

# GSA Data Repository 2016019

Dumitru, T.A., Elder, W.P., Hourigan, J.K., Chapman, A.D., Graham, S.A., and Wakabayashi, J., 2015/2016, Four Cordilleran paleorivers that connected Sevier thrust zones in Idaho to depocenters in California, Washington, Wyoming, and, indirectly, Alaska: Geology, doi: 10.1130/G37286.1

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## **Appendix DR1: Zircon U-Pb dating methods**

The six new zircon U-Pb samples reported in this paper were analyzed using three different instrument configurations.

Samples 11MB5 and 11SM1 were analyzed by A.D. Chapman at the Arizona LaserChron Center, using methods essentially identical to Dumitru et al. (2013, Table DR2 therein). Those methods are available on PDF page 34 at: <ftp://rock.geosociety.org/pub/reposit/2013/2013046.pdf>

Samples TD4F304 and TD4F312 were analyzed by T.A. Dumitru at the University of California, Santa Cruz, using methods identical to Dumitru et al. (2015, Appendix DR1 therein). Those methods are available on PDF pages 2-4 and 7 at: <http://www.tandfonline.com/doi/suppl/10.1080/00206814.2015.1008060>

Samples TD2F219 and TD2F220 were analyzed by T.A. Dumitru at UCSC, after an instrument upgrade that was completed in early 2015. The new 2015 configuration is described below.

### **University of California, Santa Cruz, 2015 Configuration**

Two samples reported here were analyzed at UCSC, following changes to UCSC procedures that were implemented in early 2015. These changes included a factory upgrade to the laser system, shortening of the lasing duration, and converting to new zircon age standards. This description of the methods specific to these two samples is modified from Sharman et al. (2013).

Zircon grains were separated from rock samples using standard methods, including: rock crushing, grinding using a Bico disc mill, concentration using a Gemini-style Wifley table, heavy liquid separation using methylene iodide (3.32 g/cm<sup>3</sup>) in 13 or 50 mL constriction tubes (Dumitru and Stockli, 1998), and progressive purification using a Frantz LB-1 magnetic barrier separator with a final setting of 1.2 amps at 10° side slope.

Grains were mounted by sprinkling or manually placing them in a single layer within a 3-4 mm diameter circle on double-sided sticky tape (typically 200-1000 total grains per sample). Up to eight samples, plus standards, were mounted together on one piece of tape, distributed within a circular area 12 mm in diameter. Grains were then encapsulated by placing a Teflon ring on the tape and pouring Struers EpoFix epoxy to form a 25-mm diameter puck. Pucks were ground and polished to expose grain interiors using 9, 6, and 1 µm diamond polishing compounds. Typical depths of exposure into grains were 10-20 µm. Immediately before insertion into the laser cell, pucks were cleaned in 1% nitric acid for several minutes using an ultrasonic cleaner.

The 2015 UCSC configuration uses a single-collector Element XR high-resolution magnetic-sector ICPMS (inductively coupled plasma mass spectrometer) coupled to a Photon Machines Analyte Excite 193 nm ArF excimer laser system with a HelEx II cell. Immediately before use, helium sample gas was passed through an inline, high-surface-area gold filter to trap trace mercury contaminants. Ablated aerosol was transported through 4 mm OD Teflon tubing and through an all-Teflon “Squid” signal smoothing manifold after addition of argon. The ATL ATLEX 300 laser was energy stabilized at 4.5 mJ. Argon and helium gas flows and torch XY position were tuned to

optimize sensitivity, while maintaining  $\text{Th}/\text{U} \approx 0.9$  and low oxide production (<0.2% ThO). A well-tuned instrument with 4.0 J/cm<sup>2</sup> laser energy density yields typical <sup>238</sup>U sensitivity on the order of 15,000 cps/ppm on NIST 612 glass (10  $\mu\text{m}$ /sec raster, 43  $\mu\text{m}$  spot diameter).

At the beginning of a session, up to  $\approx$ 800 grains (plus standards) on a single puck were preselected at random, then run in continuous automated mode for up to 20 hours. A 25  $\mu\text{m}$  spot diameter was used for all analyses reported here. Typical laser pit depths were 15-20  $\mu\text{m}$ . Each analysis sequence consisted of data collection for 20 sec with the laser off (for backgrounds), then 20 sec of lasing, then 17 sec with laser off for washout before the next analysis. Isotopes measured (in E-scan mode) were <sup>238</sup>U, <sup>235</sup>U, <sup>232</sup>Th, <sup>208</sup>Pb, <sup>207</sup>Pb, <sup>206</sup>Pb, <sup>204</sup>Pb, and <sup>202</sup>Hg. Typically, 13 sec of data from the 20 sec lasing duration were used for age calculations, omitting 2 sec at the beginning to allow for signal ramp up and 5 sec at the end which was collected mainly as a check for anomalies.

The primary age standard was Temora II zircon (416.8 $\pm$ 1.3 Ma; Black et al., 2004), using the final nonmagnetic Frantz fraction at 1.2 amps and 1° side slope. Temora II was run after each 5 unknowns. FC5Z (Duluth gabbro) was run as a secondary age standard after each 10 unknowns (1099 Ma; e.g., Black et al., 2004). Mt. Dromedary was run  $\approx$ 20 times per sessions as a tertiary age standard (99.12 Ma). Madder was run 10-20 times per session as a U and Th concentration standard.

Software used for data reduction included Iolite 2.5 with the Geochronology 3 data reduction scheme (Paton et al., 2010), followed by an Excel spreadsheet (see below; Sharman et al., 2013). To correct for down-hole elemental and isotopic fractionation, we used Iolite's exponential detrending algorithm, which calibrates to the observed down-hole fractionation of the Temora II standard. Iolite also permits efficient inspection of signal intensities, ratios, and ages as they evolved through the 20 sec lasing interval for each grain. During inspection in Iolite, the 13 sec integration intervals used to calculate ages were shortened (truncated off the trailing end) if:

- (1) drill-through was observed, based on a rapid decrease in total beam prior to the end of lasing correlated with a large change in Pb/U ratio,
- (2) spiky, erratic fluctuations of <sup>204</sup>Pb to values greater than background and persisting for longer than 1 sec were observed in the background-corrected <sup>204</sup>Pb signal (evidence of heterogeneously distributed common lead),
- (3) for grains younger than 1000 Ma, spiky, erratic fluctuations in <sup>207</sup>Pb/<sup>235</sup>U apparent age to values significantly greater than the <sup>206</sup>Pb/<sup>238</sup>U age and persisting for longer than 1 sec were observed (heterogeneous common lead),
- (4) shallow levels within the pit exhibited well behaved data, but deeper levels exhibit substantially different ages (age zoning or other isotopic complexity).

In some cases, truncation was not feasible and grains were discarded (cases 1, 2, 4) or were retained for later reexamination (case 3).

Grains with visually estimated apparent age variations over the duration of the integration interval

exceeding 30% were noted for later discard.

Grains that exhibit relatively constant  $^{204}\text{Pb}$  above background levels (not spiky and erratic) would be discarded, but there were no instances in this dataset.

Reasons for truncations and discards are noted on the data sheets, using the codes listed at the end of this Appendix.

Total  $^{204}\text{Pb}$  backgrounds ( $\text{Pb} + \text{Hg}$ ) were typically 200-300 counts/sec. Other than  $^{204}\text{Pb}$  spikes related to inclusions or correlated with high U zones (possibly reflecting high radiation damage), average background-subtracted signals were typically less than a detection limit of three times the standard error of the background signal. For this reason, we did not apply a  $^{204}\text{Pb}$  correction and instead utilize the  $^{207}\text{Pb}$ -corrected  $^{206}\text{Pb}/^{238}\text{U}$  age for grains  $\leq 1000$  Ma. Our strategy of first truncating grains showing spiky, erratic variations in  $^{207}\text{Pb}/^{235}\text{U}$  age reduced the magnitude of  $^{207}\text{Pb}$  corrections. The  $^{207}\text{Pb}$  correction is calculated within the spreadsheet of Sharman et al. (2013), which calls routines from Isoplot (version 4.15; Ludwig, 2008), assuming an initial Pb composition based on a two-stage model of terrestrial lead isotope evolution (Stacey and Kramers, 1975). The magnitude of the  $^{207}\text{Pb}$  correction for each grain is shown in the data tables.

For grains with  $^{206}\text{Pb}/^{238}\text{U}$  ages  $> 1000$  Ma, we use uncorrected  $^{207}\text{Pb}/^{206}\text{Pb}$  ages. Our strategy of truncating integration intervals with detectable spiky, erratic, persistent fluctuations in  $^{204}\text{Pb}$  above background greatly reduces the magnitude of any potential  $^{204}\text{Pb}$  correction. Test calculations of  $^{204}\text{Pb}$ -corrected  $^{207}\text{Pb}/^{206}\text{Pb}$  ages with VizualAge (Petrus and Kamber, 2012) shows that corrections, if applied, would be  $< 4$  m.y. for  $\approx 95\%$  of grains older than 1000 Ma.

Age discordance was calculated as:

$$100\% * (1 - (\text{207corr-206Pb}/^{238}\text{U age}) / (\text{uncorr-207Pb}/^{206}\text{Pb age})).$$

Final data and ages were inspected manually in the Excel spreadsheet and grains discarded if:

- (1) age  $> 1000$  Ma and  $^{206}\text{Pb}/^{204}\text{Pb}$  ratio is  $< 300$  (potential common lead),
- (2) visually estimated apparent age variations over the duration of the integration interval are  $> 30\%$ .
- (3) age  $< 1000$  Ma and  $^{207}\text{Pb}$  common lead correction is  $> 2\%$  of uncorrected  $^{206}\text{Pb}/^{238}\text{U}$  age. This filter excludes some grains with erratic fluctuations in  $^{207}\text{Pb}/^{235}\text{U}$  apparent age that were not amenable to truncation.

Grains are omitted from probability density plots and cumulative probability plots (but included in concordia plots) if:

- (4) age  $> 800$  Ma and discordance  $> 30\%$ ,
- (5) age  $> 800$  Ma and reverse discordance  $> 5\%$ ,

These filtering methods are identical to those used in Dumitru et al. (2015), except that previously:

- (1) for grains younger than 1000 Ma that exhibited spiky, erratic changes in  $^{207}\text{Pb}/^{235}\text{U}$  apparent age and where truncation was not feasible, we discarded the grains. We now retain these grains and go on to evaluate the size of

the 207Pb age correction.

(2) for grains younger than 1000 Ma where the 207Pb common lead correction is >10% of uncorrected 206Pb/238U age, we discarded the grain. We now discard using a 2% cutoff.

(3) grains with >800 Ma and discordance >25% were omitted (this change has no effect because no grains in the 2015 paper were 25-30% discordant.)

The data from the youngest several grains in each sample were then reexamined in Iolite to reconfirm that there was no evidence that isotopic disturbances led to a spuriously young age. Essentially no such cases were identified.

Probability density plots, concordia plots, and weighted age plots were constructed using Isoplot 3.70 running in Windows Excel 2003 (Ludwig, 2008). Cumulative probability plots were constructed using the spreadsheet of G.E. Gehrels (<https://sites.google.com/a/laserchron.org/laserchron/>).

### Typical Laser Parameters

Laser Energy:	4.5 mJ
Spot size:	25 µm diameter circle
Repetition Rate:	8 Hz
Shot count:	160 (20 sec ablation)
Spot laser energy density:	4.0 J/cm <sup>2</sup>

### Typical Gas Flow Parameters

Nebulizer (argon):	~0.725 L/min
Add 1 (sampling cone; helium):	~0.650 L/min
Add 2 (cell pressure; helium):	~0.800 L/min)

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## Explanation for UCSC U-Pb datasheets in Table DR2C-DR2F

Column	Explanation
Grain	Sample name and spot number
Time hr:min:s	Clock time of analysis
U ppm	Uranium concentration (approx. ppm)
U/Th	Uranium/thorium ratio (approx.)
206Pb/ 204Pb	Isotopic ratio
207Pb/ 206Pb	Isotopic ratio
207Pb/ 235U	Isotopic ratio
206Pb/ 238U	Isotopic ratio
Error Corr.	Error correlation between 206Pb/238U ratio and 207Pb/235U ratio
unc. 206Pb/238U age (Ma)	206Pb/238U Age, uncorrected for common lead
207corr 206Pb/238Pb age (Ma)	206Pb/238U Age, corrected for common lead using 207Pb measurement
207 corr (Ma)	Magnitude of 207Pb correction (m.y.) (if large and age <1000 Ma, age is suspect)
uncorr. 207Pb/206Pb age (Ma)	207Pb /206Pb age (Ma), uncorrected for common lead
discordance	Discordance: 100% * ((207corr 206Pb/238Pb age)/(uncorr. 207Pb/206Pb age)). If large, age is suspect (but only if age >800 Ma)
Best Age (Ma)	207corr 206Pb/238U age if that age is <=1000 Ma; otherwise uncorrected 207Pb/206Pb age (Ma)
Comments	Comment codes, see list
+2s (Ma)	+ 2 sigma uncertainty of the value one cell to left
Data Source	Explanation
GS Excel	Values was calculated using spreadsheet of G. Sharman (Sharman et al., 2013)
TD Excel	Values was calculated using modifications to Sharman spreadsheet by T. Dumitru
Pb206_CPS/Pb204_CPS	Value is from Iolite channel with this name, using Geochronology 3 data reduction scheme (Paton et al., 2010)
Final207_206	From Iolite
Final207_206_Prop2SE	From Iolite
Final207_235	From Iolite
Final207_235_Prop2SE	From Iolite
Final206_238	From Iolite
Final206_238_Prop2SE	From Iolite
ErrorCorrelation_6_38vs7_35	From Iolite
FinalAge206_238	From Iolite
FinalAge206_238_Prop2SE	From Iolite
FinalAge207_206	From Iolite
FinalAge207_206_Prop2SE	From Iolite
Comment Code	Explanation
9	good, no obvious data anomalies; corrected downhole age trend basically flat (code used for grain of any age)
fair	fair, minor data anomalies, such as gently sloping age trend; age probably reasonably accurate (grain of any age)
76 good	206Pb/238U age exhibits variability, but 207Pb/206Pb age is good keep grain (grains >1000 Ma)
76 fair	206Pb/238U age exhibits variability, but 207Pb/206Pb age is fair; keep grain (grains >1000 Ma)
DT:TRIM	Drilled through the grain into underlying epoxy; truncate integration interval to trim out epoxy
204 spk:TRIM	Spikey, erratic, persistant (>1 sec) fluctuations in 204Pb cps above background, truncate integration starting at beginning of spike
207 spk:TRIM	Spikey, erratic, persistant (> 1 sec) fluctuations in apparent 207Pb/235U age greater than 206Pb/238U age, truncate integration starting at beginning of spike (only for grains <1000 Ma)
zoned:TRIM	Upper part of grain exhibits consistent age, stepping to another age deeper; truncate at step
DT:DEL	See above, truncation not feasible, discard grain
204 spk:DEL	See above, truncation not feasible, discard grain
207 spk:DEL	See above, truncation not feasible, discard grain
zoned:DEL	See above, truncation not feasible, discard grain
202 spk:DEL	Spikey, erratic, persistant fluctuations in 202Hg cps, discard grain
high 207corr:DEL	207Pb age correction is >2% of uncorrected 206Pb/238U age; discard grain (only for grains <1000 Ma)
var130-170	206Pb/238U age varies downhole from 130 to 170 Ma (<30%); keep grain
var95-145:DEL	206Pb/238U age varies downhole from 95 to 145 Ma (>30%); discard grain
76var1000-1100	grain >1000 Ma and 207Pb/206Pb age varies downhole from 1000-1100 (<30%); keep grain
76var1000-1800:DEL	grain >1000 Ma and 207Pb/206Pb age varies downhole from 1000-1800 (>30%); discard grain
disc:DEL	discordance >30%; discard grain
rev disc:DEL	reverse discordance >5%; discard grain
no signal:DEL	very weak total beam, probably not a zircon; discard grain
very low U:DEL	very low U concentration, probably not a zircon; discard grain
run error:DEL	instrument or operator error; discard grain

**Table DR1: Supplementary information about Type E detrital zircon samples and Idaho source areas**

Sample.	Locality, with		
Reference.	site code	Percent	
Lat (°N)	used in	Lemhi	
Long(°W)	Figures 1-2	Unit	doublet* Comments
<b>Belt Supergroup Basin</b>			
"Main Belt basin" Lewis et al., 2010. 7 samples, see original source for lat/long	North-central Idaho Site B	Belt Supergroup	N/A
Lemhi subbasin. Link et al., 2007; Lewis et al., 2010. 10 samples, see original sources for lat/long	Central Idaho Lemhi rocks of Belt basin		
<b>Franciscan Complex-central and northern California</b>			
AH(NQT) Snow et al., 2010 37.8942 122.3040 (approx)	Albany Hill, Albany CA. Site H	Franciscan terrane (NQT)	47%
TD4F304 this paper 37.78138 122.51414	Sutro Baths, San Francisco CA. Site E	NQT	40%

Figures 2B shows a composite plot of detrital zircon ages for these 7 samples, using their map codes in Lewis et al. (2010, fig. 2): BC, SC, LC, BH, NF, MM, DB. These are located near label "B" in Figure 1 and areas farther north exhibit somewhat different zircon patterns. There are no 1380 Ma igneous rocks in any of these areas. Map of Lewis et al. (2010, fig. 2) shows garnet isograd.

Figures 2A shows a composite plot of detrital zircon ages for these 10 samples, using their map codes in Lewis et al. (2010, fig. 2): YJ, QM, TR, BM, HS, SR, GP, HQ, GQ, DO. These are located near the two "A" labels in Figure 1. Stewart et al. (2010) present zircon Hf isotopic data from a few of the samples near the eastern "A" and for other Belt samples farther east. This area also exposes 1380 Ma bimodal plutons and sills. Descriptions of the 1380 Ma rocks are available in Evans and Zartman (1990, p. 66-67) and they are labeled Yag and Yam on the on-line Idaho state geologic map (Lewis et al., 2012). Evans (1981) contains references to USGS and other reports of potential exposures of correlative rocks in other areas of Idaho (mostly in roadless areas); these do not appear on the state map and we have not checked their status. Map of Lewis et al. (2010, fig. 2) shows garnet isograd. The strong record of 1380 Ma detrital zircons in the Upper Cretaceous sandstones discussed in this paper suggests that the 1380 Ma rocks may be more widespread than currently appreciated, and/or that substantial bodies of 1380 Ma rock may have been eroded away.

This locality was assigned to Novato Quarry terrane by Blake et al. (2000), Snow et al. (2010), and Wakabayashi (2015, fig. 5). On Figure 1, we crudely restore the San Francisco Bay block about 200 km SSE of its current location, to remove post-80 Ma displacements along the San Andreas fault system. McLaughlin et al. (1996) and Wakabayashi (1999) present models of these displacements. We apply this restoration to Franciscan Bay block samples AH, TD4F304, TD4F312, JW1F006, and CAZSS. The NQT, which has a mapped outcrop extent of roughly 100 km<sup>2</sup>, has yielded age-diagnostic fossils from only two known localities, both yielding bivalves of *Sphenoceramus schmidtii* (formerly *Inoceramus schmidtii*; Bailey et al., 1964, table 16 and photo 10; Wright, 1974; Elder and Miller, 1993, fig. 2). They were found distant from NQT zircon sampling areas. This species was traditionally assigned an early Campanian age (ca. 82-79 Ma), but Ward et al. (2012, table 2) have reassigned a late Santonian age (ca. 85-83 Ma). This suggests but does not require that the NQT samples discussed in this paper may be late Santonian. New zircon data included in Table DR2C.

This locality was assigned to the San Bruno Mountain terrane (SBMT) on map of Blake et al. (2000), but we reassign it to the NQT, based on Type E zircon. SBMT is Eocene, has Type A1 zircon (abundant grains with ages matching 53-98 Ma Idaho batholith), has very sparse to common detrital muscovite visible in the field, and was partly sourced from extensional terranes in central Idaho (Dumitru et al., 2013, 2015). Our recent 2015 work in the central part of SBMT at Guadalupe Quarry confirms it contains common detrital muscovite and Type A1 zircon (sample at 37.68170°N 122.42181°W), confirming an Idaho source and Eocene age.

