0.686	2746	40	2261	30	1764	36	55.7	33	44700
avr15-108	0.1905	0.0043	6.25	0.20	0.238	0.006	0.718	2746	36	2012	28	1377	29	99.5	46	37070
avr15-022	0.1994	0.0043	8.17	0.47	0.297	0.016	0.930	2821	34	2250	51	1676	79	68.3	44	234400
avr15-151	0.1997	0.0053	11.95	0.48	0.434	0.013	0.748	2824	43	2600	37	2324	58	21.5	43	25700
avr15-035	0.2002	0.0043	4.82	0.20	0.175	0.006	0.850	2828	35	1789	34	1038	33	172.4	242	100900
avr15-045	0.2021	0.0044	5.31	0.23	0.191	0.007	0.859	2843	35	1870	36	1124	38	152.9	349	103500
avr15-059	0.2060	0.0144	5.68	0.48	0.200	0.009	0.549	2874	109	1928	70	1175	49	144.6	1110	181000
avr15-044	0.2063	0.0042	8.70	0.30	0.306	0.008	0.801	2877	33	2307	31	1720	41	67.3	300	97100
avr15-184	0.2074	0.0053	12.47	0.47	0.436	0.012	0.732	2885	41	2640	35	2333	54	23.7	80	274000
avr15-015	0.2079	0.0046	12.16	0.38	0.424	0.009	0.702	2889	36	2617	29	2279	42	26.8	11	57600
avr15-124	0.2099	0.0043	8.25	0.22	0.285	0.005	0.647	2905	33	2259	24	1617	25	79.6	3	42100
avr15-149	0.2137	0.0055	7.22	0.48	0.245	0.015	0.921	2934	41	2139	58	1413	77	107.7	61	134200
avr15-169	0.2140	0.0052	11.92	0.53	0.404	0.015	0.834	2936	39	2598	41	2187	69	34.2	698	207900
avr15-111	0.2154	0.0047	10.47	0.36	0.353	0.010	0.776	2947	35	2477	32	1947	45	51.3	218	88500
avr15-189	0.2192	0.0054	12.69	0.41	0.420	0.009	0.649	2975	39	2657	30	2260	40	31.6	16	7350
avr15-159	0.2253	0.0076	14.32	0.55	0.461	0.008	0.474	3019	53	2771	36	2444	37	23.5	201	55200
avr15-201	0.2309	0.0049	10.05	0.29	0.316	0.006	0.659	3058	34	2440	26	1769	29	72.9	198	49440
avr15-161	0.2315	0.0058	7.94	0.31	0.249	0.008	0.773	3062	40	2224	35	1431	39	114.0	356	65200
avr15-167	0.2327	0.0061	10.88	0.50	0.339	0.013	0.828	3071	41	2513	42	1882	62	63.2	73	23020
avr15-216	0.2346	0.0061	4.38	0.14	0.136	0.002	0.560	3084	41	1709	26	819	14	276.4	217	35500
avr15-067	0.2368	0.0063	13.91	0.46	0.426	0.009	0.612	3099	41	2743	31	2287	39	35.5	157	48200
avr15-205	0.2369	0.0049	6.01	0.22	0.184	0.006	0.820	3099	33	1977	31	1089	30	184.7	349	70700
avr15-178	0.2452	0.0052	15.16	0.37	0.449	0.005	0.495	3154	33	2826	23	2389	24	32.0	23	134900
avr15-217	0.2485	0.0052	14.90	0.46	0.435	0.010	0.742	3175	33	2809	29	2328	45	36.4	195	57400
avr15-145	0.2523	0.0056	13.71	0.49	0.394	0.011	0.780	3199	35	2730	33	2141	51	49.4	50	39200
avr15-221	0.2561	0.0065	9.98	0.42	0.283	0.010	0.799	3223	40	2433	38	1605	48	100.8	185	25980
avr15-068	0.2577	0.0075	14.23	0.48	0.401	0.007	0.498	3233	45	2765	31	2172	31	48.8	265	48060
avr15-099	0.2662	0.0064	9.22	0.33	0.251	0.007	0.731	3284	37	2360	32	1444	33	127.4	325	64800
avr15-090	0.2694	0.0083	4.93	0.19	0.133	0.003	0.629	3303	47	1808	33	804	19	310.9	121	25000
avr15-137	0.2697	0.0092	8.19	0.34	0.220	0.005	0.554	3304	53	2252	36	1283	26	157.6	261	33470
avr15-146	0.2722	0.0077	7.88	0.50	0.210	0.012	0.896	3319	44	2218	56	1229	64	170.1	64	30740
avr15-092	0.2748	0.0058	18.88	0.53	0.498	0.009	0.653	3334	33	3036	27	2606	39	27.9	23	85800
avr15-213	0.2766	0.0059	19.60	0.59	0.514	0.011	0.708	3344	33	3072	29	2674	47	25.1	30	105300
avr15-077	0.3128	0.0068	17.04	1.14	0.395	0.025	0.946	3535	33	2937	62	2146	115	64.7	48	136000
avr15-003	0.3831	0.0084	17.91	0.74	0.339	0.012	0.851	3844	33	2985	39	1882	58	104.3	1518	89900

AVR 16 14 ≤ 250µm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr14-359	0.1700	0.0034	10.94	0.31	0.467	0.009	0.705	2558	34	2518	26	2470	41	3.6	13	155600
avr14-303	0.1705	0.0036	11.11	0.31	0.473	0.009	0.650	2563	35	2533	26	2496	38	2.7	5	116700
avr14-261	0.1711	0.0034	11.08	0.25	0.470	0.005	0.457	2568	33	2530	21	2481	21	3.5	0	132000
avr14-350	0.1723	0.0047	12.00	0.43	0.505	0.012	0.656	2580	45	2604	33	2635	51	-2.1	5	130100
avr14-259	0.1741	0.0035	11.70	0.27	0.487	0.005	0.468	2597	33	2581	21	2559	22	1.5	1	105700
avr14-421*	0.1750	0.0059	11.75	0.55	0.487	0.016	0.698	2606	55	2585	43	2558	69	1.9	6	9020
avr12-421	0.1849	0.0062	12.49	0.56	0.490	0.015	0.677	2697	54	2642	42	2571	65	4.9	6	9020
avr14-424	0.1754	0.0036	11.62	0.30	0.481	0.007	0.591	2610	34	2575	24	2530	32	3.2	59	202100
avr14-410	0.1760	0.0037	12.08	0.31	0.498	0.007	0.572	2616	35	2610	24	2604	31	0.4	4	75900
avr14-226	0.1763	0.0039	11.94	0.39	0.491	0.012	0.742	2618	36	2599	30	2575	52	1.7	13	98000
avr14-397	0.1767	0.0045	11.48	0.32	0.471	0.006	0.445	2622	41	2563	26	2489	26	5.4	7	17760
avr14-378*	0.1775	0.0047	11.93	0.36	0.487	0.007	0.467	2630	43	2599	28	2559	29	2.7	68	63000
avr14-378	0.1945	0.0045	13.31	0.50	0.497	0.015	0.789	2781	38	2702	35	2599	63	7.0	68	63000
avr14-300	0.1781	0.0048	12.11	0.46	0.493	0.013	0.696	2635	45	2613	35	2584	56	2.0	38	168000
avr14-374	0.1814	0.0036	12.73	0.31	0.509	0.007	0.590	2666	32	2660	23	2652	31	0.5	6	59900
avr14-301	0.1819	0.0042	12.31	0.34	0.491	0.007	0.545	2670	37	2629	25	2575	31	3.7	9	20400
avr14-296	0.1826	0.0056	13.02	0.57	0.517	0.016	0.709	2677	50	2681	40	2686	68	-0.4	4	89500
avr14-360	0.1839	0.0039	12.93	0.47	0.510	0.015	0.809	2688	35	2675	34	2657	64	1.2	3	35900
avr14-337	0.1842	0.0039	12.85	0.30	0.506	0.005	0.412	2691	34	2668	21	2639	21	2.0	12	56630
avr14-432	0.1844	0.0036	12.90	0.29	0.508	0.005	0.472	2693	32	2673	21	2646	23	1.8	18	157300
avr14-363*	0.1846	0.0056	13.03	0.58	0.512	0.017	0.741	2695	49	2682	41	2665	72	1.1	31	22300
avr14-363	0.2054	0.0055	14.70	0.67	0.519	0.019	0.809	2870	43	2796	43	2695	81	6.5	31	22300
avr14-419	0.1846	0.0049	12.85	0.53	0.505	0.016	0.765	2695	43	2669	38	2635	68	2.3	19	115600
avr14-283	0.1855	0.0044	12.70	0.38	0.497	0.009	0.606	2703	39	2658	28	2599	39	4.0	4	53900
avr14-385	0.1856	0.0041	13.01	0.38	0.508	0.009	0.634	2704	36	2680	27	2649	40	2.0	11	62300
avr14-331	0.1857	0.0043	12.71	0.34	0.496	0.007	0.523	2704	37	2658	25	2598	30	4.1	58	117000

avr14-258	0.1858	0.0040	12.63	0.31	0.493	0.006	0.515	2705	35	2652	23	2583	27	4.7	3	42800
avr14-356	0.2013	0.0044	15.40	0.45	0.555	0.011	0.671	2837	35	2841	28	2846	45	-0.3	18	138100
avr14-413*	0.2019	0.0052	14.89	0.59	0.535	0.016	0.759	2842	41	2808	37	2762	67	2.9	191	308000
avr14-413	0.2108	0.0048	15.75	0.54	0.542	0.014	0.751	2912	36	2862	32	2792	58	4.3	191	308000
avr14-267	0.2084	0.0044	16.07	0.38	0.559	0.006	0.478	2893	34	2881	23	2864	26	1.0	5	84300
avr14-339	0.2106	0.0047	16.01	0.42	0.551	0.008	0.529	2910	35	2877	25	2830	32	2.8	4	49540
avr14-268	0.2107	0.0049	15.70	0.45	0.541	0.009	0.594	2911	37	2859	27	2786	38	4.5	8	55300
avr14-299	0.2114	0.0057	16.09	0.66	0.552	0.017	0.750	2916	43	2882	39	2833	70	2.9	26	135100
avr14-343*	0.2130	0.0253	16.71	2.26	0.569	0.037	0.481	2929	180	2918	122	2904	150	0.9	1480	117000
avr14-343	0.3541	0.0106	33.25	1.64	0.681	0.027	0.793	3725	45	3588	47	3348	101	11.2	1480	117000
avr14-264	0.2251	0.0045	18.28	0.52	0.589	0.012	0.714	3018	32	3005	27	2985	48	1.1	11	145000
avr14-362	0.2392	0.0057	19.56	0.73	0.593	0.017	0.770	3115	37	3070	35	3002	68	3.8	23	69800
avr14-314*	0.2496	0.0046	20.73	0.51	0.603	0.010	0.660	3182	29	3126	24	3040	39	4.7	50	85100
avr14-314	0.2521	0.0050	21.05	0.52	0.606	0.009	0.592	3198	31	3141	24	3052	36	4.8	50	85100
avr14-368	0.2504	0.0054	21.48	0.57	0.622	0.010	0.584	3187	34	3161	26	3119	38	2.2	14	94400
avr14-323	0.2512	0.0047	21.57	0.47	0.623	0.007	0.495	3192	30	3165	21	3121	27	2.3	18	107700
avr14-412	0.2681	0.0062	23.18	0.72	0.627	0.013	0.665	3295	36	3234	30	3138	51	5.0	3	68200
avr14-401	0.2702	0.0057	23.54	0.59	0.632	0.009	0.551	3307	33	3250	24	3157	35	4.8	23	59700
avr14-433	0.2744	0.0060	25.27	0.77	0.668	0.014	0.692	3331	34	3319	29	3298	54	1.0	3	91600
avr14-366	0.2750	0.0056	24.79	0.61	0.654	0.009	0.565	3335	31	3300	24	3243	35	2.8	3	96500
avr14-355	0.2752	0.0056	24.09	0.69	0.635	0.013	0.710	3336	31	3272	28	3169	51	5.3	6	159300
avr14-426	0.2777	0.0066	24.62	0.70	0.643	0.010	0.549	3350	37	3293	27	3201	39	4.7	20	60400
avr14-388	0.2796	0.0073	25.56	0.93	0.663	0.017	0.703	3361	40	3330	35	3279	66	2.5	33	37270
avr14-252	0.2799	0.0054	24.90	0.54	0.645	0.007	0.483	3362	30	3304	21	3210	27	4.8	20	79800
avr14-381	0.2803	0.0057	25.16	0.60	0.651	0.008	0.529	3365	31	3314	23	3232	32	4.1	1	77800
avr14-249	0.2807	0.0054	25.66	0.57	0.663	0.007	0.491	3367	30	3334	21	3279	28	2.7	9	85300
avr14-241	0.2815	0.0058	26.28	0.74	0.677	0.013	0.682	3371	32	3357	27	3333	50	1.2	14	73800
avr14-344	0.2817	0.0057	25.67	0.68	0.661	0.011	0.633	3372	31	3334	25	3271	43	3.1	9	99770
avr14-373	0.2818	0.0067	25.61	0.90	0.659	0.017	0.736	3373	37	3332	34	3263	66	3.4	22	50600
avr14-375	0.2827	0.0055	26.01	0.55	0.667	0.006	0.414	3378	30	3347	21	3296	23	2.5	2	76400
avr14-425	0.2845	0.0069	25.89	0.89	0.660	0.016	0.705	3388	37	3342	33	3267	62	3.7	1	111600
avr14-302	0.2885	0.0066	26.34	0.71	0.662	0.010	0.537	3410	35	3359	26	3275	37	4.1	22	82400
avr14-399	0.2892	0.0062	26.52	0.65	0.665	0.008	0.490	3413	33	3366	24	3287	31	3.8	7	95400
avr14-315	0.2937	0.0065	26.82	0.71	0.662	0.010	0.548	3437	34	3377	26	3276	37	4.9	9	113500
avr14-395	0.3033	0.0062	28.57	0.70	0.683	0.009	0.545	3487	31	3439	24	3357	35	3.9	16	105500
avr14-405	0.3101	0.0069	29.89	0.87	0.699	0.013	0.641	3521	34	3483	28	3417	49	3.1	0	69600
avr14-383	0.3211	0.0068	31.52	0.91	0.712	0.014	0.680	3575	32	3535	28	3466	53	3.1	42	232000
avr14-228	0.3219	0.0075	32.53	1.07	0.733	0.017	0.707	3579	35	3567	32	3545	63	1.0	2	32400
avr14-254	0.3227	0.0064	31.00	0.69	0.697	0.007	0.435	3583	30	3519	22	3408	25	5.1	20	116700
avr14-277	0.3228	0.0069	31.47	0.95	0.707	0.015	0.705	3583	32	3534	29	3447	56	3.9	9	136700
avr14-387	0.3242	0.0084	31.83	0.93	0.712	0.010	0.468	3590	39	3545	28	3466	36	3.6	5	11590
avr14-227	0.3242	0.0106	32.54	1.58	0.728	0.026	0.737	3590	49	3567	47	3526	96	1.8	3	21300
avr14-256	0.3261	0.0065	33.20	0.79	0.738	0.009	0.537	3599	30	3586	23	3564	35	1.0	3	65500
avr14-275	0.3272	0.0071	32.57	0.80	0.722	0.008	0.467	3604	33	3568	24	3503	31	2.9	5	33500
avr14-251	0.3316	0.0064	33.26	0.72	0.728	0.007	0.459	3624	29	3588	21	3524	27	2.8	5	176600
avr14-434	0.3322	0.0067	34.58	0.89	0.755	0.012	0.621	3627	30	3627	25	3626	44	0.0	-1	76700
avr14-349	0.3508	0.0096	35.70	1.41	0.738	0.021	0.719	3710	41	3658	38	3563	77	4.1	7	75500
avr14-365	0.3616	0.0086	37.99	1.42	0.762	0.022	0.773	3757	36	3720	36	3652	80	2.9	3	125000
> 5% Disc.																
avr14-341	0.1203	0.0029	5.37	0.17	0.324	0.007	0.669	1961	42	1880	27	1807	34	8.5	51	155300
avr14-392*	0.1288	0.0026	6.14	0.15	0.346	0.005	0.569	2082	35	1996	21	1914	23	8.8	31	84700
avr14-392	0.2058	0.0040	10.89	0.38	0.384	0.011	0.834	2873	31	2514	32	2094	52	37.2	31	84700
avr14-328*	0.1720	0.0036	10.65	0.33	0.449	0.010	0.724	2577	35	2493	28	2391	44	7.8	11	16070
avr14-328	0.1777	0.0046	11.10	0.37	0.453	0.010	0.632	2632	42	2532	31	2409	42	9.2	11	16070
avr14-311	0.1738	0.0035	10.85	0.26	0.453	0.006	0.563	2595	33	2510	22	2407	27	7.8	33	110700
avr14-396*	0.1753	0.0044	10.83	0.40	0.448	0.012	0.733	2609	41	2509	33	2386	53	9.3	23	139000
avr14-396	0.1777	0.0042	11.00	0.50	0.449	0.017	0.848	2632	39	2523	41	2391	76	10.1	23	139000
avr14-270	0.1767	0.0038	11.32	0.33	0.465	0.009	0.670	2622	36	2550	27	2460	40	6.6	10	96700
avr14-307*	0.1774	0.0038	10.98	0.38	0.449	0.012	0.777	2629	36	2522	32	2391	53	10.0	40	76900
avr14-307	0.1805	0.0038	11.15	0.47	0.448	0.016	0.870	2657	34	2536	39	2386	73	11.4	40	76900
avr14-431	0.1794	0.0044	11.62	0.35	0.470	0.008	0.565	2647	40	2574	27	2483	35	6.6	24	92500
avr14-400	0.1802	0.0046	11.40	0.34	0.459	0.007	0.515	2655	42	2556	28	2434	31	9.1	19	35600
avr14-334	0.1803	0.0052	11.84	0.37	0.476	0.006	0.412	2656	47	2591	29	2510	27	5.8	9	28400
avr14-295*	0.1815	0.0103	11.46	1.03	0.458	0.032	0.777	2667	91	2561	81	2431	140	9.7	13	17400
avr14-295	0.1931	0.0075	12.35	0.99	0.464	0.033	0.876	2769	62	2632	73	2457	142	12.7	13	17400
avr14-272	0.1847	0.0048	12.30	0.46	0.483	0.013	0.716	2696	43	2628	35	2540	56	6.1	1	18100
avr14-371	0.1849	0.0048	11.91	0.46	0.467	0.013	0.728	2697	43	2597	35	2470	57	9.2	12	32200

avr14-379	0.1851	0.0038	11.92	0.28	0.467	0.006	0.508	2699	33	2598	22	2470	25	9.3	16	74200
avr14-378	0.1945	0.0045	13.31	0.35	0.497	0.006	0.455	2781	38	2702	24	2599	25	7.0	68	63000
avr14-408	0.1982	0.0043	13.63	0.39	0.499	0.009	0.643	2811	35	2724	26	2609	39	7.8	70	199000
avr14-363	0.2054	0.0055	14.70	0.54	0.519	0.013	0.681	2870	43	2796	34	2695	55	6.5	31	22300
avr14-250	0.2089	0.0056	14.97	0.45	0.520	0.008	0.481	2897	43	2813	29	2698	32	7.4	10	18420
avr14-266	0.2235	0.0085	17.01	0.73	0.552	0.011	0.465	3006	60	2935	40	2833	46	6.1	18	49700
avr14-239	0.2421	0.0063	18.96	0.78	0.568	0.018	0.772	3134	41	3040	39	2900	74	8.1	31	165800
avr14-294	0.2513	0.0074	19.82	0.93	0.572	0.021	0.779	3193	46	3083	45	2916	86	9.5	27	97300
avr14-353	0.2723	0.0078	23.01	1.06	0.613	0.022	0.781	3319	44	3228	44	3082	87	7.7	39	134700
avr14-384*	0.2780	0.0120	23.27	1.33	0.607	0.023	0.661	3352	66	3238	54	3058	92	9.6	1170	226000
avr14-384	0.3530	0.0116	32.37	1.64	0.665	0.026	0.759	3720	49	3562	49	3287	98	13.2	1170	226000
avr14-313	0.2803	0.0061	24.73	0.76	0.640	0.014	0.710	3365	33	3298	30	3189	55	5.5	9	105800
avr14-316	0.2813	0.0063	24.74	0.65	0.638	0.008	0.504	3370	35	3298	25	3180	33	6.0	19	76900
avr14-285	0.2927	0.0064	26.47	0.71	0.656	0.010	0.570	3432	34	3364	26	3252	39	5.5	14	59400
avr14-235	0.2941	0.0069	25.47	1.07	0.628	0.022	0.830	3439	36	3326	40	3142	87	9.5	30	75100
avr14-348	0.3007	0.0075	27.03	0.86	0.652	0.013	0.625	3474	38	3385	31	3236	51	7.3	17	57610
avr14-427	0.3030	0.0121	26.90	1.62	0.644	0.029	0.747	3486	61	3380	57	3205	113	8.8	32	86800
avr14-319	0.3055	0.0056	26.95	0.61	0.640	0.009	0.590	3498	28	3382	22	3188	34	9.7	21	246500
avr14-262	0.3082	0.0079	27.81	0.80	0.655	0.009	0.454	3512	39	3413	28	3246	33	8.2	12	68700
avr14-386	0.3172	0.0062	28.54	0.64	0.653	0.007	0.489	3556	30	3438	22	3238	28	9.8	21	238000
avr14-347	0.3419	0.0092	32.86	1.48	0.697	0.025	0.799	3671	41	3576	43	3409	94	7.7	18	108500
avr14-291	0.3425	0.0069	32.68	0.84	0.692	0.011	0.621	3674	30	3571	25	3390	42	8.4	10	350000
avr14-332	0.3456	0.0069	34.17	0.89	0.717	0.012	0.644	3688	30	3615	25	3485	45	5.8	19	165900
avr14-260	0.3494	0.0068	33.48	0.76	0.695	0.008	0.530	3704	29	3595	22	3401	32	8.9	21	207300
avr14-428	0.3494	0.0073	34.64	0.90	0.719	0.011	0.590	3704	31	3628	25	3492	41	6.1	27	197400
avr14-351	0.3580	0.0090	35.15	1.32	0.712	0.020	0.747	3741	38	3643	36	3466	75	7.9	40	115200
avr14-309	0.4145	0.0090	45.15	1.16	0.790	0.011	0.541	3963	32	3891	25	3753	39	5.6	1	22000
> 10% Disc.																
avr14-330	0.1515	0.0030	7.79	0.26	0.373	0.010	0.794	2363	34	2207	29	2042	45	15.7	236	323400
avr14-376	0.1632	0.0037	9.18	0.26	0.408	0.007	0.612	2489	38	2356	26	2205	33	12.9	45	238300
avr14-420	0.1651	0.0042	9.01	0.39	0.396	0.014	0.809	2509	43	2339	39	2151	64	16.6	150	492000
avr14-246	0.1655	0.0036	9.67	0.25	0.424	0.006	0.543	2513	36	2404	24	2278	27	10.3	17	114200
avr14-370	0.1693	0.0035	9.82	0.25	0.421	0.006	0.581	2551	35	2418	23	2264	29	12.7	68	275000
avr14-367	0.1729	0.0035	10.13	0.28	0.425	0.008	0.692	2586	33	2446	25	2282	37	13.3	22	136500
avr14-240	0.1791	0.0041	10.92	0.34	0.442	0.009	0.677	2645	37	2516	28	2360	41	12.1	29	48600
avr14-292	0.1795	0.0049	10.72	0.44	0.433	0.013	0.737	2648	45	2499	37	2319	58	14.2	10	119900
avr14-274	0.1813	0.0038	11.09	0.33	0.444	0.009	0.700	2665	35	2531	27	2367	41	12.6	24	90400
avr14-429	0.1820	0.0047	10.79	0.38	0.430	0.010	0.666	2671	42	2505	32	2306	45	15.9	43	53300
avr14-435	0.1828	0.0045	11.09	0.37	0.440	0.010	0.665	2678	40	2531	30	2351	43	13.9	26	46400
avr14-244	0.1860	0.0039	11.57	0.30	0.451	0.007	0.584	2707	34	2570	24	2400	30	12.8	65	241200
avr14-430	0.1867	0.0057	11.38	0.54	0.442	0.016	0.762	2713	50	2555	43	2360	71	15.0	15	18000
avr14-321	0.1895	0.0042	11.95	0.30	0.458	0.006	0.484	2738	36	2601	23	2429	25	12.7	67	215600
avr14-372	0.1901	0.0048	11.58	0.38	0.442	0.009	0.622	2743	41	2571	30	2359	40	16.3	35	36900
avr14-393	0.2013	0.0053	12.89	0.42	0.465	0.009	0.573	2837	43	2672	30	2459	38	15.3	27	72000
avr14-289	0.2422	0.0052	17.82	0.48	0.534	0.009	0.614	3134	34	2980	26	2757	37	13.7	3	103900
avr14-243	0.2423	0.0047	17.72	0.43	0.530	0.008	0.609	3135	30	2974	23	2743	33	14.3	21	98400
avr14-263	0.2690	0.0057	21.66	0.59	0.584	0.010	0.626	3300	33	3169	26	2965	41	11.3	23	92000
avr14-409	0.2712	0.0069	20.01	0.76	0.535	0.015	0.739	3313	40	3092	36	2762	63	19.9	27	110800
avr14-342	0.2715	0.0057	21.07	0.55	0.563	0.009	0.601	3315	33	3142	25	2878	37	15.2	26	121100
avr14-312	0.2727	0.0060	20.44	0.58	0.544	0.010	0.631	3322	34	3113	27	2799	41	18.7	39	109000
avr14-255	0.2773	0.0064	22.75	0.62	0.595	0.009	0.525	3348	36	3216	26	3010	34	11.2	16	110000
avr14-225	0.2778	0.0078	22.79	0.88	0.595	0.016	0.693	3351	43	3218	37	3010	64	11.3	10	46800
avr14-308	0.2860	0.0061	23.95	0.59	0.607	0.008	0.502	3396	33	3266	24	3060	30	11.0	16	81400
avr14-357	0.2889	0.0081	23.78	0.87	0.597	0.014	0.640	3412	43	3259	35	3018	56	13.1	20	53500
avr14-234	0.3084	0.0071	26.02	1.04	0.612	0.020	0.818	3513	35	3347	38	3078	79	14.1	14	171900
avr14-320	0.3176	0.0065	27.28	0.68	0.623	0.009	0.562	3558	31	3393	24	3121	34	14.0	20	90900
avr14-333	0.3250	0.0141	27.56	2.12	0.615	0.039	0.825	3594	65	3404	73	3090	154	16.3	1270	188700
avr14-417	0.3276	0.0071	28.10	1.16	0.622	0.022	0.854	3606	33	3422	40	3118	87	15.7	145	172700
avr14-271	0.3291	0.0077	27.41	0.84	0.604	0.012	0.648	3613	35	3398	30	3046	48	18.6	15	28790
avr14-229	0.3293	0.0084	28.70	1.00	0.632	0.015	0.681	3614	39	3443	34	3157	59	14.5	22	55800
avr14-335	0.3340	0.0124	30.53	1.46	0.663	0.020	0.632	3636	56	3504	46	3279	77	10.9	30	34400
avr14-238	0.3636	0.0102	34.59	1.79	0.690	0.030	0.841	3765	42	3627	50	3383	113	11.3	25	197400
avr14-390	0.3700	0.0071	33.65	0.74	0.660	0.007	0.488	3791	29	3600	22	3266	28	16.1	43	190000
> 20% Disc.																
avr14-230	0.1590	0.0047	4.90	0.22	0.224	0.008	0.756	2445	50	1803	38	1301	40	87.9	63	33400
avr14-324	0.1744	0.0035	6.29	0.15	0.262	0.004	0.554	2600	33	2017	21	1498	18	73.6	54	144800
avr14-377	0.1757	0.0041	3.15	0.28	0.130	0.011	0.964	2613	38	1445	65	788	62	231.6	40	52430

avr14-286	0.1791	0.0040	10.02	0.31	0.406	0.009	0.702	2645	37	2436	28	2195	41	20.5	99	122300
avr14-380	0.1794	0.0036	7.57	0.47	0.306	0.018	0.947	2647	33	2181	54	1721	88	53.8	50	112200
avr14-284	0.1835	0.0052	10.04	0.38	0.397	0.010	0.655	2685	46	2438	34	2154	45	24.6	8	33200
avr14-338	0.1841	0.0046	5.55	0.24	0.219	0.008	0.822	2690	41	1908	37	1274	42	111.2	35	58500
avr14-407	0.1844	0.0048	9.25	0.39	0.364	0.012	0.782	2693	43	2364	38	2001	56	34.6	36	43000
avr14-248	0.1857	0.0037	8.68	0.44	0.339	0.016	0.922	2704	32	2305	46	1882	77	43.7	89	78700
avr14-282	0.1872	0.0052	8.18	0.43	0.317	0.014	0.847	2718	45	2251	46	1775	68	53.1	12	27800
avr14-361	0.1873	0.0044	10.27	0.29	0.398	0.006	0.544	2719	38	2459	26	2158	28	26.0	21	28010
avr14-364	0.1906	0.0041	9.49	0.42	0.361	0.014	0.872	2747	35	2386	40	1987	66	38.3	189	171900
avr14-224	0.1907	0.0048	10.46	0.34	0.398	0.008	0.626	2748	41	2477	30	2160	37	27.2	13	20860
avr14-423	0.1914	0.0049	10.87	0.40	0.412	0.011	0.721	2754	42	2512	34	2224	50	23.8	154	85400
avr14-322	0.1916	0.0039	7.04	0.22	0.267	0.007	0.771	2756	33	2117	28	1523	33	81.0	104	135800
avr14-247	0.1934	0.0074	3.68	0.27	0.138	0.009	0.858	2771	61	1568	58	834	50	232.3	142	178700
avr14-310	0.1981	0.0041	10.20	0.25	0.374	0.005	0.531	2811	33	2453	22	2046	22	37.3	58	346000
avr14-406	0.1985	0.0045	11.44	0.42	0.418	0.012	0.785	2814	37	2560	34	2251	54	25.0	60	98400
avr14-269	0.1988	0.0042	11.59	0.30	0.423	0.007	0.589	2816	34	2572	24	2273	29	23.9	10	74300
avr14-391	0.2010	0.0044	11.27	0.34	0.407	0.009	0.695	2834	35	2546	28	2199	39	28.9	60	102300
avr14-287	0.2047	0.0064	10.70	0.46	0.379	0.011	0.680	2864	50	2497	39	2072	51	38.3	60	19100
avr14-278	0.2057	0.0047	12.30	0.36	0.434	0.008	0.645	2872	36	2628	27	2323	37	23.6	20	121400
avr14-297	0.2070	0.0077	9.39	0.69	0.329	0.021	0.863	2882	59	2377	66	1834	101	57.2	73	164000
avr14-389	0.2139	0.0043	13.35	0.32	0.453	0.006	0.558	2935	32	2705	23	2408	27	21.9	70	167800
avr14-293	0.2202	0.0055	9.44	0.49	0.311	0.014	0.873	2982	40	2382	46	1746	68	70.8	431	116000
avr14-398	0.2241	0.0048	13.48	0.36	0.436	0.007	0.602	3010	34	2714	25	2334	31	29.0	71	193200
avr14-336	0.2249	0.0046	12.55	0.30	0.405	0.005	0.524	3016	32	2646	22	2190	23	37.7	50	158100
avr14-414	0.2329	0.0058	4.27	0.23	0.133	0.006	0.887	3072	39	1687	43	804	36	281.9	405	103500
avr14-245	0.2405	0.0083	10.08	0.87	0.304	0.024	0.917	3123	54	2442	77	1711	118	82.5	158	127600
avr14-290	0.2416	0.0061	12.86	0.49	0.386	0.011	0.750	3131	39	2669	35	2104	51	48.8	30	329000
avr14-369	0.2459	0.0068	9.65	0.31	0.285	0.005	0.504	3159	43	2402	29	1614	23	95.7	644	119000
avr14-327	0.2473	0.0048	15.28	0.41	0.448	0.008	0.684	3168	31	2833	25	2387	36	32.7	20	295800
avr14-394	0.2527	0.0066	10.46	0.36	0.300	0.007	0.645	3202	41	2476	31	1692	33	89.2	235	46900
avr14-304	0.2549	0.0053	15.54	0.40	0.442	0.007	0.577	3215	33	2849	24	2361	29	36.2	54	144800
avr14-346	0.2585	0.0073	15.11	0.66	0.424	0.014	0.762	3238	44	2822	40	2279	63	42.1	370	74900
avr14-298	0.2585	0.0098	10.59	0.61	0.297	0.013	0.755	3238	59	2487	52	1676	64	93.1	278	45000
avr14-257	0.2616	0.0092	14.67	0.59	0.407	0.008	0.492	3256	54	2794	38	2199	37	48.1	395	58210
avr14-231	0.2651	0.0066	17.03	1.08	0.466	0.027	0.918	3277	39	2937	59	2466	118	32.9	45	151300
avr14-281	0.2658	0.0058	18.69	0.68	0.510	0.015	0.805	3281	34	3026	35	2657	64	23.5	14	140900
avr14-237	0.2803	0.0063	18.59	0.65	0.481	0.013	0.767	3365	35	3021	33	2532	56	32.9	18	63300
avr14-418	0.2877	0.0078	15.19	0.86	0.383	0.019	0.877	3405	42	2827	52	2090	88	62.9	67	166000
avr14-403	0.2939	0.0059	12.72	0.34	0.314	0.006	0.673	3438	31	2659	25	1760	28	95.3	464	48640
avr14-404	0.2951	0.0090	16.97	0.55	0.417	0.005	0.333	3445	47	2933	31	2247	20	53.3	426	46800
avr14-325	0.3051	0.0061	23.33	0.61	0.555	0.009	0.645	3496	30	3241	25	2844	38	22.9	17	138200
avr14-329	0.3084	0.0061	22.85	0.57	0.537	0.008	0.600	3513	30	3221	24	2773	33	26.7	14	209900
avr14-340	0.3095	0.0066	15.48	0.52	0.363	0.010	0.773	3518	33	2845	32	1995	45	76.4	46	84000
avr14-352	0.3118	0.0067	24.03	0.65	0.559	0.009	0.609	3530	33	3270	26	2862	38	23.3	23	237000
avr14-253	0.3122	0.0061	20.91	0.49	0.486	0.007	0.567	3532	30	3135	23	2552	28	38.4	19	124200
avr14-233	0.3180	0.0131	11.44	2.03	0.261	0.045	0.972	3560	62	2560	153	1495	226	138.1	40	48600
avr14-317	0.3187	0.0076	13.89	0.55	0.316	0.010	0.798	3564	36	2742	37	1770	49	101.3	17	11820
avr14-318	0.3293	0.0069	6.90	0.56	0.152	0.012	0.967	3614	32	2099	70	912	67	296.2	135	64300
avr14-280	0.3298	0.0077	26.07	0.76	0.573	0.010	0.595	3616	35	3349	28	2921	40	23.8	-1	17120
avr14-345	0.3310	0.0142	13.19	0.82	0.289	0.013	0.725	3622	64	2693	57	1637	65	121.3	795	74500
avr14-279	0.3331	0.0090	14.76	0.58	0.321	0.009	0.732	3631	41	2800	37	1797	45	102.1	14	9830
avr14-402	0.3760	0.0219	31.47	2.93	0.607	0.044	0.779	3816	86	3534	88	3058	174	24.8	610	81300
avr14-326	0.3950	0.0106	8.61	0.69	0.158	0.012	0.943	3890	40	2297	71	946	66	311.4	1309	72700
avr14-306	0.3988	0.0093	15.05	0.44	0.274	0.005	0.609	3905	35	2818	28	1560	25	150.4	916	54000
avr14-416	0.4083	0.0118	35.64	1.23	0.633	0.012	0.548	3940	43	3656	34	3161	47	24.6	10	8950
avr14-415	0.4168	0.0097	34.71	1.18	0.604	0.015	0.731	3971	34	3630	33	3046	60	30.4	24	34600
Standards AVR16-15,-14, <250um																
og1-1	0.3010	0.0066	29.59	0.79	0.713	0.011	0.576	3475	34	3473	26	3470	41	0.2	6	84600
og1-2	0.2971	0.0070	30.44	0.92	0.743	0.014	0.624	3455	36	3501	29	3582	52	-3.5	-3	25580
og1-3	0.3026	0.0072	30.42	0.86	0.729	0.011	0.534	3484	36	3500	27	3530	41	-1.3	8	33920
og1-4	0.2951	0.0072	28.93	0.82	0.711	0.010	0.499	3445	37	3451	27	3462	38	-0.5	6	29280
og1-5	0.2988	0.0066	29.00	0.84	0.704	0.013	0.639	3464	34	3454	28	3436	49	0.8	5	38340
og1-6	0.3011	0.0066	29.31	0.81	0.706	0.012	0.613	3476	34	3464	27	3443	45	0.9	5	29800
og1-7	0.3004	0.0069	17.93	0.68	0.433	0.013	0.793	3472	35	2986	36	2319	58	49.7	5	26550
og1-8	0.2990	0.0073	29.72	0.90	0.721	0.013	0.593	3465	37	3478	29	3500	49	-1.0	-1	25670

og1-9	0.2991	0.0073	30.06	0.93	0.729	0.014	0.621	3466	37	3489	30	3530	52	-1.8	11	44900
og1-10	0.2997	0.0064	31.03	0.85	0.751	0.013	0.630	3469	33	3520	27	3611	48	-3.9	3	33970
og1-11	0.3007	0.0072	31.26	1.00	0.754	0.016	0.663	3474	37	3527	31	3622	59	-4.1	6	37800

AVR 16 13 ≤ 250µm								207Pb/		207Pb/		206Pb/			Mass	Mass
	207Pb/		207Pb/		206Pb/			206Pb	2 σ	235U	2 σ	238U	2 σ	%	204	206
name	206Pb	2 σ	235U	2 σ	238U	2 σ	ρ	age (Ma)	(Ma)	age (Ma)	(Ma)	age (Ma)	(Ma)	disc.	cps	cps
avr13-135	0.1261	0.0039	6.30	0.29	0.363	0.012	0.734	2044	54	2019	39	1994	57	2.5	4	14420
avr13-092	0.1343	0.0032	7.32	0.28	0.395	0.011	0.769	2155	41	2151	33	2146	53	0.4	29	132600
avr13-047	0.1689	0.0040	10.84	0.39	0.465	0.012	0.747	2547	39	2509	33	2463	55	3.4	6.2	63100
avr13-195	0.1694	0.0045	11.52	0.43	0.493	0.013	0.690	2552	44	2566	34	2585	54	-1.3	5.7	102400
avr13-055*	0.1761	0.0046	11.58	0.41	0.477	0.011	0.672	2616	43	2571	33	2514	49	4.1	347	133300
avr13-055	0.2344	0.0054	16.53	0.54	0.512	0.012	0.718	3082	36	2908	31	2664	51	15.7	347	133300
avr13-121*	0.1785	0.0066	11.74	0.57	0.477	0.015	0.658	2639	60	2584	45	2514	67	5.0	14.7	14170
avr13-121	0.1890	0.0066	12.58	0.56	0.483	0.013	0.623	2733	56	2649	41	2540	58	7.6	14.7	14170
avr13-044	0.1819	0.0051	12.37	0.46	0.493	0.012	0.650	2670	46	2633	34	2585	51	3.3	6.6	26700
avr13-033	0.1826	0.0059	12.97	0.54	0.515	0.014	0.637	2677	52	2677	39	2678	58	0.0	10.2	21400
avr13-003	0.1864	0.0055	13.07	0.51	0.508	0.013	0.654	2711	48	2684	36	2650	55	2.3	9.4	24840
avr13-023	0.1879	0.0047	13.61	0.48	0.526	0.013	0.711	2724	41	2723	33	2722	56	0.1	13.4	45100
avr13-118	0.1881	0.0048	13.09	0.48	0.505	0.013	0.723	2726	41	2686	34	2634	57	3.5	15.6	27280
avr13-116	0.1922	0.0048	13.54	0.52	0.511	0.015	0.765	2761	40	2718	36	2661	64	3.8	47	38700
avr13-071	0.2077	0.0047	16.22	0.52	0.566	0.013	0.712	2888	36	2890	30	2893	53	-0.2	9.8	58300
avr13-013	0.2089	0.0048	16.48	0.54	0.572	0.014	0.716	2897	37	2905	31	2917	55	-0.7	11.5	123000
avr13-081	0.2095	0.0047	16.62	0.55	0.575	0.014	0.732	2902	36	2913	31	2929	57	-0.9	8.8	50400
avr13-143	0.2120	0.0079	16.19	0.90	0.554	0.023	0.741	2921	59	2888	52	2842	94	2.8	3.2	24470
avr13-205	0.2570	0.0062	22.71	0.81	0.641	0.017	0.740	3228	37	3215	34	3193	66	1.1	16.8	97000
avr13-128	0.2626	0.0066	23.90	1.01	0.660	0.022	0.803	3262	39	3264	40	3267	86	-0.1	2	181600
avr13-075	0.2731	0.0080	23.95	0.96	0.636	0.017	0.683	3324	45	3266	39	3173	69	4.7	0.1	20370
avr13-201	0.2741	0.0072	25.02	1.05	0.662	0.022	0.777	3330	41	3309	40	3275	83	1.7	9.6	144000
avr13-091*	0.2750	0.0065	24.61	0.87	0.649	0.017	0.742	3335	37	3293	34	3224	66	3.4	118	185300
avr13-091	0.2779	0.0069	24.88	0.87	0.650	0.016	0.702	3351	38	3304	34	3227	62	3.8	118	185300
avr13-148	0.2762	0.0075	25.25	1.07	0.663	0.022	0.767	3342	42	3318	41	3279	83	1.9	8.7	154400
avr13-066	0.2784	0.0061	25.77	0.81	0.671	0.015	0.718	3354	34	3338	30	3311	58	1.3	3.9	91320
avr13-114	0.2787	0.0060	25.13	0.79	0.654	0.015	0.725	3356	33	3313	30	3243	58	3.5	18.6	143700
avr13-154	0.2789	0.0094	26.57	1.34	0.691	0.026	0.744	3357	52	3368	48	3386	98	-0.9	-1.9	16050
avr13-034	0.2796	0.0065	26.21	0.93	0.680	0.018	0.754	3361	36	3355	34	3344	69	0.5	12.2	143300
avr13-015*	0.2799	0.0082	25.63	1.08	0.664	0.020	0.717	3362	45	3332	40	3283	77	2.4	9	7520
avr13-015	0.2854	0.0095	26.20	1.18	0.666	0.020	0.671	3393	51	3354	43	3290	77	3.1	9	7520
avr13-204	0.2812	0.0068	26.29	0.97	0.678	0.019	0.751	3370	37	3357	35	3337	72	1.0	5.2	153600
avr13-214	0.2814	0.0071	25.46	0.88	0.656	0.015	0.681	3371	39	3326	33	3253	60	3.6	5	40370
avr13-131	0.2816	0.0063	25.28	0.80	0.651	0.014	0.704	3372	34	3319	30	3232	56	4.3	57	240200
avr13-022	0.2820	0.0072	25.74	0.94	0.662	0.017	0.713	3374	39	3337	35	3275	66	3.0	3.3	31600
avr13-087	0.2821	0.0070	27.04	0.94	0.695	0.017	0.703	3375	38	3385	34	3402	64	-0.8	9.4	20200
avr13-030	0.2831	0.0072	26.35	0.93	0.675	0.017	0.691	3380	39	3360	34	3326	63	1.6	14.1	108100
avr13-110	0.2837	0.0062	26.16	0.83	0.669	0.016	0.732	3383	33	3352	31	3301	60	2.5	6.4	47400
avr13-123	0.2838	0.0076	26.02	1.23	0.665	0.026	0.821	3384	41	3347	45	3287	99	3.0	2.6	89300
avr13-072	0.2847	0.0070	26.07	0.89	0.664	0.016	0.694	3389	38	3349	33	3283	61	3.2	10	95500
avr13-067	0.2847	0.0073	25.70	0.87	0.655	0.015	0.659	3389	39	3335	33	3247	57	4.4	6.6	25660
avr13-196	0.2847	0.0071	25.53	0.88	0.650	0.016	0.690	3389	39	3329	33	3230	60	4.9	1.5	51530
avr13-106	0.2860	0.0066	27.24	0.87	0.691	0.015	0.690	3396	36	3392	31	3386	58	0.3	1.6	73180
avr13-016	0.2861	0.0065	27.17	0.86	0.689	0.015	0.698	3397	35	3390	30	3378	58	0.6	13.3	123800
avr13-102	0.2864	0.0068	27.47	0.93	0.696	0.017	0.710	3398	37	3400	33	3404	63	-0.2	5.4	32800
avr13-004	0.2871	0.0062	26.45	0.83	0.668	0.015	0.722	3402	33	3363	30	3299	58	3.1	7.9	59370
avr13-136	0.2874	0.0094	27.90	1.54	0.704	0.031	0.807	3404	50	3415	53	3436	117	-0.9	11.6	69800
avr13-014	0.2885	0.0069	27.96	0.98	0.703	0.018	0.728	3410	37	3418	34	3432	67	-0.7	9	96200
avr13-009	0.2888	0.0078	27.22	0.98	0.684	0.016	0.657	3411	42	3391	35	3358	62	1.6	9	35800
avr13-057	0.2888	0.0067	26.43	0.86	0.664	0.015	0.706	3411	35	3363	31	3282	59	4.0	0.2	71300
avr13-183	0.2897	0.0075	26.48	1.03	0.663	0.019	0.746	3416	40	3365	37	3279	74	4.2	5.7	75200
avr13-157	0.2900	0.0116	27.43	1.55	0.686	0.028	0.711	3418	61	3399	54	3367	105	1.5	1.6	18500
avr13-032	0.2953	0.0069	27.52	0.96	0.676	0.017	0.740	3446	36	3402	34	3329	67	3.5	4.6	162000
avr13-062	0.2987	0.0065	28.42	0.93	0.690	0.017	0.752	3463	33	3434	32	3383	65	2.4	-0.9	120800
avr13-082	0.3037	0.0088	28.40	1.07	0.678	0.016	0.641	3489	44	3433	36	3337	63	4.5	10.6	68200
avr13-105	0.3071	0.0070	30.57	1.08	0.722	0.019	0.762	3506	35	3505	34	3504	72	0.1	8.9	98600
avr13-086	0.3126	0.0068	31.61	0.99	0.733	0.016	0.715	3534	33	3538	30	3546	60	-0.3	5.1	176200
avr13-090	0.3135	0.0072	30.11	0.99	0.697	0.016	0.716	3538	35	3490	32	3408	62	3.8	18.9	143800
avr13-138	0.3146	0.0077	31.62	1.30	0.729	0.024	0.801	3544	37	3539	40	3530	89	0.4	10.5	78800

avr13-079	0.3149	0.0082	32.11	1.12	0.740	0.017	0.665	3545	40	3554	34	3569	63	-0.7	2.5	22030
avr13-198	0.3162	0.0080	31.96	1.18	0.733	0.020	0.726	3551	38	3549	36	3545	72	0.2	-1	31100
avr13-069	0.3177	0.0074	32.46	1.09	0.741	0.018	0.719	3559	35	3564	33	3574	66	-0.4	0.2	47800
avr13-042	0.3202	0.0091	32.18	1.30	0.729	0.021	0.712	3571	43	3556	39	3530	78	1.2	9.4	26600
avr13-191	0.3245	0.0081	32.71	1.25	0.731	0.021	0.753	3591	38	3572	37	3537	78	1.5	1.7	67800
avr13-158	0.3265	0.0114	33.40	2.04	0.742	0.037	0.819	3601	53	3593	58	3578	136	0.6	10	52800
avr13-149	0.3280	0.0104	34.01	1.49	0.752	0.023	0.689	3608	48	3610	42	3615	83	-0.2	14.7	48900
avr13-089	0.3354	0.0077	34.96	1.20	0.756	0.019	0.743	3642	35	3638	33	3630	70	0.3	-2	318500
avr13-156	0.3370	0.0129	33.97	1.87	0.731	0.029	0.719	3649	57	3609	53	3537	107	3.2	7.3	39200
avr13-095	0.3510	0.0083	35.54	1.17	0.734	0.017	0.696	3711	35	3654	32	3550	62	4.6	18.3	57100
avr13-029	0.3515	0.0082	37.84	1.26	0.781	0.018	0.713	3714	35	3716	32	3720	67	-0.2	8.3	58900
avr13-070	0.3531	0.0082	38.46	1.29	0.790	0.019	0.725	3720	35	3732	33	3753	69	-0.9	21.2	60600
avr13-115	0.3584	0.0081	39.05	1.27	0.790	0.018	0.721	3743	34	3747	32	3754	66	-0.3	5.7	136100
avr13-197	0.3597	0.0078	38.61	1.21	0.779	0.018	0.725	3749	32	3736	31	3712	64	1.0	6.5	181800
avr13-142	0.3600	0.0149	37.87	2.42	0.763	0.037	0.764	3750	61	3717	61	3655	135	2.6	17	74700
> 5% Disc.																
avr13-017*	0.1706	0.0055	10.65	0.43	0.453	0.011	0.610	2564	53	2493	37	2408	50	6.5	22.7	23970
avr13-017	0.1823	0.0056	11.53	0.45	0.459	0.011	0.600	2674	50	2567	35	2435	47	9.8	22.7	23970
avr13-176	0.1737	0.0043	10.65	0.38	0.445	0.011	0.722	2594	41	2493	33	2372	51	9.4	13.9	121000
avr13-144	0.1750	0.0049	10.93	0.52	0.453	0.018	0.811	2606	46	2517	43	2409	77	8.2	30.5	85200
avr13-213*	0.1755	0.0086	10.94	0.78	0.452	0.024	0.734	2611	79	2518	65	2404	105	8.6	122	73700
avr13-213	0.2230	0.0053	14.51	0.76	0.472	0.022	0.893	3002	37	2783	49	2492	96	20.5	122	73700
avr13-167	0.1782	0.0051	11.32	0.44	0.461	0.012	0.684	2636	46	2550	36	2443	54	7.9	42.6	83000
avr13-050	0.1816	0.0063	12.03	0.53	0.481	0.013	0.617	2668	57	2607	41	2529	57	5.5	7.5	10360
avr13-008*	0.1842	0.0057	12.01	0.53	0.473	0.015	0.702	2691	51	2605	40	2497	63	7.8	32.7	39800
avr13-008	0.1877	0.0051	12.31	0.49	0.476	0.014	0.730	2722	44	2628	36	2509	60	8.5	32.7	39800
avr13-219	0.1929	0.0053	12.79	0.47	0.481	0.011	0.652	2767	45	2664	34	2530	50	9.4	26	37500
avr13-120	0.2077	0.0048	14.75	0.64	0.515	0.019	0.848	2888	37	2799	41	2678	80	7.8	27.2	172000
avr13-011	0.2179	0.0053	15.77	0.67	0.525	0.018	0.821	2965	39	2863	40	2720	77	9.0	31.8	93500
avr13-169	0.2465	0.0055	19.05	0.64	0.561	0.014	0.750	3162	35	3045	32	2869	58	10.2	27.6	69100
avr13-051	0.2479	0.0056	19.98	0.68	0.585	0.015	0.749	3171	35	3090	32	2967	60	6.9	13.3	81000
avr13-093*	0.2654	0.0069	21.92	0.76	0.599	0.014	0.667	3279	40	3180	33	3025	56	8.4	388	143400
avr13-093	0.3037	0.0084	26.73	0.96	0.639	0.015	0.641	3489	42	3374	35	3184	58	9.6	388	143400
avr13-085	0.2660	0.0058	21.78	0.70	0.594	0.014	0.738	3283	34	3174	31	3005	57	9.2	25.8	201200
avr13-097*	0.2681	0.0061	21.91	0.75	0.593	0.015	0.745	3295	35	3180	33	3000	61	9.8	17.2	156500
avr13-097	0.2797	0.0061	23.31	0.76	0.605	0.015	0.743	3361	34	3240	31	3048	58	10.3	17.2	156500
avr13-007	0.2738	0.0067	23.07	0.97	0.611	0.021	0.815	3328	38	3230	40	3074	83	8.3	11.7	99300
avr13-080	0.2779	0.0063	23.96	0.79	0.625	0.015	0.731	3351	35	3267	32	3131	60	7.0	7	79700
avr13-024	0.2785	0.0070	24.23	1.01	0.631	0.021	0.801	3355	39	3278	40	3154	83	6.4	27	118700
avr13-119	0.2785	0.0066	24.06	0.81	0.627	0.015	0.708	3355	37	3271	32	3136	59	7.0	31.2	58850
avr13-049	0.2792	0.0063	23.74	0.78	0.617	0.015	0.727	3358	35	3258	31	3097	58	8.4	17.5	139100
avr13-185	0.2798	0.0086	23.61	1.11	0.612	0.022	0.757	3362	47	3252	45	3078	86	9.2	19.9	71400
avr13-043	0.2807	0.0065	23.93	0.77	0.618	0.014	0.697	3367	36	3265	31	3103	55	8.5	8.8	62050
avr13-203	0.2816	0.0071	23.88	0.94	0.615	0.019	0.769	3372	39	3263	38	3090	74	9.1	30	120900
avr13-181	0.2824	0.0069	23.67	0.86	0.608	0.016	0.743	3376	37	3255	35	3062	65	10.3	9.7	141200
avr13-180*	0.2846	0.0068	24.92	1.02	0.635	0.021	0.814	3388	37	3305	39	3169	83	6.9	47	63600
avr13-180	0.2879	0.0074	25.39	1.04	0.640	0.020	0.781	3406	39	3323	39	3189	80	6.8	47	63600
avr13-056	0.2875	0.0072	25.25	0.92	0.637	0.017	0.724	3404	39	3318	35	3177	66	7.1	6.9	27590
avr13-186	0.2910	0.0093	25.56	1.36	0.637	0.027	0.802	3423	49	3330	51	3177	106	7.7	6.1	28500
avr13-077	0.3034	0.0076	27.20	0.93	0.650	0.015	0.683	3488	38	3391	33	3229	59	8.0	-4.3	56900
avr13-025	0.3074	0.0072	28.46	0.97	0.671	0.017	0.726	3508	36	3435	33	3311	64	5.9	16.2	207000
avr13-218	0.3102	0.0069	28.16	0.89	0.659	0.015	0.711	3522	34	3425	31	3261	58	8.0	5.1	94900
avr13-189	0.3115	0.0094	28.73	1.35	0.669	0.024	0.765	3528	46	3444	45	3302	92	6.9	28.6	72300
avr13-027	0.3121	0.0089	27.88	1.61	0.648	0.033	0.871	3531	43	3415	55	3220	127	9.7	8.4	126000
avr13-060	0.3142	0.0073	28.23	0.94	0.652	0.015	0.709	3542	36	3427	32	3235	59	9.5	2.2	160200
avr13-147*	0.3158	0.0114	28.96	1.77	0.665	0.033	0.807	3550	55	3452	58	3287	126	8.0	4.4	74400
avr13-147	0.3180	0.0136	28.57	1.91	0.652	0.034	0.770	3560	64	3439	64	3236	130	10.0	4.4	74400
avr13-005	0.3189	0.0103	28.93	1.38	0.658	0.023	0.736	3565	49	3451	46	3259	89	9.4	24.3	50200
avr13-073	0.3231	0.0074	30.12	1.04	0.676	0.017	0.746	3585	35	3491	33	3329	67	7.7	13.6	32600
avr13-058	0.3391	0.0073	32.30	1.02	0.691	0.016	0.730	3659	33	3560	31	3386	60	8.1	5.8	97700
avr13-100	0.4039	0.0092	41.87	1.38	0.752	0.018	0.723	3924	34	3816	32	3614	66	8.6	3.3	231700
> 10% Disc.																
avr13-211	0.1614	0.0035	8.94	0.28	0.402	0.009	0.728	2470	36	2332	28	2177	42	13.5	10.5	177900
avr13-076	0.1833	0.0046	11.47	0.42	0.454	0.012	0.741	2683	40	2562	34	2412	55	11.2	22.6	367100
avr13-212	0.1873	0.0049	10.99	0.40	0.426	0.011	0.708	2719	42	2523	34	2286	50	18.9	25.6	37900
avr13-078	0.2032	0.0045	13.38	0.44	0.477	0.012	0.745	2852	36	2707	31	2516	51	13.4	4.2	113400
avr13-101	0.2047	0.0055	13.56	0.50	0.480	0.012	0.690	2864	43	2719	34	2529	53	13.3	66	103900

avr13-054	0.2155	0.0076	13.76	0.88	0.463	0.025	0.837	2947	55	2733	59	2453	108	20.2	83	338000
avr13-048	0.2205	0.0055	14.25	0.48	0.469	0.011	0.675	2984	40	2766	32	2478	47	20.4	34.3	148100
avr13-192	0.2226	0.0072	15.92	0.66	0.519	0.013	0.625	3000	51	2872	39	2694	56	11.3	24.4	61600
avr13-137	0.2362	0.0076	17.03	0.99	0.523	0.025	0.834	3095	50	2937	54	2712	106	14.1	2.3	134000
avr13-125	0.2385	0.0065	16.21	0.76	0.493	0.019	0.814	3110	43	2889	44	2584	81	20.4	78	163800
avr13-166	0.2445	0.0052	17.37	0.55	0.515	0.012	0.735	3149	34	2956	30	2679	51	17.6	7.3	168700
avr13-155	0.2503	0.0081	19.08	0.91	0.553	0.019	0.735	3187	50	3046	45	2838	80	12.3	84	100900
avr13-103	0.2608	0.0061	19.56	0.81	0.544	0.019	0.824	3252	36	3070	39	2800	77	16.1	18	173700
avr13-178	0.2609	0.0068	20.40	0.86	0.567	0.019	0.785	3252	41	3110	40	2895	77	12.3	41.4	63400
avr13-173	0.2674	0.0062	19.98	0.67	0.542	0.013	0.719	3291	36	3090	32	2791	54	17.9	20	78900
avr13-006	0.2700	0.0098	20.51	1.06	0.551	0.020	0.711	3306	56	3116	49	2829	84	16.8	46	78900
avr13-194	0.2730	0.0064	20.82	0.68	0.553	0.013	0.696	3323	36	3130	31	2838	52	17.1	76.5	118800
avr13-210	0.2732	0.0058	21.64	0.67	0.574	0.013	0.731	3324	33	3168	30	2926	53	13.6	32.7	677000
avr13-035	0.2744	0.0065	22.36	0.85	0.591	0.018	0.782	3331	37	3199	36	2993	71	11.3	10.4	154500
avr13-112	0.2745	0.0065	21.23	0.82	0.561	0.017	0.790	3332	37	3149	37	2871	71	16.1	189	81100
avr13-083	0.2752	0.0063	22.58	0.78	0.595	0.016	0.754	3336	35	3209	33	3010	63	10.8	128	118700
avr13-215	0.2797	0.0062	22.46	0.71	0.583	0.013	0.717	3361	34	3204	30	2959	54	13.6	33	147900
avr13-109	0.2818	0.0064	21.34	0.71	0.549	0.013	0.726	3373	35	3154	32	2821	55	19.5	11	54600
avr13-061	0.2821	0.0073	23.57	0.88	0.606	0.016	0.723	3375	40	3251	36	3054	65	10.5	26.2	53500
avr13-193	0.2833	0.0078	21.99	1.02	0.563	0.021	0.809	3381	42	3183	44	2879	87	17.4	41	254000
avr13-096	0.2881	0.0065	22.68	0.79	0.571	0.015	0.760	3407	35	3213	33	2912	62	17.0	28.3	59400
avr13-187	0.2891	0.0096	23.44	1.63	0.588	0.036	0.878	3413	51	3245	66	2981	144	14.5	198	98100
avr13-175	0.2891	0.0068	22.62	0.79	0.567	0.015	0.742	3413	36	3211	33	2897	60	17.8	31.4	68700
avr13-216	0.2937	0.0064	23.26	0.76	0.574	0.014	0.746	3437	33	3238	31	2925	57	17.5	88	114600
avr13-163	0.3015	0.0065	23.90	0.79	0.575	0.014	0.754	3478	33	3264	32	2928	58	18.8	12	136300
avr13-038	0.3017	0.0067	23.57	0.76	0.567	0.013	0.723	3479	34	3251	31	2894	54	20.2	68	148100
avr13-174	0.3090	0.0078	25.48	1.07	0.598	0.020	0.797	3516	39	3327	40	3022	80	16.4	7.5	136700
avr13-045	0.3156	0.0083	26.57	0.97	0.611	0.015	0.691	3549	40	3368	35	3072	61	15.5	13	42200
avr13-139	0.3156	0.0094	25.98	1.19	0.597	0.021	0.761	3549	45	3346	44	3018	83	17.6	33.2	100700
avr13-036	0.3157	0.0072	27.03	1.11	0.621	0.021	0.829	3549	35	3385	39	3114	83	14.0	-3.1	144000
avr13-202	0.3162	0.0094	26.73	1.35	0.613	0.025	0.811	3551	45	3373	48	3082	100	15.2	11.8	17810
avr13-153	0.3244	0.0095	28.27	1.35	0.632	0.024	0.786	3591	44	3428	46	3157	93	13.7	9.3	70400
avr13-162	0.3249	0.0083	26.52	1.21	0.592	0.022	0.830	3593	38	3366	44	2998	90	19.9	61	40200
avr13-111	0.3304	0.0078	29.88	1.03	0.656	0.016	0.724	3619	36	3483	33	3251	63	11.3	10.2	151600
avr13-063	0.3658	0.0089	32.63	1.17	0.647	0.017	0.735	3774	36	3570	35	3216	66	17.3	13	74600
avr13-107	0.3672	0.0081	34.23	1.07	0.676	0.015	0.708	3780	33	3617	30	3329	57	13.5	9.4	120700
avr13-026	0.3782	0.0090	33.43	1.40	0.641	0.022	0.823	3825	36	3593	40	3193	86	19.8	102	123900
> 20% Disc.																
avr13-168	0.1251	0.0027	4.71	0.15	0.273	0.006	0.727	2030	37	1769	26	1558	31	30.3	108	274000
avr13-146	0.1347	0.0051	5.07	0.32	0.273	0.014	0.808	2160	64	1831	53	1556	71	38.8	213	250000
avr13-094	0.1498	0.0034	6.69	0.25	0.324	0.010	0.807	2344	38	2072	33	1810	48	29.5	68.2	236000
avr13-209	0.1563	0.0039	7.16	0.24	0.332	0.007	0.665	2416	42	2132	30	1850	36	30.6	37	93300
avr13-217	0.1700	0.0040	6.52	0.24	0.278	0.008	0.760	2558	39	2048	32	1581	39	61.7	124	125500
avr13-152	0.1761	0.0056	6.41	0.38	0.264	0.013	0.841	2616	52	2034	51	1510	67	73.2	103	80400
avr13-170	0.1769	0.0046	8.56	0.30	0.351	0.008	0.674	2624	42	2292	31	1939	39	35.3	40.6	54200
avr13-001	0.1835	0.0049	2.54	0.12	0.101	0.004	0.840	2685	43	1284	35	617	24	334.9	49.8	41860
avr13-002	0.2200	0.0052	3.11	0.13	0.103	0.004	0.837	2981	38	1436	33	630	22	373.4	149	36970
avr13-020	0.2258	0.0065	6.42	0.26	0.206	0.006	0.707	3023	46	2035	35	1209	32	150.0	344	398000
avr13-200	0.2387	0.0058	9.38	0.58	0.285	0.016	0.918	3111	38	2376	55	1616	80	92.5	140	111300
avr13-108	0.2388	0.0053	14.51	0.47	0.441	0.010	0.720	3112	35	2784	30	2354	46	32.2	125	478000
avr13-145	0.2406	0.0080	14.36	0.75	0.433	0.017	0.769	3124	52	2774	48	2319	77	34.7	72	342100
avr13-190	0.2420	0.0063	9.04	0.50	0.271	0.013	0.882	3133	41	2342	49	1546	66	102.7	46.5	185000
avr13-040	0.2473	0.0055	15.14	0.49	0.444	0.011	0.735	3168	35	2824	31	2369	47	33.7	37.4	314800
avr13-126	0.2513	0.0063	16.75	0.60	0.484	0.012	0.712	3193	39	2921	34	2542	53	25.6	24.6	63900
avr13-133	0.2516	0.0085	12.59	0.80	0.363	0.019	0.844	3195	53	2650	58	1996	91	60.0	37.7	110200
avr13-028	0.2553	0.0063	12.21	0.99	0.347	0.027	0.953	3218	38	2621	74	1920	128	67.6	13.9	177500
avr13-037	0.2562	0.0059	12.41	0.50	0.351	0.012	0.822	3223	36	2636	37	1941	55	66.1	20.9	138400
avr13-172	0.2635	0.0064	18.82	0.86	0.518	0.020	0.844	3268	38	3033	43	2691	84	21.4	82	1266000
avr13-199	0.2662	0.0072	17.62	1.06	0.480	0.026	0.893	3284	42	2969	56	2527	112	29.9	32	88600
avr13-117	0.2688	0.0059	18.23	0.68	0.492	0.015	0.808	3299	34	3002	35	2579	63	27.9	30.9	266800
avr13-064	0.2693	0.0061	17.15	0.73	0.462	0.017	0.850	3302	35	2944	40	2448	74	34.9	27.6	71400
avr13-140	0.2698	0.0104	18.97	1.27	0.510	0.028	0.818	3305	59	3040	63	2657	118	24.4	15	23600
avr13-113	0.2701	0.0061	16.27	0.77	0.437	0.018	0.880	3307	35	2893	44	2337	81	41.5	167	375000
avr13-059	0.2715	0.0067	10.03	0.45	0.268	0.010	0.838	3315	38	2437	41	1530	51	116.6	181	115300
avr13-188	0.2718	0.0086	16.38	0.83	0.437	0.017	0.784	3316	48	2899	47	2337	77	41.9	13.3	13430
avr13-184	0.2719	0.0067	19.46	0.76	0.519	0.016	0.779	3317	38	3065	37	2695	67	23.1	38.4	301100
avr13-206	0.2723	0.0061	17.78	0.59	0.474	0.012	0.744	3319	35	2978	32	2500	51	32.8	20.7	129800

avr13-021	0.2733	0.0060	10.70	0.58	0.284	0.014	0.916	3325	34	2498	49	1611	71	106.3	136	327200
avr13-150	0.2735	0.0082	18.74	0.81	0.497	0.016	0.723	3326	46	3029	41	2601	67	27.9	16.7	169100
avr13-046	0.2767	0.0064	20.18	0.84	0.529	0.018	0.830	3344	36	3100	40	2737	77	22.2	62.6	126000
avr13-098	0.2769	0.0067	18.10	0.78	0.474	0.017	0.827	3346	37	2995	41	2501	74	33.8	46	152400
avr13-065	0.2790	0.0064	15.62	0.69	0.406	0.015	0.855	3357	35	2854	41	2197	70	52.8	45	37600
avr13-165	0.2820	0.0074	21.04	0.82	0.541	0.015	0.736	3374	40	3140	37	2788	64	21.0	45	177000
avr13-179	0.2863	0.0078	21.47	0.96	0.544	0.019	0.794	3398	42	3160	43	2800	80	21.3	87	64000
avr13-159	0.2866	0.0068	21.50	0.92	0.544	0.019	0.831	3399	37	3161	41	2800	80	21.4	8.9	200200
avr13-018	0.2872	0.0066	18.53	0.76	0.468	0.016	0.831	3403	35	3018	39	2475	70	37.5	97	164400
avr13-207	0.2882	0.0067	13.49	0.55	0.339	0.011	0.823	3408	36	2714	38	1884	55	80.9	468	137100
avr13-130	0.2895	0.0090	14.29	1.02	0.358	0.023	0.901	3415	48	2769	66	1973	109	73.1	404	132100
avr13-134	0.2915	0.0069	19.41	0.74	0.483	0.015	0.790	3426	36	3063	36	2540	63	34.9	17.3	225200
avr13-208	0.2918	0.0072	20.84	0.82	0.518	0.016	0.779	3427	38	3131	37	2691	67	27.4	80	34500
avr13-127	0.2991	0.0069	19.10	0.71	0.463	0.013	0.783	3466	35	3047	35	2454	59	41.2	39	232800
avr13-041	0.2994	0.0086	22.66	1.15	0.549	0.023	0.822	3467	44	3213	48	2821	94	22.9	10.6	32830
avr13-074	0.3134	0.0072	24.63	0.82	0.570	0.014	0.724	3538	35	3294	32	2908	56	21.7	25.1	86800
avr13-010	0.3438	0.0113	26.02	1.18	0.549	0.017	0.685	3680	49	3347	43	2821	70	30.4	17.3	69800
avr13-019	0.3549	0.0084	11.25	0.48	0.230	0.008	0.832	3728	35	2544	39	1334	42	179.5	609	66900
avr13-161	0.3824	0.0100	24.31	2.06	0.461	0.037	0.951	3841	39	3281	79	2444	162	57.2	315	64000
avr13-160	0.3836	0.0086	32.00	1.63	0.605	0.028	0.899	3846	33	3550	49	3050	111	26.1	73	95200

AVR 16 12 ≤ 250µm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr12-260	0.1139	0.0026	5.22	0.17	0.332	0.008	0.716	1863	40	1856	27	1850	37	0.7	0.3	115500
avr12-312	0.1158	0.0027	5.21	0.17	0.326	0.007	0.692	1892	41	1854	27	1820	35	4.0	2.7	130700
avr12-280	0.1191	0.0031	6.04	0.21	0.368	0.008	0.653	1943	46	1982	30	2020	39	-3.8	2.3	81000
avr12-252	0.1196	0.0027	5.86	0.20	0.355	0.009	0.736	1950	40	1955	29	1960	42	-0.5	0.5	110200
avr12-221	0.1250	0.0049	6.02	0.28	0.349	0.009	0.556	2029	68	1978	40	1930	44	5.1	3.1	8910
avr12-335*	0.1280	0.0052	6.52	0.33	0.369	0.011	0.592	2071	70	2049	43	2027	51	2.2	43.2	25740
avr12-335	0.1509	0.0049	7.92	0.34	0.381	0.011	0.660	2356	54	2222	38	2080	50	13.3	43.2	25740
avr12-383	0.1323	0.0037	6.76	0.26	0.371	0.010	0.691	2129	48	2080	34	2032	47	4.8	20.8	48300
avr12-355	0.1602	0.0038	9.79	0.42	0.443	0.016	0.833	2458	39	2415	39	2364	70	4.0	24	169200
avr12-369	0.1614	0.0044	10.53	0.47	0.473	0.017	0.794	2470	45	2482	41	2497	74	-1.1	4	119600
avr12-264	0.1643	0.0039	10.71	0.37	0.473	0.012	0.718	2500	39	2498	31	2495	51	0.2	6.8	69800
avr12-235	0.1646	0.0053	10.72	0.43	0.472	0.011	0.605	2503	53	2499	37	2494	50	0.4	10.9	18820
avr12-388	0.1671	0.0041	10.58	0.35	0.459	0.010	0.679	2529	40	2487	30	2436	45	3.8	7.8	43320
avr12-274	0.1676	0.0039	11.08	0.37	0.480	0.012	0.724	2534	38	2530	31	2526	50	0.3	10.7	62300
avr12-382*	0.1678	0.0045	10.76	0.45	0.465	0.015	0.773	2536	44	2502	39	2462	66	3.0	70	68300
avr12-382	0.1839	0.0047	12.07	0.46	0.476	0.014	0.744	2688	41	2610	35	2510	59	7.1	70	68300
avr12-275	0.1683	0.0042	10.96	0.37	0.472	0.011	0.679	2541	41	2520	31	2494	47	1.9	6.9	40460
avr12-299	0.1704	0.0050	11.47	0.48	0.488	0.015	0.719	2562	48	2562	38	2562	63	0.0	1.5	42600
avr12-350	0.1707	0.0049	11.44	0.43	0.486	0.012	0.650	2565	47	2560	35	2554	52	0.4	6	27100
avr12-352	0.1708	0.0050	11.35	0.52	0.482	0.017	0.767	2565	48	2552	42	2536	74	1.2	3.8	73000
avr12-333	0.1718	0.0046	11.13	0.48	0.470	0.016	0.785	2575	44	2534	40	2484	70	3.7	2.6	131800
avr12-346	0.1725	0.0047	11.34	0.41	0.477	0.012	0.664	2582	45	2552	33	2514	50	2.7	2.5	33700
avr12-414	0.1738	0.0040	11.72	0.38	0.489	0.011	0.704	2595	38	2582	30	2566	48	1.1	13.6	94400
avr12-405	0.1740	0.0042	11.64	0.44	0.485	0.014	0.764	2596	40	2576	35	2549	60	1.9	9.6	62000
avr12-255	0.1759	0.0041	11.67	0.40	0.481	0.012	0.728	2615	38	2578	31	2532	52	3.2	9.2	90200
avr12-282	0.1760	0.0043	12.10	0.41	0.499	0.012	0.696	2616	40	2613	31	2609	50	0.3	9.9	65700
avr12-242*	0.1761	0.0051	11.85	0.46	0.488	0.012	0.658	2616	47	2593	35	2562	53	2.1	62	45700
avr12-242	0.1947	0.0057	13.30	0.51	0.496	0.012	0.650	2782	47	2701	35	2594	53	7.2	62	45700
avr12-343	0.1771	0.0043	12.72	0.54	0.521	0.018	0.820	2626	40	2659	39	2703	77	-2.9	1.4	112400
avr12-248	0.1815	0.0048	12.74	0.50	0.509	0.015	0.746	2667	43	2660	37	2652	64	0.5	5.3	24680
avr12-261	0.1825	0.0047	12.98	0.45	0.516	0.012	0.671	2676	42	2679	32	2682	51	-0.2	10.2	45690
avr12-390	0.1826	0.0045	12.97	0.47	0.515	0.013	0.725	2677	41	2678	33	2679	57	-0.1	10.6	34800
avr12-380	0.1826	0.0039	12.62	0.42	0.501	0.013	0.761	2677	35	2652	31	2620	54	2.2	13.8	155400
avr12-250	0.1839	0.0059	12.85	0.52	0.507	0.013	0.617	2688	52	2668	38	2642	54	1.8	1.7	15120
avr12-273	0.1857	0.0061	13.03	0.56	0.509	0.014	0.651	2704	53	2682	40	2652	61	2.0	0.4	12000
avr12-246	0.1859	0.0055	12.83	0.51	0.501	0.013	0.668	2706	48	2667	37	2616	56	3.5	6.8	24670
avr12-356	0.1970	0.0050	14.48	0.76	0.533	0.024	0.874	2802	41	2782	49	2754	102	1.7	6.9	195000
avr12-342	0.2052	0.0056	15.36	0.71	0.543	0.020	0.806	2868	44	2838	43	2796	84	2.6	16	113000
avr12-345	0.2063	0.0059	15.96	0.60	0.561	0.014	0.649	2877	46	2874	35	2871	56	0.2	1.8	24110
avr12-404	0.2076	0.0045	16.17	0.51	0.565	0.013	0.723	2887	35	2887	30	2887	53	0.0	3	117200
avr12-272	0.2099	0.0057	16.35	0.64	0.565	0.016	0.715	2905	44	2898	37	2887	65	0.6	15.6	49900
avr12-357	0.2118	0.0058	15.83	0.59	0.542	0.014	0.680	2919	43	2867	35	2792	57	4.6	2.7	25190