NQT terrane is Late Cretaceous (probably at least in part late Santonian) and partly sourced from contractional belts in central Idaho (this paper). Jayko and Blake (1984) reported mean modal QFL composition of NQT is about quartz 40%; feldspar 50%; lithics 10%. Hand samples of TD4F304 are quartzofeldspathic (but very weathered). Detrital muscovite that is identifiable in the field is very rare or absent in NQT.

Based on its unusually quartzofeldspathic composition compared to other Franciscan units, Jayko and Blake (1984) speculated that the NQT (and certain other terranes) may have been tectonically transported from more distant areas and accreted into the Franciscan. Instead, the NQT probably represents new influx of quartzofeldspathic detritus to the trench from Idaho.

Sample.	Locality, with site code			Percent		
Reference.	Lat (°N)	Long (°W)	used in Figures 1-2	Unit	Lemhi doublet*	Comments
TD4F312 this paper	Bolinas Rd, Marin 37.93454 122.69001	Bolinas Ridge, Fairfax- County CA. Site F	NQT	10%	New zircon data included in Table DR2D. Shown as SBMT on map of Blake et al. (2000). Shown as 'NQT(?)' by Wakabayashi (2015, fig. 5). Assigned here to NQT (see TD4F304). Sample is from Bolinas Ridge body (BRB), see JW1F006. Note that this sample contains only 10% Lemhi doublet zircon grains versus 30-47% for three other NQT samples. We hypothesize it contains less Idaho detritus and more Sierra Nevada arc detritus and is probably more lithic than classic NQT. The NQT was originally defined partly based on its quartzofeldspathic composition; samples such as this suggest that the NQT may also include less quartzofeldspathic rocks that have not yet been clearly recognized (see also Wakabayashi, 2015, p. 685).	
JW1F006 Prohoroff et al., 2012 37.89351 122.63508	SE of Stinson Beach, Marin County CA. Site G	Cazadero, Sonoma County CA. (KRRM)	NQT	30%	Sampled by J. Wakabayashi because it was in a unit shown as "fm" ('Franciscan Complex mélange "terrane" ') on map of Blake et al. (2000) that appeared to be structurally beneath the Bolinas Ridge body (BRB) that Blake et al. considered part of the SBMT. Samples from the BRB (along Hwy 1 along Bolinas Lagoon) and this sample appear to be petrographically identical, that is, they are sandstones that are unusually low lithic with notable amounts of detrital potassium feldspar. This is characteristic of the NQT. In addition, the structurally low(est) position within the Franciscan structural stack of this region is equivalent to the NQT. Accordingly, Wakabayashi (2015, fig. 5) assigned JW1F006 and the BRB to 'NQT(?)'. Here, we concur that both JW1F006 and BRB (TD4F312) are NQT, based on Type E zircon.	
CAZSS Erickson, 2011 38.5159 123.1304		Franciscan Kings Ridge Road melange (KRRM)		24%	Probably correlates with NQT (Wakabayashi, 2015, p. 685). If correlated, depositional age may be Santonian or Campanian. The KRRM contains both lithic-rich sandstones and lithic-poor sandstones.	
CR10R Dumitru et al., 2015 39.63452 123.5276	Branscomb Rd, 6km SSW of Laytonville CA.	Franciscan Central belt		27%	Near western boundary of Central belt. Formerly considered Type D (Dumitru et al., 2015), changed here to Type E. Possibly correlated in some way to NQT (Wakabayashi, 2015; p. 685). If correlated, depositional age may be Santonian or Campanian. Possibly displaced an unknown distance from farther south, but not sufficient data to restore its depositional location.	
8997-002 Dumitru et al., 2015 40.0247 124.06515	Pt Delgada subterrane of Franciscan King Range terrane (sandstone part of PDST)			22%	Formerly considered Type D, changed here to Type E. Possibly correlated in some way to NQT. Dumitru et al. (2015) could not confidently interpret a depositional age. Recognition of Type E pattern here indicates that sample is Late Cretaceous, possibly Santonian or Campanian. Sample is located near San Andreas fault and possibly was displaced 420 km or more from the SSE, but it is beyond the scope of this paper to discuss this, see McLaughlin et al. (1994, p. 47-51).	
<b>Great Valley forearc basin</b>						
GVG09-2 Sharman et al., 2015 37.4527 121.2756	Unit III of Panoche Formation of Great Valley forearc basin			44%	Bishop (1970) shows locality as within his Unit III of the Panoche Formation. Fossils in Units III and IV suggest Unit III is lower Campanian. Hosford Scheirer and Magoon (2007, fig. 5.1) correlate the Forbes Formation (lower Campanian) with the lower part of the Panoche Formation. So this sample is probably the same general age as the Kione-Forbes formations in the northern Great Valley discussed by Williams and Graham (2013), but cannot currently be correlated to Kione-Forbes submarine fan system. See also Bartow et al. (1985) and Sharman et al. (2015, data repository).	
<b>Hornbrook basin</b>						
07-HB-05, 13-RGS-06 13-RGS-08 Surpless and Beverly, 2013; Surpless, 2015. Lat/long not given.	Area near Ashland Oregon and Hornbrook California.	Hornbrook Formation		30% 15% 15%	Of 19 total zircon sandstone samples from the Hornbrook Formation, 3 exhibit the Lemhi doublet. Depositional age data from fossils are confusing, see Wiley et al. (2011), Surpless and Beverly (2013), Surpless (2015). From top to bottom of section: --2 samples, no doublet, probably late Campanian–Maastrichtian --07-HB-05 from Rancheria sandstone beds, shows doublet, upper Campanian based on molluscan fossils (ca. 75-71 Ma) --2 of 6 samples from the Rocky Gulch Sandstone (RGS) show doublets (13-RGS-06, 13-RGS-08). Age of the RGS is Coniacian or younger, possibly "Campanian(?)". --None of 10 samples from units that underlie the RGS exhibit the doublet. Their ages may range from upper(?) Albian to Lower Coniacian(?).	
<b>Salinian block</b>						

Sample.	Locality, with		
Reference.	site code	Percent	
Lat (°N)	used in	Lemhi	
Long(°W)	Figures 1-2	Unit	doublet* Comments
N=5 samples			
Barth et al., 2003; Grove et al., 2003		0%	
See original sources for coordinates.	Sierra de Salinas. Site L	18% Schist of Sierra de Salinas	See original sources. Three out of five total samples are Type E.
		22%	Thornburg and Kulm (1987) and Dodson et al. (1996) document long-distance transport of turbidites down the trench axis in some modern subduction zones.
		35%	
<b>Franciscan Complex-Nacimiento block</b>			
03-01, 03-03, 99-66A			
Jacobson et al., 2011.			
See original source for coordinates.	Franciscan Cambria slab. trench slope basin	included below	See Data Repository of Jacobson et al. (2011) for details. 52 total zircon grains dated.
11MB5			Chapman's new zircon data included in Table DR2A of this paper.
Chapman et al., 2015 and in prep.			Sample collected from Location 8 of Hsu (1969), described as "Broken formation A," a well-bedded sandstone with relatively continuous strata.
35.56948	Franciscan Cambria slab. trench slope basin	17% (4 samples)	Detrital grains of quartz and albite comprise ~75 modal% of sample, in subequal proportions. Trace detrital grains include K-feldspar (1%), white mica, biotite, chlorite, opaques, and zircon. Rock fragments, including subequal shale, siltstone, chert, dacitic-to-rhyolitic volcanic debris, comprise ~10 % of sample.
121.11122	Site N1		Smith et al. (1979) interpreted the Cambria slab as a trench slope basin deposit, an interpretation followed by many later workers. Ogawa et al. (2015) interpreted the slab as a trench axis deposit. It is beyond the scope of this paper to evaluate these complex, local interpretations. They do have implications for the location of the Nacimiento block during deposition, given that long-distance flow of turbidites down trench axes may occur (e.g., Thornburg and Kulm, 1987; Dodson et al., 1996), whereas trench slope basins should be more closely tied to sediment transport pathways in the forearc basin located upslope.
BS1, BS1A, PS2			
Jacobson et al., 2011			
See original source for coordinates.	Franciscan Pfeiffer slab. trench slope basin(?)	20%	Two shale samples from the Cambria slab yielded microfossils that were dated by W.R. Evitt as "Upper Cretaceous, probably Campanian" (Evitt, 1967, written comm., in Hsu, 1969, p. 18; Evitt, 1981, oral comm., in Page, 1982, p. 1709).
11SM1			
Chapman et al., 2015 and in prep.	Stanley Mountain window;		See Data Repository of Jacobson et al. (2011) for details.
35.05040	Stanley sandstone		Chapman's new zircon data included in Table DR2B of this paper.
120.18371	Mountain. block in melange	30%	Sample collected from a ~100 m wide metasandstone block in melange along Hwy 166. The block, like other blocks-in-melange in the Stanley Mountain window (Korsch, 1982), contains significant (>50%) detrital quartz and albite, a smaller (~10%) proportion of lithic fragments, and lacks detrital K-feldspar. These detrital constituents are overprinted by neoblastic white mica, stilpnomelane, lawsonite, and pumpellyite.
<b>Washington, Oregon, Alaska</b>			
Swakane Gneiss			
Gatewood and Stowell, 2012			Protolith deposited sometime 91 to 75 Ma, then metamorphosed at 640-740°C and 35-40 km depth. Zircon dating designed to elucidate metamorphic history, so multiple spot ages determined on many individual grains. Zircon grains not selected for dating at random, so
See original source for coordinates.	Central Washington. Site 0	≈14% (7 samples)	determined on many individual grains. Zircon grains not selected for dating at random, so PDP and CPP are biased to an unknown extent. Many zircon grains exhibit 75-63 Ma metamorphic overgrowths and some Proterozoic zircon ages are probably disturbed and altered by such overgrowths.
TD2F219			New zircon data included in Tables DR2E-DR2F.
this paper	Coastal Oregon.	Tyee Formation Tyee forearc basin	Deposited ca. 48 Ma (e.g., Dumitru et al., 2013, table DR1 therein). This sample was analyzed primarily to determine the ages of Proterozoic zircons shed from Idaho in the Eocene, for comparison to the Yakutat sample.
43.37805			Recollected at same outcrop as sample LF20 of Dumitru et al. (2013). For grains older than 1000 Ma, this new sample supercedes LF20, as describe in Figure DR4.
123.51220	Site P		

Sample.	Locality, with		
Reference.	site code	Percent	
Lat (°N)	used in	Lemhi	
Long(°W)	Figures 1-2	Unit	doublet* Comments
TD2F220 this paper			
43.40817	Same as		
123.54218	above	Same as above	31% Same as above. Recollected at same outcrop as sample LF23 of Dumitru et al. (2013).
JG10-25			
Garver and Davidson, 2015	Yakutat in southeastern Alaska.	Yakutat Group. Yakutat sector of Chugach accretionary complex	Depositional age is Maastrichtian (ca. 71-65 Ma). Zircons were first selected at random and 14% of grains yielded age between 1900 and 1100 Ma. Then additional colored and/or rounded grains were selected to attempt to date more old grains. PDP and CPP in this paper show all grains and thus show a higher proportion of old grains than actually present.
139.57452	Site Q	=14%	

\*Percent of total cumulative probability between 1900 and 1100 Ma, as read from Figure DR1.

See next page for reference list.

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Table DR2A. U-Pb geochronologic analyses completed at Arizona LaserChron Center (Cambria sample, site "N1").

Analysis	U (ppm)	206Pb 204Pb	U/Th	Isotope ratios						Apparent ages (Ma)						Best age (Ma)	± (Ma)	Conc (%)	
				206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±			
				207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)			
11MB5_60	131	4457	1.8	27.8178	36.0	0.0678	37.1	0.0137	8.6	0.23	87.5	7.5	66.6	23.9	-634.8	1014.0	87.5	7.5	NA
11MB5_57	173	8527	4.6	19.3080	26.8	0.0987	27.0	0.0138	3.3	0.12	88.5	2.9	95.6	24.6	276.2	623.1	88.5	2.9	NA
11MB5_13	2165	240008	10.0	20.3762	1.0	0.0959	2.1	0.0142	1.8	0.86	90.7	1.6	93.0	1.8	151.5	24.3	90.7	1.6	NA
11MB5_39	89	3632	1.9	24.4618	76.7	0.0800	76.9	0.0142	4.2	0.05	90.8	3.8	78.1	57.8	-295.0	2328.1	90.8	3.8	NA
11MB5_18	155	8637	1.4	23.2609	13.9	0.0853	14.3	0.0144	3.5	0.25	92.1	3.2	83.1	11.4	-168.1	346.3	92.1	3.2	NA
11MB5_58	294	30795	2.2	20.8300	18.9	0.0953	19.2	0.0144	3.4	0.18	92.1	3.1	92.4	16.9	99.6	449.8	92.1	3.1	NA
11MB5_62	341	27534	1.5	21.1206	9.9	0.0959	10.1	0.0147	1.8	0.18	94.1	1.7	93.0	9.0	66.7	237.1	94.1	1.7	NA
11MB5_31	205	12375	1.7	23.2021	14.8	0.0879	15.0	0.0148	2.4	0.16	94.6	2.3	85.5	12.3	-161.8	368.9	94.6	2.3	NA
11MB5_80	213	18675	1.7	21.0238	18.7	0.0975	19.0	0.0149	3.0	0.16	95.1	2.8	94.4	17.1	77.7	448.0	95.1	2.8	NA
11MB5_26	118	5437	2.3	28.6299	46.0	0.0727	46.5	0.0151	7.1	0.15	96.6	6.8	71.3	32.0	-714.3	1340.4	96.6	6.8	NA
11MB5_16	530	26672	1.9	20.2824	6.3	0.1061	7.0	0.0156	3.2	0.45	99.8	3.2	102.4	6.8	162.3	146.8	99.8	3.2	NA
11MB5_105	259	19000	2.2	20.2930	13.3	0.1066	13.6	0.0157	3.1	0.23	100.4	3.1	102.9	13.3	161.1	311.3	100.4	3.1	NA
11MB5_101	323	23151	1.3	20.5850	12.3	0.1055	12.5	0.0157	2.0	0.16	100.7	2.0	101.8	12.1	127.6	290.5	100.7	2.0	NA
11MB5_82	718	31733	2.5	20.0986	4.0	0.1084	4.4	0.0158	1.8	0.42	101.1	1.8	104.5	4.4	183.5	94.1	101.1	1.8	NA
11MB5_44	55	3010	1.4	22.9634	59.7	0.0979	60.5	0.0163	9.6	0.16	104.3	10.0	94.8	54.8	-136.2	1615.8	104.3	10.0	NA
11MB5_11	84	4746	1.1	18.0330	35.2	0.1281	35.9	0.0168	7.1	0.20	107.1	7.5	122.4	41.5	430.5	808.6	107.1	7.5	NA
11MB5_104	124	9839	1.7	18.5720	21.6	0.1256	21.9	0.0169	3.7	0.17	108.2	4.0	120.2	24.9	364.5	492.4	108.2	4.0	NA
11MB5_50	134	6635	1.6	24.5330	23.7	0.1003	24.1	0.0178	4.5	0.19	114.0	5.1	97.0	22.3	-302.5	612.4	114.0	5.1	NA
11MB5_59	593	30491	2.0	20.8451	3.5	0.1181	3.8	0.0178	1.6	0.43	114.1	1.9	113.3	4.1	98.0	82.3	114.1	1.9	NA
11MB5_66	100	6154	4.6	26.7789	46.3	0.0921	46.6	0.0179	5.5	0.12	114.2	6.3	89.4	39.9	-531.7	1299.2	114.2	6.3	NA
11MB5_69	53	2328	4.3	23.4042	30.5	0.1078	31.4	0.0183	7.2	0.23	116.9	8.3	103.9	31.0	-183.4	777.6	116.9	8.3	NA
11MB5_96	77	3188	3.4	23.5703	31.4	0.1086	31.5	0.0186	2.8	0.09	118.6	3.3	104.7	31.3	-201.1	802.9	118.6	3.3	NA
11MB5_25	92	6621	2.1	24.9337	38.6	0.1036	38.9	0.0187	4.9	0.13	119.7	5.8	100.1	37.1	-344.1	1028.6	119.7	5.8	NA
11MB5_87	209	19996	1.6	18.8842	6.1	0.1374	6.8	0.0188	2.9	0.43	120.2	3.5	130.7	8.3	326.9	139.1	120.2	3.5	NA
11MB5_21	312	47128	2.4	20.7126	6.6	0.1254	8.8	0.0188	5.9	0.67	120.3	7.0	119.9	10.0	113.0	154.7	120.3	7.0	NA
11MB5_1	296	20479	1.8	21.2228	9.6	0.1235	10.0	0.0190	2.6	0.26	121.4	3.2	118.3	11.1	55.3	230.3	121.4	3.2	NA
11MB5_7	219	11175	5.0	17.3942	18.3	0.1530	18.6	0.0193	3.0	0.16	123.2	3.6	144.5	25.0	510.4	406.2	123.2	3.6	NA
11MB5_84	115	7319	5.7	23.8089	25.6	0.1124	26.2	0.0194	5.4	0.21	124.0	6.6	108.2	26.9	-226.4	653.8	124.0	6.6	NA
11MB5_23	146	16659	2.4	18.7940	14.3	0.1427	14.7	0.0195	3.4	0.23	124.2	4.2	135.5	18.7	337.7	326.5	124.2	4.2	NA
11MB5_5	280	10901	15.2	22.3918	14.9	0.1258	15.2	0.0204	2.7	0.18	130.3	3.5	120.3	17.2	-74.2	367.1	130.3	3.5	NA
11MB5_88	277	19820	2.0	20.7790	9.4	0.1391	9.7	0.0210	2.4	0.25	133.8	3.1	132.3	12.0	105.4	222.2	133.8	3.1	NA
11MB5_36	302	17599	8.7	20.9366	8.2	0.1395	8.3	0.0212	1.4	0.17	135.1	1.9	132.6	10.4	87.6	195.0	135.1	1.9	NA
11MB5_52	330	23100	1.8	20.4667	5.2	0.1463	5.6	0.0217	2.2	0.40	138.5	3.1	138.7	7.3	141.1	121.0	138.5	3.1	NA
11MB5_100	70	4847	2.7	27.2863	64.3	0.1099	64.7	0.0217	6.7	0.10	138.7	9.3	105.9	65.1	-582.5	1928.0	138.7	9.3	NA
11MB5_77	194	20565	1.7	23.2148	17.6	0.1296	18.5	0.0218	5.7	0.31	139.1	7.8	123.7	21.5	-163.2	439.5	139.1	7.8	NA
11MB5_91	159	13460	3.6	20.6613	14.0	0.1470	14.2	0.0220	2.3	0.16	140.4	3.2	139.2	18.5	118.9	33.1	140.4	3.2	NA
11MB5_51	198	10712	1.9	21.9853	7.0	0.1445	7.7	0.0230	3.1	0.40	146.9	4.5	137.0	9.8	-29.6	170.4	146.9	4.5	NA
11MB5_8	134	10668	1.1	29.8071	42.1	0.1073	42.2	0.0232	3.2	0.08	147.9	4.7	103.5	41.6	-827.9	1246.8	147.9	4.7	NA
11MB5_17	80	13357	3.8	20.9401	12.9	0.1541	13.6	0.0234	4.4	0.33	149.2	6.5	145.5	18.4	87.2	306.0	149.2	6.5	NA
11MB5_27	57	6946	3.4	20.1784	22.4	0.1608	23.0	0.0235	5.5	0.24	149.9	8.2	151.4	32.4	174.3	527.5	149.9	8.2	NA
11MB5_67	98	12328	5.0	24.5805	29.3	0.1324	29.7	0.0236	5.0	0.17	150.4	7.4	126.3	35.3	-307.4	764.0	150.4	7.4	NA
11MB5_55	131	25428	2.5	19.5948	10.1	0.1684	10.9	0.0239	4.2	0.38	152.5	6.3	158.1	16.0	242.3	233.1	152.5	6.3	NA
11MB5_86	136	22402	1.7	19.4660	13.3	0.1697	13.6	0.0240	2.6	0.19	152.6	3.9	159.1	20.0	257.5	307.8	152.6	3.9	NA
11MB5_42	203	16872	1.8	21.9455	17.4	0.1640	17.6	0.0261	2.6	0.15	166.1	4.2	154.2	25.1	-25.2	423.5	166.1	4.2	NA
11MB5_32	412	57136	4.0	19.9929	3.9	0.1826	4.0	0.0265	0.9	0.23	168.5	1.5	170.3	6.2	195.8	89.8	168.5	1.5	NA
11MB5_73	101	18342	1.1	20.4941	18.0	0.1916	18.2	0.0285	3.0	0.17	181.0	5.4	178.0	29.8	138.0	425.3	181.0	5.4	NA
11MB5_72	161	20186	1.5	21.7782	14.3	0.1818	14.4	0.0287	2.2	0.15	182.5	3.9	169.6	22.6	-6.7	346.1	182.5	3.9	NA
11MB5_71	177	20187	2.2	21.6609	5.4	0.1883	5.6	0.0296	1.7	0.31	187.9	3.2	175.2	9.1	6.3	129.3	187.9	3.2	NA
11MB5_89	67	6029	2.3	21.9425	22.1	0.1863	22.4	0.0296	3.9	0.17	188.3	7.2	173.4	35.8	-24.9	541.0	188.3	7.2	NA
11MB5_79	81	19115	2.9	22.2187	30.7	0.1851	31.8	0.0298	8.2	0.26	189.4	15.2	172.4	50.4	-55.2	763.9	189.4	15.2	NA
11MB5_12	173	22630	2.5	20.4839	14.7	0.2027	14.9	0.0301	2.6	0.17	191.2	4.8	187.4	25.5	139.1	346.3	191.2	4.8	NA
11MB5_90	123	23641	1.6	20.8997	13.3	0.1993	13.5	0.0302	2.5	0.18	191.9	4.7	184.5	22.8	91.7	315.4	191.9	4.7	NA
11MB5_74	91	21541	2.1	21.9012	20.4	0.1956	20.6	0.0311	3.1	0.15	197.2	6.0	181.4	34.2	-20.3	497.0	197.2	6.0	NA
11MB5_83	150	25096	4.3	19.6183	14.1	0.2195	14.2	0.0312	1.5	0.11	198.3								

Table DR2B: U-Pb geochronologic analyses completed at Arizona LaserChron Center (Stanley Mountain, site "M")

Analysis	U (ppm)	206Pb 204Pb	U/Th	Isotope ratios							Apparent ages (Ma)							Best age (Ma)	$\pm$ (Ma)	Conc (%)	
				206Pb*	$\pm$	207Pb*	$\pm$	235U*	$\pm$	238U	$\pm$	error	206Pb*	$\pm$	207Pb*	$\pm$	235U*	$\pm$			
				207Pb*	(%)	235U*	(%)	238U	(%)	cor.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	207Pb*	(Ma)			
11SM1_36	141	8110	2.1	27.7574	32.2	0.0633	32.7	0.0127	5.3	0.16	81.6	4.3	62.3	19.7	-628.9	900.3	81.6	4.3	NA		
11SM1_96	72	1699	9.8	24.4204	52.3	0.0736	52.6	0.0130	5.5	0.10	83.4	4.5	72.1	36.6	-290.7	1420.9	83.4	4.5	NA		
11SM1_24	1057	65125	2.7	20.5333	4.7	0.0888	4.9	0.0132	1.4	0.28	84.7	1.1	86.4	4.1	133.5	111.4	84.7	1.1	NA		
11SM1_56	146	4699	1.6	19.5073	24.1	0.0937	24.6	0.0133	5.1	0.21	84.9	4.3	90.9	21.4	252.7	560.5	84.9	4.3	NA		
11SM1_60	302	8045	1.2	21.1574	12.7	0.0872	13.4	0.0134	4.4	0.32	85.7	3.7	84.9	10.9	62.6	303.9	85.7	3.7	NA		
11SM1_68	234	19512	1.7	20.7742	22.3	0.0898	22.8	0.0135	4.3	0.19	86.7	3.7	87.4	19.0	106.0	533.6	86.7	3.7	NA		
11SM1_55	319	13064	4.8	20.3838	9.6	0.0940	9.8	0.0139	1.9	0.19	89.0	1.7	91.3	8.5	150.6	225.3	89.0	1.7	NA		
11SM1_72	358	19340	2.7	21.2049	11.7	0.0908	11.9	0.0140	2.2	0.19	89.4	2.0	88.3	10.1	57.3	279.3	89.4	2.0	NA		
11SM1_23	442	13314	2.7	20.8681	7.9	0.0925	8.0	0.0140	1.6	0.20	89.6	1.4	89.8	6.9	95.3	186.4	89.6	1.4	NA		
11SM1_1	586	30771	2.8	20.8606	3.5	0.0927	3.7	0.0140	1.2	0.33	89.8	1.1	90.0	3.2	96.2	83.5	89.8	1.1	NA		
11SM1_81	832	23846	6.8	20.8169	4.2	0.0931	4.7	0.0141	2.1	0.44	90.0	1.9	90.4	4.1	101.1	99.7	90.0	1.9	NA		
11SM1_99	545	15473	2.1	19.3860	7.7	0.1006	8.3	0.0141	3.1	0.37	90.6	2.7	97.4	7.7	267.0	176.4	90.6	2.7	NA		
11SM1_41	212	7061	2.1	22.6374	16.2	0.0868	16.7	0.0142	3.9	0.24	91.2	3.6	84.5	13.5	-100.9	400.3	91.2	3.6	NA		
11SM1_89	250	6079	1.9	22.4902	9.9	0.0876	10.1	0.0143	1.7	0.17	91.4	1.5	85.3	8.2	-84.9	243.6	91.4	1.5	NA		
11SM1_78	454	16074	1.7	20.5509	5.4	0.0976	5.8	0.0145	2.2	0.38	93.1	2.0	94.6	5.2	131.5	125.9	93.1	2.0	NA		
11SM1_79	298	13524	2.6	18.9271	12.0	0.1065	12.3	0.0146	2.8	0.23	93.5	2.6	102.7	12.0	321.7	272.6	93.5	2.6	NA		
11SM1_32	146	5625	1.2	22.2763	34.4	0.0912	34.6	0.0147	2.7	0.08	94.3	2.5	88.6	29.3	-61.6	862.3	94.3	2.5	NA		
11SM1_54	356	14349	0.9	21.4083	9.3	0.0950	9.4	0.0148	1.4	0.15	94.4	1.4	92.2	8.3	34.5	222.6	94.4	1.4	NA		
11SM1_38	106	6196	2.5	17.0939	31.4	0.1206	32.2	0.0150	7.1	0.22	95.7	6.8	115.6	35.2	548.6	702.0	95.7	6.8	NA		
11SM1_67	638	16849	2.4	21.5369	4.7	0.0961	5.8	0.0150	3.4	0.59	96.1	3.3	93.2	5.2	20.1	113.7	96.1	3.3	NA		
11SM1_17	265	14624	2.5	19.7829	13.4	0.1084	13.6	0.0156	2.4	0.18	99.5	2.4	104.5	13.5	220.3	310.3	99.5	2.4	NA		
11SM1_2	146	5803	2.6	22.8236	16.8	0.0953	17.4	0.0158	4.4	0.25	100.9	4.4	92.4	15.4	-121.1	417.6	100.9	4.4	NA		
11SM1_30	84	3396	4.1	27.8463	69.2	0.0786	69.4	0.0159	5.9	0.09	101.6	6.0	76.9	51.4	-637.6	2143.0	101.6	6.0	NA		
11SM1_53	146	12914	1.3	23.7992	34.3	0.0923	34.8	0.0159	6.0	0.17	101.8	6.1	89.6	29.9	-225.4	886.2	101.8	6.1	NA		
11SM1_4	151	9701	1.4	24.4624	31.7	0.0900	31.9	0.0160	3.7	0.12	102.1	3.7	87.5	26.8	-295.1	827.8	102.1	3.7	NA		
11SM1_57	153	6760	1.6	22.5261	18.7	0.0983	19.4	0.0161	5.0	0.26	102.8	5.1	95.2	17.6	-88.8	462.3	102.8	5.1	NA		
11SM1_47	173	28511	1.0	19.8882	19.1	0.1144	19.3	0.0165	2.7	0.14	105.5	2.8	110.0	20.1	208.0	446.2	105.5	2.8	NA		
11SM1_45	416	19916	2.4	21.7320	8.8	0.1051	9.0	0.0166	2.1	0.23	105.9	2.2	102.1	8.7	-1.6	212.1	105.9	2.2	NA		
11SM1_92	634	25223	1.7	21.9095	6.4	0.1047	6.6	0.0166	1.6	0.24	106.4	1.7	101.1	6.3	-21.2	154.7	106.4	1.7	NA		
11SM1_13	87	3386	1.4	18.9143	42.6	0.1218	43.0	0.0167	5.4	0.13	106.8	5.7	116.7	47.4	323.2	1010.8	106.8	5.7	NA		
11SM1_37	887	31898	13.2	20.7201	4.9	0.1122	5.4	0.0169	2.3	0.42	107.8	2.4	108.0	5.6	112.2	116.4	107.8	2.4	NA		
11SM1_12	99	16882	1.5	29.0221	49.1	0.0814	49.9	0.0171	8.8	0.18	109.5	9.5	79.4	38.1	-752.4	1453.5	109.5	9.5	NA		
11SM1_25	414	24631	1.8	20.4825	4.9	0.1171	6.1	0.0174	3.6	0.59	111.2	4.0	112.4	6.5	139.3	114.9	111.2	4.0	NA		
11SM1_22	619	23464	1.5	21.0132	4.0	0.1146	4.1	0.0175	0.7	0.18	111.6	0.8	110.1	4.3	78.9	95.4	111.6	0.8	NA		
11SM1_51	76	2625	2.2	20.8870	31.3	0.1170	31.9	0.0177	6.2	0.19	113.3	6.9	112.4	33.9	93.2	75.1	113.3	6.9	NA		
11SM1_48	140	16550	4.7	22.5509	23.2	0.1086	23.9	0.0178	5.8	0.24	113.5	6.5	104.7	23.8	-91.5	575.1	113.5	6.5	NA		
11SM1_9	706	31445	1.7	21.1499	6.0	0.1163	6.1	0.0178	1.2	0.20	114.0	1.4	111.7	6.5	63.5	143.3	114.0	1.4	NA		
11SM1_94	99	4691	14.8	22.5630	29.5	0.1097	31.1	0.0180	9.9	0.32	114.7	11.3	105.7	31.2	-92.8	736.3	114.7	11.3	NA		
11SM1_18	582	19772	2.3	20.6558	5.7	0.1257	5.9	0.0188	1.6	0.27	120.2	1.9	120.2	6.7	119.5	134.4	120.2	1.9	NA		
11SM1_50	87	3047	2.1	25.8743	21.7	0.1014	22.0	0.0190	3.2	0.15	121.5	3.9	98.1	20.5	-440.5	577.0	121.5	3.9	NA		
11SM1_58	78	6809	3.4	25.9041	44.4	0.1017	45.0	0.0191	7.3	0.16	122.0	8.8	98.4	42.2	-443.5	1218.7	122.0	8.8	NA		
11SM1_44	71	4039	1.7	22.1936	60.5	0.1204	60.8	0.0194	6.5	0.11	123.8	7.9	115.5	66.5	-52.5	1614.9	123.8	7.9	NA		
11SM1_7	102	8298	2.5	26.7217	30.9	0.1012	31.4	0.0196	5.8	0.19	125.2	7.2	97.9	29.3	-526.0	842.5	125.2	7.2	NA		
11SM1_69	102	7092	2.0	17.9488	18.6	0.1599	19.5	0.0208	5.8	0.30	132.8	7.7	150.6	27.2	441.0	416.1	132.8	7.7	NA		
11SM1_31	421	35465	2.6	21.5391	5.7	0.1347	6.4	0.0210	2.8	0.44	134.2	3.7	128.3	7.7	19.9	137.0	134.2	3.7	NA		
11SM1_97	192	8593	8.2	20.6788	8.8	0.1412	9.1	0.0212	2.3	0.26	135.1	3.1	134.1	11.5	116.9	208.1	135.1	3.1	NA		
11SM1_3	145	27253	1.5	24.5088	15.4	0.1413	15.5	0.0251	1.6	0.10	159.9	2.5	134.2	19.5	-300.0	396.3	159.9	2.5	NA		
11SM1_93	252	13438	2.1	21.4435	11.8	0.1647	12.0	0.0256	2.3	0.19	163.1	3.6	154.8	17.2	30.6	282.9	163.1	3.6	NA		
11SM1_21	181	13043	1.9	20.8515	9.0	0.1706	9.1	0.0258	1.5	0.16	164.2	2.4	159.9	13.5	97.2	214.1	164.2	2.4	NA		
11SM1_39	643	37130	1.4	20.2151	3.1	0.1780	3.2	0.0261	0.9	0.27	166.1	1.4	166.3	4.9	170.0	72.0	166.1	1.4	NA		
11SM1_77	106	12078	2.4	18.8841	7.4	0.1976	8.0	0.0271	3.1	0.39	172.1	5.3	183.1	13.5	326.9	168.7	172.1	5.3	NA		
11SM1_202</																					

**Table DR2C: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz**

Run: TD-UCSC-12A (part). Sample TD4F304 (site E, Sutro Baths San Francisco, Franciscan Novato Quarry terrane). Iolite file name UCSC12A\_T3S4\_GC3. Excel file name UCSC12A\_T3S4\_GC3\_All\_Integrations.xlsx

Grain	Time hr:min:s	U ppm	U/Th	206Pb/ 204Pb		207Pb/ 206Pb		207Pb/ 235U		206Pb/ 238U		Error Corr.	238U age (Ma)	207 corr +2s (Ma)	207corr uncorr.		discor- dance	Best Age (Ma)	+2s (Ma)	Comments			
				206Pb/ 204Pb	207Pb/ 206Pb	+2s	207Pb/ 235U	+2s	206Pb/ 238U	+2s	238U age (Ma)		207 corr +2s (Ma)	206Pb/ 206Pb	207Pb/ 206Pb	uncorr. 207Pb/ 206Pb							
		Pb206_C PS/Pb204 _CPS				Final207_ 206_Prop 2SE		Final207_ 235_Prop 2SE		Final206_ 238_Prop 2SE		ErrorCorr elation_6 _38vs7_	FinalAge2 06_238_P rop2SE	FinalAge2 06_238_P rop2SE	GS Excel	GS Excel	TD Excel	FinalAge2 07_206_P rop2SE	FinalAge2 07_206_P rop2SE	TD Excel	TD Excel	TD Excel	TD Excel
	Time	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel	GS Excel
Madder_1	8:02:59	3389	8.03	48400	0.05703	0.00200	0.67760	0.04600	0.08633	0.00540	0.747	533.7	32.0	534.5	32.7	-0.8	495.0	77.0	-8%	534.5	32.7	g = good	
Madder_2	8:04:19	3506	8.28	62700	0.05648	0.00200	0.68410	0.04700	0.08783	0.00550	0.718	542.7	33.0	543.9	33.3	-1.2	470.0	79.0	-16%	543.9	33.3	DT:TRIM	
Madder_3	11:10:07	3610	8.09	77669	0.05692	0.00200	0.66050	0.04500	0.08445	0.00530	0.722	522.9	31.0	523.2	32.1	-0.3	487.0	78.0	-7%	523.2	32.1	DT:TRIM	
Madder_4	11:11:27	3475	7.97	45519	0.05716	0.00200	0.67910	0.04600	0.08602	0.00540	0.739	531.9	32.0	532.5	32.7	-0.6	496.0	78.0	-7%	532.5	32.7	g	
Madder_5	14:11:57	3503	8.29	81333	0.05707	0.00200	0.65810	0.04500	0.08378	0.00530	0.744	518.6	31.0	519.0	32.1	-0.4	496.0	78.0	-5%	519.0	32.1	DT:TRIM	
Madder_6	14:13:17	4277	8.52	51588	0.05670	0.00200	0.66350	0.04600	0.08410	0.00540	0.765	520.7	32.0	521.2	32.7	-0.5	478.0	80.0	-9%	521.2	32.7		
Madder_7	17:13:47	3145	7.95	36290	0.05728	0.00200	0.67310	0.04600	0.08559	0.00540	0.750	529.4	32.0	529.9	32.7	-0.5	503.0	78.0	-5%	529.9	32.7	g	
Madder_8	17:15:08	3285	8.20	131333	0.05714	0.00200	0.67620	0.04600	0.08581	0.00540	0.737	530.7	32.0	531.3	32.7	-0.6	499.0	76.0	-6%	531.3	32.7	g	
Madder_9	20:23:38	3389	8.22	42379	0.05697	0.00200	0.67720	0.04600	0.08638	0.00540	0.670	534.1	32.0	534.8	32.7	-0.7	495.0	78.0	-8%	534.8	32.7	g	
Madder_10	20:24:58	3036	8.22	94333	0.05705	0.00200	0.69090	0.04700	0.08753	0.00550	0.709	540.9	33.0	541.7	33.2	-0.8	493.0	78.0	-10%	541.7	33.2	g	
Plesovice_19	12:06:16	462	10.80	-4078	0.05314	0.00200	0.39280	0.02700	0.05365	0.00340	0.373	336.9	21.0	336.9	21.0	0.0	327.0	84.0	-3%	336.9	21.0	g	
Plesovice_20	12:23:39	540	10.07	30175	0.05316	0.00200	0.39780	0.02700	0.05431	0.00340	0.230	340.9	21.0	341.0	21.0	-0.1	325.0	85.0	-5%	341.0	21.0	g	
Plesovice_21	12:41:02	455	10.64	9327	0.05312	0.00200	0.39890	0.02800	0.05438	0.00340	0.220	341.3	21.0	341.4	21.0	-0.1	323.0	85.0	-6%	341.4	21.0	g	
Plesovice_22	12:58:24	609	9.05	4068	0.05384	0.00200	0.39780	0.02700	0.05363	0.00340	0.289	336.8	21.0	336.5	21.0	0.3	363.0	85.0	7%	336.5	21.0	g	
Plesovice_23	13:15:47	816	8.64	7604	0.05302	0.00200	0.39610	0.02700	0.05425	0.00340	0.386	340.6	21.0	340.7	21.0	-0.1	325.0	83.0	-5%	340.7	21.0	g	
Plesovice_24	13:33:10	576	4.82	2433	0.05630	0.00220	0.41490	0.02900	0.05345	0.00340	0.321	335.6	21.0	334.4	20.9	1.2	456.0	86.0	27%	334.4	20.9	g	
Plesovice_25	13:50:33	745	10.99	27617	0.05312	0.00190	0.39060	0.02700	0.05329	0.00330	0.430	334.7	20.0	334.7	20.4	0.0	332.0	83.0	-1%	334.7	20.4	g	
Plesovice_26	14:07:56	1172	6.72	22727	0.05246	0.00190	0.37230	0.02500	0.05132	0.00320	0.489	322.6	20.0	322.8	19.8	-0.2	301.0	82.0	-7%	322.8	19.8	g	
Plesovice_27	14:33:21	747	9.64	6796	0.05214	0.00190	0.37810	0.02600	0.05263	0.00330	0.256	330.7	20.0	331.0	20.4	-0.3	285.0	83.0	-16%	331.0	20.4	g	
Plesovice_28	14:50:44	478	10.59	-5205	0.05327	0.00200	0.38870	0.02700	0.05284	0.00330	0.284	331.9	20.0	331.9	20.4	0.0	330.0	84.0	-1%	331.9	20.4	g	
Plesovice_29	15:08:06	626	10.95	22583	0.05276	0.00190	0.37990	0.02600	0.05228	0.00330	0.294	328.5	20.0	328.6	20.4	-0.1	310.0	82.0	-6%	328.6	20.4	g	
Plesovice_30	15:25:29	666	10.14	10236	0.05310	0.00200	0.37670	0.02600	0.05165	0.00320	0.296	324.6	20.0	324.6	19.8	0.0	322.0	85.0	-1%	324.6	19.8	g	
Plesovice_31	15:42:52	946	10.69	9857	0.05322	0.00200	0.38370	0.02600	0.05262	0.00330	0.340	330.7	20.0	330.5	20.4	0.2	334.0	83.0	1%	330.5	20.4	g	
Plesovice_32	16:00:15	751	9.70	5793	0.05261	0.00190	0.37750	0.02600	0.05193	0.00330	0.259	326.3	20.0	326.5	20.4	-0.2	305.0	84.0	-7%	326.5	20.4	g	
Plesovice_33	16:17:38	846	9.21	45250	0.05299	0.00190	0.37690	0.02600	0.05157	0.00320	0.289	324.1	20.0	324.1	19.8	0.0	324.0	84.0	0%	324.1	19.8	g	
Plesovice_34	16:35:01	742	10.91	11257	0.05322	0.00190	0.37690	0.02600	0.05135	0.00320	0.331	322.8	20.0	322.7	19.8	0.1	335.0	83.0	4%	322.7	19.8	g	
Plesovice_35	16:52:24	515	9.70	-5968	0.05293	0.00200	0.38360	0.02600	0.05267	0.00330	0.275	331.0	20.0	330.9	20.4	0.1	319.0	86.0	-4%	330.9	20.4	g	
Plesovice_36	17:09:47	723	9.57	6961	0.05323	0.00200	0.38640	0.02700	0.05283	0.00330	0.345	331.9	20.0	331.8	20.4	0.1	334.0	83.0	1%	331.8	20.4	g	
Plesovice_37	17:35:11	1129	10.46	-12170	0.05309	0.00190	0.37980	0.02600	0.05199	0.00330	0.458	326.7	20.0	326.7	20.4	0.0	334.0	81.0	2%	326.7	20.4	g	
Plesovice_38	17:52:34	452	10.96	14571	0.05302	0.00200	0.39070	0.02700	0.05364	0.00340	0.253	336.8	21.0	336.9	21.0	-0.1	320.0	86.0	-5%	336.9	21.0	g	
Plesovice_39	18:09:57	447	10.42	2784	0.05330	0.00200	0.40350	0.02800	0.05478	0.00340	0.192	343.8	21.0	343.8	21.0	0.0	341.0	86.0	-1%	343.8	21.0	g	
Plesovice_40	18:27:19	488	11.27	-6139	0.05300	0.00200	0.39440	0.02700	0.05415	0.00340	0.322	339.9	21.0	340.1	21.0	-0.2	317.0	84.0	-7%	340.1	21.0	g	
Plesovice_41	18:44:42	749	8.78	21500	0.05319	0.00200	0.40330	0.02800	0.05496	0.00350	0.214	344.9	21.0	345.0	21.6	-0.1	330.0	84.0	-5%	345.0	21.6	g	
TD4F304_29	15:04:06	215	3.50	313	0.05040	0.00290	0.09390	0.00760	0.01351	0.00087	0.078	86.5	5.5	86.2	5.5	0.3	189.0	110.0	54%	86.2	5.5	g = good	
TD4F304_55	15:49:33	434	1.75	760	0.04630	0.00210	0.08780	0.00650	0.01357	0.00086	0.127	86.9	5.5	87.0	5.5	-0.2	35.0	86.0	-149%	87.0	5.5	g	
TD4F304_53	15:46:53	36	1.37	55	0.06220	0.00950	0.12000	0.01800	0.01401	0.00110	0.064	89.6	7.3	88.1	7.0	1.5	320.0	270.0	72%	88.1	7.0	zoned, TRIM	
TD4F304_17	14:44:02	1954	0.98	0	0.06040	0.00330	0.12240	0.01420	0.00990	0.00070	0.705	90.8	5.7	89.5	5.7	1.3	497.0	86.0	82%	89.5	5.7	Hg spike, DELETE	
TD4F304_54	15:48:13	824	2.03	1527	0.04730	0.00200	0.09290	0.00660	0.01427	0.00090	0.208	91.3	5.7	91.4	5.7	-0.1	75.0	82.0	-22%	91.4	5.7	g	
TD4F304_36	15:17:28	720	3.65	1935	0.04810	0.00210	0.09590	0.00690	0.01443	0.00091	0.052	92.4	5.8	92.3	5.8	0.1	112.0</td						