avr12-277	0.2199	0.0053	17.83	0.65	0.588	0.016	0.753	2980	38	2981	34	2981	65	0.0	3.3	52300
avr12-385*	0.2759	0.0064	24.31	0.84	0.639	0.016	0.737	3340	36	3281	33	3185	64	4.9	-6.5	22840
avr12-385	0.2764	0.0068	24.45	0.85	0.642	0.016	0.713	3343	38	3287	33	3196	62	4.6	-6.5	22840
avr12-377	0.2767	0.0062	24.75	0.78	0.649	0.015	0.712	3344	34	3299	30	3224	57	3.8	4.5	148300
avr12-371	0.2783	0.0064	25.10	0.79	0.654	0.014	0.688	3353	35	3312	30	3244	55	3.4	5.8	144500
avr12-358*	0.2797	0.0061	25.51	0.81	0.662	0.015	0.726	3361	34	3328	31	3273	59	2.7	-3.7	37500
avr12-358	0.2791	0.0067	25.48	0.84	0.662	0.015	0.689	3358	37	3327	32	3276	58	2.5	-3.7	37500
avr12-338	0.2800	0.0069	25.63	1.00	0.664	0.020	0.773	3363	38	3333	37	3283	77	2.4	8.6	90600
avr12-251	0.2821	0.0060	26.58	0.81	0.683	0.015	0.718	3375	33	3368	29	3357	57	0.5	0.3	161400
avr12-241	0.2826	0.0063	25.19	0.80	0.646	0.015	0.718	3377	34	3315	31	3214	58	5.1	20.1	128000
avr12-386	0.2833	0.0066	25.27	0.84	0.647	0.015	0.714	3381	36	3319	32	3216	59	5.1	1.2	21100
avr12-326	0.2835	0.0089	27.09	1.43	0.693	0.029	0.806	3382	48	3387	50	3394	111	-0.3	16.1	95500
avr12-227	0.2840	0.0074	26.54	0.94	0.678	0.016	0.675	3385	40	3367	34	3336	62	1.5	5.1	25970
avr12-285	0.2841	0.0071	25.70	0.95	0.656	0.018	0.734	3386	39	3335	35	3252	69	4.1	21	67200
avr12-327	0.2857	0.0076	26.00	1.09	0.660	0.022	0.775	3394	41	3346	40	3267	83	3.9	5.7	68500
avr12-281	0.2858	0.0068	25.97	0.92	0.659	0.017	0.738	3395	37	3345	34	3263	66	4.0	15.9	100000
avr12-416	0.2872	0.0072	26.94	0.93	0.680	0.016	0.686	3403	39	3381	33	3346	62	1.7	0.2	46420
avr12-406	0.2882	0.0065	25.95	0.92	0.653	0.018	0.767	3408	35	3345	34	3240	69	5.2	9.6	110100
avr12-334*	0.2884	0.0080	26.17	0.99	0.658	0.017	0.686	3409	42	3353	36	3259	66	4.6	12	7920
avr12-334	0.2915	0.0094	26.47	1.10	0.659	0.017	0.628	3426	49	3364	40	3263	66	5.0	12	7920
avr12-265*	0.2913	0.0066	26.34	0.86	0.656	0.016	0.726	3425	35	3359	32	3251	60	5.3	-0.2	26210
avr12-265	0.2914	0.0067	26.42	0.86	0.658	0.015	0.711	3425	35	3362	31	3259	59	5.1	-0.2	26210
avr12-269	0.3047	0.0088	29.32	1.21	0.698	0.020	0.714	3494	44	3464	40	3413	77	2.4	10	248000
avr12-344	0.3078	0.0089	30.17	1.33	0.711	0.024	0.757	3510	44	3493	42	3462	89	1.4	8.7	96000
avr12-243	0.3143	0.0084	31.20	1.15	0.720	0.018	0.685	3542	41	3525	36	3496	68	1.3	6.1	33410
avr12-279	0.3160	0.0082	31.81	1.12	0.730	0.017	0.674	3550	40	3544	34	3534	64	0.5	15.9	186800
avr12-400*	0.3163	0.0070	30.88	1.06	0.708	0.019	0.764	3552	34	3515	33	3451	70	2.9	-1.3	55600
avr12-400	0.3181	0.0070	31.04	1.02	0.708	0.017	0.742	3561	33	3520	32	3451	65	3.2	-1.3	55600
avr12-315	0.3165	0.0087	30.33	1.15	0.695	0.018	0.695	3553	41	3498	37	3402	69	4.4	1.5	20600
avr12-349	0.3186	0.0081	31.28	1.16	0.712	0.019	0.729	3563	39	3528	36	3466	72	2.8	12.2	17170
avr12-365	0.3190	0.0127	31.54	1.76	0.717	0.028	0.699	3565	60	3536	53	3485	104	2.3	11.9	37200
avr12-232	0.3190	0.0075	31.14	1.04	0.708	0.017	0.715	3565	36	3524	32	3451	64	3.3	8.8	33500
avr12-283	0.3197	0.0085	30.64	1.13	0.695	0.018	0.692	3568	40	3507	36	3402	67	4.9	2.3	30400
avr12-258	0.3209	0.0081	31.37	1.14	0.709	0.019	0.721	3574	38	3531	35	3455	70	3.5	1.3	80000
avr12-415	0.3213	0.0080	31.64	1.10	0.714	0.017	0.693	3576	38	3539	34	3474	64	2.9	10.6	19270
avr12-289	0.3227	0.0087	31.09	1.11	0.699	0.016	0.659	3583	41	3522	35	3416	62	4.9	4.5	22420
avr12-420	0.3234	0.0098	31.70	1.35	0.711	0.021	0.706	3586	46	3541	41	3462	80	3.6	3.6	16240
avr12-316	0.3240	0.0078	31.99	1.08	0.716	0.017	0.704	3589	36	3550	33	3481	64	3.1	8.4	39200
avr12-305	0.3244	0.0085	31.35	1.12	0.701	0.017	0.681	3591	40	3530	35	3424	64	4.9	14.3	31550
avr12-234	0.3245	0.0084	33.38	1.18	0.746	0.018	0.679	3591	39	3592	34	3593	66	0.0	10.4	58340
avr12-304	0.3254	0.0079	31.63	1.06	0.705	0.016	0.694	3596	37	3539	32	3439	62	4.5	5.9	30160
avr12-407	0.3258	0.0074	33.70	1.10	0.750	0.017	0.712	3597	35	3601	32	3609	64	-0.3	2.2	56600
avr12-237	0.3270	0.0084	32.06	1.19	0.711	0.019	0.728	3603	39	3552	36	3462	72	4.1	9.2	30450
avr12-413	0.3363	0.0074	32.97	1.01	0.711	0.015	0.696	3646	33	3580	30	3462	57	5.3	7.1	95410
avr12-284	0.3487	0.0082	35.00	1.22	0.728	0.019	0.741	3701	35	3639	34	3526	70	5.0	5.8	59400
avr12-337	0.3501	0.0088	35.43	1.41	0.734	0.022	0.771	3707	38	3651	38	3548	83	4.5	7.7	47700
avr12-271	0.3507	0.0079	36.47	1.18	0.754	0.017	0.714	3710	34	3679	31	3623	64	2.4	8.8	71010
avr12-378	0.3549	0.0085	35.82	1.31	0.732	0.020	0.758	3728	36	3661	35	3541	75	5.3	24.6	70000
avr12-402	0.3552	0.0075	38.23	1.20	0.781	0.018	0.737	3729	32	3726	31	3719	65	0.3	4.6	74900
avr12-401	0.3555	0.0087	36.81	1.29	0.751	0.019	0.710	3731	37	3688	34	3611	68	3.3	5.1	54020
avr12-287	0.3560	0.0082	38.56	1.27	0.786	0.018	0.712	3733	35	3734	32	3737	66	-0.1	7.6	111600
avr12-223	0.3579	0.0081	36.31	1.15	0.736	0.016	0.700	3741	34	3675	31	3555	60	5.2	11.7	124300
avr12-391*	0.3580	0.0077	38.85	1.27	0.787	0.019	0.749	3741	32	3742	32	3742	69	0.0	-1.2	103700
avr12-391	0.3582	0.0082	38.85	1.28	0.787	0.019	0.721	3742	34	3742	32	3742	67	0.0	-1.2	103700
avr12-403	0.3597	0.0082	36.79	1.18	0.742	0.017	0.708	3749	34	3688	31	3578	62	4.8	10.7	64500
avr12-306	0.3639	0.0082	38.16	1.20	0.761	0.017	0.698	3766	34	3724	31	3646	61	3.3	8	113400
avr12-347	0.3709	0.0086	39.94	1.42	0.781	0.021	0.756	3795	35	3769	35	3721	75	2.0	16.6	143000
avr12-291	0.3912	0.0106	41.96	1.60	0.778	0.021	0.703	3876	40	3818	37	3710	75	4.5	2.7	22760
> 5% Disc.																
avr12-247*	0.1121	0.0064	4.71	0.33	0.305	0.013	0.585	1834	100	1770	57	1716	62	6.9	108	28800
avr12-247	0.2267	0.0093	10.99	0.58	0.352	0.012	0.627	3029	64	2522	48	1942	55	55.9	108	28800
avr12-253	0.1148	0.0027	4.85	0.16	0.307	0.007	0.702	1877	42	1794	28	1724	35	8.8	5.3	50200
avr12-387	0.1211	0.0030	5.36	0.18	0.321	0.007	0.680	1972	44	1878	29	1794	36	9.9	34	53120
avr12-288*	0.1225	0.0030	5.60	0.20	0.332	0.009	0.720	1993	43	1917	30	1847	41	7.9	18.3	75100
avr12-288	0.1286	0.0037	5.93	0.23	0.334	0.009	0.661	2079	50	1965	33	1860	41	11.8	18.3	75100
avr12-225	0.1403	0.0031	7.19	0.23	0.372	0.009	0.725	2231	38	2135	29	2037	41	9.5	11.6	270200
avr12-259	0.1592	0.0038	9.24	0.32	0.421	0.010	0.723	2447	39	2362	31	2265	47	8.0	10.4	149200

avr12-286*	0.1634	0.0089	9.85	0.62	0.437	0.014	0.507	2491	89	2420	57	2337	63	6.6	41	81800
avr12-286	0.1829	0.0046	11.24	0.42	0.446	0.012	0.737	2679	41	2544	34	2378	54	12.7	41	81800
avr12-266	0.1664	0.0038	10.15	0.34	0.442	0.011	0.737	2522	38	2449	31	2361	49	6.8	46	152500
avr12-409	0.1680	0.0036	10.29	0.31	0.444	0.009	0.702	2538	36	2462	28	2370	42	7.1	9.5	147000
avr12-302*	0.1708	0.0055	10.48	0.47	0.445	0.014	0.703	2565	53	2478	41	2373	63	8.1	139	35300
avr12-302	0.2044	0.0092	13.21	0.67	0.469	0.011	0.475	2862	71	2694	47	2478	50	15.5	139	35300
avr12-370	0.1717	0.0039	10.57	0.33	0.447	0.010	0.689	2574	38	2486	29	2380	43	8.2	11.9	94530
avr12-399	0.1733	0.0042	10.86	0.36	0.455	0.011	0.689	2590	40	2511	31	2416	46	7.2	7.2	25630
avr12-270	0.1756	0.0051	11.01	0.44	0.455	0.013	0.690	2612	48	2524	37	2416	56	8.1	11.2	50100
avr12-373	0.1761	0.0044	11.06	0.37	0.456	0.010	0.680	2616	41	2529	31	2421	46	8.1	6.3	32240
avr12-268	0.1762	0.0048	11.08	0.41	0.456	0.011	0.675	2617	45	2530	34	2422	50	8.1	33.9	48300
avr12-230*	0.1766	0.0062	11.18	0.51	0.459	0.014	0.644	2621	57	2538	42	2435	60	7.6	15.8	83100
avr12-230	0.1883	0.0045	12.13	0.44	0.468	0.013	0.748	2727	39	2615	33	2473	55	10.3	15.8	83100
avr12-244*	0.1794	0.0041	11.24	0.39	0.454	0.012	0.755	2647	37	2543	32	2414	53	9.7	12.1	81800
avr12-244	0.1820	0.0043	11.43	0.40	0.456	0.012	0.740	2671	39	2559	32	2421	52	10.4	12.1	81800
avr12-351	0.1797	0.0049	11.49	0.42	0.464	0.011	0.665	2650	44	2564	33	2457	49	7.9	14.5	28880
avr12-375*	0.1807	0.0046	11.73	0.40	0.471	0.011	0.667	2659	42	2583	32	2488	47	6.9	-3.4	36200
avr12-375	0.1767	0.0042	11.43	0.38	0.469	0.011	0.703	2622	39	2559	30	2480	48	5.7	-3.4	36200
avr12-417	0.1808	0.0048	11.61	0.41	0.466	0.011	0.654	2660	44	2573	32	2465	47	7.9	11.6	40890
avr12-220*	0.1809	0.0074	11.90	0.62	0.477	0.015	0.620	2661	66	2596	47	2514	67	5.8	26.5	18180
avr12-220	0.1982	0.0063	13.38	0.57	0.490	0.014	0.668	2811	51	2707	40	2571	60	9.4	26.5	18180
avr12-418	0.1845	0.0044	12.00	0.41	0.472	0.011	0.710	2694	39	2604	31	2491	49	8.2	18.7	64400
avr12-290*	0.2028	0.0056	13.95	0.56	0.499	0.015	0.736	2849	44	2747	38	2609	64	9.2	30.9	43910
avr12-290	0.2203	0.0062	15.49	0.60	0.510	0.014	0.690	2983	44	2846	36	2658	58	12.2	30.9	43910
avr12-239	0.2170	0.0048	16.20	0.51	0.542	0.012	0.713	2959	35	2889	30	2790	51	6.0	7.1	48020
avr12-367	0.2345	0.0053	17.56	0.76	0.543	0.020	0.854	3083	36	2966	41	2796	84	10.3	18.5	90600
avr12-384	0.2391	0.0060	18.79	0.69	0.570	0.015	0.728	3114	39	3031	35	2908	62	7.1	16.1	70600
avr12-389	0.2427	0.0056	19.57	0.63	0.585	0.013	0.699	3138	36	3070	31	2968	53	5.7	7.1	62600
avr12-245	0.2441	0.0055	19.38	0.64	0.576	0.014	0.725	3147	36	3061	31	2932	56	7.3	9.1	137800
avr12-263	0.2442	0.0057	18.83	0.61	0.559	0.013	0.695	3148	37	3033	31	2863	52	9.9	5.8	35170
avr12-310*	0.2446	0.0069	18.95	0.87	0.562	0.020	0.788	3150	44	3039	43	2875	84	9.6	16.3	49000
avr12-310	0.2505	0.0063	19.51	0.86	0.565	0.020	0.819	3188	40	3067	42	2887	84	10.4	16.3	49000
avr12-332	0.2684	0.0081	22.13	1.09	0.598	0.023	0.792	3297	46	3189	47	3022	93	9.1	15.5	91400
avr12-411	0.2739	0.0066	22.94	0.78	0.608	0.015	0.708	3328	37	3225	33	3060	59	8.8	12.6	101500
avr12-359	0.2744	0.0071	23.25	0.82	0.615	0.015	0.675	3331	40	3237	34	3088	58	7.9	3.1	26780
avr12-257	0.2794	0.0068	24.08	0.87	0.625	0.017	0.738	3360	38	3272	35	3130	66	7.3	15.2	49000
avr12-395	0.2803	0.0062	24.71	0.77	0.639	0.014	0.710	3365	34	3297	30	3186	56	5.6	4.7	77600
avr12-236	0.2826	0.0074	24.89	0.89	0.639	0.015	0.677	3377	40	3304	34	3184	60	6.1	1.8	29400
avr12-331	0.2854	0.0081	25.30	1.10	0.643	0.021	0.761	3393	43	3320	42	3201	83	6.0	7.9	13020
avr12-421	0.2911	0.0085	25.09	1.01	0.625	0.017	0.688	3423	45	3312	39	3130	68	9.4	7	28230
avr12-360	0.3154	0.0080	29.22	1.06	0.672	0.017	0.714	3548	38	3461	35	3314	67	7.1	4.4	24400
avr12-396	0.3173	0.0073	29.18	1.06	0.667	0.019	0.772	3557	35	3460	35	3294	72	8.0	26.1	183700
avr12-397	0.3216	0.0073	30.09	1.00	0.679	0.017	0.734	3578	34	3490	32	3339	63	7.2	4.9	79850
avr12-381	0.3224	0.0090	30.76	1.30	0.692	0.022	0.750	3581	42	3511	41	3390	83	5.6	15.5	83000
avr12-303	0.3769	0.0082	38.19	1.20	0.735	0.017	0.722	3819	32	3725	31	3552	62	7.5	9.7	185100
> 10% Disc.																
avr12-309	0.1383	0.0041	6.48	0.29	0.340	0.011	0.747	2206	50	2043	38	1886	54	17.0	32	35100
avr12-314	0.1667	0.0037	9.04	0.30	0.393	0.010	0.742	2525	37	2342	30	2138	45	18.1	17.3	167800
avr12-320	0.1739	0.0042	10.43	0.42	0.435	0.014	0.799	2596	40	2474	37	2328	63	11.5	11.2	109400
avr12-353	0.1836	0.0069	11.42	0.60	0.451	0.017	0.703	2686	61	2558	48	2400	74	11.9	3.4	10400
avr12-325	0.1843	0.0084	10.60	0.88	0.417	0.029	0.840	2692	73	2488	75	2247	132	19.8	46	214700
avr12-422	0.1893	0.0048	11.72	0.42	0.449	0.012	0.717	2736	41	2582	33	2390	52	14.5	13.3	20800
avr12-293	0.1900	0.0058	11.29	0.52	0.431	0.015	0.746	2742	49	2547	42	2310	66	18.7	14.4	21100
avr12-224	0.1929	0.0047	12.09	0.43	0.455	0.012	0.732	2767	39	2612	33	2416	52	14.5	11	31800
avr12-229	0.1952	0.0044	11.75	0.37	0.436	0.010	0.694	2786	37	2584	29	2335	43	19.4	67	54010
avr12-292	0.2043	0.0047	13.67	0.44	0.485	0.011	0.693	2861	37	2727	30	2550	46	12.2	31.9	110700
avr12-354	0.2656	0.0083	20.32	1.10	0.555	0.025	0.817	3280	48	3107	51	2846	101	15.3	93	37600
avr12-249	0.2661	0.0068	19.70	0.85	0.537	0.018	0.801	3283	40	3077	41	2771	77	18.5	8.7	44100
avr12-410	0.2721	0.0062	20.83	0.68	0.555	0.013	0.718	3318	35	3131	31	2847	54	16.6	12.4	190500
avr12-228	0.2764	0.0062	22.06	0.70	0.579	0.013	0.711	3343	35	3186	31	2944	53	13.5	36.5	143300
avr12-374	0.2807	0.0070	22.54	0.79	0.582	0.014	0.703	3367	38	3207	34	2958	58	13.8	7.4	21660
avr12-313	0.2869	0.0064	23.77	0.81	0.601	0.016	0.760	3401	34	3259	33	3034	63	12.1	28	90260
avr12-267	0.2888	0.0072	22.69	0.82	0.570	0.015	0.721	3411	38	3214	34	2907	60	17.3	80.1	52500
avr12-341	0.2993	0.0077	23.94	0.95	0.580	0.017	0.758	3467	39	3266	38	2949	71	17.6	38.2	109200
avr12-256	0.3049	0.0071	26.61	0.96	0.633	0.017	0.762	3495	36	3369	35	3161	68	10.6	9.6	144900
avr12-398	0.3197	0.0077	28.30	1.38	0.642	0.027	0.871	3568	36	3430	47	3197	106	11.6	12.3	69100
avr12-311	0.3230	0.0082	28.99	1.06	0.651	0.017	0.719	3584	38	3453	35	3232	66	10.9	14.3	36190

avr12-298	0.3266	0.0074	29.23	0.96	0.649	0.015	0.720	3601	34	3461	32	3225	60	11.7	32.6	44000
avr12-322	0.3285	0.0087	27.49	1.29	0.607	0.023	0.824	3610	40	3401	45	3058	93	18.1	51	177000
avr12-408	0.3292	0.0083	26.94	0.95	0.594	0.015	0.698	3613	38	3381	34	3004	59	20.3	26.5	64800
avr12-297	0.3297	0.0080	28.05	0.94	0.617	0.014	0.685	3616	37	3421	32	3098	56	16.7	28.9	38100
avr12-336	0.3347	0.0104	28.70	1.26	0.622	0.019	0.712	3639	47	3443	42	3118	77	16.7	28	71200
avr12-361	0.3505	0.0077	31.88	1.06	0.660	0.016	0.751	3709	33	3546	32	3266	64	13.6	42.2	82400
> 20% Disc.																
avr12-254	0.1332	0.0032	4.91	0.18	0.267	0.007	0.750	2141	41	1804	30	1527	36	40.2	15.2	206200
avr12-262	0.1384	0.0037	4.89	0.31	0.256	0.015	0.910	2207	45	1800	53	1469	76	50.2	20.3	87100
avr12-392	0.1543	0.0033	6.44	0.24	0.303	0.009	0.813	2394	36	2038	32	1705	45	40.4	78.6	179300
avr12-323	0.1641	0.0042	7.93	0.32	0.350	0.011	0.776	2498	42	2223	36	1937	52	29.0	39	231000
avr12-321	0.1664	0.0037	4.93	0.31	0.215	0.013	0.937	2522	37	1808	52	1255	67	100.9	40.8	165900
avr12-317	0.1693	0.0040	8.84	0.31	0.379	0.010	0.737	2551	39	2321	32	2070	46	23.2	42	138600
avr12-348	0.1809	0.0050	9.20	0.37	0.369	0.011	0.737	2661	45	2358	37	2025	52	31.4	30.8	42330
avr12-419	0.1835	0.0041	9.56	0.38	0.378	0.013	0.827	2685	37	2394	36	2067	58	29.9	42.2	120400
avr12-363	0.1843	0.0095	10.39	0.72	0.409	0.019	0.665	2692	83	2470	62	2210	86	21.8	12	23850
avr12-362	0.1860	0.0092	10.69	0.78	0.417	0.023	0.739	2707	79	2497	66	2247	102	20.5	56.9	119000
avr12-296	0.1873	0.0050	9.66	0.41	0.374	0.012	0.782	2719	43	2403	39	2048	58	32.7	18	18960
avr12-379	0.1891	0.0062	9.89	0.43	0.379	0.011	0.666	2734	53	2425	40	2073	52	31.9	14.5	17610
avr12-318	0.2116	0.0054	10.94	0.48	0.375	0.013	0.811	2918	41	2518	40	2053	62	42.1	42	192500
avr12-307	0.2230	0.0092	12.88	0.67	0.419	0.013	0.600	3002	65	2671	48	2256	59	33.1	100	28580
avr12-394	0.2255	0.0049	9.70	0.50	0.312	0.014	0.904	3020	35	2407	46	1751	70	72.5	425	176700
avr12-276	0.2266	0.0049	10.29	0.36	0.330	0.009	0.789	3028	34	2462	32	1836	44	64.9	39.8	158900
avr12-226	0.2271	0.0061	12.98	0.50	0.415	0.011	0.718	3032	42	2678	35	2235	52	35.6	215	54100
avr12-319	0.2402	0.0068	15.70	0.69	0.474	0.016	0.768	3121	44	2859	41	2501	70	24.8	21.8	124500
avr12-393	0.2488	0.0057	10.88	0.37	0.317	0.008	0.738	3177	36	2513	31	1776	39	78.9	455	96300
avr12-340	0.2696	0.0069	18.25	0.92	0.491	0.021	0.862	3304	40	3003	47	2575	92	28.3	86	174300
avr12-339	0.2719	0.0066	19.79	0.82	0.528	0.018	0.806	3317	38	3081	39	2733	74	21.4	101	212800
avr12-328	0.2727	0.0063	10.94	0.50	0.291	0.012	0.866	3322	36	2518	42	1647	58	101.7	58	264400
avr12-366	0.2755	0.0074	17.82	0.85	0.469	0.019	0.826	3338	42	2980	45	2479	81	34.6	128	109200
avr12-240	0.2910	0.0077	21.23	0.83	0.529	0.015	0.735	3423	41	3149	37	2737	64	25.1	17.6	141100
avr12-329	0.3046	0.0086	22.26	1.08	0.530	0.021	0.812	3494	43	3195	46	2741	87	27.4	46.4	263000
avr12-330	0.3048	0.0101	22.15	1.06	0.527	0.018	0.726	3495	50	3190	46	2729	77	28.1	18.7	275000
avr12-231	0.3148	0.0077	24.35	0.98	0.561	0.018	0.793	3545	37	3283	39	2871	74	23.5	236	223300
avr12-233	0.3255	0.0070	21.05	0.95	0.469	0.019	0.877	3596	33	3141	43	2479	81	45.0	201	122700
avr12-238	0.3274	0.0074	23.88	0.76	0.529	0.012	0.704	3605	34	3264	31	2738	50	31.7	34	180000
avr12-308	0.3360	0.0111	20.60	0.92	0.445	0.013	0.672	3645	50	3120	42	2372	59	53.7	20.7	36340
avr12-300	0.3381	0.0090	19.67	0.83	0.422	0.014	0.778	3654	40	3075	40	2270	63	61.0	126	46980
avr12-295	0.3991	0.0092	29.20	1.00	0.531	0.014	0.745	3906	34	3460	33	2744	57	42.3	19.6	39100
avr12-294	0.4090	0.0092	26.67	1.25	0.473	0.019	0.876	3942	33	3372	45	2497	85	57.9	494	57700

AVR 16 11 ≤ 250µm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
avr11-548	0.2480	0.0802	24.96	11.76	0.730	0.250	0.728	3172	436	3307	379	3533	871	-10.2	273	46000
> -5% Disc.																
avr11-588*	0.0899	0.0035	2.94	0.21	0.237	0.014	0.832	1423	73	1392	52	1371	72	3.8	16.9	185000
avr11-588	0.1337	0.0045	4.61	0.30	0.250	0.014	0.857	2147	57	1750	53	1438	71	49.3	16.9	185000
avr11-478*	0.1118	0.0034	4.81	0.22	0.312	0.011	0.741	1829	55	1786	38	1750	52	4.5	79.5	159200
avr11-478	0.1559	0.0039	7.05	0.28	0.328	0.010	0.764	2412	42	2118	34	1830	47	31.8	79.5	159200
avr11-684	0.1201	0.0052	5.96	0.37	0.360	0.016	0.711	1958	75	1970	52	1982	74	-1.2	6.4	33100
avr11-565	0.1484	0.0036	8.55	0.31	0.418	0.011	0.738	2328	41	2291	32	2251	50	3.4	11.1	207600
avr11-445*	0.1630	0.0105	10.63	0.95	0.473	0.030	0.696	2487	105	2491	80	2497	128	-0.4	20.6	11720
avr11-445	0.1968	0.0074	13.24	0.86	0.488	0.026	0.815	2800	60	2697	60	2562	111	9.3	20.6	11720
avr11-535*	0.1630	0.0213	10.16	2.17	0.452	0.077	0.792	2487	204	2449	181	2404	331	3.4	307	113000
avr11-535	0.2090	0.0263	14.03	2.65	0.487	0.069	0.746	2898	191	2752	165	2558	291	13.3	307	113000
avr11-570	0.1696	0.0047	10.73	0.41	0.459	0.012	0.702	2554	45	2500	35	2435	55	4.9	5.7	73700
avr11-560	0.1704	0.0045	11.86	0.47	0.505	0.015	0.748	2562	43	2594	36	2635	64	-2.8	-1.7	81000
avr11-580	0.1714	0.0056	11.86	0.51	0.502	0.014	0.655	2571	53	2594	40	2622	61	-1.9	7.5	30100
avr11-624	0.1720	0.0164	11.79	1.68	0.497	0.053	0.746	2577	151	2588	126	2601	224	-0.9	10.5	27600
avr11-551	0.1722	0.0042	12.11	0.45	0.510	0.014	0.749	2579	40	2613	34	2657	60	-2.9	-2.4	188600
avr11-582*	0.1729	0.0095	12.04	1.13	0.505	0.038	0.812	2586	88	2607	84	2635	162	-1.9	18.3	10430
avr11-582	0.1769	0.0100	12.26	1.03	0.503	0.032	0.745	2624	91	2625	76	2627	134	-0.1	18.3	10430
avr11-479	0.1732	0.0046	11.30	0.42	0.473	0.012	0.691	2589	44	2548	34	2497	53	3.7	20.3	79000
avr11-650	0.1740	0.0174	11.28	1.77	0.470	0.057	0.771	2596	157	2546	137	2484	244	4.5	12.8	33400
avr11-510	0.1749	0.0044	11.83	0.42	0.491	0.012	0.712	2605	41	2591	33	2574	53	1.2	0.8	69500

avr11-677	0.1752	0.0081	11.33	0.76	0.469	0.023	0.728	2608	75	2551	61	2479	100	5.2	12.9	126000
avr11-669	0.1754	0.0050	11.61	0.51	0.480	0.016	0.761	2610	47	2573	41	2527	70	3.3	8	94700
avr11-463*	0.1762	0.0077	11.88	0.91	0.489	0.031	0.821	2617	71	2595	69	2566	131	2.0	19.9	31000
avr11-463	0.1828	0.0069	12.45	0.84	0.494	0.028	0.832	2678	61	2639	62	2588	119	3.5	19.9	31000
avr11-668*	0.1775	0.0060	12.09	0.63	0.494	0.020	0.764	2630	55	2611	48	2588	84	1.6	17.8	25120
avr11-668	0.1850	0.0063	12.77	0.63	0.501	0.018	0.726	2698	55	2663	46	2618	77	3.1	17.8	25120
avr11-622	0.1780	0.0203	13.18	2.19	0.537	0.065	0.727	2634	178	2693	146	2771	267	-4.9	2.4	17600
avr11-456	0.1798	0.0053	12.67	0.55	0.511	0.017	0.739	2651	48	2655	40	2661	70	-0.4	13.2	38900
avr11-515	0.1803	0.0067	12.65	0.62	0.509	0.017	0.660	2656	60	2654	45	2652	70	0.1	4.6	19200
avr11-480	0.1808	0.0046	12.14	0.48	0.487	0.015	0.766	2660	41	2615	36	2558	63	4.0	15.1	160000
avr11-528	0.1808	0.0052	11.99	0.48	0.481	0.014	0.706	2660	47	2604	37	2532	60	5.1	4.3	41910
avr11-671	0.1811	0.0055	12.04	0.49	0.482	0.013	0.675	2663	49	2608	38	2537	58	5.0	10.2	79300
avr11-697	0.1812	0.0059	12.82	0.60	0.513	0.017	0.723	2664	53	2666	43	2669	74	-0.2	-1.7	21130
avr11-667	0.1813	0.0072	12.67	0.70	0.507	0.020	0.702	2665	64	2656	51	2644	84	0.8	9	52800
avr11-540*	0.1817	0.0054	12.35	0.61	0.493	0.020	0.801	2668	48	2631	46	2584	84	3.3	20.6	30480
avr11-540	0.1854	0.0060	12.57	0.61	0.492	0.018	0.749	2702	52	2648	45	2579	77	4.7	20.6	30480
avr11-547	0.1820	0.0145	12.10	1.32	0.482	0.036	0.688	2671	126	2612	98	2536	156	5.3	8.9	16680
avr11-681	0.1822	0.0049	12.86	0.54	0.512	0.017	0.768	2673	44	2670	39	2665	70	0.3	5.5	176100
avr11-658	0.1831	0.0083	12.75	0.87	0.505	0.026	0.753	2681	73	2661	63	2635	111	1.7	4.8	31910
avr11-639	0.1840	0.0135	12.71	1.58	0.501	0.050	0.806	2689	116	2658	110	2618	211	2.7	2.3	43500
avr11-686	0.1841	0.0092	12.82	0.95	0.505	0.028	0.743	2690	80	2666	68	2635	118	2.1	47.5	119400
avr11-610	0.1841	0.0066	12.67	0.65	0.499	0.018	0.709	2690	58	2655	47	2609	77	3.1	9.8	36300
avr11-543	0.1845	0.0075	13.48	0.75	0.530	0.020	0.682	2694	65	2714	51	2741	84	-1.7	6.5	15100
avr11-693	0.1848	0.0069	12.69	0.69	0.498	0.020	0.728	2696	60	2657	50	2605	84	3.5	16.5	45000
avr11-575	0.1851	0.0077	12.61	0.71	0.494	0.019	0.677	2699	67	2651	52	2588	81	4.3	6.8	19500
avr11-439	0.1854	0.0076	12.65	0.69	0.495	0.018	0.664	2702	66	2654	50	2592	77	4.2	2.9	18820
avr11-562	0.1858	0.0094	13.19	0.88	0.515	0.022	0.655	2705	81	2694	61	2678	95	1.0	-1	14530
avr11-591	0.1865	0.0068	12.68	0.67	0.493	0.019	0.722	2712	59	2656	49	2584	81	5.0	8.5	19600
avr11-433	0.1878	0.0082	12.95	0.75	0.500	0.019	0.653	2723	70	2676	53	2614	81	4.2	18	19300
avr11-651	0.1880	0.0174	13.45	1.84	0.519	0.052	0.735	2725	145	2712	121	2695	217	1.1	6	17300
avr11-653	0.1890	0.0107	13.32	1.12	0.511	0.032	0.739	2733	90	2702	76	2661	134	2.7	14.5	34600
avr11-673	0.1900	0.0107	13.23	1.13	0.505	0.033	0.754	2742	90	2696	78	2635	138	4.1	4.2	26600
avr11-644	0.1905	0.0104	14.05	1.14	0.535	0.032	0.736	2746	87	2753	74	2762	132	-0.6	2.9	18900
avr11-577	0.1962	0.0051	14.48	0.54	0.535	0.014	0.717	2795	42	2781	35	2763	60	1.2	13.2	156900
avr11-691	0.2014	0.0053	15.19	1.07	0.547	0.036	0.927	2838	43	2827	65	2813	147	0.9	1454	687000
avr11-566	0.2047	0.0053	15.81	0.62	0.560	0.016	0.752	2864	41	2865	37	2867	67	-0.1	7.9	71400
avr11-695	0.2051	0.0057	15.10	0.71	0.534	0.020	0.803	2867	45	2822	44	2758	84	3.9	19.7	122700
avr11-500	0.2093	0.0051	16.42	0.61	0.569	0.016	0.753	2900	39	2902	35	2904	65	-0.1	4.8	113800
avr11-494	0.2098	0.0048	15.85	0.58	0.548	0.016	0.776	2904	37	2868	34	2817	64	3.1	2.9	126800
avr11-491	0.2116	0.0058	15.86	0.60	0.544	0.014	0.680	2918	44	2868	35	2799	58	4.3	54	122000
avr11-630	0.2120	0.0058	16.19	0.65	0.554	0.016	0.735	2921	43	2888	38	2842	67	2.8	18.3	152100
avr11-605	0.2208	0.0094	17.47	1.01	0.574	0.022	0.672	2987	67	2961	54	2924	90	2.1	5	92400
avr11-689	0.2315	0.0086	18.86	1.06	0.591	0.025	0.753	3062	58	3035	53	2993	100	2.3	21.8	173000
avr11-687	0.2408	0.0093	20.39	1.17	0.614	0.026	0.742	3125	60	3110	54	3086	103	1.3	6.2	33500
avr11-533	0.2409	0.0068	19.93	0.87	0.600	0.020	0.763	3126	44	3088	41	3030	80	3.2	11.3	138000
avr11-490	0.2424	0.0062	20.99	0.79	0.628	0.017	0.736	3136	40	3138	36	3142	68	-0.2	7.9	51800
avr11-534	0.2440	0.0196	21.87	2.28	0.650	0.043	0.635	3146	122	3178	96	3228	166	-2.5	-2.1	71000
avr11-564	0.2447	0.0102	21.09	1.33	0.625	0.030	0.754	3151	64	3143	59	3130	117	0.7	-4	27760
avr11-466	0.2453	0.0057	21.14	0.94	0.625	0.024	0.852	3155	36	3145	42	3130	93	0.8	7.5	77800
avr11-613	0.2492	0.0076	20.65	0.94	0.601	0.020	0.735	3180	48	3122	43	3034	80	4.8	3.1	60520
avr11-579	0.2762	0.0078	24.30	1.06	0.638	0.021	0.763	3342	43	3280	42	3181	83	5.0	11.1	87400
avr11-696	0.2810	0.0066	26.62	0.96	0.687	0.019	0.760	3368	36	3369	35	3371	72	-0.1	10.5	159400
avr11-521	0.2829	0.0080	25.16	1.05	0.645	0.020	0.734	3379	44	3314	40	3209	77	5.3	3.2	138800
avr11-657	0.2860	0.0133	26.50	1.84	0.672	0.035	0.743	3396	71	3365	66	3314	132	2.5	16.7	34700
avr11-513	0.2870	0.0124	27.98	1.51	0.707	0.023	0.599	3401	66	3418	52	3447	86	-1.3	676	68400
avr11-614	0.3190	0.0127	31.62	1.71	0.719	0.026	0.676	3565	60	3539	52	3492	98	2.1	-3.4	28320
avr11-632	0.3230	0.0173	33.27	2.20	0.747	0.029	0.590	3584	80	3589	63	3596	107	-0.3	3	15400
avr11-680	0.3263	0.0094	33.70	1.46	0.749	0.024	0.748	3600	43	3601	42	3604	89	-0.1	5.4	82900
avr11-561	0.3286	0.0088	34.52	1.58	0.762	0.028	0.813	3611	40	3625	44	3652	103	-1.1	-1.2	66000
avr11-655	0.3310	0.0211	33.27	3.06	0.729	0.048	0.721	3622	94	3589	87	3530	177	2.6	8.7	191000
avr11-646	0.3380	0.0337	35.65	5.20	0.765	0.081	0.730	3654	145	3657	135	3663	291	-0.2	7.8	51400
avr11-584	0.3430	0.0104	34.71	1.63	0.734	0.026	0.766	3676	45	3631	45	3548	98	3.6	-1.5	87200
avr11-451	0.3478	0.0094	37.07	1.80	0.773	0.031	0.831	3697	41	3695	47	3692	112	0.2	7.1	38000
avr11-498	0.3484	0.0084	35.16	1.27	0.732	0.020	0.743	3700	36	3643	35	3541	72	4.5	4.7	61800
avr11-452	0.3534	0.0079	36.64	1.32	0.752	0.021	0.785	3722	34	3684	35	3615	78	3.0	8.7	206900
avr11-556	0.3542	0.0100	37.46	1.68	0.767	0.027	0.779	3725	42	3706	43	3670	97	1.5	8.3	34700
avr11-458	0.3552	0.0098	37.71	1.48	0.770	0.021	0.710	3729	41	3712	38	3681	78	1.3	9.2	103900