TD4F304_64	16:05:36	87	1.56	194	0.05380	0.00350	0.13980	0.01200	0.01877	0.00120	0.123	119.9	7.8	119.1	7.6	0.8	330.0	130.0	64%	119.1	7.6	g
TD4F304_85	16:41:42	87	1.68	249	0.05890	0.00400	0.15640	0.01400	0.01956	0.00130	0.224	124.8	8.4	423.3	8.2	1.5	490.0	130.0	75%	423.3	8.2	minor 207 spike:DEL
TD4F304_6	14:25:19	86	2.66	99	0.04810	0.00290	0.13650	0.01100	0.02080	0.00140	0.171	132.7	8.6	132.8	8.9	-0.1	110.0	110.0	-21%	132.8	8.9	g
TD4F304_91	16:53:44	165	1.21	346	0.05080	0.00300	0.15010	0.01200	0.02151	0.00140	-0.027	137.2	8.7	136.8	8.9	0.4	183.0	110.0	25%	136.8	8.9	g
TD4F304_39	15:21:28	20	1.42	84	0.06180	0.00740	0.17900	0.02300	0.02199	0.00160	0.043	140.1	10.0	138.0	10.1	2.1	410.0	220.0	66%	138.0	10.1	g
TD4F304_30	15:05:26	30	2.10	41	0.05390	0.00550	0.16200	0.01800	0.02191	0.00150	0.012	139.6	9.6	138.8	9.5	0.8	220.0	180.0	37%	138.8	9.5	g
TD4F304_32	15:10:47	23	1.60	48	0.05980	0.00620	0.18700	0.02200	0.02309	0.00170	0.129	147.5	10.0	145.2	10.7	2.3	400.0	200.0	64%	145.2	10.7	g
TD4F304_77	16:28:20	374	1.54	966	0.05090	0.00230	0.16330	0.01200	0.02330	0.00150	0.232	148.5	9.3	148.1	9.5	0.4	223.0	90.0	34%	148.1	9.5	g
TD4F304_67	16:10:57	70	1.35	139	0.05230	0.00390	0.17600	0.01600	0.02407	0.00160	0.166	153.3	10.0	152.7	10.1	0.6	280.0	140.0	45%	152.7	10.1	DT:TRIM
TD4F304_62	16:02:56	128	1.68	471	0.04870	0.00280	0.16100	0.01300	0.02413	0.00160	-0.042	153.7	9.8	153.8	10.1	-0.1	145.0	110.0	-6%	153.8	10.1	g
TD4F304_86	16:44:23	217	1.02	778	0.05130	0.00240	0.17120	0.01300	0.02440	0.00160	0.101	155.4	9.8	155.0	10.1	0.4	258.0	94.0	40%	155.0	10.1	g
TD4F304_16	14:42:42	235	1.98	-1693	0.05060	0.00240	0.17180	0.01300	0.02470	0.00160	0.010	157.3	9.9	157.0	10.1	0.3	205.0	95.0	23%	157.0	10.1	g
TD4F304_37	15:18:48	46	2.48	223	0.05010	0.00390	0.17200	0.01600	0.02499	0.00160	0.003	159.4	10.0	158.9	10.1	0.5	270.0	140.0	41%	158.9	10.1	g
TD4F304_11	14:34:41	228	1.94	368	0.04990	0.00240	0.17130	0.01300	0.02526	0.00160	0.147	160.8	10.0	160.7	10.1	0.1	181.0	95.0	11%	160.7	10.1	g
TD4F304_13	14:37:21	183	1.75	657	0.04910	0.00240	0.17030	0.01300	0.02558	0.00160	0.122	162.8	10.0	162.9	10.1	-0.1	148.0	97.0	-10%	162.9	10.1	g
TD4F304_26	15:00:05	1607	2.15	2073	0.04910	0.00180	0.18560	0.01300	0.02729	0.00170	0.340	173.5	11.0	173.7	10.7	-0.2	150.0	82.0	-16%	173.7	10.7	g
TD4F304_46	15:34:51	271	2.45	764	0.05040	0.00230	0.19480	0.01400	0.02763	0.00170	0.088	175.7	11.0	175.5	10.7	0.2	220.0	94.0	20%	175.5	10.7	g
TD4F304_51	15:44:12	268	2.20	2062	0.05310	0.00220	0.21940	0.01600	0.02958	0.00190	0.206	187.9	12.0	187.2	11.9	0.7	323.0	86.0	42%	187.2	11.9	g
TD4F304_50	15:40:12	115	2.17	-4690	0.05000	0.00290	0.20820	0.01700	0.02994	0.00190	0.139	190.2	12.0	190.1	12.0	0.1	205.0	110.0	7%	190.1	12.0	g
TD4F304_88	16:47:03	414	3.45	1634	0.05090	0.00210	0.21360	0.01500	0.03043	0.00290	0.647	193.2	13.0	193.0	12.6	0.2	234.0	87.0	16%	193.0	12.6	var160-220:DEL
TD4F304_68	16:12:17	233	2.15	636	0.05320	0.00240	0.22740	0.01700	0.03077	0.00200	0.203	195.5	12.0	194.6	12.5	0.9	313.0	97.0	38%	194.6	12.5	g
TD4F304_81	16:36:21	162	1.40	362	0.05140	0.00240	0.23240	0.01700	0.03282	0.00210	0.193	208.2	13.0	207.9	13.2	0.3	242.0	95.0	14%	207.9	13.2	g
TD4F304_34	15:13:27	81	3.68	296	0.05040	0.00290	0.23900	0.01900	0.03425	0.00220	0.139	217.1	14.0	217.1	13.8	0.0	209.0	110.0	-4%	217.1	13.8	g
TD4F304_83	16:39:02	161	2.63	639	0.05150	0.00260	0.24060	0.01800	0.03463	0.00220	0.131	219.4	14.0	219.2	13.8	0.2	246.0	100.0	11%	219.2	13.8	f
TD4F304_76	16:27:00	236	2.77	68	0.05700	0.00250	0.28360	0.02100	0.03648	0.00230	0.287	230.9	14.0	229.2	14.3	1.7	456.0	93.0	50%	229.2	14.3	Hg spike, DELETE
TD4F304_71	16:18:58	402	1.42	402	0.05890	0.00320	0.34990	0.02700	0.04394	0.00280	0.142	277.4	17.0	274.8	17.3	2.3	517.0	110.0	47%	274.8	17.3	Hg spike, DELETE
TD4F304_9	14:29:20	144	1.95	630	0.05360	0.00240	0.37300	0.02700	0.04984	0.00320	0.103	313.5	19.0	313.2	19.8	0.3	338.0	93.0	7%	313.2	19.8	g
TD4F304_79	16:31:00	377	2.42	1289	0.05497	0.00210	0.41900	0.02900	0.05525	0.00350	0.235	346.6	21.0	346.0	21.6	0.6	405.0	87.0	15%	346.0	21.6	g
TD4F304_4	14:21:18	204	4.92	1315	0.06033	0.00230	0.89300	0.06300	0.10710	0.00690	0.638	656.0	40.0	656.8	41.2	-0.8	613.0	80.0	-7%	656.8	41.2	var750-580:keep
TD4F304_47	15:36:11	285	0.99	6256	0.08571	0.00310	0.26600	0.08000	0.22560	0.01400	0.825	1311.0	75.0	1310.1	78.5	0.9	1333.0	70.0	2%	1333.0	70.0	g
TD4F304_48	15:37:31	2271	11.46	43460	0.08606	0.00300	0.272100	0.18000	0.22950	0.01400	0.799	1331.5	76.0	1331.4	78.4	0.1	1339.0	68.0	1%	1339.0	68.0	g
TD4F304_99	17:05:46	294	2.99	7197	0.08635	0.00310	0.297500	0.20000	0.26150	0.01600	0.699	1445.0	83.0	1445.8	89.5	-0.8	1347.0	74.0	-8%	1347.0	74.0	g: rev disc 8%:DEL
TD4F304_23	14:54:44	287	5.07	4770	0.08658	0.00310	0.305300	0.24000	0.26510	0.01600	0.748	1446.0	84.0	1447.5	89.4	-0.5	1354.0	67.0	-9%	1351.0	67.0	g: rev disc 9%:DEL
TD4F304_65	16:06:57	441	1.45	7681	0.08656	0.00310	0.273100	0.19000	0.22790	0.01400	0.710	1323.0	75.0	1321.7	78.4	1.3	1356.0	68.0	3%	1356.0	68.0	g
TD4F304_52	15:45:32	486	0.88	1395	0.08684	0.00310	0.275700	0.19000	0.23050	0.01500	0.795	1336.0	77.0	1335.8	83.9	0.2	1357.0	68.0	2%	1357.0	68.0	Hg spike, DELETE
TD4F304_10	14:30:40	1121	2.54	16016	0.08682	0.00310	0.257900	0.18000	0.21550	0.01400	0.923	1258.0	73.0	1251.9	78.5	6.1	1357.3	66.0	8%	1357.3	66.0	g
TD4F304_20	14:48:03	133	1.24	978	0.08687	0.00320	0.277200	0.19000	0.23010	0.01500	0.561	1336.0	76.0	1335.3	83.9	2.5	1358.0	72.0	2%	1358.0	72.0	g
TD4F304_31	15:09:27	808	0.94	8471	0.08692	0.00310	0.277300	0.19000	0.23230	0.01500	0.719	1346.1	76.0	1345.7	83.9	0.4	1358.6	69.0	1%	1358.6	69.0	g
TD4F304_66	16:09:37	348	5.29	6158	0.08702	0.00310	0.299700	0.20000	0.24980	0.01600	0.702	1437.0	82.0	1443.4	89.4	-6.1	1361.0	68.0	-6%	1361.0	68.0	g: rev disc 6%:DEL
TD4F304_2	14:18:38	133	1.81	2087	0.08709	0.00320	0.293900	0.20000	0.24580	0.01600	0.619	1416.0	81.0	1420.8	89.4	-4.8	1363.0	71.0	-4%	1363.0	71.0	g
TD4F304_3	14:19:58	862	3.42	10500	0.08720	0.00310	0.281600	0.19000	0.23410	0.01500	0.972	1355.0	79.0	1355.3	83.9	-0.3	1365.0	68.0	1%	1365.0	68.0	g
TD4F304_24	14:56:04	297	4.05	3175	0.08724	0.00310	0.285000	0.19000	0.23670	0.01500	0.611	1369.2	78.0	1368.9	83.8	-0.6	1366.0	70.0	0%	1366.0	70.0	g
TD4F304_94	16:57:45	250	1.85	-12794	0.08716	0.00320	0.275200	0.19000	0.23020	0.01500	0.538	1335.0	76.0	1333.6	83.9	1.4	1366.0	71.0	2%	1366.0	71.0	Pb loss:TRIM
TD4F304_41	15:26:49	864	3.34	11371	0.08729	0.00310	0.268700	0.19000	0.22390	0.01400	0.923	1301.0	75.0	1298.2	78.3	2.8	1366.8	68.0	5%	1366.8	68.0	g
TD4F304_78	16:29:40	242	3.45	17114	0.08736	0.00310	0.285900	0.20000	0.23700	0.01500	0.461	1370.7	78.0	1371.3	83.8	-0.6	1368.0	70.0	0%	1368.0	70.0	g
TD4F304_75	16:24:19	697	7.94	17175	0.08758	0.00310	0.285100	0.19000	0.23730	0.01500	0.711	1372.0	78.0	1372.6	83.8	-0.6	1371.0	68.0	0%	1371.0	68.0	

TD4F304_82	16:37:42	511	1.86	18413	0.16600	0.00590	9.11500	0.62000	0.39530	0.02500	0.680	2146.0	110.0	2068.5	131.6	77.5	2518.0	60.0	18%	2518.0	60.0	f
X91500_1	8:00:18	76	2.62	-10788	0.07440	0.00290	1.80600	0.13000	0.17540	0.01100	0.212	1042.0	60.0	1041.3	63.0	0.7	1057.0	81.0	1%	1057.0	81.0	g
X91500_2	8:01:39	77	2.58	#DIV/0!	0.07540	0.00290	1.80000	0.12000	0.17390	0.01100	0.329	1033.4	60.0	1031.6	63.0	1.8	1065.0	79.0	3%	1065.0	79.0	g
X91500_3	11:07:27	78	2.65	3856	0.07480	0.00290	1.75600	0.12000	0.16830	0.01100	0.223	1002.5	59.0	1000.2	63.1	2.3	1074.0	81.0	7%	1074.0	81.0	g
X91500_4	11:08:47	74	2.59	3271	0.07530	0.00300	1.76600	0.12000	0.17080	0.01100	0.286	1016.0	60.0	1013.9	63.1	2.1	1065.0	83.0	5%	1065.0	83.0	g
X91500_5	14:09:16	75	2.58	2204	0.07480	0.00300	1.75100	0.12000	0.17110	0.01100	0.229	1018.0	59.0	1016.2	63.1	1.8	1054.0	82.0	4%	1054.0	82.0	g
X91500_6	14:10:37	76	2.58	2315	0.07510	0.00300	1.77700	0.13000	0.17080	0.01100	0.322	1017.2	59.0	1014.2	63.1	3.0	1076.0	80.0	6%	1076.0	80.0	g
X91500_7	17:11:07	84	2.60	-59110	0.07350	0.00290	1.71200	0.12000	0.16920	0.01100	0.244	1007.6	59.0	1006.9	63.2	0.7	1023.0	82.0	2%	1023.0	82.0	g
X91500_8	17:12:27	76	2.55	1746	0.07610	0.00290	1.79300	0.12000	0.17150	0.01100	0.329	1020.2	60.0	1017.0	63.0	3.2	1089.0	77.0	7%	1089.0	77.0	g
X91500_9	20:20:57	70	2.57	4589	0.07510	0.00290	1.79600	0.13000	0.17360	0.01100	0.400	1032.4	60.0	1030.2	63.0	2.2	1070.0	80.0	4%	1070.0	80.0	g
X91500_10	20:22:18	67	2.60	-3241	0.07450	0.00300	1.77500	0.12000	0.17200	0.01100	0.178	1023.0	60.0	1021.7	63.1	1.3	1046.0	84.0	2%	1046.0	84.0	g
Z_R33w64_39	13:06:26	91	1.78	-7893	0.05800	0.00260	0.49700	0.03600	0.06266	0.00400	0.201	391.7	24.0	390.1	24.5	1.6	504.0	97.0	23%	390.1	24.5	g
Z_R33w64_40	13:14:27	56	2.05	1055	0.05310	0.00260	0.50900	0.03900	0.06830	0.00440	0.258	425.7	26.0	427.1	27.0	-1.4	310.0	100.0	-38%	427.1	27.0	g
Z_R33w64_41	13:23:49	83	1.25	1354	0.05760	0.00270	0.53100	0.03900	0.06774	0.00430	0.144	422.4	26.0	421.3	26.3	1.1	473.0	99.0	11%	421.3	26.3	g
Z_R33w64_42	13:31:50	142	1.25	4880	0.05430	0.00230	0.49600	0.03500	0.06658	0.00420	0.162	415.5	25.0	415.9	25.8	-0.4	362.0	88.0	-15%	415.9	25.8	g
Z_R33w64_43	13:41:11	225	1.44	1882	0.05420	0.00220	0.51700	0.03600	0.06995	0.00440	0.288	435.8	27.0	436.6	26.9	-0.8	362.0	89.0	-21%	436.6	26.9	fair
Z_R33w64_44	13:49:13	170	1.36	46140	0.05510	0.00220	0.50010	0.03500	0.06557	0.00410	0.236	409.3	25.0	409.3	25.1	0.0	400.0	87.0	-2%	409.3	25.1	g
Z_R33w64_45	13:58:34	205	1.42	2775	0.05440	0.00220	0.49500	0.03600	0.06601	0.00420	0.179	412.5	25.0	412.4	25.8	0.1	367.0	88.0	-12%	412.4	25.8	g
Z_R33w64_46	14:06:36	130	1.73	2109	0.05600	0.00240	0.51700	0.03800	0.06660	0.00420	0.117	415.9	26.0	415.2	25.7	0.7	432.0	95.0	4%	415.2	25.7	g
Z_R33w64_47	14:23:59	240	1.36	2708	0.05740	0.00230	0.54600	0.03800	0.06853	0.00430	0.207	427.3	26.0	426.2	26.2	1.1	509.0	86.0	16%	426.2	26.2	fair
Z_R33w64_48	14:32:00	121	2.65	5043	0.05470	0.00240	0.53200	0.03800	0.07011	0.00450	0.225	436.7	27.0	437.3	27.5	-0.6	387.0	96.0	-13%	437.3	27.5	fair
Z_R33w64_49	14:41:22	139	1.99	-2538	0.05590	0.00230	0.53000	0.03800	0.06898	0.00440	0.274	429.9	26.0	429.8	26.9	0.1	449.0	92.0	4%	429.8	26.9	fair
Z_R33w64_50	14:49:23	197	1.32	-1403	0.05510	0.00220	0.50150	0.03500	0.06598	0.00420	0.170	411.8	25.0	411.8	25.7	0.0	399.0	87.0	-3%	411.8	25.7	g
Z_R33w64_51	14:58:45	84	2.32	2761	0.05490	0.00270	0.48300	0.03600	0.06357	0.00400	0.053	397.2	25.0	397.2	24.6	0.0	381.0	100.0	-4%	397.2	24.6	g
Z_R33w64_52	15:06:46	414	0.91	5605	0.05491	0.00200	0.49680	0.03500	0.06578	0.00410	0.307	410.6	25.0	410.7	25.1	-0.1	404.0	84.0	-2%	410.7	25.1	g
Z_R33w64_53	15:16:08	156	1.25	-5128	0.05570	0.00240	0.48500	0.03500	0.06344	0.00400	0.106	397.1	25.0	396.0	24.5	1.1	439.0	93.0	10%	396.0	24.5	g
Z_R33w64_54	15:24:09	304	1.03	3208	0.05459	0.00210	0.48060	0.03300	0.06370	0.00400	0.195	398.1	24.0	398.1	24.6	0.0	381.0	84.0	-4%	398.1	24.6	g
Z_R33w64_55	15:33:30	162	1.73	2847	0.05710	0.00240	0.49800	0.03500	0.06319	0.00400	0.210	395.0	24.0	393.8	24.5	1.2	481.0	92.0	18%	393.8	24.5	g
Z_R33w64_56	15:41:32	53	2.57	-7045	0.05850	0.00310	0.51700	0.04000	0.06490	0.00420	0.100	405.4	25.0	403.6	25.7	1.8	507.0	110.0	20%	403.6	25.7	g
Z_R33w64_57	15:50:53	177	1.09	1502	0.05620	0.00230	0.49200	0.03500	0.06397	0.00400	0.183	400.0	24.0	399.0	24.5	1.0	443.0	90.0	10%	399.0	24.5	g
Z_R33w64_58	15:58:55	187	1.40	#DIV/0!	0.05600	0.00230	0.49700	0.03600	0.06440	0.00410	0.193	402.3	25.0	401.7	25.1	0.6	439.0	90.0	8%	401.7	25.1	g
Z_R33w64_59	16:08:17	147	1.35	4314	0.05470	0.00230	0.48300	0.03400	0.06370	0.00400	0.058	398.4	24.0	398.1	24.6	0.3	386.0	91.0	-3%	398.1	24.6	g
Z_R33w64_60	16:16:18	196	1.33	1847	0.05440	0.00220	0.47470	0.03300	0.06352	0.00400	0.164	396.9	24.0	397.1	24.6	-0.2	369.0	88.0	-8%	397.1	24.6	g
Z_R33w64_61	16:25:40	89	1.56	11965	0.05340	0.00250	0.47200	0.03500	0.06416	0.00410	0.099	400.8	25.0	401.5	25.2	-0.7	322.0	98.0	-25%	401.5	25.2	g
Z_R33w64_62	16:33:41	202	1.13	1577	0.05500	0.00220	0.48400	0.03400	0.06365	0.00400	0.298	397.8	24.0	397.6	24.5	0.2	405.0	87.0	2%	397.6	24.5	g
Z_R33w64_63	16:43:02	253	1.02	4886	0.05530	0.00220	0.52000	0.03600	0.06865	0.00430	0.191	427.9	26.0	428.1	26.3	-0.2	406.0	89.0	-5%	428.1	26.3	fair
Z_R33w64_64	16:51:04	218	1.42	7725	0.05460	0.00220	0.51100	0.03600	0.06718	0.00420	0.270	419.4	26.0	419.4	25.7	0.0	396.0	90.0	-6%	419.4	25.7	g
Z_R33w64_65	17:00:25	201	1.92	55300	0.05500	0.00220	0.50900	0.03600	0.06691	0.00420	0.378	417.8	26.0	417.6	25.7	0.2	408.0	87.0	-2%	417.6	25.7	g
Z_R33w64_66	17:08:26	190	1.15	2096	0.05550	0.00230	0.50300	0.03500	0.06672	0.00420	0.302	416.3	26.0	416.2	25.7	0.1	413.0	91.0	-1%	416.2	25.7	g
Z_R33w64_67	17:25:49	124	1.92	955	0.05550	0.00230	0.49700	0.03600	0.06526	0.00410	0.323	407.4	25.0	407.2	25.1	0.2	412.0	92.0	1%	407.2	25.1	g
Z_R33w64_68	17:33:50	79	1.47	794	0.06280	0.00300	0.56600	0.04200	0.06506	0.00420	0.048	406.2	25.0	402.4	25.5	3.8	663.0	100.0	39%	402.4	25.5	g
Z_R33w64_69	17:43:12	86	1.45	685	0.05490	0.00260	0.47800	0.03500	0.06292	0.00400	0.091	393.3	24.0	393.2	24.6	0.1	382.0	99.0	-3%	393.2	24.6	g
Z_R33w64_70	17:51:13	104	2.01	1833	0.05520	0.00250	0.51600	0.03800	0.06815	0.00430	0.307	424.9	26.0	425.1	26.3	-0.2	406.0	97.0	-5%	425.1	26.3	g
Z_R33w64_71	18:00:35	84	2.12	7683	0.05550	0.00260	0.51200	0.03600	0.06668	0.00420	0.065	416.4	25.0	415.9	25.7	0.5	413.0	100.0	-1%	415.9	25.7	g
Z_R33w64_72	18:08:36	125	1.28	3528	0.05480	0.00230	0.51200	0.03776	0.06430	0.00430	0.079	422.5	26.0	422.9	26.3	-0.4	380.0	92.0	-11%	422.9	26.3	g
Z_R33w64_73	18:17:58	173	1.17	1692	0.05500	0.00230	0.52500	0.03700	0.06927	0.00440	0.212	431.7	26.0	432.0	26.9	-0.3	387.0	89.0	-12%	432.0	26.9	g
Z_R33w64_74	18:25:59	186	1.35	2200	0.05390	0.00220	0															

Table DR2D: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz

Run: TD-UCSC-13 (part). Sample TD4F312, Bolinis Ridge, site "F", Franciscan Novato Quarry terrane. Iolite file name UCSC13\_T2S7\_GC3\_All\_Integrations. Excel file name GS-TD UCSC13\_T2S7\_GC3

Grain	Time hr:min:s	U ppm	U/Th	206Pb/ 204Pb		207Pb/ 206Pb		207Pb/ 235U		206Pb/ 238U		Error Corr.	238U age (Ma)	238Pb age (Ma)	207 corr +2s (Ma)	206Pb age (Ma)	discor- dance	Best Age (Ma)	+2s (Ma)	Comments		
				unc. 206Pb/ 204Pb	+2s	unc. 206Pb/ 207Pb	+2s	unc. 207Pb/ 235U	+2s	unc. 206Pb/ 238U	+2s				207corr 206Pb/ 207Pb	uncorr. 206Pb/ 207Pb						
Time	GS Excel	GS Excel	Pb206_C PS/Pb204 CPS	Final207_206 2SE	Final207_206_Prop 2SE	Final207_235 2SE	Final207_235_Prop 2SE	Final206_238 2SE	Final206_238_Prop 2SE	Final206_38vs7_3 5	ErrorCorr elation_6	FinalAge2_06_238_Prop 2SE	FinalAge2_06_238_Pr op2SE	GS Excel	GS Excel	TD Excel	FinalAge2_07_206 op2SE	FinalAge2_07_206_Prop TD	TD Excel	TD Excel	TD Excel	
Madder_1	15:30:35	4358	8.40	61714	0.05690	0.00110	0.67750	0.04400	0.08645	0.00610	0.856	534.8	37.0	535.3	36.9	-0.5	490.6	45.0	-9%	535.3	36.9	g
Madder_2	15:31:55	4316	7.88	40233	0.05687	0.00110	0.68650	0.04500	0.08741	0.00620	0.853	540.1	37.0	541.1	37.5	-1.0	486.2	44.0	-11%	541.1	37.5	g
Madder_3	18:37:45	3482	7.86	54462	0.05704	0.00110	0.67680	0.04400	0.08627	0.00610	0.824	533.4	36.0	534.1	36.9	-0.7	493.2	44.0	-8%	534.1	36.9	g
Madder_4	18:39:05	3530	8.60	37077	0.05695	0.00110	0.67750	0.04400	0.08662	0.00610	0.795	535.5	36.0	536.3	36.9	-0.8	488.3	44.0	-10%	536.3	36.9	g
Madder_5	21:39:34	3392	8.27	62727	0.05710	0.00110	0.66520	0.04400	0.08493	0.00600	0.828	525.4	36.0	526.0	36.3	-0.6	494.7	44.0	-6%	526.0	36.3	g
Madder_6	21:40:55	3311	8.25	46172	0.05703	0.00110	0.66970	0.04400	0.08514	0.00600	0.754	526.9	35.0	527.3	36.3	-0.4	492.0	45.0	-7%	527.3	36.3	g
Madder_7	0:41:34	2950	7.91	36273	0.05724	0.00120	0.66230	0.04300	0.08385	0.00590	0.762	519.0	35.0	519.4	35.7	-0.4	501.0	44.0	-4%	519.4	35.7	g
Madder_8	0:42:54	2805	8.25	50304	0.05741	0.00120	0.66770	0.04400	0.08439	0.00600	0.742	522.2	35.0	522.5	36.3	-0.3	505.0	44.0	-3%	522.5	36.3	g
Plesovice_7	17:06:51	929	11.04	-21880	0.05295	0.00120	0.37120	0.02500	0.05090	0.00360	0.502	320.0	22.0	320.0	22.3	0.0	321.0	50.0	0%	320.0	22.3	g
Plesovice_8	17:24:14	883	10.77	104400	0.05299	0.00120	0.37470	0.02500	0.05122	0.00360	0.439	322.0	22.0	321.9	22.3	0.1	328.0	52.0	2%	321.9	22.3	g
Plesovice_9	17:41:36	1579	7.35	-24287	0.05280	0.00110	0.36060	0.02400	0.04941	0.00350	0.454	310.9	21.0	310.8	21.7	0.1	319.0	48.0	3%	310.8	21.7	g
Plesovice_10	17:58:59	356	12.06	-2434	0.05270	0.00140	0.37620	0.02500	0.05194	0.00370	0.079	326.4	22.0	326.5	22.9	-0.1	302.0	57.0	-8%	326.5	22.9	g
Plesovice_11	18:16:22	880	10.00	6656	0.05202	0.00120	0.36840	0.02400	0.05165	0.00360	0.421	324.6	22.0	325.0	22.3	-0.4	288.0	51.0	-13%	325.0	22.3	g
Plesovice_12	18:33:45	768	10.50	8209	0.05246	0.00120	0.37790	0.02500	0.05257	0.00370	0.394	330.3	23.0	330.5	22.9	-0.2	300.0	52.0	-10%	330.5	22.9	g
Plesovice_13	18:59:08	827	11.69	8804	0.05263	0.00120	0.37740	0.02500	0.05232	0.00370	0.390	328.8	23.0	328.9	22.9	-0.1	308.0	50.0	-7%	328.9	22.9	g
Plesovice_14	19:16:31	803	8.38	-66133	0.05299	0.00120	0.38570	0.02500	0.05257	0.00370	0.293	330.3	23.0	330.2	22.9	0.1	333.0	51.0	1%	330.2	22.9	g
Plesovice_15	19:33:54	561	11.79	8744	0.05311	0.00130	0.39010	0.02600	0.05312	0.00380	0.244	333.6	23.0	333.6	23.5	0.0	333.0	54.0	0%	333.6	23.5	g
Plesovice_16	19:51:17	1029	6.85	-25020	0.05297	0.00120	0.37870	0.02500	0.05189	0.00370	0.435	326.3	23.0	326.1	22.9	0.2	326.0	50.0	0%	326.1	22.9	g
Plesovice_17	20:08:40	742	10.38	46400	0.05246	0.00120	0.38170	0.02500	0.05295	0.00370	0.289	332.6	23.0	332.9	22.9	-0.3	297.0	53.0	-12%	332.9	22.9	g
Plesovice_18	20:26:03	993	7.91	47920	0.05265	0.00120	0.37270	0.02500	0.05134	0.00360	0.494	322.7	22.0	322.8	22.3	-0.1	306.0	50.0	-5%	322.8	22.3	g
Plesovice_19	20:43:25	1031	7.31	7684	0.05329	0.00120	0.37440	0.02500	0.05097	0.00360	0.569	320.7	22.0	320.3	22.3	0.4	341.0	50.0	6%	320.3	22.3	g
Plesovice_20	21:00:48	692	10.54	17390	0.05311	0.00120	0.38790	0.02600	0.05317	0.00380	0.285	333.9	23.0	334.0	23.5	-0.1	325.0	52.0	-3%	334.0	23.5	g
Plesovice_21	21:18:11	697	9.90	-58267	0.05300	0.00120	0.38620	0.02600	0.05294	0.00370	0.319	332.5	23.0	332.6	22.9	-0.1	323.0	52.0	-3%	332.6	22.9	g
Plesovice_22	21:35:34	646	10.81	-13483	0.05239	0.00120	0.38080	0.02500	0.05279	0.00370	0.305	331.6	23.0	331.9	22.9	-0.3	291.0	53.0	-14%	331.9	22.9	g
Plesovice_23	22:00:58	714	10.04	16191	0.05248	0.00120	0.37160	0.02500	0.05169	0.00360	0.248	324.9	22.0	325.1	22.3	-0.2	298.0	52.0	-9%	325.1	22.3	g
Plesovice_24	22:18:21	772	9.72	27329	0.05309	0.00120	0.38050	0.02500	0.05179	0.00370	0.355	325.5	22.0	325.4	22.9	0.1	332.0	50.0	2%	325.4	22.9	g
Plesovice_25	22:35:45	846	11.81	-11567	0.05271	0.00120	0.37320	0.02500	0.05166	0.00360	0.346	324.7	22.0	324.8	22.3	-0.1	308.0	52.0	-5%	324.8	22.3	g
Plesovice_26	22:53:09	589	11.64	11169	0.05287	0.00120	0.37850	0.02500	0.05175	0.00370	0.365	325.2	22.0	325.3	22.9	-0.1	321.0	52.0	-1%	325.3	22.9	g
TD4F312_25	19:23:13	2067	46.88	4529	0.04680	0.00190	0.08240	0.00630	0.01264	0.00091	0.374	81.0	5.8	81.1	5.8	-0.1	40.0	85.0	-103%	81.1	5.8	DT:TRIM
TD4F312_75	20:50:06	352	1.27	868	0.04720	0.00180	0.08500	0.00610	0.01303	0.00093	-0.002	83.4	5.9	83.5	5.9	-0.1	75.0	74.0	-11%	83.5	5.9	g = good
TD4F312_33	19:37:55	227	2.46	768	0.04840	0.00350	0.08760	0.00810	0.01345	0.00100	-0.101	86.1	6.5	86.1	6.4	0.0	140.0	130.0	39%	86.1	6.4	zoned:TRIM
TD4F312_60	20:23:22	125	1.07	-607	0.05150	0.03000	0.09350	0.00770	0.01361	0.00098	-0.008	87.1	6.3	86.7	6.2	0.4	220.0	110.0	61%	86.7	6.2	g
TD4F312_55	20:15:21	119	2.56	170	0.04870	0.00310	0.08930	0.00770	0.01358	0.00099	0.079	87.0	6.3	86.8	6.3	0.2	130.0	120.0	33%	86.8	6.3	g
TD4F312_59	20:22:02	313	1.31	1419	0.05140	0.00200	0.09860	0.00730	0.01385	0.00099	0.301	88.7	6.3	88.3	6.3	0.4	228.0	79.0	61%	88.3	6.3	fair
TD4F312_70	20:40:45	349	1.72	1402	0.04910	0.00190	0.09170	0.00670	0.01382	0.00099	0.220	88.5	6.3	88.3	6.3	0.2	157.0	75.0	44%	88.3	6.3	g
TD4F312_78	20:55:27	179	1.06	348	0.04660	0.00250	0.08840	0.00720	0.01392	0.00100	0.266	89.1	6.4	89.2	6.4	-0.1	76.0	97.0	-17%	89.2	6.4	fair
TD4F312_11	19:00:29	88	1.51	165	0.05420	0.00890	0.09800	0.01600	0.01412	0.00120	-0.040	90.4	7.4	89.7	7.7	0.7	250.0	300.0	64%	89.7	7.7	zoned:TRIM
TD4F312_61	20:27:23	429	1.75	551	0.05220	0.02200	0.010170	0.00780	0.01413	0.00100	0.369	90.4	6.4	90.0	6.3	0.4	254.0	83.0	65%	90.0	6.3	g
TD4F312_80	20:58:08	157	1.88	1501	0.04810	0.00230	0.09400	0.00730	0.01406	0.00100	0.056	90.0	6.4	90.0	6.4	0.0	135.0	91.0	33%	90.0	6.4	g
TD4F312_14	19:04:29	195	2.08	387	0.04840	0.00250	0.09590	0.00750	0.01407	0.00100	0.033	90.0	6.5	90.0	6.4	0.0	115.0	95.0	22%	90.0	6.4	

Table DR2D: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz

Run: TD-UCSC-13 (part). Sample TD4F312, Bolinis Ridge, site "F", Franciscan Novato Quarry terrane. Iolite file name UCSC13\_T2S7\_GC3\_All\_Integrations. Excel file name GS-TD UCSC13\_T2S7\_GC3