avr11-468	0.3569	0.0082	38.43	1.36	0.781	0.021	0.761	3737	34	3731	34	3721	75	0.4	-3.2	106500
avr11-524	0.3577	0.0091	38.07	1.58	0.772	0.025	0.790	3740	38	3722	40	3688	91	1.4	4.6	26680
avr11-507	0.3607	0.0092	38.20	1.35	0.768	0.019	0.694	3753	38	3725	34	3673	69	2.2	6.7	73400
avr11-526	0.3619	0.0086	36.97	1.35	0.741	0.020	0.756	3758	36	3693	35	3574	75	5.1	11.1	53800
avr11-654	0.3640	0.0167	37.69	2.48	0.751	0.035	0.717	3767	68	3712	63	3611	129	4.3	-0.9	190900
avr11-472	0.3720	0.0086	41.19	1.50	0.803	0.023	0.774	3800	35	3800	36	3800	81	0.0	22.2	67600
avr11-449	0.4120	0.0189	47.26	3.44	0.832	0.047	0.777	3953	67	3936	70	3903	163	1.3	5.4	97900
> 5% Disc.																
avr11-431*	0.0911	0.0028	2.88	0.15	0.229	0.010	0.818	1449	57	1375	39	1329	52	9.0	25.5	48100
avr11-431	0.1754	0.0051	6.15	0.30	0.255	0.010	0.796	2610	48	1998	41	1462	50	78.6	25.5	48100
avr11-550*	0.1178	0.0041	5.23	0.31	0.322	0.015	0.812	1923	60	1858	49	1799	75	6.9	116	182000
avr11-550	0.1995	0.0046	9.73	0.42	0.354	0.013	0.851	2822	37	2410	39	1954	62	44.5	116	182000
avr11-497*	0.1357	0.0060	6.72	0.39	0.359	0.013	0.635	2173	76	2075	50	1977	62	9.9	7	13400
avr11-497	0.1410	0.0060	7.05	0.38	0.363	0.012	0.624	2240	72	2118	47	1996	58	12.2	7	13400
avr11-517*	0.1516	0.0082	8.40	0.60	0.402	0.019	0.655	2364	89	2275	63	2178	86	8.5	10.3	26920
avr11-517	0.1896	0.0068	10.97	0.56	0.420	0.015	0.719	2739	58	2521	47	2260	70	21.2	10.3	26920
avr11-679*	0.1581	0.0083	9.33	0.79	0.428	0.028	0.783	2435	87	2371	75	2297	127	6.0	29.5	93300
avr11-679	0.1796	0.0091	10.84	0.82	0.438	0.025	0.741	2649	82	2510	68	2342	109	13.1	29.5	93300
avr11-427*	0.1583	0.0074	9.28	0.57	0.425	0.017	0.655	2438	77	2366	55	2283	78	6.8	50	37300
avr11-427	0.1853	0.0050	11.26	0.52	0.441	0.017	0.814	2701	44	2545	42	2355	74	14.7	50	37300
avr11-641*	0.1610	0.0144	9.43	1.24	0.425	0.041	0.733	2466	143	2381	114	2283	182	8.0	71	20300
avr11-641	0.2250	0.0186	14.30	1.57	0.461	0.033	0.659	3017	127	2769	99	2444	145	23.4	71	20300
avr11-464	0.1695	0.0046	10.38	0.43	0.444	0.014	0.761	2553	45	2469	38	2369	63	7.8	49	110100
avr11-675	0.1697	0.0099	10.32	0.93	0.441	0.030	0.762	2555	94	2464	80	2355	134	8.5	16.2	123200
avr11-486	0.1698	0.0042	10.61	0.37	0.453	0.011	0.698	2556	41	2490	32	2410	49	6.0	7.7	107000
avr11-633	0.1741	0.0050	11.07	0.43	0.461	0.012	0.679	2597	47	2529	36	2444	54	6.3	14.9	92000
avr11-477*	0.1758	0.0080	11.20	0.62	0.462	0.014	0.564	2614	74	2540	50	2448	63	6.7	85	288700
avr11-477	0.1898	0.0047	12.30	0.46	0.470	0.013	0.744	2740	40	2628	34	2484	57	10.3	85	288700
avr11-442	0.1794	0.0057	11.53	0.57	0.466	0.018	0.768	2647	52	2567	45	2466	77	7.4	12	18870
avr11-663	0.1840	0.0095	11.80	0.84	0.465	0.023	0.690	2689	83	2588	65	2462	100	9.2	7.6	20700
avr11-589	0.1857	0.0052	12.01	0.60	0.469	0.019	0.830	2704	45	2605	46	2479	85	9.1	13.7	54000
avr11-475	0.1858	0.0052	12.15	0.44	0.474	0.011	0.646	2705	45	2616	34	2502	49	8.1	17.9	44400
avr11-609	0.1865	0.0057	12.34	0.58	0.480	0.017	0.757	2712	49	2631	43	2527	74	7.3	11	30100
avr11-618	0.1870	0.0116	12.56	0.97	0.487	0.022	0.592	2716	99	2647	70	2558	96	6.2	6	37900
avr11-573	0.1872	0.0047	12.13	0.44	0.470	0.012	0.709	2718	41	2614	33	2483	52	9.4	28	61200
avr11-648	0.1980	0.0214	13.73	2.21	0.503	0.060	0.741	2810	166	2731	142	2627	252	7.0	1.1	6470
avr11-665*	0.2050	0.0214	14.10	1.71	0.499	0.031	0.507	2866	160	2757	109	2609	131	9.8	14.3	116400
avr11-665	0.2130	0.0071	14.85	0.80	0.506	0.022	0.786	2929	53	2806	50	2640	91	10.9	14.3	116400
avr11-542	0.2150	0.0049	16.00	0.54	0.540	0.014	0.739	2944	37	2877	32	2782	57	5.8	4.1	210200
avr11-545	0.2260	0.0186	17.33	2.03	0.556	0.046	0.712	3024	126	2953	107	2850	189	6.1	16.9	69200
avr11-554	0.2356	0.0088	18.58	1.08	0.572	0.026	0.770	3090	58	3020	55	2916	104	6.0	20.1	139000
avr11-505*	0.2389	0.0053	18.16	0.64	0.551	0.015	0.768	3113	35	2998	33	2831	61	10.0	30.9	198400
avr11-505	0.2397	0.0053	18.22	0.63	0.552	0.015	0.770	3118	35	3001	33	2831	60	10.1	30.9	198400
avr11-509	0.2500	0.0067	19.72	0.80	0.572	0.017	0.751	3185	42	3078	38	2916	71	9.2	14.5	40360
avr11-593	0.2605	0.0094	21.66	1.10	0.603	0.022	0.706	3250	56	3169	48	3042	87	6.8	14.5	23600
avr11-615	0.2680	0.0256	22.73	3.13	0.615	0.061	0.722	3294	142	3215	126	3090	240	6.6	6.2	39900
avr11-437	0.3043	0.0081	27.44	1.11	0.654	0.020	0.754	3492	40	3399	39	3244	77	7.7	3.5	164300
avr11-586	0.3186	0.0093	29.61	1.19	0.674	0.019	0.689	3563	44	3474	39	3321	72	7.3	20.1	79200
avr11-457	0.3231	0.0090	30.65	1.22	0.688	0.020	0.717	3585	42	3508	38	3375	75	6.2	13.9	38800
avr11-455	0.3364	0.0095	31.08	1.48	0.670	0.026	0.806	3646	43	3521	46	3306	99	10.3	4.2	103200
avr11-459	0.3460	0.0092	34.01	1.27	0.713	0.019	0.703	3689	40	3610	36	3470	70	6.3	0.1	65100
avr11-662	0.3460	0.0221	32.63	3.00	0.684	0.045	0.718	3689	94	3570	87	3360	170	9.8	9	126000
avr11-512	0.3533	0.0094	34.25	1.33	0.703	0.020	0.728	3721	40	3617	38	3432	75	8.4	0.9	61600
avr11-625	0.3560	0.0328	34.16	4.53	0.696	0.066	0.720	3733	133	3615	123	3405	248	9.6	4	65200
avr11-504	0.3562	0.0083	35.31	1.37	0.719	0.022	0.800	3734	35	3647	38	3492	83	6.9	5	156400
avr11-627	0.3674	0.0107	36.17	1.66	0.714	0.025	0.773	3781	44	3671	44	3474	95	8.8	7.7	77000
avr11-482	0.4195	0.0097	45.29	1.70	0.783	0.023	0.788	3980	34	3894	37	3728	83	6.8	14.7	159500
> 10% Disc.																
avr11-474	0.1623	0.0038	8.50	0.31	0.380	0.011	0.774	2480	39	2286	33	2075	51	19.5	58	159400
avr11-453	0.1643	0.0041	8.63	0.31	0.381	0.010	0.728	2500	41	2299	32	2080	47	20.2	17.6	149000
avr11-590	0.1670	0.0044	9.62	0.37	0.418	0.012	0.736	2528	43	2399	35	2250	54	12.4	20.2	113700
avr11-606	0.1671	0.0045	9.81	0.40	0.426	0.013	0.754	2529	44	2418	37	2288	59	10.5	20.9	149500
avr11-454	0.1718	0.0048	10.04	0.49	0.424	0.017	0.826	2575	46	2439	44	2279	78	13.0	26	77300
avr11-428	0.1724	0.0053	10.10	0.45	0.425	0.014	0.730	2581	50	2444	41	2283	63	13.0	18.2	123200
avr11-563	0.1732	0.0044	10.03	0.36	0.420	0.011	0.716	2589	42	2438	33	2261	49	14.5	61	119600
avr11-438	0.1792	0.0054	10.92	0.49	0.442	0.015	0.747	2645	49	2516	41	2360	66	12.1	14.9	29180
avr11-676	0.1798	0.0079	10.49	0.71	0.423	0.022	0.761	2651	71	2479	61	2274	98	16.6	34.9	86800

avr11-502	0.1818	0.0053	10.52	0.44	0.420	0.013	0.718	2669	47	2481	38	2258	57	18.2	12.2	36000
avr11-617	0.1830	0.0073	10.77	0.81	0.427	0.027	0.849	2680	64	2504	68	2292	122	16.9	27	71000
avr11-423	0.1858	0.0057	11.61	0.61	0.453	0.019	0.812	2705	50	2573	48	2409	85	12.3	19.2	40900
avr11-518	0.1860	0.0058	11.46	0.57	0.447	0.017	0.780	2707	51	2562	46	2382	77	13.7	2.7	42500
avr11-465	0.1861	0.0061	10.91	0.77	0.425	0.026	0.885	2708	53	2515	63	2283	118	18.6	19.6	121000
avr11-661	0.1890	0.0068	11.54	0.65	0.443	0.019	0.767	2733	58	2568	51	2364	85	15.6	24	181000
avr11-495	0.2124	0.0054	14.78	0.52	0.505	0.012	0.687	2924	41	2801	33	2634	52	11.0	4.6	47100
avr11-549	0.2141	0.0047	14.67	0.53	0.497	0.014	0.792	2937	35	2794	33	2601	60	12.9	103	252200
avr11-467	0.2204	0.0064	15.56	0.62	0.512	0.014	0.688	2984	46	2850	37	2666	60	11.9	8.8	94200
avr11-481	0.2212	0.0075	15.52	0.88	0.509	0.023	0.806	2989	53	2848	53	2652	99	12.7	12.6	11570
avr11-628	0.2330	0.0061	17.25	0.67	0.537	0.015	0.739	3073	41	2949	37	2771	64	10.9	21.5	149000
avr11-541	0.2388	0.0054	17.02	0.65	0.517	0.016	0.803	3112	36	2936	36	2686	67	15.8	23.1	133600
avr11-506	0.2394	0.0061	16.93	0.66	0.513	0.015	0.754	3116	40	2931	37	2669	64	16.7	217	119200
avr11-634	0.2401	0.0059	17.08	0.71	0.516	0.017	0.809	3121	38	2939	39	2682	74	16.3	16.9	126700
avr11-567	0.2405	0.0086	17.11	0.99	0.516	0.023	0.786	3123	56	2941	54	2682	99	16.4	4.5	28700
avr11-620	0.2409	0.0070	17.27	0.75	0.520	0.017	0.740	3126	46	2950	41	2699	70	15.8	32	121200
avr11-616	0.2461	0.0059	18.37	0.63	0.541	0.013	0.720	3160	37	3009	33	2789	56	13.3	16.6	221400
avr11-530	0.2563	0.0064	18.86	0.68	0.534	0.014	0.721	3224	39	3035	34	2757	58	16.9	12.6	300000
avr11-603	0.2829	0.0071	22.58	0.84	0.579	0.016	0.739	3379	39	3209	36	2945	65	14.8	8	238800
avr11-682	0.2860	0.0070	22.04	0.92	0.559	0.019	0.806	3396	38	3186	40	2862	77	18.6	11.4	312200
avr11-532	0.3052	0.0085	24.28	1.18	0.577	0.023	0.821	3497	42	3280	46	2936	94	19.1	11.6	68400
avr11-587	0.3093	0.0068	26.31	1.04	0.617	0.020	0.829	3517	34	3358	38	3098	80	13.5	19.3	227400
avr11-531	0.3130	0.0092	27.02	1.09	0.626	0.017	0.684	3536	45	3384	39	3134	68	12.8	7.9	56000
avr11-487	0.3210	0.0078	27.71	1.15	0.626	0.021	0.812	3575	37	3409	40	3134	83	14.1	12.7	150000
avr11-440	0.3229	0.0085	26.45	1.05	0.594	0.018	0.748	3584	40	3363	38	3006	71	19.2	109	64400
avr11-425	0.3276	0.0114	28.82	2.03	0.638	0.039	0.870	3606	52	3447	67	3181	152	13.4	11.9	40900
> 20% Disc.																
avr11-602	0.1014	0.0024	2.31	0.09	0.165	0.005	0.765	1650	43	1216	26	986	26	67.3	179	190600
avr11-629	0.1654	0.0040	8.55	0.37	0.375	0.013	0.825	2512	40	2291	38	2053	62	22.3	37	173500
avr11-503	0.1681	0.0045	5.49	0.35	0.237	0.014	0.909	2539	44	1900	54	1371	72	85.2	40.6	143800
avr11-612	0.1687	0.0044	8.71	0.32	0.374	0.010	0.704	2545	43	2308	33	2050	45	24.1	103	162000
avr11-429	0.1742	0.0049	9.13	0.62	0.380	0.023	0.908	2598	46	2351	60	2076	108	25.1	11.9	32000
avr11-574	0.1768	0.0041	9.13	0.32	0.375	0.010	0.749	2623	38	2351	31	2051	45	27.9	65	157900
avr11-672	0.1809	0.0052	9.65	0.42	0.387	0.013	0.752	2661	47	2402	39	2109	59	26.2	25.4	96300
avr11-519	0.1809	0.0067	8.16	0.40	0.327	0.011	0.667	2661	60	2249	44	1825	52	45.8	45	31610
avr11-489	0.1820	0.0048	10.26	0.41	0.409	0.012	0.739	2671	43	2459	36	2210	54	20.8	110	130400
avr11-683	0.1824	0.0050	9.78	0.47	0.389	0.015	0.818	2675	45	2415	43	2118	70	26.3	108	95200
avr11-553	0.1850	0.0107	9.82	0.82	0.385	0.023	0.724	2698	92	2418	74	2100	108	28.5	17.2	126000
avr11-539	0.1859	0.0055	9.62	0.43	0.375	0.012	0.748	2706	48	2399	40	2054	58	31.7	9	22530
avr11-649	0.1860	0.0155	10.26	1.17	0.400	0.031	0.683	2707	131	2458	100	2169	141	24.8	16.1	28100
avr11-635	0.1870	0.0145	10.73	1.04	0.416	0.024	0.604	2716	122	2500	87	2242	110	21.1	11.6	37200
avr11-462	0.1877	0.0065	8.46	0.64	0.327	0.022	0.889	2722	56	2282	66	1824	106	49.3	16.5	18100
avr11-443	0.1894	0.0049	10.45	0.54	0.400	0.018	0.866	2737	42	2475	47	2169	82	26.2	53	53200
avr11-595	0.1907	0.0055	9.81	0.52	0.373	0.017	0.843	2748	46	2417	48	2044	78	34.5	13.6	91700
avr11-447	0.1937	0.0057	7.80	0.49	0.292	0.016	0.882	2774	48	2208	55	1652	80	68.0	218	146900
avr11-501	0.1939	0.0053	9.93	0.40	0.371	0.011	0.740	2776	44	2428	37	2036	52	36.3	63	191700
avr11-601	0.1980	0.0117	7.89	0.68	0.289	0.018	0.725	2810	93	2219	74	1637	89	71.7	35	46500
avr11-621	0.2022	0.0048	12.14	0.42	0.436	0.011	0.720	2844	38	2616	32	2331	48	22.0	22.2	155200
avr11-600	0.2030	0.0155	10.75	1.20	0.384	0.031	0.725	2850	119	2502	98	2095	143	36.1	55	33300
avr11-631	0.2052	0.0051	10.52	0.52	0.372	0.016	0.865	2868	40	2482	45	2039	74	40.7	35	246000
avr11-660	0.2096	0.0049	11.94	0.44	0.413	0.012	0.778	2902	37	2599	34	2229	54	30.2	39	239400
avr11-432	0.2143	0.0055	3.63	0.14	0.123	0.004	0.761	2938	41	1556	31	747	21	293.5	141	36600
avr11-656	0.2144	0.0071	12.92	0.65	0.437	0.017	0.754	2939	52	2674	46	2337	74	25.8	51	227000
avr11-608	0.2285	0.0051	10.87	0.50	0.345	0.014	0.873	3042	35	2512	42	1911	66	59.2	56	181600
avr11-555	0.2304	0.0057	15.24	0.51	0.480	0.011	0.676	3055	39	2830	31	2526	47	20.9	21.1	151000
avr11-636	0.2310	0.0119	12.39	1.05	0.389	0.026	0.793	3059	80	2634	77	2118	120	44.4	45	156200
avr11-607	0.2407	0.0079	13.94	0.65	0.420	0.014	0.707	3125	51	2746	43	2260	63	38.2	29.5	123700
avr11-461	0.2419	0.0059	15.94	0.66	0.478	0.016	0.810	3133	38	2873	39	2519	70	24.4	9.9	59100
avr11-592	0.2435	0.0076	11.62	0.80	0.346	0.021	0.891	3143	49	2574	62	1915	101	64.1	164	172800
avr11-599	0.2470	0.0177	4.56	0.61	0.134	0.015	0.846	3166	109	1743	106	811	86	290.5	78	13180
avr11-470	0.2497	0.0101	8.13	0.58	0.236	0.014	0.823	3183	63	2245	62	1366	72	133.0	200	54100
avr11-436	0.2553	0.0080	11.64	0.52	0.331	0.011	0.720	3218	48	2576	41	1842	52	74.7	63	29480
avr11-496	0.2593	0.0072	16.95	0.74	0.474	0.016	0.774	3242	43	2932	41	2501	70	29.6	15.6	224600
avr11-488	0.2643	0.0058	10.29	0.45	0.282	0.011	0.864	3273	34	2461	40	1603	54	104.2	50	191200
avr11-637	0.2658	0.0102	17.52	0.96	0.478	0.019	0.713	3281	59	2964	51	2519	81	30.3	65	176400
avr11-692	0.2660	0.0169	16.76	1.47	0.457	0.028	0.689	3283	96	2921	81	2426	121	35.3	104	214000
avr11-522	0.2750	0.0141	19.03	1.18	0.502	0.017	0.556	3335	78	3044	58	2622	74	27.2	218	29050

avr11-441	0.2766	0.0065	16.86	0.80	0.442	0.018	0.870	3344	36	2927	45	2360	81	41.7	90	195100
avr11-572	0.3016	0.0094	16.39	0.72	0.394	0.012	0.702	3478	47	2900	41	2142	56	62.4	59	140900
avr11-638	0.3260	0.0201	24.77	2.72	0.551	0.050	0.828	3598	91	3299	102	2829	205	27.2	16	94800
avr11-568	0.3264	0.0083	10.08	0.87	0.224	0.019	0.955	3600	39	2442	77	1303	97	176.3	166	52700
avr11-523	0.3370	0.0105	19.79	0.92	0.426	0.015	0.741	3649	47	3081	44	2288	66	59.5	438	36900
avr11-426	0.3419	0.0099	19.80	1.14	0.420	0.021	0.862	3671	44	3082	54	2260	94	62.4	67	39000
avr11-578	0.3699	0.0089	29.73	1.31	0.583	0.021	0.838	3791	36	3478	42	2961	87	28.0	61	269500
avr11-492	0.3816	0.0083	15.63	0.65	0.297	0.011	0.852	3838	33	2854	39	1676	52	128.9	405	46960
avr11-558	0.4230	0.0131	16.68	0.93	0.286	0.013	0.832	3993	46	2917	52	1622	66	146.2	1900	113000
avr11-559	0.4284	0.0096	11.85	0.46	0.201	0.006	0.814	4012	33	2593	36	1179	34	240.3	2620	150100
avr11-485	0.4470	0.0142	19.38	0.77	0.314	0.008	0.601	4075	46	3061	38	1762	37	131.2	1063	50200
avr11-484	0.4497	0.0128	18.78	0.83	0.303	0.010	0.766	4084	42	3031	42	1706	51	139.4	1257	55100

Standards AVR16-13,-12,-11, <250um

og1-1	0.3020	0.0140	29.31	1.99	0.704	0.035	0.731	3481	70	3464	65	3436	131	1.3	3	22100
og1-2	0.2990	0.0100	29.44	1.75	0.714	0.035	0.826	3465	51	3468	57	3474	130	-0.2	3	18200
og1-3	0.2920	0.0160	28.63	2.71	0.711	0.055	0.816	3428	83	3441	89	3462	204	-1.0	7	19700
og1-4	0.2950	0.0110	29.25	3.28	0.719	0.076	0.943	3444	57	3462	104	3492	279	-1.4	8	19000
og1-5	0.2880	0.0230	26.53	3.49	0.668	0.070	0.795	3407	119	3366	121	3298	265	3.3	2	26300
og1-6	0.2790	0.0300	28.62	4.90	0.744	0.099	0.778	3357	159	3441	155	3585	356	-6.4	5	30300
og1-7	0.2820	0.0160	27.68	2.84	0.712	0.061	0.834	3374	86	3408	96	3466	226	-2.7	4	30300
og1-8	0.2980	0.0150	28.72	3.22	0.699	0.070	0.893	3460	76	3444	104	3417	260	1.3	0	25100
og1-9	0.3090	0.0460	37.92	7.91	0.890	0.130	0.700	3516	213	3718	188	4104	429	-14.3	10	34800
og1-10	0.3030	0.0230	28.83	5.09	0.690	0.110	0.903	3486	113	3448	160	3383	406	3.0	2	22800
og1-11	0.2930	0.0190	28.36	4.33	0.702	0.097	0.905	3434	97	3432	140	3428	357	0.2	3	24700
og1-12	0.3020	0.0220	29.15	5.43	0.700	0.120	0.920	3481	108	3459	168	3421	440	1.8	3	25300
og1-13	0.3000	0.0190	31.19	4.25	0.754	0.091	0.885	3470	95	3525	126	3622	326	-4.2	6	22500
og1-14	0.2930	0.0310	35.55	6.79	0.880	0.140	0.833	3434	155	3654	173	4069	463	-15.6	-4	25900
og1-15	0.2960	0.0150	29.67	3.59	0.727	0.080	0.908	3449	76	3476	113	3522	292	-2.1	8	21000
og1-16	0.2964	0.0088	32.12	2.40	0.786	0.054	0.918	3452	45	3554	71	3739	192	-7.7	9	21200
og1-17	0.2974	0.0081	29.85	2.71	0.728	0.063	0.954	3457	42	3482	85	3526	231	-2.0	15	27400
og1-18	0.2890	0.0150	28.77	3.23	0.722	0.072	0.887	3412	78	3446	105	3504	264	-2.6	8	22600
og1-19	0.2960	0.0120	29.55	3.06	0.724	0.069	0.920	3449	62	3472	97	3511	253	-1.8	8	19400
og1-20	0.2960	0.0140	29.30	3.29	0.718	0.073	0.907	3449	72	3464	105	3489	268	-1.1	-3	38900

GSB 17-B1 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBB1-155	0.1337	0.0017	7.14	0.20	0.387	0.010	0.889	2146	23	2129	25	2111	45	1.7	67	928000
GSBB1-090*	0.1530	0.0029	9.47	0.33	0.449	0.013	0.834	2380	32	2385	31	2391	58	-0.5	574	734000
GSBB1-090	0.1564	0.0027	9.76	0.31	0.452	0.012	0.836	2417	29	2412	29	2406	53	0.5	574	734000
GSBB1-016	0.1657	0.0022	10.25	0.27	0.449	0.010	0.864	2515	22	2457	24	2389	45	5.3	32	383100
GSBB1-086	0.1660	0.0021	10.50	0.26	0.459	0.010	0.863	2518	21	2479	22	2433	43	3.5	74	369000
GSBB1-162	0.1683	0.0024	10.79	0.29	0.465	0.010	0.846	2541	24	2505	24	2461	46	3.2	32	246000
GSBB1-113*	0.1692	0.0035	10.69	0.34	0.458	0.011	0.755	2550	35	2497	29	2432	48	4.9	281	283100
GSBB1-113	0.1791	0.0026	11.49	0.31	0.465	0.010	0.840	2645	24	2563	25	2462	46	7.4	281	283100
GSBB1-116	0.1698	0.0023	11.51	0.29	0.492	0.010	0.838	2556	23	2566	23	2578	45	-0.9	24	238200
GSBB1-012	0.1698	0.0023	11.34	0.29	0.485	0.010	0.850	2556	22	2552	23	2547	45	0.3	21	214300
GSBB1-024	0.1716	0.0022	11.57	0.29	0.489	0.010	0.854	2573	22	2570	23	2567	45	0.3	17	270000
GSBB1-089*	0.1716	0.0031	11.52	0.38	0.487	0.013	0.831	2573	30	2567	30	2558	57	0.6	150	203300
GSBB1-089	0.1745	0.0029	11.78	0.36	0.490	0.012	0.836	2601	28	2587	28	2569	54	1.2	150	203300
GSBB1-049	0.1716	0.0024	11.31	0.29	0.478	0.010	0.842	2573	23	2549	23	2519	44	2.2	42	240000
GSBB1-075	0.1718	0.0024	11.38	0.29	0.481	0.010	0.837	2575	23	2555	24	2530	45	1.8	55	254800
GSBB1-125	0.1719	0.0025	11.40	0.29	0.481	0.010	0.819	2576	25	2557	24	2532	44	1.7	40	200800
GSBB1-092	0.1721	0.0024	11.64	0.30	0.491	0.011	0.847	2578	23	2576	24	2573	46	0.2	12	95800
GSBB1-022	0.1721	0.0022	11.39	0.29	0.480	0.010	0.863	2578	21	2556	23	2528	45	2.0	21	320000
GSBB1-147	0.1723	0.0024	11.69	0.32	0.492	0.012	0.861	2580	23	2580	25	2579	50	0.0	11	269000
GSBB1-096	0.1723	0.0023	11.50	0.29	0.484	0.011	0.853	2580	22	2565	24	2546	46	1.4	17	112790
GSBB1-069	0.1723	0.0023	11.01	0.28	0.464	0.010	0.854	2580	22	2524	24	2455	44	5.1	39	184200
GSBB1-145	0.1725	0.0022	11.64	0.29	0.490	0.011	0.861	2582	21	2576	23	2569	45	0.5	19	182400
GSBB1-151	0.1728	0.0022	11.70	0.29	0.491	0.010	0.853	2585	22	2581	23	2575	45	0.4	9	182200
GSBB1-094	0.1729	0.0022	11.84	0.29	0.497	0.010	0.850	2586	22	2592	23	2600	45	-0.5	7	177000
GSBB1-109	0.1732	0.0022	11.67	0.28	0.489	0.010	0.860	2589	21	2578	23	2565	44	0.9	27	230200
GSBB1-112	0.1735	0.0024	11.24	0.29	0.470	0.010	0.844	2592	23	2543	24	2482	45	4.4	52	265700
GSBB1-020*	0.1735	0.0030	11.18	0.33	0.468	0.011	0.818	2592	28	2539	28	2473	50	4.8	30	48370

GSBB1-020	0.1781	0.0036	11.54	0.36	0.470	0.011	0.766	2635	33	2568	29	2483	49	6.1	30	48370
GSBB1-076	0.1740	0.0026	11.64	0.31	0.485	0.011	0.823	2596	25	2576	25	2550	46	1.8	30	174800
GSBB1-051	0.1741	0.0028	11.76	0.34	0.490	0.012	0.827	2597	27	2585	27	2569	51	1.1	18	149000
GSBB1-153	0.1741	0.0030	11.71	0.34	0.488	0.011	0.803	2597	28	2582	27	2562	49	1.4	26	52300
GSBB1-131	0.1744	0.0024	11.95	0.30	0.497	0.010	0.834	2600	23	2600	23	2600	45	0.0	99	343600
GSBB1-004	0.1745	0.0026	11.91	0.33	0.495	0.012	0.842	2601	25	2597	26	2592	50	0.3	11	93000
GSBB1-130	0.1747	0.0028	11.86	0.32	0.492	0.011	0.812	2603	26	2593	25	2580	47	0.9	8	256000
GSBB1-106	0.1749	0.0022	11.82	0.29	0.490	0.010	0.860	2605	21	2590	22	2571	44	1.3	125	344000
GSBB1-057*	0.1767	0.0023	12.39	0.33	0.509	0.012	0.865	2622	22	2634	24	2650	49	-1.1	91	119800
GSBB1-057	0.1799	0.0024	12.66	0.33	0.511	0.011	0.856	2652	22	2655	24	2659	49	-0.3	91	119800
GSBB1-149	0.1783	0.0052	12.13	0.47	0.494	0.012	0.655	2637	48	2615	35	2586	54	2.0	15	16920
GSBB1-068	0.1787	0.0024	12.45	0.32	0.505	0.011	0.847	2641	22	2639	24	2637	46	0.1	57	289600
GSBB1-054	0.1794	0.0031	11.91	0.37	0.481	0.012	0.830	2647	28	2597	29	2533	54	4.5	10	40400
GSBB1-115	0.1842	0.0031	12.55	0.34	0.494	0.011	0.791	2691	27	2647	25	2589	46	3.9	10	34620
GSBB1-059	0.1869	0.0025	13.65	0.35	0.530	0.011	0.844	2715	22	2725	24	2739	48	-0.9	128	242700
GSBB1-031	0.2043	0.0032	15.52	0.42	0.551	0.012	0.817	2861	25	2848	26	2830	51	1.1	21	360100
GSBB1-129	0.2069	0.0026	16.04	0.39	0.562	0.012	0.862	2881	20	2879	23	2877	49	0.2	16	232800
GSBB1-010	0.2130	0.0030	16.83	0.44	0.573	0.013	0.841	2929	23	2925	25	2921	52	0.3	29	385600
GSBB1-014	0.2141	0.0025	16.57	0.39	0.561	0.012	0.866	2937	19	2910	23	2872	48	2.3	32	531100
GSBB1-042	0.2406	0.0030	21.93	0.54	0.661	0.014	0.862	3124	20	3181	24	3272	54	-4.5	19	334000
GSBB1-137	0.2446	0.0037	21.16	0.58	0.627	0.014	0.831	3150	24	3146	26	3139	56	0.3	27	405000
GSBB1-105	0.2460	0.0030	21.65	0.52	0.638	0.013	0.861	3159	19	3168	23	3182	52	-0.7	37	414000
GSBB1-073	0.2565	0.0031	22.49	0.54	0.636	0.013	0.862	3225	19	3205	23	3172	51	1.7	54	449000
GSBB1-160	0.2608	0.0042	22.27	0.62	0.619	0.014	0.812	3252	25	3196	27	3108	55	4.6	90	171600
GSBB1-098	0.3715	0.0050	39.27	1.00	0.767	0.017	0.851	3798	20	3753	25	3669	60	3.5	76	202600
> 5% Disc.																
GSBB1-048*	0.1245	0.0031	5.87	0.28	0.342	0.014	0.850	2022	44	1957	40	1896	66	6.6	910	316000
GSBB1-048	0.1561	0.0046	7.73	0.36	0.359	0.013	0.777	2414	50	2200	41	1977	62	22.1	910	316000
GSBB1-166*	0.1318	0.0017	6.34	0.16	0.349	0.007	0.858	2122	22	2024	22	1929	36	10.0	563	836000
GSBB1-166	0.1424	0.0019	6.92	0.17	0.353	0.008	0.847	2257	23	2101	22	1947	36	15.9	563	836000
GSBB1-165	0.1454	0.0019	7.66	0.19	0.382	0.008	0.846	2293	23	2191	22	2085	38	9.9	65	395100
GSBB1-133	0.1565	0.0022	8.77	0.22	0.406	0.009	0.843	2418	23	2314	23	2198	40	10.0	185	502000
GSBB1-072	0.1566	0.0020	8.93	0.22	0.414	0.009	0.854	2419	21	2330	22	2231	39	8.4	39	285500
GSBB1-099	0.1656	0.0022	10.15	0.25	0.444	0.009	0.845	2514	22	2448	23	2370	41	6.0	16	341200
GSBB1-100	0.1680	0.0030	10.00	0.28	0.432	0.009	0.771	2538	30	2435	26	2314	42	9.7	40	220100
GSBB1-095*	0.1687	0.0022	10.00	0.25	0.430	0.009	0.854	2545	22	2435	23	2305	42	10.4	78	263300
GSBB1-095	0.1723	0.0024	10.25	0.26	0.431	0.009	0.843	2580	23	2457	23	2312	41	11.6	78	263300
GSBB1-140	0.1714	0.0024	10.39	0.30	0.440	0.011	0.876	2571	23	2470	27	2349	50	9.5	23	121000
GSBB1-152	0.1715	0.0023	10.63	0.28	0.450	0.010	0.851	2572	23	2492	24	2394	44	7.5	45	216500
GSBB1-003	0.1716	0.0022	10.88	0.26	0.460	0.009	0.851	2573	21	2513	22	2439	42	5.5	17	312400
GSBB1-110	0.1719	0.0028	10.72	0.29	0.452	0.010	0.802	2576	27	2499	25	2405	44	7.1	10	71910
GSBB1-091	0.1723	0.0038	10.65	0.36	0.448	0.012	0.763	2580	36	2493	31	2388	52	8.1	9	60800
GSBB1-135*	0.1771	0.0024	11.50	0.30	0.471	0.010	0.851	2626	22	2565	24	2488	45	5.5	70	153900
GSBB1-135	0.1879	0.0026	12.36	0.31	0.477	0.010	0.846	2724	22	2632	24	2514	45	8.4	70	153900
GSBB1-104*	0.1835	0.0023	11.86	0.31	0.469	0.011	0.881	2685	21	2593	24	2478	48	8.4	325	896200
GSBB1-104	0.1861	0.0022	12.04	0.31	0.469	0.011	0.888	2708	20	2608	24	2481	47	9.1	325	896200
GSBB1-041	0.1857	0.0025	12.08	0.33	0.472	0.011	0.867	2704	22	2611	25	2492	49	8.5	27	670000
GSBB1-082	0.2035	0.0026	14.51	0.38	0.517	0.012	0.869	2854	21	2784	25	2687	50	6.2	28	461400
GSBB1-078	0.2086	0.0035	14.84	0.42	0.516	0.012	0.811	2895	27	2805	27	2682	50	7.9	30	168000
GSBB1-139	0.2105	0.0031	15.47	0.43	0.533	0.013	0.848	2909	24	2845	26	2755	53	5.6	45	220300
GSBB1-120	0.2109	0.0031	14.91	0.39	0.513	0.011	0.823	2912	24	2810	25	2669	47	9.1	45	78750
GSBB1-111	0.2120	0.0028	15.07	0.37	0.516	0.011	0.846	2921	21	2820	23	2680	45	9.0	23	99200
GSBB1-019	0.2224	0.0029	16.52	0.41	0.539	0.011	0.850	2998	21	2907	23	2778	47	7.9	33	455600
GSBB1-144	0.2688	0.0034	22.62	0.55	0.610	0.013	0.859	3299	19	3211	23	3072	51	7.4	78	236500
GSBB1-001*	0.2689	0.0035	22.38	0.55	0.604	0.013	0.846	3300	20	3200	24	3044	50	8.4	149	345400
GSBB1-001	0.2777	0.0037	23.37	0.57	0.610	0.013	0.843	3350	20	3243	24	3072	50	9.1	149	345400
GSBB1-081	0.4006	0.0050	41.26	1.08	0.747	0.017	0.880	3911	19	3801	26	3596	63	8.8	27	174300
> 10 % Disc.																
GSBB1-062*	0.1140	0.0029	4.29	0.15	0.273	0.007	0.693	1864	45	1691	29	1555	34	19.9	574	1265000
GSBB1-062	0.1188	0.0016	4.51	0.12	0.276	0.007	0.873	1938	24	1733	22	1569	33	23.5	574	1265000
GSBB1-123	0.1469	0.0023	7.60	0.21	0.375	0.009	0.832	2310	26	2185	25	2053	41	12.5	87	388000
GSBB1-038	0.1481	0.0018	7.75	0.19	0.379	0.008	0.877	2324	21	2202	22	2073	39	12.1	21	444200
GSBB1-025	0.1483	0.0018	7.71	0.19	0.377	0.008	0.871	2326	21	2198	22	2063	38	12.8	448	1363000
GSBB1-108	0.1493	0.0019	7.90	0.19	0.384	0.008	0.856	2338	21	2220	22	2094	37	11.6	24	430200
GSBB1-171	0.1549	0.0026	8.04	0.22	0.377	0.008	0.797	2401	28	2236	24	2060	38	16.5	30	454000
GSBB1-007	0.1575	0.0019	8.59	0.22	0.396	0.009	0.877	2429	21	2295	23	2148	41	13.1	749	974000
GSBB1-136*	0.1577	0.0032	8.84	0.33	0.407	0.013	0.837	2431	34	2322	33	2199	58	10.5	394	505000