Grain	Time hr:min:s	U ppm	U/Th	206Pb/ 204Pb		207Pb/ 206Pb		207Pb/ 235U		206Pb/ 238U		Error Corr.	238U age (Ma)	238Pb age (Ma)	207 corr age (Ma)	206Pb age (Ma)	discor- dance	Best Age (Ma)	Comments		
				206Pb/ 204Pb	207Pb/ 206Pb	+2s	207Pb/ 235U	+2s	206Pb/ 238U	+2s	unc. 206Pb/ 204Pb	207corr 206Pb/ 207Pb	uncorr. 206Pb/ 207Pb	+2s (Ma)	+2s (Ma)	+2s (Ma)	+2s (Ma)				
TD4F312_86	21:10:10	68	1.82	406	0.04810	0.00360	0.11380	0.01100	0.01774	0.00130	0.025	113.4	8.3	0.0	60.0	130.0	-89%	113.4	8.3 g		
TD4F312_95	21:24:52	130	3.77	2069	0.04740	0.00300	0.11340	0.01000	0.01778	0.00140	0.028	113.6	8.7	0.2	100.0	110.0	-14%	113.8	8.9 var150-85-DEL		
TD4F312_28	19:28:33	68	2.58	214	0.04960	0.00340	0.12250	0.01100	0.01813	0.00130	-0.058	115.8	8.4	115.6	8.3	0.2	180.0	120.0	36%	8.3 g	
TD4F312_22	19:19:12	164	5.31	270	0.04930	0.00220	0.12400	0.00930	0.01821	0.00130	0.181	116.3	8.3	116.2	8.3	0.1	195.0	87.0	40%	116.2	8.3 g
TD4F312_74	20:48:46	154	1.78	3380	0.04920	0.00250	0.12320	0.00960	0.01821	0.00130	-0.073	116.3	8.3	116.2	8.3	0.1	179.0	97.0	35%	116.2	8.3 g
TD4F312_9	18:55:08	89	3.42	252	0.04960	0.00300	0.12620	0.01100	0.01856	0.00140	0.135	118.5	8.6	118.4	8.9	0.1	170.0	110.0	30%	118.4	8.9 g
TD4F312_72	20:46:06	83	1.67	1223	0.04860	0.00290	0.12480	0.01100	0.01871	0.00140	0.143	119.5	8.6	119.5	8.9	0.0	130.0	110.0	8%	119.5	8.9 g
TD4F312_91	21:19:31	412	1.89	1939	0.04790	0.00160	0.12310	0.00870	0.01900	0.00140	0.287	121.3	8.6	121.4	8.9	-0.1	102.0	66.0	-19%	121.4	8.9 fair
TD4F312_84	21:06:09	62	2.51	437	0.04770	0.00330	0.12490	0.01100	0.01910	0.00140	0.033	121.9	8.9	122.1	8.9	-0.2	100.0	120.0	-22%	122.1	8.9 g
TD4F312_97	21:28:53	65	2.29	1473	0.04960	0.00340	0.12900	0.01200	0.01935	0.00140	0.066	123.5	9.0	123.4	8.9	0.1	160.0	120.0	23%	123.4	8.9 g
TD4F312_17	19:09:50	68	2.56	154	0.04820	0.00310	0.12840	0.01100	0.01953	0.00140	0.073	124.7	9.1	124.7	8.9	0.0	100.0	110.0	-25%	124.7	8.9 g
TD4F312_100	21:32:54	79	2.81	-7480	0.05410	0.00360	0.14830	0.01400	0.01999	0.00150	0.148	127.6	9.2	126.7	9.5	0.9	300.0	120.0	58%	126.7	9.5 g
TD4F312_36	19:43:16	66	1.71	133	0.04970	0.00360	0.13210	0.01200	0.02014	0.00150	0.021	128.5	9.3	128.4	9.5	0.1	170.0	130.0	24%	128.4	9.5 g
TD4F312_79	20:56:48	58	5.62	204	0.05450	0.00370	0.15040	0.01300	0.02030	0.00150	0.185	129.5	9.6	128.6	9.5	0.9	340.0	120.0	62%	128.6	9.5 fair
TD4F312_38	19:45:56	102	1.60	295	0.04700	0.00260	0.13210	0.01100	0.02053	0.00150	0.130	131.0	9.4	131.3	9.5	-0.3	50.0	97.0	-163%	131.3	9.5 g
TD4F312_45	19:57:58	122	3.90	847	0.04820	0.00240	0.13690	0.01100	0.02078	0.00150	0.242	132.6	9.4	132.7	9.5	-0.1	129.0	95.0	-3%	132.7	9.5 g
TD4F312_10	18:56:28	88	2.78	440	0.04500	0.00280	0.13330	0.01100	0.02155	0.00160	0.021	137.4	9.8	138.1	10.2	-0.7	-10.0	110.0	1481%	138.1	10.2 g
TD4F312_85	21:07:29	104	2.25	525	0.04790	0.00260	0.14390	0.01200	0.02185	0.00160	0.117	139.5	10.0	139.5	10.2	0.0	96.0	96.0	-45%	139.5	10.2 g
TD4F312_21	19:17:52	99	2.52	357	0.05290	0.00270	0.16130	0.01300	0.02229	0.00160	0.126	142.1	10.0	141.4	10.1	0.7	299.0	100.0	53%	141.4	10.1 g
TD4F312_39	19:47:16	205	1.90	2378	0.04810	0.00190	0.14760	0.01100	0.02261	0.00160	0.082	144.1	10.0	144.3	10.1	-0.2	111.0	74.0	-30%	144.3	10.1 g
TD4F312_16	19:08:30	106	2.08	419	0.05040	0.00250	0.15430	0.01200	0.02278	0.00160	0.019	145.2	10.0	144.9	10.1	0.3	205.0	94.0	29%	144.9	10.1 g
TD4F312_29	19:29:54	142	2.04	384	0.04900	0.00230	0.15630	0.01200	0.02278	0.00160	0.112	145.2	10.0	145.2	10.1	0.0	173.0	91.0	16%	145.2	10.1 fair
TD4F312_87	21:11:30	136	1.73	457	0.04960	0.00240	0.15900	0.01200	0.02312	0.00170	-0.026	147.3	10.0	147.2	10.8	0.1	147.0	91.0	0%	147.2	10.8 g
TD4F312_73	20:47:26	500	1.94	1583	0.04970	0.00150	0.16070	0.01100	0.02354	0.00170	0.180	150.0	10.0	149.9	10.7	0.1	170.0	63.0	12%	149.9	10.7 g
TD4F312_54	20:14:01	115	2.59	494	0.04850	0.00220	0.15710	0.01200	0.02360	0.00170	0.208	150.4	11.0	150.5	10.8	-0.1	123.0	88.0	-22%	150.5	10.8 g
TD4F312_1	18:43:06	124	2.79	453	0.04850	0.00240	0.16680	0.01300	0.02479	0.00180	-0.026	157.8	11.0	158.0	11.4	-0.2	164.0	94.0	4%	158.0	11.4 g
TD4F312_53	20:12:41	77	2.48	243	0.05270	0.00330	0.18500	0.01700	0.02535	0.00180	0.260	161.3	12.0	160.7	11.3	0.6	270.0	120.0	40%	160.7	11.3 g
TD4F312_44	19:56:38	189	1.14	695	0.04870	0.00190	0.16870	0.01200	0.02558	0.00180	0.030	162.8	11.0	163.0	11.4	-0.2	132.0	77.0	-23%	163.0	11.4 g
TD4F312_23	19:20:32	138	2.00	462	0.04830	0.00200	0.17130	0.01300	0.02562	0.00180	0.245	163.1	12.0	163.3	11.4	-0.2	129.0	78.0	-27%	163.3	11.4 g
TD4F312_31	19:35:14	127	1.34	847	0.04830	0.00230	0.16830	0.01300	0.02568	0.00180	0.178	163.6	11.0	163.7	11.4	-0.1	108.0	88.0	-52%	163.7	11.4 g
TD4F312_82	21:03:29	129	2.50	1072	0.05110	0.00230	0.18270	0.01400	0.02617	0.00190	0.119	166.5	12.0	166.2	12.0	0.3	231.0	89.0	28%	166.2	12.0 g
TD4F312_88	21:12:50	81	1.69	925	0.05100	0.00260	0.18270	0.01500	0.02623	0.00190	0.175	166.9	12.0	166.6	12.0	0.3	230.0	98.0	28%	166.6	12.0 g
TD4F312_92	21:20:52	89	2.09	561	0.04780	0.00260	0.17110	0.01400	0.02637	0.00190	-0.037	167.8	12.0	168.1	12.0	-0.3	103.0	99.0	-63%	168.1	12.0 g
TD4F312_34	19:39:15	104	1.81	325	0.05100	0.00250	0.18710	0.01400	0.02690	0.00190	-0.053	171.3	12.0	170.8	12.0	0.5	236.0	95.0	28%	170.8	12.0 g
TD4F312_2	18:44:26	236	1.70	1064	0.05010	0.00170	0.18530	0.01300	0.02694	0.00190	0.204	171.3	12.0	171.2	12.0	0.1	204.0	70.0	16%	171.2	12.0 g
TD4F312_7	18:52:27	157	1.66	384	0.05130	0.00200	0.19370	0.01400	0.02766	0.00200	0.198	175.8	12.0	175.5	12.6	0.3	250.0	81.0	30%	175.5	12.6 g
TD4F312_58	20:20:42	129	3.16	765	0.04820	0.00210	0.18280	0.01400	0.02787	0.00200	0.201	177.2	12.0	177.5	12.6	-0.3	105.0	83.0	-69%	177.5	12.6 fair
TD4F312_3	18:45:46	90	2.56	324	0.04900	0.00240	0.19040	0.01500	0.02815	0.00200	-0.007	179.0	13.0	179.1	12.6	-0.1	145.0	89.0	-24%	179.1	12.6 g
TD4F312_8	18:53:48	402	1.65	918	0.05000	0.00150	0.19540	0.01300	0.02851	0.00200	0.117	181.2	13.0	181.1	12.6	0.1	193.0	63.0	6%	181.1	12.6 g
TD4F312_12	19:01:49	253	2.24	942	0.05080	0.00160	0.21000	0.01500	0.03049	0.00220	0.066	193.6	14.0	193.4	13.8	0.2	222.0	67.0	13%	193.4	13.8 g
TD4F312_27	19:27:13	398	2.81	4505	0.04961	0.00130	0.21070	0.01400	0.03099	0.00220	0.230	196.7	14.0	196.8	13.8	-0.1	172.0	57.0	-14%	196.8	13.8 g
TD4F312_83	21:04:49	166	2.27	-12195	0.04920	0.00180	0.20800	0.01500	0.03105	0.00220	0.207	197.1	14.0	197.3	13.8	-0.2	159.0	72.0	-24%	197.3	13.8 g
TD4F312_93	21:22:12	268	2.46	609	0.05690	0.00310	0.29300	0.02300	0.03231	0.00230	0.333	204.9	14.0	201.0	14.2	3.9	696.0	92.0	71%	201.0	14.2 g
TD4F312_77	20:54:07	311	2.35	3081	0.05050	0.00150	0.22130	0.01500	0.03176												

**Table DR2D: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz**

Run: TD-UCSC-13 (part). Sample TD4F312, Bolinis Ridge, site "F", Francisan Novato Quarry terrane. Iolite file name UCSC13\_T2S7\_GC3\_All\_Integrations. Excel file name GS-TD UCSC13\_T2S7\_GC3

Grain	Time hr:min:s	U ppm	U/Th	206Pb/ 204Pb	207Pb/ 206Pb	+2s	207Pb/ 235U	+2s	206Pb/ 238U	+2s	Error Corr.	238U age (Ma)	238Pb age (Ma)	207 corr age (Ma)	/206Pb age (Ma)	+2s (Ma)	discor- dance	Best Age (Ma)	+2s (Ma)	Comments			
				unc. 206Pb/ 204Pb	unc. 206Pb/ 206Pb	+2s	unc. 207Pb/ 235U	+2s	unc. 206Pb/ 238U	+2s	unc. 238U age (Ma)	+2s (Ma)	unc. 238Pb age (Ma)	+2s (Ma)	unc. 207 corr age (Ma)	+2s (Ma)	unc. 206Pb age (Ma)	+2s (Ma)	discor- dance	Best Age (Ma)	+2s (Ma)	Comments	
				Pb206_C GS Excel	PS/Pb204 GS Excel	Final207_2SE CPS	Final207_2SE 206_Prop	Final207_2SE 235_Prop	Final206_2SE 238_Prop	Final206_2SE 38vs7_3	FinalAge2_06_238_Prop op2SE	FinalAge2_06_238_Prop GS Excel	FinalAge2_07_206_Prop op2SE	FinalAge2_07_206_Prop TD Excel									
Time	GS Excel	GS Excel	GS Excel	Final207_206 206	Final207_235 235	Final207_235 2SE	Final206_238 238	Final206_238 2SE	FinalAge2_06_238 5	FinalAge2_06_238 op2SE	FinalAge2_07_206 GS Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel	FinalAge2_07_206 TD Excel		
TD4F312_48	20:03:19	192	3.66	12027	0.10375	0.00220	4.14000	0.27000	0.29050	0.02100	0.691	1643.0	100.0	1639.1	115.1	3.9	1692.0	39.0	3%	1692.0	39.0	76 good	
TD4F312_49	20:04:39	283	2.21	24200	0.10688	0.00220	3.97900	0.26000	0.27030	0.01900	0.884	1543.0	98.0	1523.0	103.6	20.0	1748.0	37.0	13%	1748.0	37.0	76 good	
TD4F312_57	20:19:21	208	2.58	10527	0.10836	0.00220	4.78800	0.31000	0.32160	0.02300	0.657	1798.0	110.0	1800.6	126.2	-2.6	1771.0	38.0	-2%	1771.0	38.0	g	
X91500_1	15:27:55	79	3.10	1790	0.07300	0.00190	1.79400	0.12000	0.17830	0.01300	0.271	1057.2	69.0	1059.6	74.5	-2.4	1014.0	53.0	-4%	1014.0	53.0	g	
X91500_2	15:29:15	100	2.79	-20058	0.07390	0.00180	1.78700	0.12000	0.17580	0.01200	0.363	1043.6	68.0	1044.2	68.7	-0.6	1046.0	50.0	0%	1046.0	50.0	g	
X91500_3	18:35:05	89	2.72	7220	0.07420	0.00180	1.77900	0.12000	0.17410	0.01200	0.416	1034.3	68.0	1034.1	68.7	0.2	1039.0	50.0	0%	1039.0	50.0	g	
X91500_4	18:36:25	82	2.71	2973	0.07390	0.00190	1.75500	0.12000	0.17310	0.01200	0.172	1029.5	67.0	1028.8	68.8	0.7	1039.0	53.0	1%	1039.0	53.0	g	
X91500_5	21:36:54	141	1.45	3096	0.06529	0.00170	0.48400	0.03300	0.06380	0.00460	0.192	398.6	27.9	398.4	27.6	0.2	399.0	67.0	0%	399.4	27.6	R-332:DEL	
X91500_6	21:38:14	85	2.65	69780	0.07510	0.00190	1.80200	0.12000	0.17350	0.01200	0.306	1031.2	68.0	1029.6	68.7	1.6	1064.0	50.0	3%	1064.0	50.0	g	
X91500_7	0:38:53	69	2.71	4685	0.07520	0.00190	1.75300	0.12000	0.16960	0.01200	0.324	1009.4	66.0	1007.2	68.8	2.2	1067.0	52.0	6%	1067.0	52.0	g	
X91500_8	0:40:14	72	2.71	-6526	0.07420	0.00200	1.72600	0.12000	0.16970	0.01200	0.360	1010.3	66.0	1008.9	68.8	1.4	1032.0	56.0	2%	1032.0	56.0	g	
Z_R33w64_16	17:32:15	304	1.36	8438	0.05517	0.00140	0.50090	0.03300	0.06604	0.00470	0.194	412.2	28.0	412.2	28.8	0.0	408.0	55.0	-1%	412.2	28.8	g	
Z_R33w64_17	17:40:16	111	1.49	-1996	0.05590	0.00170	0.50400	0.03500	0.06540	0.00460	0.227	408.3	28.0	407.9	28.2	0.4	428.0	66.0	5%	407.9	28.2	g	
Z_R33w64_18	17:49:37	284	1.39	5882	0.05461	0.00140	0.50710	0.03400	0.06701	0.00470	0.239	418.1	29.0	418.4	28.8	-0.3	398.0	56.0	-5%	418.4	28.8	g	
Z_R33w64_19	17:57:39	211	1.25	-2976	0.05569	0.00150	0.50770	0.03400	0.06647	0.00470	0.200	414.8	28.0	414.5	28.8	0.3	432.0	58.0	4%	414.5	28.8	g	
Z_R33w64_20	18:07:00	95	1.50	-1681	0.05610	0.00180	0.52700	0.03700	0.06824	0.00490	0.250	425.4	29.0	425.1	29.9	0.3	445.0	68.0	4%	425.1	29.9	g	
Z_R33w64_21	18:15:01	562	1.82	5953	0.05469	0.00130	0.51240	0.03400	0.06761	0.00480	0.290	412.9	29.0	422.0	29.4	-0.1	399.0	51.0	-6%	422.0	29.4	g	
Z_R33w64_22	18:24:23	172	1.67	#DIV/0!	0.05560	0.00170	0.52800	0.03600	0.06931	0.00490	0.113	431.9	30.0	431.9	29.9	0.0	404.0	63.0	-7%	431.9	29.9	fair	
Z_R33w64_23	18:32:24	168	1.71	-52790	0.05580	0.00150	0.51600	0.03500	0.06714	0.00480	0.260	418.8	29.0	418.6	29.3	0.2	435.0	62.0	4%	418.6	29.3	g	
Z_R33w64_24	18:49:47	173	1.87	6789	0.05580	0.00160	0.51100	0.03500	0.06622	0.00470	0.119	413.3	28.0	413.0	28.8	0.3	432.0	64.0	4%	413.0	28.8	g	
Z_R33w64_25	18:57:48	570	1.29	90450	0.05652	0.00130	0.51890	0.03400	0.06704	0.00470	0.275	418.3	29.0	417.6	28.7	0.7	466.0	51.0	10%	417.6	28.7	g	
Z_R33w64_26	19:07:10	312	1.01	12404	0.05581	0.00130	0.52140	0.03500	0.06785	0.00480	0.310	423.2	29.0	422.9	29.3	0.3	438.0	55.0	3%	422.9	29.3	g	
Z_R33w64_27	19:15:11	246	1.47	-28333	0.05523	0.00150	0.55070	0.03700	0.07256	0.00510	0.208	451.5	31.0	452.0	31.1	-0.5	422.0	60.0	-7%	452.0	31.1	fair	
Z_R33w64_28	19:24:33	167	1.59	3956	0.05510	0.00160	0.49800	0.03400	0.06583	0.00470	0.263	410.9	28.0	410.9	28.8	0.0	402.0	63.0	-2%	410.9	28.8	g	
Z_R33w64_29	19:32:34	67	2.51	5410	0.05450	0.00220	0.51400	0.03700	0.06840	0.00490	0.081	426.4	30.0	426.9	30.0	-0.5	370.0	83.0	-15%	426.9	30.0	g	
Z_R33w64_30	19:41:56	56	2.20	2209	0.05450	0.00220	0.49700	0.03600	0.06702	0.00480	0.090	418.0	29.0	418.5	29.4	-0.5	351.0	83.0	-19%	418.5	29.4	g	
Z_R33w64_31	19:49:57	250	1.15	-4749	0.05466	0.00140	0.51540	0.03500	0.06847	0.00480	0.285	426.9	29.0	427.3	29.4	-0.4	391.0	57.0	-9%	427.3	29.4	g	
Z_R33w64_32	19:59:19	117	1.39	3265	0.05390	0.00170	0.48600	0.03400	0.06574	0.00470	0.234	410.4	28.0	411.0	28.8	-0.6	344.0	68.0	-19%	411.0	28.8	fair	
Z_R33w64_33	20:07:20	90	1.46	-27810	0.05580	0.00210	0.49800	0.03500	0.06476	0.00460	0.059	404.4	28.0	404.0	28.2	0.4	417.0	79.0	3%	404.0	28.2	g	
Z_R33w64_34	20:16:41	151	1.59	#DIV/0!	0.05560	0.00160	0.52100	0.03600	0.06846	0.00490	0.188	426.8	29.0	426.7	29.9	0.1	413.0	64.0	-3%	426.7	29.9	g	
Z_R33w64_35	20:24:42	65	2.20	-6880	0.05250	0.00210	0.51200	0.03800	0.06936	0.00500	0.182	432.2	30.0	433.9	30.7	-1.7	310.0	80.0	-40%	433.9	30.7	g	
Z_R33w64_36	20:34:04	161	1.45	-2555	0.05490	0.00160	0.51300	0.03500	0.06795	0.00480	0.265	423.7	29.0	424.0	29.4	-0.3	395.0	65.0	-7%	424.0	29.4	g	
Z_R33w64_37	20:42:05	116	1.98	946	0.05510	0.00190	0.48400	0.03400	0.06369	0.00450	0.126	397.9	28.0	397.8	27.6	0.1	385.0	72.0	-3%	397.8	27.6	fair	
Z_R33w64_38	20:51:27	106	2.05	733	0.05390	0.00190	0.48800	0.03400	0.06589	0.00470	0.156	411.2	28.0	411.9	28.8	-0.7	346.0	73.0	-19%	411.9	28.8	g	
Z_R33w64_39	20:59:28	164	1.48	5782	0.05580	0.00170	0.51800	0.03600	0.06750	0.00480	0.093	421.1	29.0	420.8	29.3	0.3	426.0	62.0	1%	420.8	29.3	g	
Z_R33w64_40	21:08:50	0	0.11	-2	no-value	0.00999	no-value	0.00999	NaN	no-value	0.0	#VALUE!	#VALUE!	#VALUE!	#VALUE!	no-value	0.0	#####	#VALUE!	#VALUE!	no-signal:DEL		
Z_R33w64_41	21:16:51	146	2.30	22985	0.05580	0.00170	0.51300	0.03500	0.06735	0.00480	0.187	420.1	29.0	419.9	29.3	0.2	421.0	67.0	0%	419.9	29.3	g	
Z_R33w64_42	21:26:12	365	1.40</td																				

Table DR2E: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz after 2015 laser upgrade

Run: TD-USC-17 (part). Sample TD2F219 (first run). Iolite file name TDSC17\_T1S10GC3\_All\_Integrations. Excel file name TDSC17\_T1S10GC3.xlsx

Grain	Time	Time	206Pb/ U ppm	207Pb/ U/Th	207Pb/ 204Pb	207Pb/ 206Pb	+2s	207Pb/ 235U	207Pb/ 238U	206Pb/ 238U	+2s	Error Corr.	238U age (Ma)	+2s (Ma)	unc. 206Pb/ 238U	207corr 206Pb/ 238Pb	207corr 206Pb/ 238Pb	207 corr age (Ma)	207 corr age (Ma)	uncorr. 207Pb /206Pb	discor- dance	Best Age (Ma)	+2s (Ma)	Comments
	Time	GS Excel	GS Excel	Pb206_C PS/Pb20 4 CPS	Final207_2 06_S	Final207_2 06_Prop2	Final207_2 35_S	Final207_2 35_Prop2	Final206_2 38_S	Final206_2 38_Prop2	elation_6 _38vs7_3	FinalAge2 5	FinalAge 206_238 _Prop2S	E	GS Excel	TD Excel	FinalAge2 07_206 7_206_Pro p2SE	TD Excel	TD Excel	TD Excel	TD Excel	TD Excel	TD Excel	
Dromedary_1	0:22:54	944	2.34	1212	0.04890	0.00180	0.10440	0.00500	0.01549	0.00051	0.173	99.1	3.2	99.0	3.2	0.1	141.0	73.0	30%	99.0	3.2	g		
Dromedary_2	0:23:51	319	2.86	1219	0.04990	0.00270	0.10620	0.00620	0.01557	0.00054	0.177	99.6	3.4	99.4	3.4	0.2	195.0	100.0	49%	99.4	3.4	g		
Dromedary_3	0:24:49	413	1.85	572	0.04900	0.00250	0.10620	0.00640	0.01564	0.00054	0.173	100.3	3.4	99.9	3.4	0.4	137.0	98.0	27%	99.9	3.4	g		
Dromedary_4	0:25:46	864	2.76	1607	0.04840	0.00200	0.10470	0.00570	0.01549	0.00053	0.353	99.1	3.4	99.0	3.4	0.1	138.0	84.0	28%	99.0	3.4	g		
Dromedary_5	1:01:09	557	2.43	335	0.04810	0.00210	0.10430	0.00560	0.01548	0.00050	0.201	99.0	3.2	99.0	3.2	0.0	116.0	89.0	15%	99.0	3.2	g		
Dromedary_6	1:33:37	344	2.19	367	0.04680	0.00270	0.09720	0.00620	0.01526	0.00051	0.118	97.9	3.3	97.8	3.3	0.1	33.0	100.0	-196%	97.8	3.3	g		
Dromedary_7	2:05:09	780	1.74	949	0.04790	0.00190	0.10110	0.00490	0.01511	0.00052	0.295	96.9	3.2	96.7	3.3	0.2	103.0	79.0	6%	96.7	3.3	g		
Dromedary_8	2:37:30	4500	1.03	21206	0.04793	0.00110	0.10080	0.00400	0.01524	0.00048	0.618	97.5	3.0	97.5	3.1	0.0	94.0	50.0	-4%	97.5	3.1	g		
Dromedary_9	3:09:03	249	2.35	-3966	0.04980	0.00300	0.10220	0.00690	0.01497	0.00052	0.212	95.8	3.3	95.6	3.3	0.2	170.0	110.0	44%	95.6	3.3	g		
Dromedary_10	3:43:27	264	2.70	985	0.04970	0.00280	0.10220	0.00650	0.01497	0.00054	0.275	95.8	3.4	95.6	3.4	0.2	170.0	110.0	44%	95.6	3.4	g		
Dromedary_11	4:15:00	318	3.05	1099	0.05020	0.00290	0.10360	0.00650	0.01507	0.00052	0.162	96.4	3.3	96.1	3.3	0.3	180.0	110.0	47%	96.1	3.3	g		
Dromedary_12	4:52:26	803	1.45	7925	0.04850	0.00180	0.10400	0.00470	0.01476	0.00048	0.325	94.5	3.1	94.4	3.1	0.1	132.0	75.0	28%	94.4	3.1	g		
Dromedary_13	5:23:58	409	1.58	-645	0.04870	0.00240	0.10380	0.00580	0.01534	0.00053	0.115	98.1	3.3	98.0	3.4	0.1	131.0	95.0	25%	98.0	3.4	g		
Dromedary_14	5:56:28	320	1.76	1453	0.04720	0.00260	0.10050	0.00660	0.01533	0.00053	0.249	98.1	3.4	98.2	3.4	-0.1	80.0	110.0	-23%	98.2	3.4	g		
Dromedary_15	6:28:00	179	1.80	-364	0.05070	0.00390	0.10480	0.00800	0.01515	0.00063	-0.032	96.9	4.0	96.6	4.0	0.3	230.0	150.0	58%	96.6	4.0	g		
Dromedary_16	7:02:24	331	2.13	1565	0.04590	0.00260	0.09620	0.00590	0.01517	0.00050	0.137	97.0	3.2	97.3	3.2	-0.3	50.0	100.0	-95%	97.3	3.2	g		
Dromedary_17	7:33:55	4143	0.97	-69300	0.04769	0.00110	0.10400	0.00410	0.01565	0.00049	0.633	100.1	3.1	100.1	3.1	0.0	81.0	48.0	-24%	100.1	3.1	g		
Dromedary_18	8:06:25	799	1.80	7422	0.04740	0.00180	0.10260	0.00520	0.01558	0.00051	0.437	99.6	3.3	99.7	3.3	-0.1	74.0	74.0	-35%	99.7	3.3	g		
Dromedary_19	8:37:58	556	2.22	1397	0.04930	0.00240	0.10350	0.00560	0.01548	0.00052	0.121	99.0	3.3	98.9	3.3	0.1	160.0	97.0	38%	98.9	3.3	g		
Dromedary_20	9:10:28	651	1.70	1915	0.04700	0.00200	0.09930	0.00510	0.01534	0.00051	0.326	98.2	3.2	98.3	3.3	-0.1	79.0	83.0	-24%	98.3	3.3	g		
Dromedary_21	9:42:01	723	2.74	1377	0.04840	0.00190	0.10190	0.00550	0.01525	0.00052	0.434	97.5	3.3	97.5	3.3	0.0	138.0	81.0	29%	97.5	3.3	g		
Dromedary_22	10:16:27	385	2.29	452	0.04830	0.00240	0.10200	0.00580	0.01550	0.00052	0.280	99.1	3.3	99.1	3.3	0.0	119.0	95.0	17%	99.1	3.3	fair		
Dromedary_23	10:47:59	275	2.71	-3149	0.04680	0.00280	0.09750	0.00680	0.01468	0.00051	0.233	93.9	3.2	94.1	3.3	-0.2	60.0	110.0	-57%	94.1	3.3	g		
Dromedary_24	11:20:30	905	1.33	5047	0.04720	0.00160	0.09900	0.00470	0.01528	0.00051	-0.238	97.7	3.2	97.9	3.3	-0.2	81.0	69.0	-21%	97.9	3.3	fair		
Dromedary_25	11:52:03	244	2.78	414	0.04780	0.00270	0.09940	0.00650	0.01491	0.00053	0.279	95.4	3.4	95.4	3.4	0.0	100.0	110.0	5%	95.4	3.4	g		
Dromedary_26	12:13:04	251	2.21	394	0.04680	0.00270	0.09660	0.00650	0.01545	0.00052	0.191	98.8	3.3	99.0	3.3	-0.2	60.0	110.0	-65%	99.0	3.3	g		
Dromedary_27	12:14:02	4409	0.91	7716	0.04786	0.00110	0.10440	0.00410	0.01586	0.00050	0.717	101.4	3.2	101.5	3.2	-0.1	95.0	48.0	-7%	101.5	3.2	g		
FC5Z_1	0:19:05	461	1.55	-35969	0.07549	0.00160	0.20280	0.07900	0.19210	0.00600	0.733	1136.0	34.0	1135.3	34.2	0.7	1080.0	42.0	-5%	1080.0	42.0	g		
FC5Z_2	0:29:02	4748	1.09	25716	0.07532	0.00159	0.20120	0.07300	0.19340	0.00580	0.767	1139.9	34.0	1142.9	33.4	-3.9	1076.0	38.0	-6%	1076.0	38.0	REVDISC		
FC5Z_3	0:20:59	280	1.83	4115	0.07690	0.00180	0.20100	0.08300	0.18750	0.00590	0.071	1107.0	32.0	1107.3	33.6	-0.3	1110.0	46.0	0%	1110.0	46.0	g		
FC5Z_4	0:21:57	303	1.93	42868	0.07670	0.00170	0.20050	0.07700	0.18860	0.00600	0.689	1113.0	32.0	1113.8	34.2	-0.8	1110.0	43.0	0%	1110.0	43.0	g		
FC5Z_5	0:26:43	218	1.57	4181	0.07580	0.00180	0.198800	0.08300	0.18890	0.00630	0.708	1119.0	34.0	1121.8	35.9	-2.8	1091.0	45.0	-3%	1091.0	45.0	g		
FC5Z_6	0:27:41	169	1.89	3826	0.07820	0.00180	0.199300	0.07900	0.18450	0.00560	0.664	1091.0	30.0	1088.6	31.9	2.4	1145.0	46.0	5%	1145.0	46.0	g		
FC5Z_7	0:42:01	294	1.55	5579	0.07470	0.00170	0.197800	0.08000	0.18780	0.00600	0.731	1109.0	33.0	1111.8	34.3	-2.8	1070.0	47.0	g	1070.0	47.0	g		
FC5Z_8	0:54:27	175	2.03	2219	0.07650	0.00200	0.196900	0.08100	0.18590	0.00610	0.509	1099.0	33.0	1098.7	34.8	0.3	1096.0	51.0	0%	1096.0	51.0	g		
FC5Z_9	1:07:50	393	1.92	3163	0.07630	0.00180	0.197300	0.08000	0.18760	0.00620	0.691	1108.0	33.0	1108.6	35.4	-0.6	1101.0	45.0	-1%	1101.0	45.0	DT:TRIM		
FC5Z_10	1:20:14	289	2.04	7558	0.07600	0.00170	0.199400	0.07800	0.18850	0.00600	0.674	1114.0	32.0	1114.1	34.2	-0.1	1096.0	44.0	-2%	1096.0	44.0	g		
FC5Z_11	1:32:40	1172	2.27	52773	0.07625	0.00150	0.199500	0.07500	0.19060	0.00600	0.793	1124.0	32.0	1125.8	34.2	-1.8	1103.0	40.0	-2%	1103.0	40.0	g		
FC5Z_12	1:46:02	261	1.51	11627	0.07970	0.00550	0.206000	0.15000	0.18780	0.00600	0.074	1109.0	33.0	1105.4	34.7	3.6	1111.0	43.0	1%	1111.0	43.0	g		
FC5Z_13	1:58:27	1880	1.83	33339	0.07563	0.00140	0.199500	0.07400	0.18990	0.00580	0.797	1120.0	32.0	1122.6	33.1	-2.6	1083.0	38.0	g	1083.0	38.0	g		
FC5Z_14	2:41:43	4	1.19	19	0.48900	0.02200	0.103000	0.08500	0.18030	0.00610	0.384	1179.0	230.0	645.9	338.4	524.4	3700.0	1500.0	83%	645.9	338.4	DEL:not a zircon		
FC5Z_15	2:24:08	191	1.90	8957	0.07630	0.00180	0.195300	0.08200	0.18710	0.00620	0.753	1105.0	33.0	1105.8	35.4	-0.8	1101.0	48.0	0%	1101.0	48.0	g		
FC5Z_16	2:36:33	182	1.67	-44375	0.0																			

FC5Z_37	7:14:49	1357	2.24	16541	0.07654	0.00150	2.03500	0.07600	0.19300	0.00590	0.811	1137.0	32.0	1139.0	33.6	-2.0	1110.0	39.0	-3%	1110.0	39.0	fair,possible 204SPK
FC5Z_38	7:27:14	476	1.89	6599	0.07890	0.00170	2.07700	0.08100	0.19080	0.00620	0.698	1125.0	33.0	1123.5	35.2	1.5	1169.0	43.0	4%	1169.0	43.0	fair
FC5Z_39	7:40:37	124	1.78	-11345	0.07700	0.00200	1.97800	0.08700	0.18730	0.00610	0.600	1108.0	33.0	1106.0	34.8	2.0	1108.0	53.0	0%	1108.0	53.0	g
FC5Z_40	7:53:03	177	1.57	-11613	0.07620	0.00170	1.92300	0.07800	0.18470	0.00600	0.706	1096.0	32.0	1092.2	34.3	3.8	1095.0	45.0	0%	1095.0	45.0	g
FC5Z_41	8:05:28	191	1.60	21456	0.07610	0.00200	1.95500	0.08100	0.18680	0.00580	0.415	1103.0	31.0	1104.3	33.1	-1.3	1084.0	52.0	-2%	1084.0	52.0	g
FC5Z_42	8:18:54	4	0.36	-69	0.28409	0.04609	8.36999	1.56999	0.19899	0.02109	0.256	1140.0	410.0	893.5	110.5	246.5	3110.0	310.0	71%	893.5	110.5	DEL:net-a-zircon
FC5Z_43	8:31:17	151	1.71	-5968	0.07540	0.00190	1.89300	0.07700	0.18260	0.00600	0.597	1080.0	33.0	1081.3	34.3	-1.3	1075.0	51.0	-1%	1075.0	51.0	g
FC5Z_44	8:44:40	182	1.78	10178	0.07690	0.00180	2.00800	0.08000	0.18730	0.00580	0.641	1107.0	32.0	1106.2	33.1	0.8	1114.0	48.0	1%	1114.0	48.0	g
FC5Z_45	8:57:06	444	1.77	11613	0.07650	0.00160	1.94900	0.07400	0.18470	0.00580	0.730	1092.0	32.0	1091.9	33.1	0.1	1109.0	41.0	2%	1109.0	41.0	g
FC5Z_46	9:09:30	881	1.72	50833	0.07582	0.00150	2.00300	0.08000	0.19280	0.00620	-0.036	1138.0	34.0	1138.8	35.3	-0.8	1086.0	40.0	-5%	1086.0	40.0	g
FC5Z_47	9:22:54	979	1.14	11100	0.07583	0.00150	1.99200	0.07600	0.19180	0.00620	0.802	1130.0	33.0	1133.1	35.3	-3.1	1090.0	39.0	-4%	1090.0	39.0	g
FC5Z_48	9:35:19	601	1.14	15662	0.07570	0.00150	1.96700	0.07400	0.18900	0.00590	0.803	1116.0	32.0	1117.4	33.7	-1.4	1084.0	40.0	-3%	1084.0	40.0	g
FC5Z_49	9:50:38	161	1.54	14736	0.07720	0.00200	1.98200	0.08200	0.18660	0.00610	0.561	1104.0	32.0	1101.8	34.8	2.2	1121.0	53.0	2%	1121.0	53.0	g
FC5Z_50	10:03:04	807	1.35	10325	0.07618	0.00150	1.98600	0.07600	0.18940	0.00590	0.780	1118.0	32.0	1119.0	33.6	-1.0	1101.0	39.0	-2%	1101.0	39.0	g
FC5Z_51	10:15:30	546	1.73	11479	0.07587	0.00160	1.96400	0.07900	0.18620	0.00590	0.640	1100.0	32.0	1101.2	33.7	-1.2	1091.0	40.0	-1%	1091.0	40.0	g
FC5Z_52	10:28:52	206	1.71	6833	0.07680	0.00190	1.95100	0.07900	0.18580	0.00600	0.597	1098.0	33.0	1097.7	34.2	0.3	1116.0	51.0	2%	1116.0	51.0	g
FC5Z_53	10:41:17	250	1.61	5827	0.07690	0.00180	2.01500	0.08000	0.19040	0.00610	0.680	1123.0	33.0	1123.8	34.8	-0.8	1118.0	48.0	-1%	1118.0	48.0	g
FC5Z_54	10:54:41	185	1.54	5389	0.07620	0.00190	1.94700	0.08000	0.18810	0.00600	0.619	1111.0	33.0	1116.6	34.2	-0.6	1097.0	49.0	-1%	1097.0	49.0	g
FC5Z_55	11:07:07	429	1.53	8739	0.07632	0.00160	2.01700	0.07700	0.19200	0.00620	0.703	1132.0	33.0	1133.6	35.3	-1.6	1101.0	44.0	-3%	1101.0	44.0	g
FC5Z_56	11:19:33	163	1.62	20413	0.07590	0.00210	1.92500	0.08200	0.18520	0.00630	0.390	1095.0	34.0	1095.5	36.0	-0.5	1086.0	55.0	-1%	1086.0	55.0	g
FC5Z_57	11:32:57	175	1.71	4095	0.07540	0.00190	1.91600	0.07700	0.18440	0.00580	0.541	1092.0	31.0	1091.5	33.2	0.5	1092.0	50.0	0%	1092.0	50.0	g
FC5Z_58	11:45:23	511	1.33	24136	0.07568	0.00150	1.99200	0.07800	0.19230	0.00620	0.821	1133.0	33.0	1136.2	35.3	-3.2	1085.0	41.0	-5%	1085.0	41.0	g
FC5Z_59	11:58:45	2369	0.81	41209	0.07442	0.00140	1.96500	0.07300	0.19120	0.00590	0.853	1129.0	34.0	1131.5	33.7	-2.5	1064.0	38.0	-7%	1064.0	38.0	REVDISC:HighU
FC5Z_60	12:08:18	403	2.05	6524	0.07619	0.00160	1.92600	0.07400	0.18400	0.00560	0.755	1088.0	31.0	1088.3	32.0	-0.3	1098.0	42.0	1%	1098.0	42.0	g
FC5Z_61	12:11:10	169	1.58	4463	0.07590	0.00180	1.91100	0.07800	0.18430	0.00600	0.659	1090.0	32.0	1090.3	34.3	-0.3	1091.0	47.0	0%	1091.0	47.0	g
FC5Z_62	12:12:07	132	1.87	6162	0.07650	0.00190	1.92100	0.08000	0.18210	0.00590	0.591	1078.0	32.0	1077.0	33.7	1.0	1107.0	51.0	3%	1107.0	51.0	g
FC5Z_63	12:14:59	219	1.59	7327	0.07470	0.00160	1.89300	0.07500	0.18650	0.00590	0.703	1102.0	32.0	1104.4	33.7	-2.4	1058.0	44.0	-4%	1058.0	44.0	g
FC5Z_64	12:15:56	184	1.60	-18340	0.07650	0.00200	1.94300	0.08600	0.18520	0.00610	0.312	1095.0	33.0	1094.7	34.8	0.3	1101.0	52.0	1%	1101.0	52.0	g
MADDER_1	0:07:37	3256	8.02	18241	0.05723	0.00110	0.70900	0.02700	0.08890	0.00270	0.850	548.8	16.0	549.9	16.3	-1.1	506.0	41.0	-9%	549.9	16.3	g (warm up laser)
MADDER_2	0:08:34	3560	8.50	13695	0.05711	0.00110	0.68930	0.02600	0.08740	0.00260	0.777	540.1	16.0	540.9	15.7	-0.8	499.0	42.0	-8%	540.9	15.7	g (w.u.)
MADDER_3	0:09:32	3293	7.78	25655	0.05769	0.00110	0.70000	0.02700	0.08740	0.00280	0.869	539.9	17.0	540.5	16.9	-0.6	515.0	42.0	-5%	540.5	16.9	g (w.u.)
MADDER_4	0:10:29	3713	8.41	91706	0.05745	0.00140	0.66800	0.03100	0.08330	0.00310	0.861	516.0	19.0	515.9	18.8	0.1	505.0	52.0	-2%	515.9	18.8	DT:TRIM (w.u.)
MADDER_5	0:11:26	3338	7.61	41405	0.05687	0.00110	0.69650	0.02600	0.08820	0.00270	0.879	544.8	16.0	545.9	16.3	-1.1	484.0	41.0	-13%	545.9	16.3	g (w.u.)
MADDER_6	0:12:23	3401	8.18	101600	0.05730	0.00110	0.68400	0.02600	0.08560	0.00260	0.148	529.5	16.0	529.9	15.7	-0.4	500.0	43.0	-6%	529.9	15.7	g (w.u.)
MADDER_7	0:13:21	3635	8.64	59630	0.05725	0.00110	0.68200	0.02600	0.08580	0.00270	0.857	530.6	16.0	531.1	16.3	-0.5	501.0	42.0	-6%	531.1	16.3	g (w.u.)
MADDER_8	0:14:18	3342	8.29	16767	0.05749	0.00110	0.69200	0.02700	0.08700	0.00280	0.872	537.8	16.0	538.2	16.9	-0.4	509.0	42.0	-6%	538.2	16.9	g (w.u.)
MADDER_9	3:17:39	3237	7.97	39667	0.05742	0.00130	0.69700	0.02900	0.08690	0.00290	0.845	537.0	17.0	537.7	17.5	-0.7	516.0	52.0	-4%	537.7	17.5	DT:TRIM
MADDER_10	3:18:36	3052	7.58	-93000	0.05742	0.00110	0.68800	0.02600	0.08680	0.00270	0.815	536.7	16.0	537.1	16.3	-0.4	507.0	43.0	-6%	537.1	16.3	g
MADDER_11	6:33:44	2816	8.43	-126300	0.05758	0.00110	0.66390	0.02500	0.08400	0.00260	0.844	519.6	15.0	520.1	15.7	-0.5	520.0	39.0	0%	520.1	15.7	g
MADDER_12	6:34:41	3052	8.64	80588	0.05711	0.00110	0.67000	0.02600	0.08500	0.00260	0.809	525.9	15.0	526.4	15.7	-0.5	499.0	43.0	-5%	526.4	15.7	g
MADDER_13	9:44:53	3032	8.60	39571	0.05721	0.00110	0.66800	0.02500	0.08470	0.00250	0.732	523.9	15.0	524.5	15.1	-0.6	499.0	43.0	-5%	524.5	15.1	g
MADDER_14	9:45:50	2864	8.29	36611	0.05743	0.00110	0.67500	0.02600	0.08580	0.00270	0.825	530.4	16.0	531.0	16.3	-0.6	505.0	43.0	-5%	531.0	16.3	g
MADDER_15	12:16:54	2868	7.75	83125	0.05700	0.00110	0.67010	0.02500	0.08550	0.00260	0.788	528.9	15.0	529.5	15.7	-0.6	489.0	42.0	-8%	529.5	15.7	g
MADDER_16	12:17:51	3046	8.15	40353	0.05749	0.00130	0.67000	0.03000	0.08600	0.00320	0.852	532.0	19.0	532.2	19.3	-0.2	506.0	50.0	-5%	532.2	19.3	DT:TRIM
TD2F219_51	6:45:12	640	1.54	-2033	0.04750	0.00300	0.04670	0.00330	0.00704	0.00024	0.200	45.2	1.6	45.2	1.5	0.0	80.0	120.0	44%	45.2	1.5	g
TD2F219_84	7:28:12	273	2.29	-481	0.04570	0.00440	0.04570	0.00430	0.00720	0.00028	0.087	46.2	1.8	46.3	1.8	-0.1	60.0	170.0	23%	46.3	1.8	g
TD2F219_40	6:29:55	977	3.25	1176	0.04760	0.00220	0.0479															