GSBB1-136	0.1705	0.0027	9.73	0.34	0.414	0.013	0.890	2563	27	2410	32	2233	59	14.7	394	505000
GSBB1-103	0.1625	0.0023	8.62	0.23	0.385	0.009	0.847	2482	24	2298	24	2098	41	18.3	57	306800
GSBB1-037*	0.1642	0.0025	8.72	0.27	0.385	0.011	0.876	2499	25	2309	28	2101	49	19.0	424	270800
GSBB1-037	0.1855	0.0027	10.09	0.30	0.395	0.010	0.873	2703	24	2443	27	2144	48	26.0	424	270800
GSBB1-032*	0.1643	0.0022	9.09	0.23	0.401	0.009	0.856	2500	22	2347	23	2175	40	15.0	60	208600
GSBB1-032	0.1688	0.0022	9.38	0.24	0.403	0.009	0.862	2546	21	2376	23	2183	40	16.6	60	208600
GSBB1-141	0.1650	0.0029	8.76	0.40	0.385	0.016	0.919	2508	30	2313	40	2100	74	19.4	43	177000
GSBB1-079	0.1667	0.0022	9.46	0.27	0.412	0.010	0.883	2525	22	2383	25	2222	46	13.6	39	170400
GSBB1-156	0.1683	0.0022	9.04	0.24	0.390	0.009	0.866	2541	22	2342	24	2121	41	19.8	68	210800
GSBB1-039*	0.1691	0.0034	9.97	0.36	0.428	0.013	0.823	2549	34	2432	33	2294	57	11.1	54	134400
GSBB1-039	0.1736	0.0031	10.29	0.35	0.430	0.012	0.852	2593	29	2461	31	2305	56	12.5	54	134400
GSBB1-163	0.1696	0.0022	9.73	0.24	0.416	0.009	0.850	2554	22	2410	23	2243	40	13.8	30	181700
GSBB1-027	0.1723	0.0022	10.20	0.25	0.429	0.009	0.854	2580	22	2453	23	2303	41	12.1	63	233000
GSBB1-029	0.1724	0.0023	9.77	0.30	0.411	0.011	0.899	2581	22	2413	28	2219	51	16.3	85	297900
GSBB1-117	0.1727	0.0025	10.04	0.27	0.422	0.009	0.840	2584	24	2439	24	2268	42	13.9	17	128300
GSBB1-060	0.1728	0.0031	10.32	0.30	0.433	0.010	0.798	2585	29	2464	27	2320	46	11.4	22	133000
GSBB1-028*	0.1731	0.0040	10.27	0.35	0.430	0.011	0.740	2588	38	2459	31	2306	49	12.2	37	61500
GSBB1-028	0.1841	0.0035	11.03	0.34	0.435	0.011	0.786	2690	31	2526	29	2326	48	15.6	37	61500
GSBB1-067	0.1738	0.0028	9.98	0.31	0.416	0.011	0.861	2595	26	2433	28	2244	51	15.6	23	126200
GSBB1-138	0.1840	0.0030	10.93	0.40	0.431	0.014	0.894	2689	27	2518	33	2310	63	16.4	30	32600
GSBB1-006	0.1984	0.0025	12.64	0.32	0.462	0.010	0.869	2813	20	2653	24	2449	45	14.9	50	520000
GSBB1-043	0.1998	0.0025	12.39	0.32	0.450	0.010	0.871	2825	20	2634	24	2393	44	18.0	61	410700
GSBB1-080	0.2088	0.0029	14.15	0.42	0.492	0.013	0.887	2896	22	2760	28	2577	56	12.4	377	289400
GSBB1-164	0.2145	0.0030	14.47	0.38	0.489	0.011	0.839	2940	23	2781	24	2568	46	14.5	72	105700
GSBB1-128	0.2360	0.0032	16.69	0.44	0.513	0.012	0.860	3093	21	2917	25	2669	49	15.9	34	397100
GSBB1-005	0.2503	0.0032	19.23	0.48	0.557	0.012	0.854	3187	20	3053	24	2855	49	11.6	36	530900
GSBB1-084	0.3686	0.0047	32.37	0.80	0.637	0.013	0.858	3786	19	3562	24	3177	53	19.2	32	132450
> 20 % Disc.																
GSBB1-122	0.1233	0.0018	4.12	0.11	0.242	0.005	0.829	2005	26	1658	21	1398	27	43.4	220	427900
GSBB1-050	0.1263	0.0018	2.38	0.09	0.137	0.005	0.916	2047	25	1236	26	825	26	148.2	436	423800
GSBB1-158	0.1324	0.0019	4.26	0.13	0.233	0.006	0.877	2130	25	1685	24	1352	32	57.6	251	425200
GSBB1-154	0.1331	0.0022	4.24	0.12	0.231	0.005	0.784	2139	29	1682	22	1341	26	59.6	117	320900
GSBB1-102	0.1380	0.0017	6.11	0.15	0.321	0.007	0.866	2202	21	1992	21	1797	32	22.6	185	649900
GSBB1-168	0.1415	0.0020	4.98	0.13	0.255	0.005	0.838	2246	24	1815	21	1465	28	53.3	34	366100
GSBB1-035*	0.1478	0.0027	6.85	0.19	0.336	0.007	0.759	2321	31	2092	25	1868	35	24.2	477	284800
GSBB1-035	0.1690	0.0022	8.06	0.20	0.346	0.007	0.850	2548	22	2237	22	1914	35	33.1	477	284800
GSBB1-009*	0.1481	0.0034	7.00	0.28	0.343	0.011	0.818	2324	39	2112	35	1901	54	22.3	130	273000
GSBB1-009	0.1574	0.0041	7.56	0.32	0.348	0.011	0.785	2428	43	2180	37	1926	55	26.1	130	273000
GSBB1-107	0.1487	0.0022	5.60	0.15	0.273	0.006	0.835	2331	25	1917	23	1558	31	49.7	71	226200
GSBB1-018	0.1492	0.0019	5.95	0.15	0.289	0.006	0.859	2337	22	1968	21	1637	31	42.8	67	434000
GSBB1-134	0.1499	0.0023	4.37	0.21	0.212	0.010	0.949	2345	26	1707	39	1237	52	89.6	343	424000
GSBB1-150	0.1515	0.0019	6.47	0.17	0.310	0.007	0.887	2363	21	2042	23	1739	36	35.9	58	367800
GSBB1-087	0.1528	0.0021	4.48	0.12	0.213	0.005	0.860	2377	23	1728	22	1244	26	91.2	246	328000
GSBB1-058	0.1547	0.0019	3.43	0.10	0.161	0.004	0.908	2398	20	1512	22	962	23	149.4	1952	732000
GSBB1-011	0.1548	0.0026	4.62	0.21	0.216	0.009	0.933	2400	28	1753	38	1263	49	90.0	87	272000
GSBB1-046	0.1572	0.0019	5.96	0.20	0.275	0.009	0.928	2425	21	1970	29	1566	43	54.9	61	442000
GSBB1-119	0.1573	0.0022	3.63	0.11	0.167	0.004	0.876	2427	24	1556	23	998	24	143.2	269	321600
GSBB1-121	0.1578	0.0023	5.98	0.24	0.275	0.010	0.930	2432	24	1973	34	1566	51	55.4	53	175400
GSBB1-118	0.1581	0.0021	6.38	0.17	0.293	0.007	0.878	2435	22	2029	24	1655	35	47.2	40	253700
GSBB1-066	0.1585	0.0020	4.74	0.12	0.217	0.005	0.874	2440	21	1775	22	1266	26	92.7	231	374600
GSBB1-047	0.1605	0.0023	8.09	0.22	0.366	0.009	0.860	2461	24	2241	25	2008	41	22.5	46	355300
GSBB1-101	0.1612	0.0027	2.86	0.20	0.129	0.009	0.970	2468	29	1370	51	779	49	216.7	401	328900
GSBB1-036	0.1618	0.0021	7.75	0.20	0.347	0.008	0.865	2475	22	2202	23	1921	37	28.8	84	640000
GSBB1-114	0.1624	0.0023	7.12	0.19	0.318	0.007	0.845	2481	23	2126	23	1779	34	39.5	199	288900
GSBB1-161	0.1625	0.0039	7.55	0.27	0.337	0.009	0.730	2482	40	2179	31	1872	42	32.6	45	78000
GSBB1-021	0.1627	0.0022	8.06	0.21	0.359	0.008	0.867	2484	22	2237	24	1978	39	25.6	44	255900
GSBB1-034	0.1632	0.0020	8.06	0.20	0.358	0.008	0.861	2489	21	2238	22	1975	36	26.0	76	515600
GSBB1-065	0.1638	0.0023	6.80	0.18	0.301	0.007	0.849	2495	24	2085	24	1696	34	47.1	269	364400
GSBB1-172	0.1661	0.0028	8.38	0.24	0.366	0.008	0.807	2519	28	2273	25	2011	39	25.3	311	453700
GSBB1-071	0.1676	0.0023	7.88	0.21	0.341	0.008	0.857	2534	22	2218	23	1892	37	33.9	188	255000
GSBB1-015	0.1688	0.0021	7.40	0.20	0.318	0.007	0.888	2545	20	2161	23	1780	36	43.0	9	334500
GSBB1-026	0.1708	0.0022	9.13	0.23	0.388	0.008	0.857	2565	22	2351	23	2112	39	21.5	45	283300
GSBB1-093	0.1717	0.0026	6.58	0.19	0.278	0.007	0.851	2574	25	2057	25	1581	34	62.8	22	69800
GSBB1-085	0.1726	0.0029	9.20	0.29	0.386	0.010	0.848	2583	28	2358	29	2106	48	22.6	59	200400
GSBB1-148	0.1735	0.0047	6.67	0.38	0.279	0.014	0.882	2592	45	2069	50	1586	71	63.4	7	19900
GSBB1-157	0.1775	0.0024	6.93	0.34	0.283	0.013	0.961	2630	22	2102	42	1606	66	63.7	107	138800
GSBB1-126	0.1777	0.0027	4.16	0.14	0.170	0.005	0.892	2632	25	1666	27	1011	28	160.3	1024	407500

GSBB1-008	0.1822	0.0023	4.05	0.12	0.161	0.004	0.899	2673	21	1644	23	963	23	177.6	640	271100
GSBB1-143	0.1842	0.0028	10.01	0.27	0.394	0.009	0.823	2691	25	2436	24	2143	40	25.6	28	52110
GSBB1-142	0.1868	0.0033	7.11	0.21	0.276	0.006	0.798	2714	29	2125	26	1572	33	72.7	127	77700
GSBB1-056	0.1878	0.0023	10.26	0.25	0.396	0.009	0.874	2723	20	2459	23	2152	40	26.5	112	700700
GSBB1-097	0.1910	0.0024	9.81	0.24	0.373	0.008	0.860	2751	21	2417	23	2041	37	34.8	34	463200
GSBB1-044	0.1913	0.0024	10.90	0.27	0.413	0.009	0.865	2753	20	2515	23	2230	40	23.5	169	286600
GSBB1-061	0.1913	0.0027	6.81	0.19	0.258	0.006	0.857	2753	23	2086	24	1480	31	86.1	532	231900
GSBB1-013	0.1917	0.0036	7.91	0.32	0.299	0.011	0.888	2757	30	2221	36	1687	53	63.4	2460	1080000
GSBB1-083	0.1965	0.0026	11.38	0.29	0.420	0.009	0.854	2797	22	2555	24	2261	42	23.7	104	448000
GSBB1-040	0.2001	0.0035	9.34	0.29	0.339	0.009	0.830	2827	28	2372	28	1880	42	50.3	155	80900
GSBB1-063	0.2032	0.0039	9.50	0.31	0.339	0.009	0.808	2852	31	2388	29	1883	43	51.5	49	152700
GSBB1-169	0.2044	0.0028	10.81	0.37	0.383	0.012	0.917	2862	22	2507	32	2092	56	36.8	23	129200
GSBB1-070	0.2077	0.0027	8.71	0.23	0.304	0.007	0.864	2888	21	2308	24	1712	34	68.7	201	197100
GSBB1-074	0.2119	0.0031	4.44	0.18	0.152	0.006	0.928	2920	24	1721	32	913	31	219.9	688	130400
GSBB1-170	0.2274	0.0032	8.76	0.24	0.280	0.006	0.855	3034	22	2314	24	1589	33	90.9	2034	298300
GSBB1-132	0.2285	0.0032	7.62	0.29	0.242	0.009	0.929	3042	22	2188	33	1397	44	117.7	732	143700
GSBB1-159*	0.2320	0.0041	15.27	0.47	0.477	0.012	0.819	3066	28	2832	29	2515	52	21.9	546	235400
GSBB1-159	0.2647	0.0035	18.07	0.49	0.495	0.012	0.870	3275	21	2993	26	2593	50	26.3	546	235400
GSBB1-052	0.2320	0.0038	11.63	0.31	0.364	0.008	0.794	3066	26	2575	25	1999	37	53.4	431	94000
GSBB1-045	0.2322	0.0040	12.95	0.43	0.405	0.011	0.852	3067	27	2676	31	2190	52	40.0	808	147600
GSBB1-023	0.2367	0.0029	14.12	0.36	0.433	0.010	0.875	3098	19	2758	24	2318	43	33.7	125	568600
GSBB1-077	0.2493	0.0043	17.34	0.49	0.505	0.011	0.791	3180	27	2954	27	2633	48	20.8	2990	494000
GSBB1-127	0.2539	0.0030	12.99	0.43	0.371	0.011	0.932	3209	19	2679	31	2034	54	57.8	588	328600
GSBB1-033	0.2670	0.0041	4.39	0.16	0.119	0.004	0.911	3288	24	1711	31	727	23	352.6	582	190400
GSBB1-030	0.2689	0.0037	6.47	0.26	0.175	0.007	0.938	3300	22	2042	35	1037	36	218.1	3065	373400
GSBB1-002	0.2818	0.0040	17.80	0.49	0.458	0.011	0.861	3373	22	2979	26	2431	48	38.8	1461	194300
GSBB1-088	0.2824	0.0093	7.88	0.37	0.202	0.007	0.706	3376	51	2217	41	1188	36	184.3	3300	333000
GSBB1-064	0.2910	0.0050	3.87	0.11	0.096	0.002	0.803	3423	26	1607	23	593	13	477.0	1658	155900
GSBB1-053	0.2920	0.0051	9.20	0.29	0.229	0.006	0.829	3428	27	2358	28	1327	31	158.3	3293	316300
GSBB1-055	0.3047	0.0067	8.28	0.49	0.197	0.011	0.928	3494	34	2262	52	1159	58	201.4	874	90100
GSBB1-167	0.3412	0.0051	12.18	0.35	0.259	0.006	0.849	3668	23	2619	26	1485	32	147.1	2490	178900
GSBB1-146	0.3877	0.0048	24.50	0.61	0.458	0.010	0.867	3862	19	3288	24	2432	43	58.8	1032	128100
GSBB1-017	0.4258	0.0081	16.98	0.51	0.289	0.007	0.776	4003	28	2934	28	1638	34	144.4	5915	298200
GSBB1-124	0.4400	0.0148	10.33	0.46	0.170	0.005	0.649	4052	49	2464	40	1013	27	299.9	3240	155300

GSB 17-C1 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBC1-286*	0.1415	0.0079	9.10	0.57	0.466	0.013	0.457	2246	93	2348	56	2467	58	-9.0	151	81700
GSBC1-286	0.1963	0.0029	13.48	0.36	0.498	0.011	0.837	2796	24	2714	25	2605	48	7.3	151	81700
< -5% Disc.																
GSBC1-317*	0.1211	0.0019	5.88	0.16	0.352	0.008	0.836	1972	27	1958	24	1945	39	1.4	56	89300
GSBC1-317	0.1266	0.0020	6.19	0.17	0.355	0.008	0.816	2051	28	2003	24	1957	38	4.8	56	89300
GSBC1-212	0.1211	0.0021	5.76	0.17	0.345	0.008	0.801	1972	30	1940	25	1910	38	3.3	22	127400
GSBC1-258	0.1359	0.0019	7.08	0.21	0.378	0.010	0.877	2176	24	2122	26	2066	45	5.3	67	635000
GSBC1-219	0.1572	0.0025	10.14	0.29	0.468	0.011	0.831	2426	27	2448	26	2475	49	-2.0	35	259000
GSBC1-328	0.1684	0.0029	10.80	0.32	0.465	0.011	0.812	2542	28	2506	27	2462	49	3.3	69	326300
GSBC1-237	0.1690	0.0027	10.60	0.30	0.455	0.011	0.824	2548	27	2488	26	2416	47	5.4	24	116000
GSBC1-184	0.1699	0.0023	11.37	0.31	0.485	0.011	0.862	2557	23	2554	25	2551	49	0.2	15	260800
GSBC1-300	0.1703	0.0025	11.17	0.29	0.476	0.010	0.830	2561	24	2538	24	2509	45	2.1	25	106200
GSBC1-271	0.1704	0.0022	10.94	0.28	0.466	0.010	0.862	2562	22	2518	24	2464	45	4.0	28	191400
GSBC1-246	0.1722	0.0022	11.77	0.31	0.496	0.011	0.876	2579	21	2586	24	2596	49	-0.6	37	278400
GSBC1-276	0.1736	0.0024	11.89	0.30	0.497	0.010	0.840	2593	23	2596	23	2599	45	-0.3	26	109300
GSBC1-275	0.1743	0.0031	11.77	0.36	0.490	0.012	0.817	2599	29	2587	28	2570	53	1.1	8	30510
GSBC1-295	0.1763	0.0024	11.85	0.31	0.487	0.011	0.851	2618	22	2592	24	2559	46	2.3	87	176600
GSBC1-191*	0.1766	0.0029	12.30	0.40	0.505	0.014	0.865	2621	27	2628	30	2636	60	-0.6	450	448000
GSBC1-191	0.1839	0.0024	12.93	0.38	0.510	0.013	0.894	2688	21	2675	27	2657	57	1.2	450	448000
GSBC1-252	0.1793	0.0045	12.29	0.48	0.497	0.015	0.768	2646	41	2627	36	2601	64	1.8	7	28000
GSBC1-313	0.1811	0.0033	12.55	0.38	0.503	0.012	0.796	2663	30	2646	28	2625	51	1.4	11	69190
GSBC1-250	0.1815	0.0027	12.87	0.35	0.514	0.012	0.836	2667	24	2670	25	2675	49	-0.3	12	77000
GSBC1-203	0.1891	0.0025	13.53	0.37	0.519	0.012	0.875	2734	22	2717	26	2695	53	1.5	21	283300
GSBC1-293	0.1920	0.0040	13.39	0.44	0.506	0.013	0.771	2759	34	2708	30	2639	54	4.6	14	63000
GSBC1-243	0.2089	0.0029	16.36	0.42	0.568	0.012	0.849	2897	22	2898	24	2900	51	-0.1	57	176800
GSBC1-298	0.2101	0.0027	16.06	0.40	0.555	0.012	0.859	2906	21	2881	24	2844	49	2.2	49	197700
GSBC1-256	0.2111	0.0032	16.35	0.47	0.562	0.014	0.847	2914	24	2898	27	2874	56	1.4	21	234200
GSBC1-236	0.2364	0.0040	20.14	0.66	0.618	0.017	0.857	3096	27	3098	31	3102	68	-0.2	26	333000

GSBC1-248	0.2536	0.0033	22.47	0.62	0.643	0.016	0.881	3207	21	3204	27	3199	61	0.3	81	193500
GSBC1-220	0.2662	0.0033	24.41	0.61	0.665	0.014	0.865	3284	20	3285	24	3287	55	-0.1	17	570000
GSBC1-188	0.2696	0.0035	24.76	0.65	0.666	0.015	0.868	3304	20	3299	25	3291	59	0.4	41	467000
GSBC1-245	0.2976	0.0044	27.22	0.72	0.663	0.014	0.826	3458	23	3391	26	3280	56	5.4	39	232400
GSBC1-326	0.3041	0.0039	30.21	0.78	0.721	0.016	0.868	3491	20	3494	25	3498	60	-0.2	24	413300
GSBC1-323	0.3113	0.0039	31.24	0.79	0.728	0.016	0.867	3527	19	3527	25	3525	59	0.1	28	149100
GSBC1-185	0.3217	0.0048	31.15	0.84	0.702	0.016	0.832	3578	23	3524	26	3429	60	4.3	41	58250
GSBC1-202	0.3225	0.0044	32.36	0.87	0.728	0.017	0.862	3582	21	3561	26	3525	63	1.6	74	148100
GSBC1-207	0.3460	0.0055	36.13	1.00	0.757	0.017	0.817	3689	24	3670	27	3634	63	1.5	15	53500
GSBC1-179	0.3476	0.0067	37.24	1.14	0.777	0.018	0.775	3697	29	3700	30	3707	66	-0.3	4	17360
GSBC1-180	0.3513	0.0045	35.52	0.92	0.733	0.017	0.868	3713	20	3653	25	3546	61	4.7	119	453000
GSBC1-228	0.3522	0.0052	37.09	0.97	0.764	0.017	0.829	3717	22	3696	26	3658	60	1.6	15	65240
GSBC1-230	0.3545	0.0048	38.15	1.01	0.781	0.018	0.860	3726	20	3724	26	3719	64	0.2	4	119700
GSBC1-316	0.3555	0.0057	38.09	1.12	0.777	0.019	0.835	3731	24	3722	29	3706	69	0.7	36	83700
GSBC1-239	0.3557	0.0052	38.11	1.01	0.777	0.017	0.836	3732	22	3723	26	3707	62	0.7	15	47800
GSBC1-231	0.3564	0.0057	38.23	1.07	0.778	0.018	0.818	3735	24	3726	27	3709	64	0.7	16	21190
GSBC1-214	0.3567	0.0057	38.15	1.04	0.776	0.017	0.813	3736	24	3724	27	3701	62	0.9	8	26280
GSBC1-177	0.3871	0.0049	41.83	1.05	0.784	0.017	0.862	3860	19	3815	25	3730	61	3.5	28	545000
> 5% Disc.																
GSBC1-321*	0.1700	0.0026	10.18	0.29	0.434	0.011	0.846	2558	25	2451	26	2326	47	10.0	96	157700
GSBC1-321	0.1804	0.0028	10.95	0.31	0.440	0.010	0.834	2657	26	2519	26	2352	46	12.9	96	157700
GSBC1-302	0.1720	0.0024	10.73	0.28	0.453	0.010	0.843	2577	23	2500	24	2407	44	7.1	13	118700
GSBC1-247	0.1721	0.0030	10.52	0.30	0.443	0.010	0.788	2578	29	2482	26	2365	44	9.0	13	53600
GSBC1-225	0.1747	0.0024	10.83	0.29	0.450	0.010	0.857	2603	23	2509	24	2394	45	8.7	52	195100
GSBC1-305*	0.1748	0.0027	10.82	0.30	0.449	0.010	0.825	2604	26	2508	25	2391	45	8.9	257	160000
GSBC1-305	0.1959	0.0033	12.50	0.35	0.463	0.010	0.792	2792	27	2642	26	2451	44	13.9	257	160000
GSBC1-222	0.1815	0.0035	11.44	0.33	0.457	0.010	0.748	2667	32	2560	27	2427	44	9.9	31	118600
GSBC1-310	0.2308	0.0035	17.20	0.50	0.541	0.013	0.854	3058	24	2946	28	2786	56	9.8	108	223500
GSBC1-281	0.2365	0.0044	17.96	0.54	0.551	0.013	0.780	3097	30	2988	28	2828	53	9.5	95	223000
GSBC1-209	0.2643	0.0042	21.46	0.70	0.589	0.017	0.875	3273	25	3160	31	2985	68	9.6	22	817000
GSBC1-270	0.2880	0.0042	25.73	0.77	0.648	0.017	0.873	3407	23	3336	29	3220	66	5.8	65	302000
GSBC1-308	0.2996	0.0070	27.35	0.98	0.662	0.018	0.755	3468	36	3396	34	3275	69	5.9	11	37960
GSBC1-199	0.3028	0.0042	26.81	0.70	0.642	0.014	0.851	3485	21	3377	25	3198	56	9.0	67	306000
GSBC1-201*	0.3069	0.0055	27.63	0.83	0.653	0.016	0.800	3505	28	3406	29	3240	61	8.2	73	37400
GSBC1-201	0.3369	0.0057	31.59	0.89	0.680	0.015	0.801	3649	26	3538	27	3345	59	9.1	73	37400
GSBC1-221	0.3186	0.0044	29.63	0.78	0.675	0.015	0.855	3563	21	3475	26	3324	58	7.2	21	333000
GSBC1-259	0.3560	0.0064	35.50	1.04	0.723	0.017	0.785	3733	27	3653	28	3508	62	6.4	16	209800
> 10 % Disc.																
GSBC1-224	0.1591	0.0024	8.90	0.23	0.406	0.009	0.818	2446	25	2328	23	2196	39	11.4	15	95470
GSBC1-327	0.1619	0.0023	9.25	0.24	0.415	0.009	0.837	2476	24	2363	24	2235	41	10.7	19	130400
GSBC1-232	0.1626	0.0022	9.18	0.24	0.410	0.009	0.856	2483	22	2356	23	2213	41	12.2	42	399000
GSBC1-288	0.1655	0.0022	9.53	0.25	0.418	0.009	0.859	2513	23	2391	24	2250	43	11.6	64	340000
GSBC1-262*	0.1663	0.0031	9.43	0.32	0.411	0.012	0.833	2521	31	2381	30	2221	53	13.5	53	35500
GSBC1-262	0.1868	0.0033	10.74	0.34	0.417	0.011	0.830	2714	29	2500	29	2246	50	20.8	53	35500
GSBC1-254	0.1708	0.0022	9.71	0.27	0.412	0.010	0.886	2565	22	2407	26	2225	47	15.3	83	300000
GSBC1-178	0.1764	0.0025	10.03	0.27	0.413	0.009	0.850	2619	24	2438	25	2226	43	17.7	38	119500
GSBC1-283	0.1816	0.0026	10.95	0.36	0.438	0.013	0.895	2668	24	2519	30	2339	57	14.0	80	196000
GSBC1-304	0.1825	0.0029	10.71	0.31	0.426	0.010	0.838	2676	26	2498	27	2286	47	17.0	50	158000
GSBC1-268	0.1856	0.0024	11.50	0.30	0.450	0.010	0.862	2704	21	2565	24	2393	44	13.0	107	453800
GSBC1-267	0.1883	0.0041	11.62	0.36	0.448	0.010	0.726	2727	35	2574	29	2384	45	14.4	39	151500
GSBC1-325	0.2047	0.0027	12.75	0.33	0.452	0.010	0.862	2864	21	2661	24	2403	45	19.2	32	131900
GSBC1-287	0.2276	0.0028	15.02	0.41	0.479	0.012	0.893	3035	20	2817	26	2522	51	20.4	23	315900
GSBC1-277	0.2317	0.0035	16.70	0.45	0.523	0.012	0.831	3064	24	2918	26	2711	50	13.0	36	345200
GSBC1-197*	0.2330	0.0030	16.95	0.44	0.528	0.012	0.869	3073	20	2932	24	2732	50	12.5	219	195700
GSBC1-197	0.2453	0.0031	18.15	0.46	0.537	0.012	0.861	3155	20	2998	24	2770	49	13.9	219	195700
GSBC1-269*	0.2660	0.0163	21.20	1.62	0.578	0.027	0.602	3283	93	3148	72	2941	108	11.6	458	216900
GSBC1-269	0.2856	0.0041	23.00	0.82	0.584	0.019	0.916	3394	22	3227	34	2965	77	14.5	458	216900
GSBC1-266*	0.2806	0.0060	22.01	0.75	0.569	0.015	0.776	3366	33	3184	33	2903	62	15.9	37	46750
GSBC1-266	0.2885	0.0061	22.87	0.75	0.575	0.014	0.764	3410	32	3222	31	2928	59	16.4	37	46750
GSBC1-210*	0.2822	0.0069	21.59	0.85	0.555	0.017	0.782	3375	38	3166	38	2846	70	18.6	365	115500
GSBC1-210	0.3178	0.0042	25.33	0.78	0.578	0.016	0.900	3559	20	3321	30	2941	65	21.0	365	115500
GSBC1-296	0.2841	0.0038	21.99	0.58	0.561	0.013	0.859	3386	21	3183	25	2872	52	17.9	62	374000
GSBC1-251	0.2894	0.0038	23.69	0.66	0.594	0.015	0.881	3414	20	3256	27	3004	59	13.6	37	372000
GSBC1-234	0.2915	0.0038	24.80	0.74	0.617	0.017	0.898	3426	20	3300	29	3098	66	10.6	160	219100
GSBC1-213	0.2933	0.0039	24.08	0.63	0.595	0.013	0.859	3435	21	3272	25	3011	53	14.1	27	64600
GSBC1-282*	0.2946	0.0070	23.19	0.94	0.571	0.019	0.812	3442	36	3235	39	2912	77	18.2	114	107000
GSBC1-282	0.3081	0.0047	24.89	0.81	0.586	0.017	0.881	3511	24	3304	31	2973	68	18.1	114	107000

GSBC1-205	0.2972	0.0038	25.12	0.69	0.613	0.015	0.884	3456	20	3313	27	3082	59	12.1	102	431300
GSBC1-174	0.3161	0.0047	26.46	0.79	0.607	0.016	0.869	3551	23	3364	29	3058	63	16.1	33	540000
GSBC1-319	0.3289	0.0053	29.60	0.83	0.653	0.015	0.819	3612	25	3474	27	3239	58	11.5	38	82000
> 20 % Disc.																
GSBC1-249	0.1172	0.0016	4.41	0.13	0.273	0.007	0.879	1914	24	1714	23	1554	34	23.1	26	188400
GSBC1-206	0.1378	0.0019	3.84	0.11	0.202	0.005	0.866	2200	24	1601	22	1186	26	85.5	40	216600
GSBC1-244	0.1382	0.0019	4.33	0.17	0.227	0.008	0.934	2205	24	1699	32	1319	44	67.1	76	330600
GSBC1-196	0.1400	0.0018	6.15	0.18	0.318	0.008	0.903	2227	22	1997	25	1782	41	25.0	83	446200
GSBC1-297*	0.1500	0.0039	7.09	0.25	0.343	0.008	0.683	2346	43	2122	31	1899	40	23.5	381	447000
GSBC1-297	0.1652	0.0024	7.97	0.21	0.350	0.008	0.838	2510	24	2228	24	1935	37	29.7	381	447000
GSBC1-218	0.1528	0.0027	6.26	0.18	0.297	0.007	0.780	2377	30	2012	24	1676	32	41.8	249	227800
GSBC1-187	0.1562	0.0021	5.64	0.16	0.262	0.006	0.879	2415	23	1923	24	1501	33	60.9	49	368600
GSBC1-301	0.1623	0.0027	3.48	0.11	0.156	0.004	0.863	2480	28	1523	25	932	24	166.0	251	221300
GSBC1-189	0.1650	0.0024	5.58	0.16	0.245	0.006	0.850	2508	24	1913	24	1414	30	77.3	100	152200
GSBC1-329	0.1662	0.0023	7.54	0.21	0.329	0.008	0.864	2520	23	2178	24	1835	38	37.4	38	130400
GSBC1-272	0.1680	0.0023	7.34	0.21	0.317	0.008	0.870	2538	23	2154	25	1775	38	43.0	174	573000
GSBC1-322	0.1682	0.0024	7.89	0.21	0.340	0.008	0.851	2540	24	2219	24	1888	37	34.5	108	233000
GSBC1-263	0.1713	0.0033	8.99	0.30	0.381	0.010	0.820	2570	32	2337	30	2080	49	23.6	24	40300
GSBC1-307	0.1726	0.0023	8.99	0.27	0.378	0.010	0.899	2583	22	2337	28	2066	48	25.0	27	112000
GSBC1-292	0.1741	0.0026	4.79	0.18	0.200	0.007	0.912	2597	25	1783	31	1173	36	121.4	361	211800
GSBC1-309	0.1745	0.0038	5.25	0.17	0.218	0.005	0.739	2601	36	1860	27	1272	28	104.5	280	71100
GSBC1-233	0.1803	0.0031	6.20	0.30	0.250	0.011	0.932	2656	28	2005	41	1436	57	84.9	87	79000
GSBC1-291	0.1818	0.0075	4.56	0.23	0.182	0.005	0.591	2669	66	1743	42	1078	30	147.5	55	19400
GSBC1-279	0.1831	0.0031	8.99	0.43	0.356	0.016	0.932	2681	28	2337	42	1963	74	36.6	641	360000
GSBC1-320	0.1840	0.0031	10.30	0.30	0.406	0.010	0.814	2689	28	2462	27	2196	44	22.5	76	44100
GSBC1-238	0.1848	0.0026	7.31	0.52	0.287	0.020	0.980	2696	23	2150	61	1627	99	65.8	1100	621000
GSBC1-182	0.1851	0.0024	9.32	0.25	0.365	0.009	0.874	2699	21	2370	24	2006	40	34.5	266	175200
GSBC1-241	0.1852	0.0025	9.68	0.26	0.379	0.009	0.865	2700	22	2404	24	2071	41	30.4	57	319000
GSBC1-240	0.1883	0.0036	10.35	0.33	0.399	0.010	0.805	2727	31	2467	29	2164	47	26.1	46	35400
GSBC1-261	0.1890	0.0028	8.87	0.27	0.340	0.009	0.868	2733	24	2325	27	1889	43	44.7	378	112200
GSBC1-303	0.1916	0.0028	7.93	0.35	0.300	0.013	0.945	2756	24	2223	39	1691	62	62.9	135	939000
GSBC1-257	0.1935	0.0040	8.19	0.26	0.307	0.007	0.753	2772	34	2252	28	1726	36	60.6	145	74220
GSBC1-253	0.1957	0.0080	11.03	0.53	0.409	0.010	0.524	2791	65	2525	44	2209	47	26.4	29	126100
GSBC1-226	0.1970	0.0034	3.40	0.13	0.125	0.004	0.887	2802	28	1505	29	761	24	268.1	311	108300
GSBC1-289	0.1973	0.0027	8.50	0.22	0.312	0.007	0.844	2804	22	2286	23	1753	33	60.0	111	76320
GSBC1-195	0.1977	0.0032	9.55	0.32	0.351	0.010	0.868	2807	27	2393	30	1937	48	44.9	533	208900
GSBC1-198	0.1987	0.0032	8.47	0.39	0.309	0.013	0.939	2816	26	2282	41	1736	66	62.2	448	176500
GSBC1-330	0.2018	0.0060	7.76	0.46	0.279	0.014	0.862	2841	48	2204	52	1586	71	79.1	274	291000
GSBC1-284	0.2032	0.0042	10.66	0.36	0.381	0.010	0.788	2852	34	2494	31	2079	47	37.2	136	53000
GSBC1-215	0.2032	0.0041	4.95	0.23	0.177	0.007	0.902	2852	32	1811	38	1049	40	171.9	476	182000
GSBC1-280	0.2057	0.0038	11.54	0.49	0.407	0.015	0.896	2872	30	2568	39	2201	70	30.5	930	247000
GSBC1-175	0.2058	0.0030	10.92	0.30	0.385	0.009	0.850	2873	23	2517	25	2100	41	36.8	83	101100
GSBC1-290	0.2168	0.0035	7.78	0.22	0.260	0.006	0.824	2957	26	2205	26	1490	31	98.4	2955	659100
GSBC1-294	0.2179	0.0031	12.28	0.33	0.409	0.009	0.851	2965	23	2626	25	2209	43	34.2	220	149600
GSBC1-217	0.2212	0.0030	13.02	0.34	0.427	0.009	0.855	2989	21	2681	24	2291	42	30.5	343	439700
GSBC1-306	0.2225	0.0073	13.80	0.59	0.450	0.012	0.644	2999	52	2736	40	2394	55	25.3	46	11400
GSBC1-216	0.2277	0.0052	6.46	0.21	0.206	0.005	0.715	3036	36	2041	28	1207	25	151.5	520	145700
GSBC1-260	0.2331	0.0030	13.72	0.38	0.427	0.010	0.883	3073	21	2731	26	2292	47	34.1	1032	457900
GSBC1-315	0.2341	0.0031	14.20	0.40	0.440	0.011	0.887	3080	21	2763	27	2350	50	31.1	2193	644800
GSBC1-312	0.2359	0.0040	7.33	0.21	0.225	0.005	0.814	3093	27	2152	26	1310	28	136.1	1180	187000
GSBC1-211	0.2398	0.0030	10.91	0.45	0.330	0.013	0.951	3119	20	2516	37	1838	62	69.6	49	126300
GSBC1-299	0.2405	0.0034	8.88	0.32	0.268	0.009	0.918	3123	23	2326	32	1530	45	104.1	179	201000
GSBC1-255	0.2435	0.0035	10.02	0.39	0.299	0.011	0.929	3143	23	2437	36	1684	54	86.7	305	236700
GSBC1-208	0.2484	0.0041	10.99	0.32	0.321	0.008	0.821	3175	26	2522	27	1794	37	76.9	642	107600
GSBC1-183	0.2488	0.0037	7.30	0.25	0.213	0.007	0.900	3177	23	2149	30	1244	35	155.3	223	252000
GSBC1-318	0.2500	0.0035	9.21	0.24	0.267	0.006	0.841	3185	22	2359	24	1526	30	108.7	701	107300
GSBC1-324	0.2552	0.0035	17.11	0.45	0.486	0.011	0.855	3217	22	2941	25	2555	48	25.9	104	520000
GSBC1-194	0.2558	0.0057	9.07	0.29	0.257	0.006	0.732	3221	34	2346	29	1476	31	118.2	894	218700
GSBC1-273*	0.2570	0.0114	18.18	1.03	0.513	0.018	0.625	3228	68	2999	53	2669	77	20.9	60	104800
GSBC1-273	0.2817	0.0048	20.55	0.69	0.529	0.015	0.860	3372	26	3117	32	2737	64	23.2	60	104800
GSBC1-235	0.2572	0.0033	11.33	0.29	0.320	0.007	0.865	3230	20	2551	23	1788	34	80.7	610	513900
GSBC1-278	0.2610	0.0036	10.31	0.38	0.286	0.010	0.928	3253	21	2463	33	1624	49	100.4	176	161300
GSBC1-265	0.2611	0.0053	16.45	0.77	0.457	0.019	0.900	3253	32	2903	44	2426	85	34.1	319	160600
GSBC1-200	0.2633	0.0047	15.17	0.55	0.418	0.013	0.868	3267	28	2826	34	2251	59	45.1	44	452300
GSBC1-181	0.2669	0.0033	17.38	0.44	0.472	0.010	0.870	3288	20	2956	24	2494	45	31.8	303	671000
GSBC1-314	0.2747	0.0036	18.26	0.63	0.482	0.015	0.924	3333	20	3003	33	2536	67	31.4	480	378500
GSBC1-264	0.2825	0.0101	17.29	0.92	0.444	0.017	0.740	3377	55	2951	50	2369	77	42.6	585	123000

GSBC1-223	0.2850	0.0037	10.91	0.34	0.278	0.008	0.912	3391	20	2515	29	1579	40	114.7	6280	588000
GSBC1-173	0.2902	0.0039	16.79	0.48	0.420	0.010	0.882	3419	21	2923	27	2259	47	51.4	72	571600
GSBC1-311	0.2959	0.0041	16.18	0.49	0.397	0.011	0.887	3449	21	2888	28	2154	49	60.1	1883	198600
GSBC1-186	0.3003	0.0046	16.72	0.55	0.404	0.012	0.887	3472	24	2919	31	2187	54	58.7	996	134400
GSBC1-229	0.3014	0.0050	19.74	0.78	0.475	0.017	0.905	3477	26	3079	37	2505	74	38.8	31	43200
GSBC1-227	0.3042	0.0041	13.00	0.34	0.310	0.007	0.860	3492	21	2680	25	1740	35	100.7	376	132200
GSBC1-190	0.3067	0.0041	19.20	0.66	0.454	0.014	0.921	3504	20	3052	32	2413	63	45.2	216	402000
GSBC1-204	0.3154	0.0076	10.52	0.65	0.242	0.014	0.921	3548	37	2482	56	1397	72	153.9	2190	170000
GSBC1-193	0.3199	0.0046	15.39	0.62	0.349	0.013	0.934	3569	22	2840	37	1930	62	85.0	249	108700
GSBC1-192	0.3235	0.0040	18.56	0.51	0.416	0.010	0.890	3587	19	3019	26	2243	46	59.9	1058	396900
GSBC1-176	0.3285	0.0044	10.97	0.29	0.242	0.005	0.860	3610	20	2520	24	1398	28	158.3	2860	229500
GSBC1-274	0.3305	0.0045	13.16	0.35	0.289	0.007	0.859	3619	21	2691	25	1636	33	121.3	517	269300
GSBC1-331	0.3618	0.0064	30.06	0.86	0.603	0.014	0.786	3757	27	3489	28	3040	54	23.6	1240	141700
GSBC1-242	0.3671	0.0067	21.47	0.67	0.424	0.011	0.815	3779	27	3160	30	2280	49	65.8	667	104900
GSBC1-285	0.3954	0.0056	17.28	0.64	0.317	0.011	0.923	3892	21	2951	35	1775	52	119.2	1092	154400
Standards GSB17-B1,-C1																
og1-1	0.3020	0.0021	29.81	0.30	0.716	0.005	0.729	3481	11	3481	10	3481	20	0.0	19	74470
og1-2	0.2969	0.0035	28.97	0.42	0.708	0.006	0.571	3454	18	3453	14	3450	22	0.1	8	84550
og1-3	0.2992	0.0042	31.06	0.76	0.753	0.015	0.817	3466	22	3521	24	3619	55	-4.2	5	47020
og1-4	0.2992	0.0066	29.25	1.22	0.709	0.025	0.848	3466	34	3462	40	3455	94	0.3	4	63100
og1-5	0.2970	0.0065	29.57	1.28	0.722	0.027	0.863	3455	34	3473	42	3504	100	-1.4	6	103600
og1-6	0.2967	0.0081	28.96	1.46	0.708	0.030	0.841	3453	42	3452	48	3451	112	0.1	9	88600
og1-7	0.2970	0.0025	29.32	0.48	0.716	0.010	0.856	3455	13	3464	16	3481	37	-0.8	18	92400
og1-8	0.2988	0.0022	29.98	0.36	0.728	0.007	0.785	3464	11	3486	12	3525	25	-1.7	14	100200
og1-9	0.2978	0.0025	29.20	0.39	0.711	0.007	0.774	3459	13	3460	13	3463	27	-0.1	9	122500
og1-10	0.2954	0.0027	29.19	0.37	0.717	0.006	0.699	3446	14	3460	12	3484	24	-1.1	0	107600
og1-11	0.2986	0.0036	28.49	0.64	0.692	0.013	0.842	3463	19	3436	22	3390	49	2.1	8	70400
og1-12	0.2957	0.0035	28.87	0.56	0.708	0.011	0.795	3448	18	3449	19	3451	41	-0.1	10	91300
og1-13	0.2976	0.0023	29.26	0.37	0.713	0.007	0.786	3458	12	3462	12	3470	26	-0.3	7	74500
og1-14	0.2968	0.0031	29.07	0.46	0.710	0.008	0.750	3454	16	3456	15	3460	32	-0.2	12	63300
og1-15	0.3001	0.0031	29.47	0.42	0.712	0.007	0.689	3471	16	3469	14	3467	26	0.1	16	84700
og1-16	0.2986	0.0027	29.35	0.37	0.713	0.006	0.693	3463	14	3465	12	3469	23	-0.2	13	66120
og1-17	0.2983	0.0025	29.22	0.37	0.710	0.007	0.748	3461	13	3461	12	3460	25	0.0	16	73830
og1-18	0.2976	0.0029	29.40	0.46	0.717	0.009	0.787	3458	15	3467	15	3483	33	-0.7	18	92660

GSB 17-C2 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBC2-246	0.2100	0.0032	18.30	0.50	0.632	0.014	0.824	2906	25	3006	26	3157	56	-8.0	6	63000
GSBC2-295	0.2457	0.0032	23.71	0.59	0.700	0.015	0.851	3157	21	3256	24	3420	56	-7.7	36	388500
GSBC2-207	0.2580	0.0054	58.70	3.88	1.650	0.103	0.949	3235	32	4152	64	6282	247	-48.5	31000	7780000
> - 5% Disc.																
GSBC2-214	0.1266	0.0026	6.55	0.19	0.375	0.007	0.685	2051	36	2053	25	2054	34	-0.1	8	28310
GSBC2-168	0.1619	0.0021	9.88	0.23	0.442	0.008	0.818	2476	22	2423	21	2361	37	4.8	53	470000
GSBC2-273	0.1707	0.0025	11.18	0.29	0.475	0.010	0.833	2565	24	2538	24	2505	45	2.4	43	270000
GSBC2-240	0.1707	0.0023	10.98	0.27	0.467	0.009	0.827	2565	23	2522	22	2469	41	3.9	59	407000
GSBC2-284	0.1716	0.0027	11.64	0.31	0.492	0.010	0.798	2573	26	2576	24	2580	45	-0.2	32	121100
GSBC2-258	0.1728	0.0025	11.23	0.26	0.471	0.008	0.783	2585	24	2543	21	2490	37	3.8	28	135400
GSBC2-263	0.1732	0.0034	11.13	0.33	0.466	0.010	0.750	2589	33	2534	27	2466	46	5.0	13	43700
GSBC2-261	0.1735	0.0024	11.93	0.29	0.499	0.010	0.815	2592	23	2599	22	2608	42	-0.6	19	171400
GSBC2-262	0.1738	0.0024	12.01	0.28	0.501	0.009	0.798	2595	23	2605	21	2618	40	-0.9	8	143100
GSBC2-237	0.1783	0.0025	12.33	0.28	0.501	0.009	0.791	2637	23	2630	21	2620	38	0.7	12	132900
GSBC2-195	0.1808	0.0024	12.49	0.28	0.501	0.009	0.808	2660	22	2642	21	2618	39	1.6	48	165000
GSBC2-274	0.1822	0.0033	12.17	0.33	0.484	0.010	0.742	2673	30	2618	25	2546	42	5.0	3	35060
GSBC2-223	0.1826	0.0030	13.10	0.34	0.520	0.010	0.771	2677	27	2687	24	2700	44	-0.9	6	50940
GSBC2-293	0.1860	0.0034	12.98	0.37	0.506	0.011	0.771	2707	29	2678	26	2640	47	2.6	21	49600
GSBC2-192*	0.1875	0.0029	13.38	0.37	0.518	0.012	0.832	2720	25	2707	26	2689	50	1.2	58	40700
GSBC2-192	0.1926	0.0035	13.83	0.36	0.521	0.010	0.726	2764	29	2738	25	2702	42	2.3	58	40700
GSBC2-203	0.1917	0.0025	13.35	0.31	0.505	0.010	0.819	2757	22	2704	22	2635	41	4.6	19	418900
GSBC2-210	0.1992	0.0027	14.75	0.35	0.537	0.010	0.819	2820	22	2799	22	2771	44	1.8	4	167300
GSBC2-193*	0.2121	0.0068	15.88	0.73	0.543	0.018	0.711	2922	51	2870	43	2796	74	4.5	25	25700
GSBC2-193	0.2198	0.0056	16.58	0.64	0.547	0.016	0.748	2979	40	2911	36	2813	65	5.9	25	25700
GSBC2-251	0.2162	0.0030	17.18	0.39	0.576	0.010	0.783	2953	23	2945	22	2934	42	0.6	23	182000
GSBC2-271	0.2172	0.0029	17.42	0.43	0.582	0.012	0.842	2960	21	2958	23	2956	49	0.1	70	278900

GSBC2-250	0.2344	0.0045	19.97	0.77	0.618	0.021	0.867	3082	30	3090	36	3102	81	-0.6	87	520000
GSBC2-288	0.2375	0.0035	19.79	0.51	0.604	0.013	0.819	3103	23	3081	24	3047	51	1.9	17	145100
GSBC2-176	0.2444	0.0033	21.41	0.48	0.636	0.011	0.799	3149	21	3158	22	3171	45	-0.7	10	169600
GSBC2-194	0.2755	0.0039	25.57	0.58	0.673	0.012	0.785	3338	22	3330	22	3318	46	0.6	15	94900
GSBC2-227	0.2776	0.0037	24.55	0.58	0.641	0.012	0.818	3349	21	3290	23	3194	48	4.9	21	334200
GSBC2-266	0.2818	0.0038	25.97	0.63	0.668	0.014	0.834	3373	21	3345	23	3300	52	2.2	12	650000
GSBC2-226	0.3234	0.0046	31.53	0.75	0.707	0.013	0.802	3586	22	3536	23	3447	50	4.0	16	124100
GSBC2-294	0.3493	0.0051	35.33	0.89	0.734	0.015	0.817	3704	22	3648	25	3546	56	4.4	16	97600
GSBC2-167	0.3540	0.0048	37.86	0.85	0.776	0.014	0.797	3724	20	3716	22	3701	50	0.6	17	163600
GSBC2-186	0.3572	0.0051	37.43	0.86	0.760	0.014	0.790	3738	21	3705	23	3644	50	2.6	12	68300
GSBC2-267	0.3882	0.0051	41.22	0.96	0.770	0.015	0.828	3864	20	3801	23	3681	54	5.0	4	292000
GSBC2-201	0.4005	0.0052	46.09	1.04	0.835	0.015	0.820	3911	19	3911	22	3912	54	0.0	16	277200
GSBC2-248	0.4134	0.0057	48.05	1.17	0.843	0.017	0.820	3959	21	3953	24	3941	58	0.4	22	181600
> 5% Disc.																
GSBC2-254*	0.1489	0.0027	8.08	0.26	0.393	0.011	0.831	2333	31	2240	29	2139	49	9.1	316	381000
GSBC2-254	0.1585	0.0026	8.73	0.25	0.400	0.009	0.816	2440	28	2311	26	2167	43	12.6	316	381000
GSBC2-260*	0.1541	0.0054	8.51	0.40	0.401	0.013	0.672	2392	58	2287	42	2172	58	10.1	55	190000
GSBC2-260	0.1628	0.0027	9.09	0.29	0.405	0.011	0.854	2485	27	2347	28	2192	50	13.4	55	190000
GSBC2-272	0.1744	0.0024	10.66	0.26	0.443	0.009	0.830	2600	23	2494	22	2366	40	9.9	56	267700
GSBC2-252	0.1750	0.0026	10.79	0.26	0.447	0.009	0.797	2606	24	2505	22	2383	38	9.4	27	425200
GSBC2-310	0.1787	0.0027	11.21	0.32	0.455	0.011	0.852	2641	24	2540	26	2417	48	9.3	140	240500
GSBC2-298*	0.1806	0.0032	11.43	0.32	0.459	0.010	0.786	2658	29	2559	26	2436	45	9.1	46	173900
GSBC2-298	0.1749	0.0027	10.95	0.26	0.454	0.008	0.769	2605	25	2519	22	2414	37	7.9	46	173900
GSBC2-287	0.1875	0.0030	12.45	0.34	0.482	0.011	0.813	2720	26	2639	25	2534	47	7.4	32	73700
GSBC2-309	0.1877	0.0029	12.51	0.38	0.484	0.012	0.855	2722	25	2644	28	2542	54	7.1	15	190200
GSBC2-221	0.1906	0.0026	12.41	0.29	0.472	0.009	0.810	2747	22	2636	21	2493	39	10.2	18	212600
GSBC2-217	0.2192	0.0035	16.52	0.46	0.547	0.012	0.812	2975	26	2907	26	2811	51	5.8	364	434600
GSBC2-187	0.2258	0.0030	17.35	0.39	0.557	0.010	0.805	3023	21	2955	21	2856	42	5.8	16	266200
GSBC2-241	0.2721	0.0040	23.15	0.56	0.617	0.012	0.793	3318	23	3233	23	3098	47	7.1	52	121000
GSBC2-268	0.2789	0.0039	23.62	0.59	0.614	0.013	0.829	3357	22	3253	24	3087	51	8.7	19	355500
GSBC2-229	0.2805	0.0083	23.48	0.98	0.607	0.018	0.704	3366	46	3247	40	3058	71	10.1	95	156900
GSBC2-191	0.2848	0.0051	24.92	0.70	0.635	0.014	0.762	3389	28	3305	27	3168	53	7.0	36	180200
GSBC2-243	0.2899	0.0053	24.74	0.75	0.619	0.015	0.792	3417	28	3298	29	3106	59	10.0	23	68600
GSBC2-249	0.3745	0.0058	38.31	1.12	0.742	0.018	0.846	3810	23	3728	29	3578	68	6.5	50	286100
GSBC2-228	0.3846	0.0055	40.09	1.10	0.756	0.018	0.852	3850	22	3773	27	3630	65	6.1	29	77600
> 10 % Disc.																
GSBC2-177*	0.1176	0.0019	5.01	0.17	0.309	0.009	0.877	1920	28	1821	28	1736	44	10.6	607	923000
GSBC2-177	0.1262	0.0018	5.45	0.16	0.313	0.008	0.873	2046	25	1893	25	1756	39	16.5	607	923000
GSBC2-283*	0.1185	0.0022	5.00	0.15	0.306	0.007	0.779	1934	32	1820	24	1722	34	12.3	17	57900
GSBC2-283	0.1256	0.0021	5.35	0.14	0.309	0.006	0.739	2037	30	1877	21	1736	28	17.4	17	57900
GSBC2-234	0.1217	0.0020	5.17	0.13	0.308	0.006	0.754	1981	30	1849	21	1733	29	14.3	8	75000
GSBC2-283	0.1256	0.0021	5.35	0.14	0.309	0.006	0.739	2037	30	1877	21	1736	28	17.4	17	57900
GSBC2-179*	0.1426	0.0032	6.64	0.21	0.338	0.008	0.725	2259	38	2065	28	1876	38	20.4	10	89570
GSBC2-179	0.1483	0.0022	6.94	0.16	0.339	0.006	0.782	2326	25	2104	21	1883	30	23.5	10	89570
GSBC2-257	0.1495	0.0019	7.82	0.17	0.379	0.007	0.821	2340	22	2211	20	2073	32	12.9	149	448400
GSBC2-174*	0.1525	0.0040	8.13	0.33	0.387	0.012	0.758	2374	44	2246	36	2108	55	12.6	30	34500
GSBC2-174	0.1750	0.0038	9.59	0.32	0.397	0.010	0.764	2606	35	2396	30	2157	47	20.8	30	34500
GSBC2-286	0.1608	0.0029	9.05	0.27	0.408	0.010	0.803	2464	30	2343	27	2207	45	11.6	133	286000
GSBC2-296*	0.1817	0.0027	11.13	0.31	0.444	0.011	0.852	2668	24	2534	26	2370	47	12.6	426	526300
GSBC2-296	0.1871	0.0026	11.50	0.28	0.446	0.009	0.825	2717	23	2565	23	2377	40	14.3	426	526300
GSBC2-308*	0.1867	0.0028	11.25	0.34	0.437	0.012	0.870	2713	24	2544	28	2337	51	16.1	102	179300
GSBC2-308	0.1845	0.0026	11.10	0.29	0.436	0.010	0.846	2694	23	2532	24	2335	43	15.4	102	179300
GSBC2-166	0.1913	0.0028	12.18	0.32	0.462	0.010	0.833	2753	24	2619	24	2448	44	12.5	12	136600
GSBC2-264	0.1977	0.0029	12.90	0.35	0.473	0.011	0.843	2807	24	2672	25	2498	47	12.4	16	98300
GSBC2-292	0.2006	0.0030	12.59	0.37	0.455	0.011	0.856	2831	24	2650	27	2419	50	17.0	939	416900
GSBC2-238	0.2586	0.0048	19.56	0.54	0.549	0.011	0.742	3238	29	3070	26	2819	47	14.9	99	307600
GSBC2-253	0.2745	0.0044	21.25	0.56	0.562	0.012	0.797	3332	25	3150	25	2873	49	16.0	22	400000
GSBC2-222	0.2760	0.0038	21.61	0.51	0.568	0.011	0.811	3340	22	3166	23	2899	45	15.2	13	133900
GSBC2-303	0.3228	0.0042	28.22	0.65	0.634	0.012	0.826	3583	20	3427	22	3166	47	13.2	22	264900
> 20 % Disc.																
GSBC2-244	0.1121	0.0018	1.92	0.06	0.124	0.003	0.845	1834	29	1088	20	755	18	142.8	265	361400
GSBC2-183	0.1138	0.0016	3.67	0.11	0.234	0.006	0.878	1861	26	1565	24	1354	32	37.4	107	203400
GSBC2-178	0.1216	0.0020	4.63	0.14	0.276	0.007	0.844	1980	30	1754	26	1571	37	26.0	22	64800
GSBC2-277	0.1273	0.0021	2.42	0.08	0.138	0.004	0.869	2061	29	1249	24	833	22	147.3	73	89700
GSBC2-196	0.1275	0.0018	4.66	0.12	0.265	0.006	0.830	2064	25	1760	21	1515	29	36.2	216	367200
GSBC2-213	0.1307	0.0024	5.05	0.14	0.280	0.006	0.754	2107	32	1828	24	1593	30	32.3	22	36210
GSBC2-306	0.1311	0.0034	2.98	0.11	0.165	0.004	0.692	2113	45	1402	27	983	23	115.0	18	26900

GSBC2-280	0.1355	0.0020	3.51	0.10	0.188	0.005	0.851	2170	26	1529	22	1109	25	95.7	196	309000
GSBC2-205	0.1360	0.0020	3.08	0.09	0.165	0.004	0.857	2177	26	1429	22	982	22	121.7	128	231700
GSBC2-285	0.1392	0.0025	4.67	0.13	0.243	0.005	0.775	2217	30	1762	23	1404	27	57.9	40	144000
GSBC2-289	0.1395	0.0021	5.93	0.16	0.309	0.007	0.816	2221	26	1966	23	1733	32	28.1	123	351000
GSBC2-270	0.1401	0.0034	4.83	0.25	0.250	0.012	0.888	2228	41	1790	43	1438	60	54.9	244	335500
GSBC2-225	0.1414	0.0019	3.99	0.14	0.205	0.006	0.917	2244	24	1632	28	1200	35	87.0	161	346600
GSBC2-247	0.1420	0.0021	4.70	0.14	0.240	0.006	0.862	2252	26	1767	25	1387	32	62.4	49	317300
GSBC2-172	0.1447	0.0020	5.92	0.14	0.297	0.005	0.792	2284	24	1964	20	1675	27	36.4	74	262700
GSBC2-239	0.1448	0.0028	4.23	0.13	0.212	0.005	0.780	2285	33	1681	25	1240	27	84.3	88	47000
GSBC2-173	0.1495	0.0028	3.75	0.24	0.182	0.011	0.958	2340	31	1582	51	1078	62	117.1	149	190700
GSBC2-181	0.1516	0.0021	5.47	0.14	0.262	0.005	0.830	2364	23	1896	21	1499	28	57.7	171	476000
GSBC2-307	0.1539	0.0031	5.16	0.16	0.243	0.006	0.765	2390	34	1845	27	1402	30	70.4	162	94000
GSBC2-275	0.1548	0.0036	5.22	0.19	0.245	0.007	0.764	2400	39	1856	30	1411	34	70.1	94	162000
GSBC2-175	0.1549	0.0021	4.87	0.12	0.228	0.004	0.815	2401	23	1798	20	1325	23	81.2	243	215800
GSBC2-291	0.1592	0.0029	3.37	0.13	0.154	0.005	0.879	2447	31	1497	30	921	29	165.8	200	175500
GSBC2-281	0.1598	0.0027	3.59	0.12	0.163	0.005	0.870	2454	28	1547	27	973	27	152.2	187	174000
GSBC2-208	0.1610	0.0026	3.55	0.09	0.160	0.003	0.798	2466	27	1538	21	956	19	158.1	624	295600
GSBC2-236	0.1618	0.0023	5.38	0.25	0.241	0.011	0.954	2475	23	1881	39	1392	55	77.8	139	156000
GSBC2-219	0.1632	0.0021	6.91	0.35	0.307	0.015	0.966	2489	22	2100	43	1726	73	44.2	292	490000
GSBC2-199	0.1633	0.0025	3.82	0.16	0.170	0.006	0.929	2490	25	1597	32	1010	35	146.6	92	182000
GSBC2-304	0.1635	0.0026	8.50	0.22	0.377	0.007	0.781	2492	26	2286	23	2062	35	20.8	39	192000
GSBC2-197	0.1655	0.0026	6.95	0.23	0.304	0.009	0.880	2513	26	2105	29	1713	44	46.7	38	177700
GSBC2-182	0.1659	0.0024	3.42	0.13	0.149	0.005	0.922	2517	24	1508	29	897	29	180.6	213	119800
GSBC2-185	0.1664	0.0022	8.65	0.27	0.377	0.011	0.903	2522	22	2302	28	2063	50	22.2	86	256000
GSBC2-200	0.1678	0.0036	2.24	0.13	0.097	0.005	0.928	2536	35	1195	39	597	30	324.9	193	53810
GSBC2-245	0.1698	0.0032	7.12	0.23	0.304	0.008	0.802	2556	32	2126	28	1712	38	49.3	24	66300
GSBC2-233	0.1703	0.0029	7.54	0.24	0.321	0.009	0.846	2561	29	2177	29	1795	43	42.7	4	36100
GSBC2-171	0.1718	0.0029	8.73	0.23	0.369	0.007	0.756	2575	28	2310	24	2022	34	27.3	119	143000
GSBC2-190	0.1729	0.0024	7.13	0.19	0.299	0.007	0.858	2586	23	2128	24	1686	35	53.3	41	184800
GSBC2-230	0.1739	0.0027	7.83	0.23	0.327	0.008	0.846	2596	26	2212	26	1821	40	42.5	91	242800
GSBC2-198	0.1769	0.0029	6.47	0.20	0.265	0.007	0.838	2624	27	2042	26	1516	34	73.0	50	150000
GSBC2-300	0.1808	0.0036	6.87	0.29	0.276	0.010	0.880	2660	33	2095	37	1570	52	69.5	39	36600
GSBC2-282	0.1839	0.0034	8.39	0.37	0.331	0.013	0.905	2688	30	2274	39	1843	63	45.9	62	50500
GSBC2-265	0.1848	0.0028	7.33	0.24	0.288	0.008	0.881	2696	25	2153	29	1631	41	65.4	331	161500
GSBC2-204	0.1862	0.0044	4.19	0.17	0.163	0.005	0.814	2709	39	1673	33	975	30	177.8	79	83300
GSBC2-256	0.1864	0.0034	7.38	0.25	0.287	0.008	0.846	2711	29	2158	30	1627	41	66.6	52	59500
GSBC2-259	0.1878	0.0032	7.54	0.23	0.291	0.007	0.820	2723	28	2178	26	1648	36	65.3	251	220000
GSBC2-299	0.1913	0.0037	8.81	0.34	0.334	0.011	0.868	2753	31	2319	35	1858	55	48.2	51	42400
GSBC2-169	0.1956	0.0034	11.10	0.30	0.411	0.009	0.766	2790	28	2531	25	2221	39	25.6	25	126000
GSBC2-202	0.1996	0.0034	3.26	0.09	0.118	0.003	0.794	2823	27	1471	21	721	15	291.7	793	141500
GSBC2-216	0.2005	0.0042	6.94	0.22	0.251	0.006	0.743	2830	34	2104	27	1444	30	96.1	27	146000
GSBC2-269	0.2030	0.0029	9.49	0.23	0.339	0.007	0.820	2850	23	2387	22	1883	33	51.4	256	206300
GSBC2-242	0.2053	0.0059	11.96	0.46	0.422	0.011	0.660	2869	46	2601	35	2271	48	26.3	82	25500
GSBC2-189	0.2061	0.0061	7.14	0.29	0.251	0.007	0.686	2875	47	2128	35	1444	36	99.1	48	23700
GSBC2-215	0.2064	0.0030	12.69	0.29	0.446	0.008	0.773	2877	24	2657	21	2377	35	21.1	43	202300
GSBC2-232	0.2118	0.0031	12.55	0.33	0.430	0.009	0.826	2919	24	2646	24	2304	42	26.7	126	144300
GSBC2-209	0.2128	0.0035	4.03	0.12	0.137	0.003	0.840	2927	26	1639	24	829	20	253.2	708	140100
GSBC2-235	0.2133	0.0030	7.45	0.17	0.253	0.005	0.795	2931	23	2167	21	1455	24	101.4	757	155600
GSBC2-224	0.2174	0.0034	8.73	0.29	0.291	0.008	0.883	2962	25	2310	30	1647	42	79.8	133	74200
GSBC2-211	0.2216	0.0033	11.12	0.29	0.364	0.008	0.827	2992	24	2533	24	2000	37	49.6	52	160000
GSBC2-170	0.2252	0.0048	5.09	0.23	0.164	0.007	0.884	3018	33	1834	38	978	36	208.5	518	92400
GSBC2-276	0.2292	0.0038	11.64	0.34	0.368	0.009	0.821	3046	26	2576	27	2021	42	50.7	668	120300
GSBC2-301	0.2324	0.0047	8.30	0.35	0.259	0.010	0.876	3069	32	2264	37	1485	49	106.7	150	52400
GSBC2-188	0.2335	0.0030	15.03	0.34	0.467	0.009	0.825	3076	20	2817	21	2470	38	24.6	37	300400
GSBC2-180	0.2365	0.0041	15.15	0.48	0.465	0.012	0.838	3097	27	2825	30	2460	54	25.9	197	268000
GSBC2-220	0.2387	0.0036	10.68	0.30	0.324	0.008	0.842	3111	24	2495	25	1811	37	71.8	154	153600
GSBC2-302	0.2424	0.0033	12.54	0.30	0.375	0.008	0.829	3136	21	2646	23	2054	35	52.7	111	491000
GSBC2-212	0.2456	0.0034	13.28	0.32	0.392	0.008	0.824	3157	22	2700	23	2133	36	48.0	1118	575000
GSBC2-206*	0.2568	0.0035	18.03	0.48	0.509	0.012	0.857	3227	22	2991	25	2654	50	21.6	222	113400
GSBC2-206	0.2716	0.0036	19.33	0.45	0.516	0.010	0.821	3315	21	3059	22	2683	42	23.5	222	113400
GSBC2-279	0.2589	0.0057	6.66	0.25	0.187	0.006	0.816	3240	34	2067	33	1102	32	193.9	1040	142300
GSBC2-305	0.2671	0.0039	15.84	0.50	0.430	0.012	0.889	3289	23	2867	30	2306	54	42.6	61	103400
GSBC2-184	0.2758	0.0044	15.64	0.45	0.411	0.010	0.827	3339	25	2855	27	2221	44	50.3	146	74700
GSBC2-311	0.3017	0.0059	16.72	0.59	0.402	0.012	0.834	3479	30	2919	33	2178	54	59.7	38	37900
GSBC2-297	0.3022	0.0043	20.91	0.52	0.502	0.010	0.827	3482	22	3134	24	2622	44	32.8	33	204600
GSBC2-278	0.3037	0.0043	16.12	0.45	0.385	0.009	0.862	3489	22	2884	27	2100	43	66.2	634	105000
GSBC2-255	0.3174	0.0047	22.84	1.01	0.522	0.022	0.942	3557	23	3220	42	2708	91	31.4	75	65500

GSBC2-290	0.3331	0.0054	9.76	0.30	0.213	0.005	0.848	3631	24	2413	28	1243	29	192.2	1020	91800
GSBC2-218	0.3350	0.0050	20.45	0.56	0.443	0.010	0.836	3640	23	3113	26	2363	45	54.1	220	194600
GSBC2-231	0.3403	0.0053	14.50	0.61	0.309	0.012	0.929	3664	24	2783	39	1736	59	111.1	541	98500

GSB 17-C5 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBC5-036	0.1714	0.0031	12.44	0.33	0.526	0.010	0.727	2571	30	2638	24	2725	42	-5.7	5	112000
> - 5% Disc.																
GSBC5-126	0.1206	0.0021	5.76	0.15	0.347	0.006	0.724	1964	31	1941	22	1919	30	2.3	31	235000
GSBC5-030	0.1238	0.0027	5.92	0.19	0.347	0.008	0.720	2012	38	1965	27	1921	37	4.7	13	40320
GSBC5-065	0.1559	0.0029	9.60	0.26	0.447	0.009	0.723	2412	31	2397	24	2380	38	1.3	12	215200
GSBC5-025*	0.1561	0.0028	9.38	0.28	0.436	0.011	0.814	2414	30	2376	27	2332	48	3.5	209	76800
GSBC5-025	0.1923	0.0032	12.04	0.31	0.454	0.009	0.763	2762	27	2607	24	2413	40	14.5	209	76800
GSBC5-023*	0.1615	0.0029	9.84	0.33	0.442	0.013	0.848	2471	30	2420	30	2360	56	4.7	105	119900
GSBC5-023	0.1700	0.0031	10.47	0.32	0.447	0.011	0.801	2558	30	2477	28	2380	49	7.5	105	119900
GSBC5-061	0.1655	0.0030	10.84	0.28	0.475	0.009	0.718	2513	30	2509	24	2505	38	0.3	20	237000
GSBC5-037	0.1670	0.0033	10.67	0.29	0.464	0.009	0.684	2528	33	2495	25	2455	38	3.0	139	206000
GSBC5-161	0.1680	0.0030	10.75	0.27	0.464	0.008	0.709	2538	30	2501	23	2457	37	3.3	22	278100
GSBC5-019	0.1685	0.0030	10.82	0.27	0.466	0.008	0.710	2543	29	2508	23	2465	36	3.2	51	366300
GSBC5-002	0.1690	0.0030	11.33	0.32	0.486	0.010	0.768	2548	30	2551	26	2554	45	-0.3	22	168000
GSBC5-154	0.1692	0.0030	11.41	0.29	0.489	0.009	0.706	2550	30	2557	23	2567	38	-0.7	19	196800
GSBC5-005	0.1692	0.0032	11.36	0.34	0.487	0.011	0.768	2550	31	2553	27	2558	48	-0.3	4	265700
GSBC5-052	0.1716	0.0033	11.81	0.32	0.499	0.010	0.715	2573	32	2589	25	2610	42	-1.4	12	153000
GSBC5-060	0.1717	0.0034	11.23	0.32	0.474	0.010	0.720	2574	32	2542	26	2503	42	2.9	15	190000
GSBC5-108*	0.1718	0.0030	11.46	0.34	0.484	0.012	0.812	2575	29	2561	28	2543	51	1.3	88	80200
GSBC5-108	0.1840	0.0037	12.39	0.35	0.489	0.010	0.700	2689	33	2635	26	2564	42	4.9	88	80200
GSBC5-070	0.1719	0.0034	11.47	0.31	0.484	0.009	0.688	2576	32	2562	25	2545	39	1.2	13	54800
GSBC5-071	0.1723	0.0031	11.58	0.29	0.487	0.009	0.706	2580	30	2571	24	2559	38	0.8	3	228100
GSBC5-010	0.1725	0.0031	11.72	0.30	0.493	0.009	0.722	2582	29	2582	24	2582	39	0.0	64	227900
GSBC5-088	0.1728	0.0032	11.94	0.32	0.501	0.009	0.710	2585	31	2600	24	2619	40	-1.3	33	102500
GSBC5-151	0.1729	0.0031	11.99	0.30	0.503	0.009	0.709	2586	29	2604	23	2627	38	-1.6	17	139200
GSBC5-011	0.1736	0.0034	11.89	0.33	0.497	0.010	0.722	2593	32	2596	26	2600	43	-0.3	47	82200
GSBC5-160	0.1737	0.0033	11.71	0.31	0.489	0.009	0.694	2594	32	2581	25	2565	39	1.1	20	188900
GSBC5-009	0.1738	0.0031	11.80	0.32	0.493	0.010	0.749	2595	30	2589	25	2582	43	0.5	27	169400
GSBC5-156	0.1748	0.0031	11.96	0.30	0.496	0.009	0.708	2604	30	2601	24	2597	38	0.3	35	137900
GSBC5-164	0.1768	0.0033	11.94	0.31	0.490	0.009	0.695	2623	31	2600	24	2571	38	2.0	38	122750
GSBC5-047	0.1813	0.0035	12.88	0.35	0.515	0.009	0.686	2665	32	2671	25	2679	40	-0.5	8	39100
GSBC5-006	0.1867	0.0041	13.32	0.43	0.518	0.012	0.730	2713	36	2703	30	2689	51	0.9	138	81100
GSBC5-163	0.1961	0.0035	13.98	0.35	0.517	0.009	0.708	2794	29	2748	24	2686	39	4.0	25	194800
GSBC5-096	0.1972	0.0035	14.74	0.39	0.542	0.011	0.747	2803	28	2799	25	2793	45	0.4	13	258400
GSBC5-142	0.2065	0.0037	15.24	0.39	0.535	0.010	0.723	2878	29	2830	24	2763	42	4.2	46	257500
GSBC5-086	0.2093	0.0037	16.73	0.44	0.580	0.011	0.742	2900	28	2920	25	2948	46	-1.6	37	145700
GSBC5-042*	0.2149	0.0036	16.76	0.49	0.566	0.014	0.823	2943	27	2921	28	2890	56	1.8	126	168600
GSBC5-042	0.2228	0.0041	17.52	0.47	0.570	0.011	0.738	3001	29	2964	26	2909	47	3.2	126	168600
GSBC5-064	0.2241	0.0052	18.03	0.58	0.584	0.013	0.698	3010	37	2991	31	2963	53	1.6	29	28600
GSBC5-115	0.2257	0.0050	18.47	0.55	0.593	0.012	0.668	3022	35	3014	29	3003	48	0.6	29	132500
GSBC5-110	0.2347	0.0041	18.64	0.47	0.576	0.010	0.721	3084	28	3023	24	2932	43	5.2	39	193400
GSBC5-050	0.2356	0.0042	18.99	0.50	0.585	0.011	0.731	3090	28	3041	25	2967	45	4.1	12	377000
GSBC5-072	0.2423	0.0044	20.08	0.54	0.601	0.012	0.731	3135	29	3095	26	3034	47	3.3	42	129600
GSBC5-035	0.2426	0.0067	20.24	0.76	0.605	0.015	0.676	3137	44	3103	36	3050	62	2.9	11	14190
GSBC5-146	0.2441	0.0044	21.10	0.56	0.627	0.012	0.734	3147	28	3143	25	3137	48	0.3	18	163700
GSBC5-145	0.2457	0.0044	21.21	0.55	0.626	0.012	0.722	3157	28	3148	25	3134	46	0.8	30	111900
GSBC5-012	0.2531	0.0047	22.22	0.57	0.637	0.012	0.700	3204	29	3193	25	3176	45	0.9	49	159600
GSBC5-127	0.2641	0.0051	23.93	0.70	0.657	0.014	0.752	3271	30	3266	28	3256	56	0.5	15	98500
GSBC5-157	0.2752	0.0068	24.40	0.81	0.643	0.014	0.668	3336	38	3284	32	3201	56	4.2	7	131000
GSBC5-143	0.2760	0.0054	25.44	0.70	0.669	0.013	0.712	3340	30	3325	27	3300	51	1.2	4	38140
GSBC5-132	0.2793	0.0053	26.50	0.72	0.688	0.014	0.720	3359	29	3365	26	3376	52	-0.5	15	35030
GSBC5-015	0.2793	0.0054	26.00	0.74	0.675	0.014	0.736	3359	30	3346	28	3326	54	1.0	19	82900
GSBC5-092	0.2807	0.0054	25.82	0.67	0.667	0.012	0.671	3367	30	3340	25	3295	45	2.2	12	58690
GSBC5-135	0.2988	0.0058	28.30	0.77	0.687	0.013	0.694	3464	30	3429	26	3370	49	2.8	7	53100
GSBC5-084	0.3119	0.0055	30.03	0.78	0.698	0.013	0.736	3530	27	3488	25	3414	50	3.4	33	168300
GSBC5-008	0.3216	0.0057	32.79	0.85	0.740	0.014	0.731	3578	27	3574	25	3569	52	0.2	51	151000
GSBC5-083	0.3833	0.0066	43.23	1.10	0.818	0.015	0.733	3845	26	3848	25	3853	54	-0.2	12	117600
GSBC5-022	0.3856	0.0069	43.44	1.19	0.817	0.017	0.762	3854	27	3852	27	3850	60	0.1	12	368000
> 5% Disc.																

GSBC5-147*	0.1144	0.0021	4.94	0.15	0.313	0.008	0.800	1870	33	1809	26	1757	38	6.5	34	113700
GSBC5-147	0.1210	0.0021	5.28	0.14	0.316	0.007	0.769	1971	31	1865	23	1771	32	11.3	34	113700
GSBC5-067	0.1154	0.0021	4.98	0.13	0.313	0.006	0.716	1886	32	1816	22	1755	29	7.4	71	420000
GSBC5-017*	0.1157	0.0042	5.07	0.47	0.318	0.027	0.918	1891	64	1832	75	1780	130	6.2	51	79300
GSBC5-017	0.1317	0.0023	5.65	0.18	0.311	0.008	0.823	2121	31	1923	27	1745	39	21.5	51	79300
GSBC5-134*	0.1590	0.0031	9.01	0.28	0.411	0.010	0.778	2445	32	2339	28	2219	45	10.2	93	183300
GSBC5-134	0.1651	0.0025	9.41	0.24	0.413	0.008	0.802	2509	25	2378	23	2230	38	12.5	93	183300
GSBC5-066	0.1596	0.0022	9.06	0.21	0.412	0.008	0.802	2451	23	2344	21	2224	34	10.2	133	420300
GSBC5-032*	0.1630	0.0025	9.49	0.28	0.422	0.011	0.860	2487	25	2386	27	2270	48	9.5	45	130000
GSBC5-032	0.1706	0.0025	10.03	0.26	0.426	0.009	0.833	2564	24	2437	24	2289	42	12.0	45	130000
GSBC5-093	0.1645	0.0029	9.74	0.25	0.430	0.008	0.746	2502	29	2411	24	2304	38	8.6	31	317800
GSBC5-034	0.1654	0.0030	10.13	0.25	0.444	0.008	0.702	2512	30	2447	23	2370	35	6.0	50	146900
GSBC5-048	0.1677	0.0024	9.93	0.26	0.429	0.009	0.837	2535	23	2428	23	2303	42	10.1	41	118400
GSBC5-097	0.1702	0.0030	10.42	0.29	0.444	0.010	0.775	2560	30	2473	26	2369	43	8.0	42	204200
GSBC5-046	0.1708	0.0031	10.43	0.27	0.443	0.008	0.699	2565	30	2474	24	2363	35	8.6	25	94600
GSBC5-141*	0.1771	0.0026	10.99	0.31	0.450	0.011	0.850	2626	25	2522	26	2395	48	9.6	35	87600
GSBC5-141	0.1816	0.0027	11.28	0.28	0.450	0.009	0.807	2668	24	2546	23	2397	40	11.3	35	87600
GSBC5-116	0.1778	0.0034	11.04	0.30	0.450	0.009	0.711	2632	31	2527	25	2397	38	9.8	44	74900
GSBC5-059	0.1781	0.0034	11.06	0.33	0.450	0.010	0.756	2635	32	2528	27	2396	44	10.0	179	136900
GSBC5-040*	0.1793	0.0038	11.46	0.39	0.464	0.012	0.779	2646	35	2561	31	2455	53	7.8	127	103400
GSBC5-040	0.2000	0.0035	13.10	0.36	0.475	0.010	0.764	2826	29	2687	26	2506	43	12.8	127	103400
GSBC5-162	0.1855	0.0034	11.99	0.33	0.469	0.009	0.731	2703	30	2603	25	2477	41	9.1	46	59550
GSBC5-140	0.1860	0.0040	12.06	0.35	0.470	0.009	0.685	2707	35	2609	27	2485	41	8.9	26	39700
GSBC5-125	0.2322	0.0043	17.33	0.46	0.541	0.010	0.711	3067	29	2953	25	2789	42	10.0	47	275800
GSBC5-051	0.2444	0.0088	18.76	0.81	0.557	0.013	0.555	3149	56	3030	41	2853	55	10.4	30	133900
GSBC5-031	0.2459	0.0048	19.98	0.57	0.589	0.012	0.725	3159	31	3091	27	2987	49	5.7	27	200600
GSBC5-131	0.2712	0.0051	22.81	0.62	0.610	0.012	0.713	3313	29	3219	26	3070	47	7.9	44	243000
GSBC5-014	0.2924	0.0060	25.56	0.85	0.634	0.016	0.786	3430	31	3330	32	3165	65	8.4	50	336000
GSBC5-026	0.3045	0.0053	27.61	0.71	0.658	0.012	0.733	3493	27	3405	25	3258	48	7.2	47	242600
GSBC5-112	0.3253	0.0088	29.92	1.06	0.667	0.015	0.646	3595	41	3484	34	3294	59	9.1	65	20010
> 10 % Disc.																
GSBC5-113*	0.1122	0.0037	4.49	0.20	0.290	0.008	0.658	1835	59	1729	36	1642	42	11.8	164	254900
GSBC5-113	0.1278	0.0020	5.19	0.14	0.295	0.007	0.822	2068	28	1851	23	1664	33	24.3	164	254900
GSBC5-069	0.1176	0.0017	4.55	0.12	0.281	0.006	0.831	1920	25	1740	21	1595	30	20.4	16	114000
GSBC5-007	0.1424	0.0019	7.10	0.17	0.362	0.007	0.835	2257	23	2124	21	1991	35	13.4	60	400100
GSBC5-045	0.1476	0.0021	7.81	0.22	0.384	0.009	0.863	2318	24	2210	25	2094	43	10.7	25	493000
GSBC5-118*	0.1483	0.0020	7.74	0.21	0.378	0.009	0.867	2326	22	2201	24	2069	41	12.5	112	279500
GSBC5-118	0.1544	0.0022	8.12	0.19	0.381	0.007	0.806	2395	24	2244	21	2083	34	15.0	112	279500
GSBC5-109*	0.1489	0.0023	7.22	0.21	0.352	0.009	0.845	2333	27	2139	26	1942	41	20.1	87	185000
GSBC5-109	0.1539	0.0024	7.53	0.19	0.355	0.007	0.798	2390	26	2176	23	1957	34	22.1	87	185000
GSBC5-074	0.1633	0.0021	8.64	0.19	0.384	0.007	0.815	2490	22	2301	20	2094	32	18.9	24	195000
GSBC5-138	0.1656	0.0025	9.55	0.23	0.418	0.008	0.793	2514	25	2392	22	2252	37	11.6	34	220000
GSBC5-128*	0.1660	0.0039	8.98	0.30	0.392	0.010	0.720	2518	39	2336	30	2133	44	18.0	58	151300
GSBC5-128	0.1734	0.0025	9.42	0.23	0.394	0.008	0.797	2591	24	2380	22	2141	35	21.0	58	151300
GSBC5-041	0.1677	0.0025	9.02	0.23	0.390	0.008	0.808	2535	25	2341	23	2124	37	19.3	78	230000
GSBC5-105	0.1708	0.0024	9.69	0.22	0.411	0.007	0.789	2565	23	2406	21	2221	34	15.5	70	267200
GSBC5-155	0.1712	0.0025	9.72	0.28	0.412	0.010	0.855	2569	24	2409	26	2223	45	15.6	44	129800
GSBC5-129	0.1766	0.0028	10.56	0.27	0.434	0.009	0.795	2621	26	2485	24	2321	40	12.9	27	93500
GSBC5-077*	0.1913	0.0035	11.93	0.39	0.452	0.012	0.823	2753	30	2599	30	2405	54	14.5	66	144200
GSBC5-077	0.2045	0.0028	12.93	0.35	0.459	0.010	0.856	2862	22	2674	25	2433	46	17.7	66	144200
GSBC5-139	0.1957	0.0028	12.04	0.28	0.446	0.008	0.790	2791	23	2608	22	2378	37	17.3	59	212600
GSBC5-043*	0.2048	0.0045	12.63	0.42	0.447	0.011	0.746	2865	36	2653	31	2383	49	20.2	81	183200
GSBC5-043	0.2149	0.0030	13.30	0.32	0.449	0.009	0.808	2943	23	2701	22	2389	39	23.2	81	183200
GSBC5-133	0.2254	0.0044	15.33	0.45	0.493	0.011	0.743	3020	31	2836	28	2585	46	16.8	47	127100
GSBC5-095*	0.2263	0.0047	16.44	0.57	0.527	0.015	0.800	3026	33	2903	32	2729	61	10.9	76	79900
GSBC5-095	0.2326	0.0041	17.11	0.50	0.533	0.013	0.802	3070	28	2941	28	2756	53	11.4	76	79900
GSBC5-099	0.2333	0.0034	17.31	0.41	0.538	0.010	0.787	3075	23	2952	22	2775	42	10.8	23	104300
GSBC5-062	0.2392	0.0032	17.91	0.41	0.543	0.010	0.813	3115	21	2985	22	2796	42	11.4	41	416900
GSBC5-063	0.2502	0.0043	19.13	0.53	0.555	0.012	0.785	3186	27	3048	26	2844	50	12.0	120	250200
GSBC5-100	0.2597	0.0035	20.46	0.49	0.572	0.012	0.834	3245	21	3114	23	2914	47	11.4	40	557700
GSBC5-004*	0.2653	0.0045	21.00	0.70	0.574	0.017	0.864	3278	26	3138	32	2924	68	12.1	424	311000
GSBC5-004	0.2840	0.0037	22.91	0.61	0.585	0.014	0.874	3385	20	3223	26	2969	55	14.0	424	311000
GSBC5-153	0.2682	0.0049	20.12	0.63	0.544	0.014	0.817	3296	28	3097	30	2800	58	17.7	94	71300
GSBC5-057	0.2778	0.0037	21.26	0.55	0.555	0.012	0.859	3351	21	3151	25	2846	51	17.7	140	506000
GSBC5-152	0.2900	0.0053	23.83	0.70	0.596	0.014	0.787	3418	28	3262	28	3014	56	13.4	23	111000
GSBC5-003	0.2944	0.0041	24.66	0.57	0.608	0.011	0.803	3441	21	3295	22	3060	45	12.4	50	255200
GSBC5-091	0.3017	0.0046	25.72	0.66	0.618	0.013	0.810	3479	23	3336	25	3103	51	12.1	41	266000

GSBC5-107	0.3186	0.0043	28.51	0.69	0.649	0.013	0.826	3563	21	3437	23	3224	51	10.5	55	232000
GSBC5-089	0.3378	0.0069	30.26	0.84	0.650	0.012	0.681	3653	31	3495	27	3227	48	13.2	35	27430
> 20 % Disc.																
GSBC5-121	0.1128	0.0016	4.12	0.10	0.265	0.005	0.829	1845	25	1658	20	1514	28	21.9	40	249500
GSBC5-114	0.1342	0.0024	4.55	0.15	0.246	0.007	0.842	2154	30	1739	27	1416	35	52.1	101	107000
GSBC5-058	0.1354	0.0026	5.33	0.15	0.285	0.006	0.734	2169	33	1873	24	1618	30	34.1	72	48200
GSBC5-123	0.1380	0.0019	5.85	0.15	0.307	0.007	0.847	2202	23	1953	22	1727	32	27.5	50	231200
GSBC5-122	0.1398	0.0024	5.03	0.14	0.261	0.005	0.772	2225	29	1824	23	1494	28	48.9	153	91600
GSBC5-024	0.1404	0.0029	5.18	0.18	0.267	0.007	0.802	2232	35	1849	29	1528	37	46.1	395	465000
GSBC5-136	0.1418	0.0023	4.66	0.12	0.238	0.005	0.801	2249	27	1760	22	1378	27	63.2	80	157900
GSBC5-001	0.1424	0.0026	5.19	0.18	0.264	0.008	0.846	2257	31	1850	28	1511	39	49.4	84	390000
GSBC5-016	0.1471	0.0028	3.89	0.14	0.192	0.006	0.838	2312	33	1611	28	1130	31	104.6	126	219000
GSBC5-104	0.1523	0.0027	6.10	0.25	0.291	0.010	0.896	2372	30	1990	35	1644	52	44.3	37	207000
GSBC5-082	0.1531	0.0024	5.83	0.15	0.276	0.006	0.792	2381	27	1951	22	1573	29	51.4	125	330100
GSBC5-029	0.1576	0.0022	4.95	0.14	0.228	0.005	0.869	2430	23	1810	23	1322	29	83.8	406	407800
GSBC5-158	0.1580	0.0029	7.61	0.26	0.349	0.010	0.836	2434	31	2186	30	1931	47	26.1	35	136000
GSBC5-087	0.1589	0.0033	5.67	0.24	0.259	0.010	0.878	2444	34	1926	36	1483	50	64.8	105	32400
GSBC5-144	0.1641	0.0052	3.46	0.20	0.153	0.008	0.838	2498	53	1519	45	918	42	172.1	20	28300
GSBC5-021	0.1654	0.0026	3.99	0.15	0.175	0.006	0.906	2512	26	1633	30	1040	32	141.5	1266	417000
GSBC5-028	0.1729	0.0030	5.39	0.20	0.226	0.008	0.885	2586	29	1883	32	1314	39	96.8	684	422000
GSBC5-054	0.1735	0.0035	8.13	0.24	0.340	0.007	0.720	2592	33	2246	26	1886	34	37.4	190	82300
GSBC5-049	0.1741	0.0034	9.03	0.53	0.376	0.021	0.942	2597	32	2341	52	2058	97	26.2	117	281100
GSBC5-080	0.1758	0.0039	5.32	0.17	0.220	0.005	0.717	2614	36	1872	27	1279	26	104.3	395	341400
GSBC5-094	0.1793	0.0038	6.49	0.23	0.263	0.007	0.803	2646	35	2044	31	1503	38	76.1	374	172200
GSBC5-150	0.1868	0.0037	5.48	0.18	0.213	0.006	0.807	2714	32	1897	28	1243	30	118.4	373	114600
GSBC5-149	0.1875	0.0039	7.40	0.32	0.286	0.011	0.873	2720	34	2161	38	1623	54	67.6	226	213400
GSBC5-027	0.1890	0.0039	9.49	0.58	0.364	0.021	0.940	2733	34	2386	54	2001	98	36.6	79	340100
GSBC5-130	0.1891	0.0030	10.17	0.28	0.390	0.009	0.815	2734	26	2451	25	2124	40	28.8	160	245200
GSBC5-055	0.1907	0.0055	7.80	0.30	0.297	0.007	0.648	2748	47	2208	34	1674	36	64.2	60	22000
GSBC5-075	0.1921	0.0024	9.95	0.24	0.376	0.008	0.843	2760	21	2430	22	2055	35	34.3	299	198600
GSBC5-102	0.1999	0.0034	10.60	0.27	0.385	0.007	0.753	2825	27	2489	24	2098	35	34.7	160	70700
GSBC5-020	0.2022	0.0036	9.67	0.30	0.347	0.009	0.816	2844	29	2403	28	1919	42	48.2	130	63100
GSBC5-018	0.2096	0.0032	11.39	0.34	0.394	0.010	0.857	2902	24	2556	27	2142	46	35.5	78	85600
GSBC5-165	0.2107	0.0035	12.59	0.33	0.433	0.009	0.779	2911	26	2649	24	2321	40	25.4	280	86700
GSBC5-111	0.2108	0.0044	6.51	0.25	0.224	0.007	0.840	2912	33	2047	33	1302	38	123.6	645	135000
GSBC5-159	0.2127	0.0031	11.52	0.28	0.393	0.008	0.796	2926	24	2566	23	2136	35	37.0	286	75400
GSBC5-013	0.2147	0.0048	12.53	0.41	0.423	0.010	0.732	2941	35	2645	30	2276	46	29.2	71	162700
GSBC5-085	0.2149	0.0043	9.39	0.31	0.317	0.008	0.792	2943	32	2377	29	1775	40	65.8	148	41970
GSBC5-068	0.2251	0.0043	6.64	0.20	0.214	0.005	0.775	3018	30	2065	26	1250	26	141.4	76	118000
GSBC5-053	0.2309	0.0041	7.01	0.27	0.220	0.007	0.888	3058	28	2113	33	1283	39	138.4	1416	258000
GSBC5-124	0.2457	0.0050	9.00	0.31	0.266	0.007	0.806	3157	32	2338	31	1518	38	107.9	277	45300
GSBC5-148	0.2556	0.0050	7.67	0.21	0.218	0.004	0.703	3220	31	2193	25	1270	22	153.6	825	133600
GSBC5-076	0.2743	0.0048	9.27	0.47	0.245	0.012	0.938	3331	27	2365	46	1413	60	135.8	367	64900
GSBC5-117	0.2811	0.0051	12.99	0.38	0.335	0.008	0.777	3369	28	2679	27	1863	36	80.8	484	100100
GSBC5-090	0.2844	0.0055	10.38	0.29	0.265	0.005	0.713	3387	30	2469	25	1513	27	123.8	332	100600
GSBC5-073	0.2849	0.0040	9.31	0.44	0.237	0.011	0.955	3390	22	2369	42	1371	55	147.2	307	185000
GSBC5-103	0.2869	0.0044	11.64	0.34	0.294	0.007	0.855	3401	24	2576	27	1662	37	104.6	788	81100
GSBC5-137	0.2998	0.0066	5.40	0.17	0.131	0.003	0.711	3469	33	1885	26	791	16	338.4	430	33700
GSBC5-101	0.3001	0.0048	10.93	0.37	0.264	0.008	0.884	3471	24	2517	31	1511	40	129.7	68	45120
GSBC5-081	0.3045	0.0049	15.28	0.42	0.364	0.008	0.817	3493	24	2833	26	2001	39	74.6	634	111000
GSBC5-079	0.3078	0.0073	16.13	0.52	0.380	0.008	0.679	3510	36	2885	30	2077	39	69.0	962	92500
GSBC5-039	0.3146	0.0062	22.77	0.78	0.525	0.015	0.815	3544	30	3217	33	2720	62	30.3	52	40470
GSBC5-044	0.3153	0.0048	13.04	0.60	0.300	0.013	0.943	3547	23	2683	42	1691	64	109.7	1254	109700
GSBC5-033	0.3371	0.0046	19.10	0.65	0.411	0.013	0.915	3650	21	3047	32	2219	58	64.4	587	129800
GSBC5-106	0.3433	0.0059	9.36	0.26	0.198	0.004	0.780	3678	26	2374	25	1163	23	216.1	1417	103100
GSBC5-098	0.3484	0.0056	22.67	0.81	0.472	0.015	0.894	3700	24	3213	34	2492	66	48.5	96	42900
GSBC5-120	0.3534	0.0053	19.31	0.49	0.396	0.008	0.805	3722	23	3057	24	2152	37	73.0	497	79600
GSBC5-078	0.3710	0.0082	22.51	1.06	0.440	0.018	0.885	3796	33	3206	45	2351	82	61.5	1117	112800
GSBC5-056	0.3790	0.0101	19.44	1.39	0.372	0.025	0.929	3828	40	3064	67	2039	115	87.7	655	74100
GSBC5-119	0.3800	0.0109	20.20	0.78	0.386	0.010	0.669	3832	43	3101	37	2102	46	82.3	1208	80200
GSBC5-038	0.4295	0.0081	6.70	0.20	0.113	0.003	0.778	4016	28	2073	26	691	15	480.9	1290	62400
Standards GSB17-C2,-C5																
og1-1	0.2935	0.0048	29.10	0.87	0.719	0.018	0.837	3436	25	3457	29	3492	67	-1.6	12	39380
og1-2	0.2938	0.0051	29.21	0.86	0.721	0.017	0.805	3438	27	3461	28	3500	63	-1.8	10	45900
og1-3	0.2972	0.0031	30.14	0.45	0.735	0.008	0.717	3456	16	3491	15	3554	29	-2.8	6	66510

og1-4	0.2977	0.0030	29.67	0.44	0.723	0.008	0.731	3458	16	3476	14	3507	29	-1.4	15	50700
og1-5	0.3005	0.0032	29.72	0.41	0.717	0.006	0.636	3473	16	3478	13	3486	24	-0.4	4	44880
og1-6	0.2986	0.0028	30.00	0.37	0.729	0.006	0.660	3463	14	3487	12	3529	22	-1.9	9	53180
og1-7	0.3000	0.0027	29.99	0.37	0.725	0.006	0.683	3470	14	3487	12	3515	23	-1.3	9	63760
og1-8	0.2983	0.0024	29.65	0.37	0.721	0.007	0.761	3461	12	3475	12	3500	25	-1.1	11	79300
og1-9	0.2974	0.0025	30.25	0.37	0.738	0.007	0.729	3457	13	3495	12	3562	24	-3.0	6	77800
og1-10	0.2995	0.0027	29.86	0.42	0.723	0.008	0.763	3468	14	3482	14	3507	29	-1.1	7	75500
og1-11	0.3006	0.0031	30.68	0.41	0.740	0.006	0.636	3473	16	3509	13	3572	23	-2.8	6	75000
og1-12	0.2989	0.0024	29.91	0.35	0.726	0.006	0.734	3465	12	3484	12	3517	23	-1.5	7	79600
og1-13	0.2980	0.0032	30.57	0.47	0.744	0.008	0.720	3460	17	3505	15	3585	31	-3.5	14	73500
og1-14	0.2995	0.0027	30.32	0.40	0.734	0.007	0.727	3468	14	3497	13	3549	26	-2.3	11	74700
og1-15	0.3015	0.0027	30.68	0.42	0.738	0.008	0.763	3478	14	3509	14	3563	29	-2.4	1	88000
og1-16	0.2981	0.0035	29.71	0.46	0.723	0.007	0.657	3460	18	3477	15	3507	28	-1.3	8	28490
og1-17	0.3016	0.0034	30.17	0.50	0.726	0.009	0.732	3478	17	3492	16	3517	33	-1.1	8	42450

GSB 17-D1 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBD1-277*	0.1354	0.0029	8.99	0.28	0.482	0.011	0.715	2169	37	2337	28	2535	46	-14.4	1950	174900
GSBD1-277	0.3035	0.0042	25.30	0.47	0.605	0.008	0.672	3488	21	3320	18	3048	30	14.4	1950	174900
> - 5% Disc.																
GSBD1-196*	0.1666	0.0026	10.39	0.28	0.452	0.010	0.819	2524	26	2470	25	2405	45	4.9	265	171100
GSBD1-196	0.1890	0.0022	12.10	0.18	0.465	0.004	0.631	2733	19	2613	14	2459	19	11.1	265	171100
GSBD1-261	0.1706	0.0020	11.37	0.27	0.483	0.010	0.874	2563	19	2554	22	2542	43	0.9	12	216300
GSBD1-239	0.1717	0.0022	11.06	0.28	0.467	0.010	0.867	2574	21	2528	23	2470	45	4.2	20	171800
GSBD1-287*	0.1721	0.0020	10.98	0.27	0.463	0.010	0.872	2578	20	2522	22	2452	43	5.1	55	122300
GSBD1-287	0.1765	0.0015	11.34	0.12	0.466	0.003	0.577	2620	14	2552	10	2466	12	6.3	55	122300
GSBD1-266	0.1728	0.0023	11.71	0.29	0.491	0.010	0.849	2585	22	2581	23	2577	45	0.3	12	76200
GSBD1-282*	0.1728	0.0045	11.41	0.49	0.479	0.016	0.789	2585	43	2557	39	2523	70	2.5	44	26000
GSBD1-282	0.1820	0.0060	12.17	0.50	0.485	0.012	0.600	2671	54	2618	38	2549	52	4.8	44	26000
GSBD1-232*	0.1730	0.0029	11.37	0.33	0.477	0.011	0.822	2587	27	2554	27	2512	50	3.0	23	51400
GSBD1-232	0.1772	0.0029	11.63	0.27	0.476	0.008	0.703	2627	27	2575	21	2509	34	4.7	23	51400
GSBD1-217	0.1731	0.0020	11.37	0.28	0.477	0.010	0.888	2588	19	2554	23	2512	46	3.0	79	361700
GSBD1-273	0.1736	0.0023	12.08	0.30	0.505	0.011	0.845	2593	22	2611	23	2634	45	-1.6	7	136700
GSBD1-260	0.1739	0.0021	12.07	0.29	0.503	0.010	0.868	2596	20	2610	22	2628	45	-1.2	10	188100
GSBD1-218	0.1740	0.0021	11.56	0.28	0.482	0.010	0.863	2596	20	2570	22	2536	43	2.4	106	309400
GSBD1-191	0.1749	0.0021	11.83	0.28	0.490	0.010	0.870	2605	20	2591	22	2572	44	1.3	19	199400
GSBD1-219	0.1751	0.0041	11.38	0.39	0.471	0.012	0.724	2607	38	2554	31	2489	50	4.7	16	39200
GSBD1-293	0.1757	0.0024	11.99	0.30	0.495	0.010	0.834	2613	23	2604	23	2592	45	0.8	3	68000
GSBD1-233	0.1760	0.0032	11.96	0.71	0.493	0.028	0.951	2616	30	2602	54	2584	119	1.2	18	92000
GSBD1-192*	0.1769	0.0023	12.15	0.31	0.498	0.011	0.862	2624	22	2616	24	2606	48	0.7	45	41750
GSBD1-192	0.1830	0.0023	12.65	0.19	0.501	0.004	0.545	2680	21	2654	14	2620	18	2.3	45	41750
GSBD1-227	0.1784	0.0032	11.91	0.33	0.484	0.011	0.778	2638	29	2597	26	2545	46	3.7	33	48400
GSBD1-206	0.1844	0.0023	12.66	0.31	0.498	0.011	0.867	2693	20	2655	23	2605	45	3.4	55	123100
GSBD1-259	0.2055	0.0023	16.31	0.39	0.576	0.012	0.887	2870	18	2895	23	2931	50	-2.1	20	198900
GSBD1-284	0.2084	0.0050	17.10	0.68	0.595	0.019	0.804	2893	38	2940	38	3010	77	-3.9	19	31100
GSBD1-290*	0.2110	0.0122	17.16	1.55	0.590	0.041	0.767	2913	91	2944	83	2989	163	-2.5	258	265200
GSBD1-290	0.2384	0.0038	19.69	1.22	0.599	0.036	0.967	3109	25	3076	58	3026	144	2.8	258	265200
GSBD1-278	0.2172	0.0026	17.15	0.42	0.573	0.012	0.869	2960	19	2943	23	2919	50	1.4	226	256300
GSBD1-286	0.2331	0.0030	18.90	0.47	0.588	0.012	0.854	3073	20	3037	24	2981	50	3.1	30	201000
GSBD1-221	0.2413	0.0031	19.93	0.49	0.599	0.013	0.854	3129	20	3088	23	3026	50	3.4	9	83400
GSBD1-205	0.2877	0.0032	27.11	0.63	0.683	0.014	0.876	3405	17	3387	23	3357	53	1.4	16	241100
GSBD1-299	0.3263	0.0046	32.94	0.84	0.732	0.016	0.837	3600	21	3579	25	3542	58	1.6	17	101300
GSBD1-197	0.3268	0.0037	32.46	0.78	0.720	0.015	0.881	3602	17	3564	23	3497	57	3.0	39	214000
GSBD1-209	0.3503	0.0040	37.36	0.91	0.774	0.017	0.881	3708	17	3703	24	3694	60	0.4	72	300200
GSBD1-281	0.3503	0.0045	37.19	0.94	0.770	0.017	0.862	3708	19	3698	25	3680	61	0.8	18	78700
GSBD1-190	0.3908	0.0047	42.82	1.03	0.795	0.017	0.866	3874	18	3838	24	3770	59	2.8	10	109000
> 5% Disc.																
GSBD1-300	0.1671	0.0022	10.10	0.26	0.438	0.010	0.863	2529	22	2444	24	2343	44	7.9	14	222900
GSBD1-251*	0.1676	0.0025	10.40	0.29	0.450	0.010	0.846	2534	24	2471	25	2396	46	5.8	101	168000
GSBD1-251	0.1784	0.0022	11.21	0.19	0.456	0.005	0.665	2638	20	2540	15	2420	22	9.0	101	168000
GSBD1-279	0.1703	0.0024	10.56	0.28	0.450	0.010	0.850	2561	23	2485	25	2394	45	6.9	46	112100
GSBD1-269	0.1710	0.0021	10.35	0.26	0.439	0.009	0.870	2567	20	2467	23	2347	42	9.4	30	166500
GSBD1-253	0.1717	0.0022	10.89	0.27	0.460	0.010	0.850	2574	21	2514	22	2440	42	5.5	33	151800
GSBD1-243	0.1727	0.0034	10.95	0.34	0.460	0.011	0.771	2584	32	2519	28	2438	48	6.0	40	60300
GSBD1-247*	0.1748	0.0036	10.86	0.34	0.451	0.011	0.753	2604	34	2512	29	2399	48	8.6	68	49100

GSBD1-247	0.1849	0.0036	11.65	0.25	0.457	0.004	0.443	2697	32	2576	20	2425	19	11.2	68	49100
GSBD1-289	0.1750	0.0021	11.12	0.27	0.461	0.010	0.866	2606	20	2533	22	2443	42	6.7	33	208900
GSBD1-223	0.1753	0.0024	10.83	0.27	0.448	0.009	0.842	2609	22	2509	23	2386	42	9.3	41	112200
GSBD1-244	0.1782	0.0034	11.17	0.33	0.455	0.010	0.764	2636	31	2538	27	2417	45	9.1	35	25470
GSBD1-250	0.1845	0.0030	12.22	0.33	0.480	0.010	0.796	2694	27	2622	25	2529	45	6.5	10	78500
GSBD1-194	0.1925	0.0022	12.91	0.33	0.487	0.011	0.889	2764	19	2673	23	2556	47	8.1	239	595000
GSBD1-214	0.2084	0.0024	15.18	0.36	0.528	0.011	0.873	2893	19	2826	22	2734	46	5.8	34	261900
GSBD1-203	0.2208	0.0025	16.50	0.39	0.542	0.011	0.879	2987	18	2906	22	2792	46	7.0	20	184200
GSBD1-255	0.2269	0.0060	17.55	0.69	0.561	0.016	0.740	3030	42	2965	37	2871	67	5.6	21	83500
GSBD1-276	0.2444	0.0028	19.23	0.49	0.571	0.013	0.896	3149	18	3054	24	2911	53	8.2	14	165000
GSBD1-256*	0.2559	0.0040	20.74	0.60	0.588	0.014	0.840	3222	25	3127	28	2981	58	8.1	144	178000
GSBD1-256	0.2662	0.0022	21.86	0.32	0.596	0.007	0.829	3284	13	3177	14	3012	29	9.0	144	178000
GSBD1-201*	0.2713	0.0077	22.82	0.89	0.610	0.016	0.689	3314	44	3219	37	3070	65	7.9	29	69300
GSBD1-201	0.2782	0.0058	23.55	0.62	0.614	0.010	0.616	3353	32	3250	25	3086	40	8.6	29	69300
GSBD1-238*	0.2812	0.0040	23.95	0.64	0.618	0.014	0.846	3370	22	3266	26	3101	56	8.7	153	53200
GSBD1-238	0.2956	0.0034	25.55	0.38	0.627	0.006	0.646	3447	18	3330	15	3138	24	9.9	153	53200
GSBD1-222	0.3307	0.0056	30.89	0.89	0.677	0.016	0.812	3620	26	3515	28	3334	61	8.6	20	134400
> 10 % Disc.																
GSBD1-200*	0.1591	0.0030	8.28	0.30	0.378	0.012	0.853	2446	32	2262	33	2065	55	18.5	96	211000
GSBD1-200	0.1639	0.0020	8.58	0.23	0.380	0.009	0.887	2496	20	2295	24	2075	41	20.3	96	211000
GSBD1-241*	0.1664	0.0033	9.57	0.30	0.417	0.010	0.785	2522	33	2394	29	2248	47	12.2	141	108000
GSBD1-241	0.1834	0.0027	10.76	0.22	0.426	0.006	0.679	2684	24	2503	18	2285	26	17.4	141	108000
GSBD1-267	0.1685	0.0024	9.29	0.26	0.400	0.010	0.863	2543	24	2367	25	2168	45	17.3	32	125000
GSBD1-254*	0.1770	0.0030	10.10	0.29	0.414	0.010	0.810	2625	28	2444	26	2232	44	17.6	37	62400
GSBD1-254	0.1853	0.0025	10.69	0.18	0.418	0.004	0.597	2701	22	2496	15	2253	19	19.9	37	62400
GSBD1-285*	0.1787	0.0058	10.37	0.48	0.421	0.014	0.713	2641	53	2469	42	2265	63	16.6	125	164000
GSBD1-285	0.1979	0.0029	11.79	0.32	0.432	0.010	0.845	2809	24	2588	25	2315	45	21.4	125	164000
GSBD1-195	0.1812	0.0020	10.62	0.25	0.425	0.009	0.876	2664	19	2491	21	2284	39	16.6	70	453600
GSBD1-231*	0.2007	0.0031	13.21	0.37	0.477	0.011	0.842	2832	25	2694	26	2515	49	12.6	76	146200
GSBD1-231	0.2056	0.0019	13.60	0.20	0.480	0.006	0.778	2871	15	2723	14	2527	24	13.6	76	146200
GSBD1-246	0.2077	0.0040	13.71	0.44	0.479	0.012	0.798	2888	31	2730	30	2522	53	14.5	43	103000
GSBD1-208*	0.2253	0.0031	16.22	0.44	0.522	0.012	0.861	3019	22	2890	25	2708	51	11.5	86	282800
GSBD1-208	0.2334	0.0016	16.94	0.21	0.526	0.006	0.841	3076	11	2931	12	2726	24	12.8	86	282800
GSBD1-234*	0.2688	0.0052	19.90	0.66	0.537	0.015	0.818	3299	30	3087	32	2771	61	19.1	176	83700
GSBD1-234	0.3021	0.0039	23.33	0.47	0.560	0.009	0.769	3481	20	3241	19	2867	36	21.4	176	83700
GSBD1-270	0.2749	0.0030	20.61	0.51	0.544	0.012	0.893	3334	17	3120	24	2799	50	19.1	93	283400
GSBD1-220*	0.2893	0.0060	22.91	0.74	0.574	0.014	0.768	3414	32	3223	31	2925	58	16.7	54	44100
GSBD1-220	0.3109	0.0051	24.92	0.53	0.581	0.008	0.638	3525	25	3305	21	2954	32	19.3	54	44100
> 20 % Disc.																
GSBD1-204	0.0837	0.0011	0.72	0.02	0.062	0.001	0.856	1287	25	550	11	389	8	230.5	132	249200
GSBD1-265	0.1318	0.0032	4.96	0.17	0.273	0.006	0.689	2122	42	1813	28	1556	32	36.4	21	21900
GSBD1-237	0.1339	0.0023	3.37	0.10	0.183	0.004	0.806	2150	30	1498	23	1082	23	98.7	103	78300
GSBD1-262	0.1356	0.0024	5.39	0.20	0.288	0.009	0.879	2172	31	1883	31	1632	47	33.1	132	86300
GSBD1-291	0.1429	0.0019	6.44	0.16	0.327	0.007	0.848	2263	22	2038	21	1823	33	24.1	209	445900
GSBD1-297	0.1432	0.0022	4.55	0.15	0.231	0.007	0.889	2266	27	1740	28	1337	36	69.5	274	420000
GSBD1-215	0.1437	0.0016	6.24	0.16	0.315	0.007	0.896	2272	19	2010	22	1765	35	28.7	219	798900
GSBD1-248	0.1577	0.0037	6.44	0.21	0.296	0.007	0.697	2431	39	2038	28	1672	33	45.4	83	171000
GSBD1-240	0.1593	0.0019	7.83	0.22	0.356	0.009	0.903	2448	20	2211	25	1965	43	24.6	50	379000
GSBD1-242	0.1652	0.0054	7.79	0.33	0.342	0.009	0.639	2510	54	2208	37	1897	44	32.3	35	74000
GSBD1-199	0.1682	0.0022	8.03	0.22	0.346	0.008	0.879	2540	22	2234	24	1916	40	32.6	72	98400
GSBD1-292	0.1701	0.0027	5.37	0.15	0.229	0.005	0.823	2559	26	1881	24	1330	28	92.4	1085	299000
GSBD1-207	0.1733	0.0031	8.77	0.34	0.367	0.012	0.882	2590	30	2314	34	2015	58	28.5	219	417000
GSBD1-258	0.1753	0.0022	6.92	0.21	0.286	0.008	0.908	2609	21	2102	26	1624	39	60.7	189	393800
GSBD1-225	0.1761	0.0021	8.83	0.23	0.364	0.008	0.885	2616	20	2320	23	1999	39	30.9	117	248300
GSBD1-252	0.1792	0.0036	7.89	0.25	0.320	0.008	0.779	2645	33	2219	28	1787	39	48.0	25	29200
GSBD1-211	0.1832	0.0022	10.22	0.25	0.405	0.009	0.872	2682	20	2455	22	2190	39	22.5	220	550800
GSBD1-210	0.1846	0.0024	8.28	0.24	0.325	0.009	0.897	2695	21	2262	26	1816	41	48.4	373	748800
GSBD1-249	0.1860	0.0045	9.39	0.35	0.366	0.011	0.766	2707	39	2377	34	2011	50	34.6	36	31200
GSBD1-228*	0.1866	0.0034	10.60	0.38	0.412	0.012	0.854	2712	30	2488	32	2224	57	22.0	79	136000
GSBD1-228	0.1994	0.0020	11.50	0.26	0.418	0.008	0.893	2821	16	2564	21	2252	38	25.3	79	136000
GSBD1-216	0.1895	0.0033	9.39	0.36	0.360	0.012	0.890	2738	28	2377	34	1980	58	38.3	449	292500
GSBD1-229	0.1912	0.0054	7.61	0.32	0.289	0.009	0.735	2753	46	2186	37	1636	44	68.3	53	24400
GSBD1-302	0.1969	0.0043	5.18	0.18	0.191	0.005	0.777	2801	35	1849	29	1126	28	148.8	380	77000
GSBD1-230	0.1982	0.0027	5.76	0.16	0.211	0.005	0.874	2811	22	1940	24	1233	27	128.1	177	121900
GSBD1-226	0.2019	0.0059	6.51	0.26	0.234	0.006	0.687	2842	47	2047	35	1354	33	109.9	260	84000
GSBD1-235	0.2051	0.0049	10.76	0.40	0.381	0.011	0.754	2867	39	2503	34	2079	49	37.9	73	46700
GSBD1-301	0.2140	0.0040	6.38	0.20	0.216	0.005	0.801	2936	30	2029	27	1262	29	132.7	204	45800

GSBD1-298	0.2141	0.0028	11.38	0.30	0.386	0.009	0.869	2937	21	2555	24	2102	41	39.7	278	280000
GSBD1-212	0.2143	0.0040	12.51	0.40	0.423	0.011	0.810	2938	30	2644	30	2276	50	29.1	28	70000
GSBD1-274	0.2145	0.0048	8.81	0.40	0.298	0.012	0.867	2940	36	2319	40	1681	58	74.8	120	38300
GSBD1-283	0.2165	0.0052	12.51	0.57	0.419	0.016	0.852	2955	38	2643	42	2256	74	31.0	142	158000
GSBD1-213	0.2220	0.0033	7.38	0.21	0.241	0.006	0.852	2995	24	2158	25	1392	31	115.2	1020	211000
GSBD1-202	0.2353	0.0044	11.60	0.33	0.358	0.008	0.754	3088	29	2573	26	1970	36	56.7	2196	384800
GSBD1-272	0.2366	0.0046	11.91	0.36	0.365	0.009	0.771	3097	30	2598	28	2007	40	54.3	443	78300
GSBD1-296	0.2376	0.0041	14.31	0.42	0.437	0.010	0.809	3104	28	2770	28	2336	47	32.9	169	58000
GSBD1-263	0.2399	0.0057	14.55	0.53	0.440	0.012	0.751	3119	37	2786	34	2350	53	32.7	55	38500
GSBD1-245	0.2420	0.0042	10.01	0.29	0.300	0.007	0.800	3133	27	2435	26	1691	34	85.3	239	92000
GSBD1-264	0.2583	0.0057	8.94	0.30	0.251	0.006	0.756	3236	34	2332	30	1444	33	124.1	780	110000
GSBD1-275	0.2613	0.0033	12.91	0.34	0.358	0.008	0.880	3255	20	2673	25	1975	40	64.8	420	208300
GSBD1-271	0.2652	0.0073	9.92	0.35	0.271	0.006	0.630	3278	43	2427	32	1547	31	111.9	4230	437000
GSBD1-193	0.2657	0.0030	18.83	0.46	0.514	0.011	0.887	3281	18	3033	23	2673	47	22.7	179	469000
GSBD1-295	0.2685	0.0035	17.32	0.52	0.468	0.013	0.899	3297	21	2953	28	2474	55	33.3	134	593000
GSBD1-288	0.2730	0.0037	9.18	0.26	0.244	0.006	0.878	3323	21	2356	26	1407	31	136.2	1724	306300
GSBD1-257	0.2786	0.0046	16.53	0.46	0.430	0.009	0.797	3355	26	2908	26	2307	42	45.4	1048	142600
GSBD1-224	0.2786	0.0037	12.40	0.34	0.323	0.008	0.878	3355	20	2635	26	1803	38	86.0	531	182200
GSBD1-268	0.2801	0.0031	20.84	0.60	0.540	0.014	0.923	3363	17	3131	27	2782	60	20.9	217	462000
GSBD1-236	0.3105	0.0043	12.89	0.71	0.301	0.016	0.968	3523	21	2671	51	1696	80	107.7	459	158700
GSBD1-294	0.3321	0.0072	21.11	0.80	0.461	0.014	0.820	3627	33	3144	36	2444	63	48.4	144	430800
GSBD1-189	0.3555	0.0047	13.77	0.38	0.281	0.007	0.879	3731	20	2734	26	1596	34	133.7	807	116200
GSBD1-198	0.3667	0.0061	17.20	0.50	0.340	0.008	0.815	3778	25	2946	27	1887	38	100.2	1162	128900
GSBD1-280	0.3673	0.0051	12.74	0.36	0.252	0.006	0.872	3780	21	2660	26	1446	32	161.4	4427	323400

GSB 17-D2 12-2mm								**207Pb/**		**207Pb/**		**206Pb/**			**Mass**	**Mass**
	207Pb/		**207Pb/**		**206Pb/**			**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**%**	**204**	**206**
name	**206Pb**	**2 σ**	**235U**	**2 σ**	**238U**	**2 σ**	**ρ**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**age (Ma)**	**(Ma)**	**disc.**	**cps**	**cps**
GSBD2-120	0.1779	0.0027	14.58	0.41	0.594	0.014	0.845	2633	25	2788	26	3006	57	-12.4	34	64620
GSBD2-047*	0.3996	0.0091	52.62	2.30	0.955	0.036	0.853	3908	34	4043	43	4322	116	-9.6	4130	294000
GSBD2-047	0.4139	0.0064	55.13	2.02	0.966	0.032	0.906	3960	23	4090	36	4358	104	-9.1	4130	294000
> - 5% Disc.																
GSBD2-111	0.1700	0.0019	10.96	0.24	0.467	0.009	0.869	2558	18	2519	20	2472	39	3.5	33	628600
GSBD2-076	0.1709	0.0023	10.95	0.26	0.465	0.009	0.826	2566	22	2519	22	2461	40	4.3	28	168000
GSBD2-156	0.1716	0.0020	11.52	0.25	0.487	0.009	0.858	2573	19	2566	20	2558	40	0.6	4	289700
GSBD2-133	0.1722	0.0022	11.49	0.26	0.484	0.009	0.834	2579	21	2564	21	2545	40	1.4	37	218590
GSBD2-172	0.1723	0.0020	11.63	0.26	0.490	0.009	0.854	2580	19	2575	21	2569	40	0.5	4	199600
GSBD2-186	0.1723	0.0022	11.37	0.26	0.479	0.009	0.830	2580	21	2554	21	2522	40	2.3	17	192000
GSBD2-149	0.1724	0.0021	11.36	0.30	0.478	0.011	0.885	2581	20	2553	24	2517	48	2.5	12	138530
GSBD2-160	0.1741	0.0021	11.32	0.25	0.472	0.009	0.845	2597	20	2550	20	2491	39	4.3	23	166500
GSBD2-181	0.1745	0.0021	11.85	0.26	0.492	0.009	0.847	2601	20	2592	21	2581	40	0.8	8	172910
GSBD2-014	0.1751	0.0028	11.62	0.30	0.481	0.010	0.781	2607	27	2574	24	2532	42	2.9	19	32100
GSBD2-127	0.1755	0.0021	11.54	0.26	0.477	0.009	0.843	2611	20	2567	21	2513	39	3.9	18	135100
GSBD2-110	0.1761	0.0022	12.18	0.28	0.502	0.009	0.836	2616	21	2619	21	2622	41	-0.2	4	115400
GSBD2-150	0.1762	0.0030	11.72	0.30	0.483	0.010	0.760	2617	28	2583	24	2539	41	3.1	1	40000
GSBD2-089	0.1814	0.0026	12.06	0.29	0.482	0.009	0.800	2666	24	2609	22	2537	40	5.1	8	72300
GSBD2-011	0.1834	0.0022	12.50	0.29	0.494	0.010	0.854	2684	20	2642	21	2589	42	3.7	75	184900
GSBD2-080	0.1929	0.0040	13.76	0.41	0.517	0.011	0.719	2767	34	2733	28	2688	47	2.9	3	24630
GSBD2-042	0.2041	0.0027	14.97	0.34	0.532	0.010	0.825	2859	21	2813	22	2749	42	4.0	12	248000
GSBD2-052	0.2046	0.0025	14.90	0.37	0.528	0.011	0.872	2863	20	2809	23	2733	48	4.8	157	751200
GSBD2-078	0.2055	0.0026	15.57	0.36	0.549	0.011	0.835	2870	20	2851	22	2823	44	1.7	26	151900
GSBD2-102	0.2069	0.0039	16.51	0.46	0.579	0.012	0.742	2881	30	2907	27	2943	49	-2.1	26	254000
GSBD2-012	0.2075	0.0026	15.78	0.36	0.552	0.011	0.842	2886	20	2863	22	2831	44	1.9	14	100810
GSBD2-162	0.2125	0.0036	16.01	0.41	0.546	0.011	0.754	2925	27	2877	24	2810	44	4.1	26	216000
GSBD2-060	0.2199	0.0030	17.56	0.42	0.579	0.011	0.821	2980	22	2966	22	2945	46	1.2	17	93100
GSBD2-171	0.2399	0.0026	19.83	0.43	0.599	0.011	0.861	3119	17	3083	21	3027	45	3.0	20	423300
GSBD2-139	0.2411	0.0027	20.56	0.46	0.618	0.012	0.864	3127	18	3118	21	3104	47	0.8	29	228800
GSBD2-105*	0.2426	0.0053	19.67	0.64	0.588	0.014	0.738	3137	34	3075	31	2981	57	5.2	134	83280
GSBD2-105	0.2578	0.0040	21.50	0.54	0.605	0.012	0.785	3233	24	3161	24	3050	48	6.0	134	83280
GSBD2-055	0.2443	0.0030	20.85	0.47	0.619	0.012	0.841	3148	19	3132	22	3106	46	1.4	14	368200
GSBD2-050	0.3021	0.0034	29.53	0.65	0.709	0.013	0.859	3481	17	3471	21	3455	50	0.8	62	466600
GSBD2-056	0.3065	0.0050	28.57	0.74	0.676	0.014	0.773	3503	25	3439	25	3329	52	5.2	29	150600
GSBD2-067	0.3249	0.0038	32.40	0.73	0.723	0.014	0.855	3593	18	3562	22	3508	52	2.4	15	199100
GSBD2-045	0.3348	0.0049	34.10	0.84	0.739	0.015	0.803	3639	22	3613	24	3566	54	2.1	0	67400
> 5% Disc.																
GSBD2-081	0.1645	0.0019	9.66	0.21	0.426	0.008	0.859	2502	19	2403	20	2288	36	9.4	16	287900

GSBD2-084	0.1646	0.0020	9.73	0.24	0.429	0.009	0.873	2503	20	2409	22	2300	42	8.9	49	271000
GSBD2-070*	0.1686	0.0028	10.39	0.35	0.447	0.013	0.874	2544	27	2470	31	2381	58	6.8	813	375200
GSBD2-070	0.1778	0.0023	11.03	0.33	0.450	0.012	0.904	2632	21	2526	27	2395	54	9.9	813	375200
GSBD2-109	0.1705	0.0021	10.61	0.24	0.452	0.009	0.839	2563	20	2490	21	2402	38	6.7	23	224800
GSBD2-003*	0.1712	0.0028	10.49	0.30	0.445	0.010	0.816	2569	27	2479	26	2371	45	8.4	23	67000
GSBD2-003	0.1739	0.0030	10.66	0.29	0.445	0.009	0.776	2596	28	2494	25	2371	42	9.5	23	67000
GSBD2-064	0.1724	0.0019	10.71	0.24	0.450	0.009	0.869	2581	19	2498	21	2397	39	7.7	69	334900
GSBD2-140	0.1737	0.0021	11.00	0.25	0.459	0.009	0.855	2594	20	2523	21	2436	40	6.5	150	242400
GSBD2-034	0.1740	0.0021	10.95	0.25	0.456	0.009	0.842	2596	20	2519	21	2423	38	7.2	10	178200
GSBD2-163	0.1741	0.0021	10.66	0.24	0.444	0.009	0.851	2597	20	2494	21	2368	38	9.7	61	197700
GSBD2-129	0.1747	0.0021	10.93	0.25	0.454	0.009	0.857	2603	20	2517	21	2413	39	7.9	73	190500
GSBD2-023	0.1799	0.0022	11.49	0.26	0.463	0.009	0.834	2652	20	2564	21	2453	38	8.1	40	259200
GSBD2-157	0.1811	0.0021	11.85	0.28	0.475	0.010	0.867	2663	19	2593	22	2504	42	6.3	20	186000
GSBD2-033	0.1845	0.0023	11.88	0.27	0.467	0.009	0.847	2694	20	2595	21	2470	40	9.0	17	248500
GSBD2-136	0.1880	0.0034	12.64	0.35	0.488	0.010	0.756	2725	29	2653	25	2560	44	6.4	4	26020
GSBD2-164	0.1889	0.0028	12.71	0.39	0.488	0.013	0.882	2733	24	2658	29	2562	57	6.7	51	294000
GSBD2-144	0.1911	0.0027	12.96	0.32	0.492	0.010	0.817	2752	23	2677	23	2579	42	6.7	41	498400
GSBD2-048	0.1945	0.0027	13.16	0.32	0.491	0.010	0.828	2781	22	2691	23	2573	43	8.1	34	166000
GSBD2-092	0.1957	0.0022	13.52	0.31	0.501	0.010	0.870	2791	18	2717	21	2619	42	6.6	29	1232100
GSBD2-053*	0.2013	0.0026	14.01	0.35	0.505	0.011	0.852	2837	21	2750	23	2634	46	7.7	32	106000
GSBD2-053	0.2097	0.0027	14.75	0.34	0.510	0.010	0.829	2903	21	2799	22	2657	41	9.3	32	106000
GSBD2-069	0.2039	0.0025	13.98	0.33	0.497	0.010	0.853	2858	20	2749	22	2603	43	9.8	64	316900
GSBD2-073*	0.2075	0.0029	14.67	0.39	0.513	0.012	0.853	2886	22	2794	25	2668	49	8.2	57	200000
GSBD2-073	0.2156	0.0029	15.41	0.38	0.518	0.011	0.841	2948	21	2841	23	2692	45	9.5	57	200000
GSBD2-028*	0.2165	0.0033	15.71	0.43	0.526	0.012	0.829	2955	24	2860	26	2726	50	8.4	107	120000
GSBD2-028	0.2271	0.0035	16.69	0.42	0.533	0.011	0.802	3032	24	2917	24	2754	46	10.1	107	120000
GSBD2-095	0.2706	0.0054	22.50	0.68	0.603	0.014	0.752	3310	31	3206	29	3042	55	8.8	16	21210
GSBD2-130	0.2708	0.0034	22.68	0.52	0.607	0.012	0.840	3311	19	3213	22	3059	47	8.2	19	163100
GSBD2-180	0.2749	0.0033	23.08	0.52	0.609	0.012	0.847	3334	19	3230	22	3066	46	8.7	17	263200
GSBD2-083	0.2838	0.0031	24.65	0.54	0.630	0.012	0.863	3384	17	3294	21	3149	47	7.5	45	271600
GSBD2-103	0.2859	0.0032	25.40	0.56	0.644	0.012	0.862	3395	17	3324	21	3206	48	5.9	37	271200
GSBD2-031	0.3057	0.0035	27.56	0.61	0.654	0.012	0.859	3499	17	3404	21	3243	48	7.9	58	728000
GSBD2-155	0.3074	0.0035	27.27	0.61	0.643	0.012	0.865	3508	17	3393	22	3202	49	9.5	24	319100
GSBD2-057	0.3223	0.0036	29.25	0.64	0.658	0.012	0.856	3581	17	3462	21	3260	48	9.8	64	261900
GSBD2-006	0.3358	0.0046	31.05	0.74	0.671	0.013	0.818	3644	21	3521	23	3309	50	10.1	23	104600
GSBD2-019	0.4028	0.0051	42.56	1.01	0.766	0.015	0.842	3920	19	3832	23	3668	55	6.9	16	213900
> 10 % Disc.																
GSBD2-126*	0.1423	0.0021	6.91	0.19	0.352	0.008	0.831	2255	26	2100	24	1945	38	16.0	136	371000
GSBD2-126	0.1461	0.0024	7.13	0.19	0.354	0.007	0.785	2301	28	2128	23	1954	35	17.7	136	371000
GSBD2-137	0.1486	0.0018	7.85	0.18	0.383	0.008	0.860	2330	20	2214	21	2090	36	11.5	52	461000
GSBD2-079*	0.1554	0.0018	8.15	0.19	0.380	0.008	0.879	2407	19	2248	21	2078	37	15.8	210	704000
GSBD2-079	0.1583	0.0018	8.34	0.18	0.382	0.007	0.862	2438	19	2269	20	2086	34	16.9	210	704000
GSBD2-037	0.1568	0.0022	7.92	0.20	0.367	0.008	0.832	2421	23	2222	22	2013	36	20.3	47	169000
GSBD2-112*	0.1603	0.0026	9.11	0.27	0.412	0.010	0.832	2459	28	2349	27	2225	46	10.5	149	235300
GSBD2-112	0.1749	0.0024	10.10	0.26	0.419	0.009	0.847	2605	22	2444	23	2256	41	15.5	149	235300
GSBD2-090	0.1638	0.0019	9.21	0.21	0.408	0.008	0.851	2495	20	2359	20	2205	35	13.1	85	337400
GSBD2-038*	0.1645	0.0024	8.93	0.31	0.394	0.013	0.907	2502	25	2331	32	2140	58	16.9	415	283000
GSBD2-038	0.1768	0.0021	9.75	0.30	0.400	0.011	0.925	2623	19	2411	28	2169	52	21.0	415	283000
GSBD2-185	0.1659	0.0019	9.45	0.21	0.413	0.008	0.869	2517	19	2382	21	2229	37	12.9	1604	883400
GSBD2-174	0.1666	0.0022	9.19	0.22	0.400	0.008	0.839	2524	22	2357	22	2169	37	16.4	33	122300
GSBD2-046*	0.1697	0.0022	9.90	0.25	0.423	0.009	0.862	2555	22	2425	23	2274	42	12.4	146	161900
GSBD2-046	0.1828	0.0023	10.84	0.25	0.430	0.008	0.843	2678	21	2509	22	2305	38	16.2	146	161900
GSBD2-121*	0.1699	0.0051	9.40	0.37	0.401	0.010	0.638	2557	49	2377	35	2174	46	17.6	155	129600
GSBD2-121	0.1854	0.0027	10.32	0.26	0.404	0.009	0.828	2702	23	2464	23	2187	39	23.5	155	129600
GSBD2-142	0.1701	0.0021	10.13	0.24	0.432	0.009	0.853	2559	20	2447	21	2315	39	10.5	32	222600
GSBD2-158	0.1706	0.0020	9.87	0.23	0.420	0.008	0.862	2564	20	2422	21	2258	38	13.5	46	252900
GSBD2-039*	0.1707	0.0021	10.01	0.26	0.425	0.010	0.886	2565	20	2436	24	2285	45	12.2	65	182200
GSBD2-039	0.1764	0.0021	10.40	0.26	0.428	0.009	0.871	2619	20	2471	23	2295	41	14.1	65	182200
GSBD2-043	0.1717	0.0022	9.66	0.25	0.408	0.009	0.865	2574	21	2403	23	2206	41	16.7	36	274300
GSBD2-122	0.1756	0.0027	10.36	0.29	0.428	0.010	0.836	2612	25	2468	25	2297	44	13.7	41	328100
GSBD2-082	0.1776	0.0021	10.57	0.25	0.432	0.009	0.859	2631	20	2486	22	2313	39	13.7	124	178100
GSBD2-123	0.1777	0.0026	10.36	0.30	0.423	0.011	0.867	2632	24	2468	27	2274	49	15.7	46	109600
GSBD2-013*	0.1829	0.0031	10.73	0.33	0.425	0.011	0.836	2679	28	2500	28	2284	49	17.3	92	196000
GSBD2-013	0.1905	0.0031	11.32	0.32	0.431	0.010	0.810	2746	27	2550	26	2310	44	18.9	92	196000
GSBD2-010*	0.1918	0.0023	11.85	0.30	0.448	0.010	0.876	2758	20	2593	23	2387	44	15.5	103	246100
GSBD2-010	0.2004	0.0024	12.51	0.29	0.453	0.009	0.854	2829	20	2644	22	2408	40	17.5	103	246100
GSBD2-005*	0.1949	0.0062	12.52	0.54	0.466	0.014	0.677	2784	51	2644	40	2466	60	12.9	26	9990

GSBD2-005	0.2214	0.0066	14.60	0.57	0.478	0.012	0.654	2991	47	2790	37	2520	53	18.7	26	9990
GSBD2-020*	0.1956	0.0029	11.84	0.34	0.439	0.011	0.847	2790	24	2592	26	2346	47	18.9	280	169000
GSBD2-020	0.2227	0.0038	13.93	0.38	0.454	0.010	0.778	3000	27	2745	26	2412	43	24.4	280	169000
GSBD2-002	0.1987	0.0029	12.27	0.32	0.448	0.010	0.829	2816	24	2626	24	2386	43	18.0	43	215900
GSBD2-044	0.2019	0.0023	12.64	0.32	0.454	0.010	0.887	2842	19	2654	23	2414	45	17.7	56	318000
GSBD2-017	0.2104	0.0031	14.15	0.37	0.488	0.011	0.827	2909	24	2760	25	2562	46	13.5	53	316800
GSBD2-113	0.2135	0.0044	14.59	0.44	0.496	0.011	0.741	2932	33	2789	28	2595	48	13.0	38	88000
GSBD2-058*	0.2205	0.0041	15.48	0.49	0.509	0.013	0.803	2984	30	2845	30	2653	55	12.5	165	88000
GSBD2-058	0.2391	0.0050	17.05	0.52	0.517	0.012	0.731	3114	33	2938	29	2687	49	15.9	165	88000
GSBD2-016*	0.2238	0.0063	15.92	0.68	0.516	0.017	0.752	3008	45	2872	40	2682	70	12.2	3630	429000
GSBD2-016	0.3352	0.0039	27.27	0.77	0.590	0.015	0.912	3641	18	3393	27	2989	62	21.8	3630	429000
GSBD2-165*	0.2280	0.0103	15.78	0.86	0.502	0.016	0.570	3038	70	2864	51	2622	67	15.9	91	73000
GSBD2-165	0.2375	0.0037	16.36	0.44	0.500	0.011	0.811	3103	25	2898	25	2612	47	18.8	91	73000
GSBD2-175	0.2380	0.0034	16.40	0.39	0.500	0.010	0.805	3107	22	2900	23	2613	41	18.9	313	98800
GSBD2-004	0.2588	0.0064	19.98	0.73	0.560	0.015	0.731	3239	39	3091	35	2867	61	13.0	54	295400
GSBD2-049	0.2981	0.0034	24.48	0.57	0.596	0.012	0.875	3460	17	3288	23	3012	49	14.9	29	684000
GSBD2-154	0.3100	0.0037	25.21	0.61	0.590	0.012	0.866	3521	19	3316	23	2988	50	17.8	39	693000
GSBD2-077	0.3108	0.0048	26.93	0.75	0.629	0.015	0.836	3525	23	3381	27	3144	58	12.1	140	292200
GSBD2-100	0.3142	0.0045	25.54	0.63	0.590	0.012	0.818	3542	22	3329	24	2987	48	18.6	75	310000
> 20 % Disc.																
GSBD2-179	0.1146	0.0016	1.55	0.04	0.098	0.002	0.863	1874	25	949	17	602	14	211.2	40	97800
GSBD2-138	0.1161	0.0014	3.73	0.10	0.233	0.006	0.895	1897	21	1578	21	1351	29	40.4	28	273800
GSBD2-035	0.1214	0.0022	2.59	0.07	0.155	0.003	0.753	1977	32	1297	20	927	18	113.3	192	360000
GSBD2-091	0.1295	0.0028	2.97	0.17	0.167	0.009	0.922	2091	38	1401	42	993	48	110.5	398	625000
GSBD2-099	0.1408	0.0021	3.21	0.11	0.165	0.005	0.891	2237	26	1459	25	986	27	126.8	129	181000
GSBD2-024	0.1424	0.0026	5.00	0.15	0.255	0.006	0.802	2257	31	1820	26	1463	32	54.2	48	106000
GSBD2-131	0.1458	0.0022	6.22	0.22	0.310	0.010	0.907	2297	25	2008	30	1739	49	32.1	70	388700
GSBD2-152	0.1458	0.0031	3.16	0.13	0.157	0.005	0.849	2297	36	1448	30	942	30	143.8	173	146000
GSBD2-085	0.1474	0.0019	6.92	0.17	0.340	0.007	0.854	2316	22	2101	22	1888	35	22.7	41	302500
GSBD2-087	0.1483	0.0022	3.26	0.08	0.160	0.003	0.810	2326	25	1472	19	954	18	143.9	350	309000
GSBD2-075	0.1503	0.0052	5.93	0.25	0.286	0.007	0.563	2349	58	1966	36	1623	34	44.8	136	70000
GSBD2-145	0.1539	0.0020	6.37	0.15	0.300	0.006	0.841	2390	21	2028	20	1693	29	41.2	157	280600
GSBD2-166	0.1541	0.0017	6.39	0.17	0.301	0.007	0.907	2392	19	2031	23	1694	36	41.2	69	415000
GSBD2-088	0.1576	0.0023	3.92	0.15	0.180	0.006	0.925	2430	25	1617	31	1068	35	127.5	165	274000
GSBD2-128	0.1602	0.0020	6.53	0.15	0.296	0.006	0.843	2458	21	2050	20	1669	29	47.3	54	318100
GSBD2-170	0.1612	0.0023	6.57	0.21	0.296	0.009	0.899	2468	24	2056	28	1670	42	47.8	193	262700
GSBD2-125	0.1623	0.0021	5.79	0.15	0.259	0.006	0.863	2480	22	1944	22	1483	30	67.2	571	523000
GSBD2-021	0.1637	0.0056	6.89	0.32	0.305	0.010	0.681	2494	57	2097	41	1717	48	45.3	32	8500
GSBD2-068	0.1643	0.0022	7.89	0.21	0.348	0.008	0.870	2500	22	2219	24	1927	39	29.8	60	243400
GSBD2-115	0.1661	0.0020	6.09	0.24	0.266	0.010	0.954	2519	20	1989	34	1520	51	65.7	276	350000
GSBD2-036	0.1662	0.0024	7.75	0.20	0.338	0.007	0.812	2520	25	2202	22	1878	33	34.2	106	258900
GSBD2-098	0.1674	0.0022	6.16	0.16	0.267	0.006	0.863	2532	22	1999	23	1526	31	66.0	115	138000
GSBD2-135	0.1675	0.0023	8.47	0.21	0.367	0.008	0.831	2533	23	2283	22	2015	36	25.7	244	420900
GSBD2-161	0.1681	0.0019	8.26	0.20	0.356	0.007	0.872	2539	19	2260	21	1965	35	29.2	98	409300
GSBD2-018	0.1701	0.0020	8.88	0.21	0.379	0.008	0.871	2558	19	2325	21	2069	36	23.6	36	265700
GSBD2-177	0.1702	0.0021	9.04	0.22	0.385	0.008	0.866	2560	20	2342	22	2101	38	21.8	13	189300
GSBD2-097	0.1707	0.0028	5.01	0.33	0.213	0.014	0.969	2565	27	1822	54	1245	72	106.0	87	138900
GSBD2-168	0.1712	0.0031	6.62	0.18	0.280	0.006	0.739	2569	30	2062	24	1593	28	61.3	828	467000
GSBD2-022	0.1734	0.0037	5.53	0.20	0.231	0.007	0.794	2591	35	1906	30	1342	34	93.1	98	39600
GSBD2-062	0.1735	0.0026	7.32	0.27	0.306	0.010	0.911	2592	25	2152	32	1721	51	50.5	39	50200
GSBD2-178	0.1788	0.0022	8.45	0.24	0.343	0.009	0.903	2642	20	2280	25	1899	42	39.1	162	235800
GSBD2-184	0.1841	0.0031	10.42	0.29	0.410	0.009	0.796	2690	28	2473	25	2217	41	21.4	75	253000
GSBD2-001	0.1865	0.0028	9.30	0.27	0.362	0.009	0.861	2712	25	2368	27	1989	43	36.3	133	112000
GSBD2-030	0.1868	0.0039	6.13	0.20	0.238	0.006	0.761	2714	34	1995	28	1377	30	97.1	236	83700
GSBD2-071	0.1897	0.0026	8.91	0.30	0.341	0.011	0.915	2740	22	2329	31	1891	51	44.9	280	265000
GSBD2-106	0.1899	0.0030	9.72	0.25	0.371	0.008	0.800	2741	26	2409	24	2036	37	34.7	49	47300
GSBD2-072	0.1919	0.0030	6.68	0.20	0.253	0.007	0.856	2759	25	2070	26	1452	34	90.0	610	239000
GSBD2-108	0.1930	0.0033	6.56	0.29	0.246	0.010	0.921	2768	28	2054	38	1420	52	94.9	567	151400
GSBD2-114	0.1940	0.0049	6.85	0.26	0.256	0.007	0.743	2776	41	2092	33	1469	37	89.0	149	30200
GSBD2-116	0.1947	0.0025	10.65	0.26	0.397	0.008	0.844	2782	21	2494	22	2155	37	29.1	425	199100
GSBD2-182	0.1959	0.0024	5.73	0.16	0.212	0.005	0.902	2792	20	1935	24	1239	29	125.3	620	208000
GSBD2-054	0.1997	0.0064	10.08	0.52	0.366	0.015	0.778	2824	52	2442	46	2011	68	40.4	930	300900
GSBD2-040*	0.2003	0.0036	11.88	0.34	0.430	0.009	0.773	2829	29	2595	26	2306	42	22.7	72	315000
GSBD2-040	0.2065	0.0032	12.33	0.31	0.433	0.009	0.784	2878	25	2630	23	2320	39	24.1	72	315000
GSBD2-124	0.2006	0.0023	10.63	0.28	0.385	0.009	0.901	2831	18	2492	24	2097	42	35.0	601	311000
GSBD2-032	0.2027	0.0024	11.12	0.25	0.398	0.008	0.861	2848	19	2533	21	2159	36	31.9	259	352600
GSBD2-009	0.2030	0.0041	9.57	0.30	0.342	0.008	0.754	2850	33	2394	28	1895	38	50.4	74	42900

GSBD2-151	0.2031	0.0028	10.07	0.26	0.360	0.008	0.853	2851	22	2441	24	1980	38	44.0	112	300900
GSBD2-063	0.2085	0.0030	7.88	0.25	0.274	0.008	0.892	2894	23	2217	28	1562	39	85.3	856	238000
GSBD2-107	0.2089	0.0024	8.62	0.25	0.299	0.008	0.921	2897	19	2298	27	1687	40	71.7	169	229000
GSBD2-029	0.2092	0.0034	7.73	0.37	0.268	0.012	0.940	2899	26	2200	42	1531	61	89.4	940	344500
GSBD2-159	0.2102	0.0030	5.04	0.13	0.174	0.004	0.835	2907	23	1826	22	1033	21	181.4	468	114600
GSBD2-008	0.2103	0.0030	10.07	0.29	0.347	0.009	0.867	2908	23	2442	26	1922	42	51.3	736	205000
GSBD2-094	0.2111	0.0037	6.40	0.38	0.220	0.013	0.957	2914	28	2033	51	1282	66	127.3	106	273000
GSBD2-173	0.2133	0.0026	11.86	0.27	0.403	0.008	0.856	2931	19	2594	21	2185	37	34.2	156	147400
GSBD2-061	0.2135	0.0028	6.46	0.22	0.219	0.007	0.921	2932	21	2040	29	1278	36	129.4	1820	320000
GSBD2-059	0.2145	0.0054	10.22	0.34	0.346	0.007	0.648	2940	40	2455	30	1913	36	53.7	291	91000
GSBD2-169	0.2167	0.0044	11.78	0.36	0.394	0.009	0.748	2956	32	2587	28	2142	41	38.0	138	129000
GSBD2-146	0.2171	0.0041	3.64	0.10	0.122	0.003	0.741	2959	30	1559	22	740	15	299.7	1228	172400
GSBD2-183	0.2185	0.0028	12.32	0.61	0.409	0.019	0.965	2970	21	2629	45	2210	88	34.4	511	148000
GSBD2-141	0.2264	0.0044	12.98	0.40	0.416	0.010	0.773	3027	31	2678	29	2241	45	35.0	593	724000
GSBD2-119	0.2307	0.0044	9.86	0.28	0.310	0.007	0.747	3057	30	2422	26	1741	32	75.6	663	118300
GSBD2-118	0.2390	0.0034	14.55	0.36	0.442	0.009	0.822	3113	22	2786	23	2357	40	32.1	1940	477300
GSBD2-143	0.2455	0.0032	8.28	0.24	0.245	0.006	0.898	3156	20	2262	26	1411	33	123.7	557	115400
GSBD2-066	0.2499	0.0072	16.13	0.62	0.468	0.012	0.650	3184	45	2884	36	2475	51	28.7	25	40500
GSBD2-093	0.2504	0.0033	10.13	0.30	0.293	0.008	0.897	3187	21	2446	27	1658	39	92.2	52	93410
GSBD2-176	0.2531	0.0031	16.52	0.43	0.473	0.011	0.881	3204	19	2907	25	2498	47	28.2	165	478000
GSBD2-147	0.2576	0.0044	4.81	0.17	0.136	0.004	0.870	3232	27	1787	29	819	23	294.6	947	110800
GSBD2-096	0.2581	0.0035	10.14	0.42	0.285	0.011	0.945	3235	21	2448	38	1616	56	100.1	209	108800
GSBD2-104	0.2605	0.0045	7.02	0.22	0.195	0.005	0.825	3250	27	2114	27	1151	27	182.4	861	81800
GSBD2-134	0.2691	0.0034	6.24	0.26	0.168	0.007	0.954	3301	20	2010	36	1002	37	229.5	473	124700
GSBD2-148	0.2710	0.0033	15.96	0.54	0.427	0.013	0.932	3312	19	2874	32	2292	60	44.5	368	329800
GSBD2-101	0.2711	0.0039	15.82	0.40	0.423	0.009	0.827	3312	22	2866	24	2275	40	45.6	160	247000
GSBD2-153	0.2718	0.0035	5.32	0.17	0.142	0.004	0.913	3316	20	1872	27	856	23	287.5	362	85200
GSBD2-051*	0.2750	0.0104	19.83	0.93	0.523	0.014	0.592	3335	58	3083	44	2712	61	23.0	970	725000
GSBD2-051	0.2923	0.0038	21.48	0.51	0.533	0.011	0.839	3430	20	3161	23	2754	45	24.5	970	725000
GSBD2-041	0.2862	0.0044	15.19	0.66	0.385	0.016	0.936	3397	24	2827	40	2100	72	61.8	438	186000
GSBD2-086	0.2953	0.0035	19.85	0.47	0.488	0.010	0.862	3446	18	3084	22	2560	43	34.6	457	303000
GSBD2-117	0.2953	0.0044	11.54	0.38	0.284	0.008	0.896	3446	23	2568	31	1609	42	114.2	922	98900
GSBD2-015	0.3079	0.0036	21.50	0.53	0.507	0.011	0.880	3510	18	3162	24	2642	47	32.9	381	668000
GSBD2-025	0.3098	0.0068	19.98	0.63	0.468	0.011	0.713	3520	34	3090	30	2473	46	42.3	93	43700
GSBD2-026	0.3132	0.0039	17.06	0.67	0.395	0.015	0.949	3537	19	2938	37	2146	68	64.8	436	118300
GSBD2-167	0.3134	0.0043	8.19	0.28	0.190	0.006	0.911	3538	21	2252	30	1119	31	216.2	2106	187000
GSBD2-074	0.3272	0.0057	6.47	0.18	0.143	0.003	0.765	3604	27	2042	24	864	17	317.2	1520	120000
GSBD2-188	0.3357	0.0044	24.39	0.62	0.527	0.011	0.855	3643	20	3284	25	2729	48	33.5	457	95600
GSBD2-007	0.3400	0.0203	14.72	1.25	0.314	0.019	0.710	3663	88	2797	77	1760	92	108.1	40	2870
GSBD2-065	0.3502	0.0086	7.88	0.33	0.163	0.006	0.812	3708	37	2217	37	975	31	280.5	1582	109300
GSBD2-027	0.3597	0.0046	23.01	0.56	0.464	0.010	0.851	3749	19	3227	23	2457	42	52.6	40	132700
GSBD2-187	0.3647	0.0044	23.90	0.58	0.475	0.010	0.869	3770	18	3264	23	2507	44	50.4	327	143900
GSBD2-132	0.3794	0.0046	30.08	0.91	0.575	0.016	0.915	3829	18	3489	29	2928	65	30.8	164	116100
Standards GSB17-D1,-D2																
og1-1	0.2974	0.0044	28.42	0.78	0.693	0.016	0.842	3457	23	3434	27	3394	61	1.8	21	101700
og1-2	0.3042	0.0048	29.23	0.78	0.697	0.015	0.806	3492	24	3461	26	3409	57	2.4	7	82700
og1-3	0.2996	0.0026	28.92	0.41	0.700	0.008	0.789	3468	13	3451	14	3421	30	1.4	15	89600
og1-4	0.2971	0.0030	28.86	0.49	0.705	0.010	0.803	3455	16	3449	17	3438	36	0.5	24	62800
og1-5	0.2982	0.0029	28.84	0.36	0.701	0.006		3461	15	3448	12	3426	21	1.0	15	78300
og1-6	0.2965	0.0029	30.09	0.45	0.736	0.008	0.755	3452	15	3490	15	3556	31	-2.9	10	54100
og1-7	0.2986	0.0025	29.37	0.33	0.713	0.005	0.671	3463	13	3466	11	3471	20	-0.2	4	63000
og1-8	0.2990	0.0026	29.00	0.36	0.704	0.006	0.717	3465	13	3454	12	3434	24	0.9	1	72200
og1-9	0.2983	0.0024	30.15	0.40	0.733	0.008	0.790	3461	12	3492	13	3545	28	-2.4	9	80300
og1-10	0.2985	0.0032	30.24	0.43	0.735	0.007	0.648	3462	17	3495	14	3551	25	-2.5	2	67900
og1-11	0.2994	0.0021	28.89	0.29	0.700	0.005	0.714	3467	11	3450	10	3420	19	1.4	11	117460
og1-12	0.2997	0.0026	28.55	0.35	0.691	0.006	0.701	3469	13	3438	12	3386	22	2.4	8	105900
og1-13	0.2976	0.0019	29.59	0.31	0.721	0.006	0.798	3458	10	3473	10	3501	23	-1.2	5	113700
og1-14	0.2961	0.0026	28.51	0.38	0.698	0.007	0.752	3450	14	3437	13	3414	27	1.0	11	102500
og1-15	0.2998	0.0023	29.52	0.38	0.714	0.007	0.804	3469	12	3471	13	3474	28	-0.1	14	95700
og1-16	0.3001	0.0027	30.19	0.39	0.730	0.007	0.719	3471	14	3493	13	3532	25	-1.7	12	103150

APPENDIX C. APPENDIX REFERENCES

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