TD2F219_58	6:53:48	776	1.61	-14525	0.04990	0.00220	0.09560	0.00510	0.01395	0.00046	0.309	89.3	2.9	89.1	2.9	0.2	185.0	88.0	52%	89.1	2.9	g
TD2F219_76	7:17:41	1039	6.85	-38850	0.04740	0.00160	0.09000	0.00430	0.01395	0.00048	0.467	89.3	3.1	89.4	3.1	-0.1	73.0	67.0	-22%	89.4	3.1	g
TD2F219_56	6:51:54	564	9.26	-3021	0.04740	0.00240	0.09060	0.00530	0.01408	0.00053	0.225	90.1	3.4	90.2	3.4	-0.1	87.0	94.0	-4%	90.2	3.4	g
TD2F219_37	6:25:09	265	3.17	-1813	0.04500	0.00270	0.08860	0.00600	0.01406	0.00052	0.167	90.0	3.3	90.3	3.3	-0.3	-10.0	110.0	1003%	90.3	3.3	g
TD2F219_17	6:00:17	247	31.01	-450	0.04590	0.00280	0.09190	0.00630	0.01434	0.00050	0.123	91.8	3.2	92.0	3.2	-0.2	40.0	120.0	-130%	92.0	3.2	g
TD2F219_83	7:25:20	339	3.25	626	0.04860	0.00270	0.09800	0.00630	0.01459	0.00051	0.274	93.6	3.2	93.3	3.3	0.3	130.0	100.0	28%	93.3	3.3	g
TD2F219_10	5:50:43	83	3.57	-154	0.04370	0.00510	0.08900	0.01000	0.01461	0.00061	0.076	93.5	3.9	94.0	4.0	-0.5	-70.0	180.0	234%	94.0	4.0	g
TD2F219_67	7:06:14	169	1.29	-656	0.04640	0.00340	0.09880	0.00790	0.01508	0.00059	0.281	96.5	3.7	96.7	3.8	-0.2	90.0	130.0	-7%	96.7	3.8	g
TD2F219_95	7:42:31	313	1.41	3125	0.04770	0.00310	0.09900	0.00670	0.01513	0.00054	0.118	96.8	3.4	96.8	3.5	0.0	130.0	120.0	26%	96.8	3.5	g
TD2F219_71	7:11:00	67	2.54	459	0.05030	0.00690	0.11000	0.01500	0.01553	0.00075	0.062	99.3	4.8	99.1	4.8	0.2	280.0	240.0	65%	99.1	4.8	g
TD2F219_45	6:38:31	379	2.75	2245	0.05310	0.00560	0.11600	0.01300	0.01559	0.00051	-0.120	99.7	3.2	99.1	3.3	0.6	230.0	120.0	57%	99.1	3.3	g
TD2F219_55	6:50:56	525	2.11	-1111	0.04730	0.00280	0.10030	0.00650	0.01552	0.00053	0.239	99.3	3.4	99.4	3.4	-0.1	80.0	110.0	-24%	99.4	3.4	207SPK:TRIM
TD2F219_31	6:17:29	75	2.80	165	0.04490	0.00570	0.09800	0.01200	0.01619	0.00075	0.118	103.5	4.7	103.9	4.8	-0.4	-90.0	200.0	215%	103.9	4.8	g
TD2F219_16	5:59:20	185	4.55	-1954	0.04730	0.00310	0.11280	0.00820	0.01764	0.00065	0.250	112.7	4.1	112.9	4.2	-0.2	80.0	120.0	-41%	112.9	4.2	g
TD2F219_41	6:30:52	696	4.47	-2206	0.04770	0.00190	0.11540	0.00590	0.01765	0.00059	0.446	112.8	3.7	112.9	3.8	-0.1	95.0	79.0	-19%	112.9	3.8	g
TD2F219_77	7:18:39	99	4.92	788	0.05100	0.00460	0.12500	0.01200	0.01791	0.00071	0.165	114.4	4.5	114.0	4.5	0.4	210.0	160.0	46%	114.0	4.5	g
TD2F219_19	6:03:09	7	4.42	36	0.08790	0.04000	0.18900	0.07900	0.02010	0.00220	0.194	128.0	14.0	122.4	14.0	5.9	-340.0	740.0	136%	122.4	14.0	g; 207Corr>2%
TD2F219_85	7:29:09	103	1.92	678	0.04910	0.00370	0.13900	0.01100	0.02056	0.00088	0.315	131.2	5.6	131.1	5.6	0.1	140.0	140.0	6%	131.1	5.6	g
TD2F219_74	7:15:47	134	2.81	-934	0.04810	0.00320	0.14510	0.01100	0.02196	0.00080	0.191	140.0	5.0	140.2	5.1	-0.2	140.0	130.0	0%	140.2	5.1	g
TD2F219_27	6:12:42	86	2.25	-217	0.05000	0.00420	0.15700	0.01300	0.02263	0.00095	0.046	144.2	6.0	144.1	6.1	0.1	250.0	160.0	42%	144.1	6.1	g
TD2F219_86	7:30:06	57	0.87	-454	0.04710	0.00480	0.14700	0.01600	0.02270	0.00100	0.208	144.7	6.5	145.0	6.4	-0.3	20.0	170.0	-625%	145.0	6.4	g
TD2F219_100	7:48:16	132	2.82	430	0.04940	0.00340	0.16600	0.01200	0.02466	0.00094	0.067	157.0	5.9	157.0	6.0	0.0	170.0	130.0	8%	157.0	6.0	g
TD2F219_52	6:46:10	4127	2.44	-5209	0.05080	0.00160	0.17620	0.00820	0.02499	0.00088	0.655	158.5	5.5	158.2	5.6	-0.3	230.0	63.0	31%	158.2	5.6	var180-120:DEL
TD2F219_24	6:09:54	3	0.19	23	0.12390	0.09700	0.34100	0.02400	0.02800	0.00440	-0.24	177.0	27.0	161.8	33.1	16.2	-2600.0	2000.0	106%	161.8	33.1	g; 207Corr>2%
TD2F219_57	6:52:51	169	2.59	-546	0.04750	0.00290	0.17200	0.01200	0.02614	0.00090	0.185	166.3	5.7	166.7	5.7	-0.4	90.0	120.0	-85%	166.7	5.7	g
TD2F219_25	6:10:48	106	2.79	474	0.04830	0.00340	0.19500	0.01400	0.02949	0.00110	0.144	187.3	7.0	187.7	7.0	-0.4	110.0	130.0	-71%	187.7	7.0	g
TD2F219_42	6:31:50	87	2.46	-266	0.04930	0.00360	0.20500	0.01600	0.02975	0.00120	0.036	188.9	7.4	189.1	7.6	-0.2	160.0	140.0	-18%	189.1	7.6	g
TD2F219_73	7:12:55	139	3.18	4542	0.05020	0.00300	0.20900	0.01400	0.03049	0.00110	0.251	194.0	6.8	193.6	7.0	0.4	200.0	110.0	3%	193.6	7.0	g
TD2F219_20	6:04:06	75	4.60	-272	0.04920	0.00410	0.21100	0.01900	0.03050	0.00110	0.082	193.6	7.1	193.9	7.0	-0.3	140.0	140.0	-38%	193.9	7.0	g
TD2F219_11	5:51:41	161	2.59	-480	0.04790	0.00250	0.21100	0.01300	0.03146	0.00110	0.164	199.6	6.9	200.2	7.0	-0.6	106.0	100.0	-89%	200.2	7.0	g
TD2F219_78	7:19:36	2	0.24	-34	0.09090	0.10000	0.46000	0.03100	0.03440	0.00490	0.045	216.0	31.0	207.4	39.8	8.6	-2800.0	2200.0	107%	207.4	39.8	fair; 207Corr>2%
TD2F219_64	7:03:22	695	7.01	-5129	0.08139	0.00200	0.54200	0.04600	0.04900	0.00380	0.966	308.0	23.0	297.5	22.7	10.5	1237.0	51.0	76%	297.5	22.7	DEL:var200-500
TD2F219_91	7:36:47	278	2.56	65050	0.06040	0.00180	0.72600	0.03300	0.08710	0.00290	0.550	539.0	17.0	537.0	17.5	2.0	621.0	66.0	14%	537.0	17.5	g
TD2F219_97	7:44:26	396	1.07	4457	0.06100	0.00150	0.86000	0.03400	0.10260	0.00320	0.553	629.3	19.0	624.9	19.1	-0.1	632.0	52.0	0%	629.4	19.1	g
TD2F219_99	7:47:19	118	3.08	3563	0.08639	0.00250	1.25300	0.06800	0.10760	0.00490	0.830	657.0	28.0	638.9	28.4	18.1	1336.0	58.0	52%	638.9	28.4	DEL:var1000-600
TD2F219_68	7:07:14	484	7.31	-14900	0.11590	0.00200	1.79300	0.11000	0.11300	0.00580	0.959	689.0	34.0	646.5	32.3	42.5	1892.0	45.0	66%	646.5	32.3	var1500-2000:DEL
TD2F219_32	6:18:26	129	2.97	32175	0.07400	0.00200	1.88500	0.08000	0.18540	0.00200	0.569	1096.0	33.0	1099.0	34.9	-3.0	1027.0	57.0	57.0	1027.0	57.0	g
TD2F219_94	7:41:34	369	1.25	-16704	0.08639	0.00170	2.76300	0.10000	0.23200	0.00700	0.735	1344.0	37.0	1344.8	39.2	-0.8	1353.0	39.0	1%	1353.0	39.0	g
TD2F219_9	5:49:46	348	2.24	20048	0.08715	0.00180	2.75400	0.10000	0.22810	0.00700	0.770	1324.0	37.0	1321.9	39.2	2.1	1362.0	40.0	3%	1362.0	40.0	g
TD2F219_19	5:41:11	1595	8.62	13000	0.08710	0.00170	2.30700	0.09300	0.19200	0.00640	0.945	1132.0	35.0	1119.7	36.0	12.3	1364.0	35.0	18%	1364.0	35.0	g
TD2F219_92	7:37:45	436	2.29	-23818	0.08742	0.00180	2.73500	0.11000	0.22640	0.00770	0.841	1315.0	40.0	1312.0	43.1	3.0	1366.0	39.0	4%	1366.0	39.0	g
TD2F219_43	6:32:47	131	2.40	-6428	0.08750	0.00220	2.82500	0.11000	0.23130	0.00730	0.563	1341.0	38.0	1339.2	40.9	1.8	1376.0	49.0	3%	1376.0	49.0	g
TD2F219_61	6:57:38	194	2.03	16207	0.08780	0.00190	2.82500	0.11000	0.23520	0.00740	0.773	1361.0	39.0	1360.5	41.4	0.5	1376.0	43.0	1%	1376.0	43.0	g
TD2F219_28	6:13:40	359	6.49	-9925	0.08767	0.00180	2.79000	0.11000	0.23120	0.00740	0.773	1340.0	39.0	1338.4	41.4	1.6	1379.0	40.0	3%	1379.0	40.0	g
TD2F219_59	6:55:43	353	12.85	-18375	0.09000	0.00190	2.91900	0.12000	0.23570	0.00770	0.742	1366.0	39.0	1359.9	42.9	6.1	1424.0	40.0	4%	1424.0	40.0	(208/232var 30%?)
TD2F219_63	6:59:33	434	1.13	14085	0.09070	0.00190	3.01600	0.12000	0.24110	0.00780	0.840	1392.0	41.0	1388.9	43.4	3.1	1442.0	37.0	4%	1442.0	37.0	g
TD2F219_60	6:56:41	180	1.90	-6657	0.09130	0.00210	3.14100	0.13000	0.24640	0.00												

Z_Temora2_4	0:18:07	115	2.66	1926	0.05710	0.00270	0.52600	0.03100	0.06660	0.00230	0.378	415.3	14.0	414.6	14.1	0.7	452.0	100.0	8%	414.6	14.1	g
Z_Temora2_5	0:28:38	548	3.91	6628	0.05510	0.00140	0.50900	0.02100	0.06690	0.00220	0.558	417.1	13.0	417.5	13.5	-0.4	403.0	58.0	-4%	417.5	13.5	g; 208SPK:KEEP
Z_Temora2_6	0:29:35	318	2.42	-11070	0.05520	0.00150	0.50300	0.02200	0.06670	0.00220	0.544	415.8	13.0	416.7	13.5	-0.9	363.0	63.0	-15%	416.7	13.5	g
Z_Temora2_7	0:35:20	357	2.68	1537	0.05540	0.00140	0.50900	0.02200	0.06680	0.00210	0.603	416.6	13.0	416.7	12.9	-0.1	418.0	58.0	0%	416.7	12.9	g
Z_Temora2_8	0:41:04	210	2.26	1365	0.05500	0.00200	0.51800	0.02400	0.06810	0.00220	0.332	424.4	13.0	424.9	13.5	-0.5	405.0	78.0	-5%	424.9	13.5	g
Z_Temora2_9	0:47:45	497	2.79	3673	0.05620	0.00170	0.53800	0.02400	0.06930	0.00230	0.503	431.7	14.0	431.6	14.1	0.1	443.0	65.0	3%	431.6	14.1	g
Z_Temora2_10	0:53:30	145	2.46	665	0.05440	0.00210	0.49300	0.02400	0.06720	0.00240	0.405	419.0	14.0	419.7	14.7	-0.7	380.0	84.0	-10%	419.7	14.7	g
Z_Temora2_11	1:00:12	297	2.28	2072	0.05500	0.00150	0.51200	0.02200	0.06650	0.00210	0.466	414.8	13.0	415.1	12.9	-0.3	393.0	61.0	-6%	415.1	12.9	g
Z_Temora2_12	1:06:52	234	1.78	1998	0.05290	0.00200	0.49300	0.02400	0.06650	0.00220	0.279	415.0	13.0	416.1	13.5	-1.1	306.0	81.0	-36%	416.1	13.5	g
Z_Temora2_13	1:13:33	380	1.78	2975	0.05410	0.00150	0.50200	0.02100	0.06630	0.00220	0.531	413.8	14.0	414.3	13.5	-0.5	372.0	61.0	-11%	414.3	13.5	g
Z_Temora2_14	1:19:17	193	1.59	2595	0.05620	0.00200	0.52000	0.02400	0.06660	0.00220	0.317	416.3	13.0	415.1	13.5	1.2	437.0	77.0	5%	415.1	13.5	g
Z_Temora2_15	1:25:58	1082	3.04	5493	0.05544	0.00130	0.49800	0.02100	0.06490	0.00220	0.752	405.4	13.0	405.1	13.5	0.3	433.0	50.0	6%	405.1	13.5	var420-380:KEEP
Z_Temora2_16	1:31:42	445	1.78	2254	0.05620	0.00160	0.51700	0.02200	0.06660	0.00210	0.566	416.5	13.0	415.1	12.9	1.4	448.0	61.0	7%	415.1	12.9	g
Z_Temora2_17	1:39:21	856	1.49	7587	0.05512	0.00130	0.50600	0.02100	0.06620	0.00210	0.650	413.9	13.0	413.2	12.9	0.7	414.0	53.0	0%	413.2	12.9	g
Z_Temora2_18	1:45:05	239	3.11	-8305	0.05490	0.00180	0.50800	0.02400	0.06730	0.00220	0.328	419.5	13.0	420.0	13.5	-0.5	375.0	69.0	-12%	420.0	13.5	g
Z_Temora2_19	1:51:46	414	3.18	3675	0.05480	0.00160	0.50900	0.02200	0.06810	0.00220	0.476	424.7	14.0	425.0	13.5	-0.3	390.0	64.0	-9%	425.0	13.5	g
Z_Temora2_20	1:57:30	254	1.38	1898	0.05580	0.00170	0.49600	0.02300	0.06410	0.00210	0.468	400.1	13.0	400.0	12.9	0.1	435.0	68.0	8%	400.0	12.9	g
Z_Temora2_21	2:04:12	317	1.75	5290	0.05510	0.00170	0.49700	0.02300	0.06470	0.00230	0.573	404.3	14.0	404.0	14.1	0.3	419.0	69.0	4%	404.0	14.1	207SPK:TRIM
Z_Temora2_22	2:10:53	274	2.10	2050	0.05560	0.00160	0.50200	0.02200	0.06660	0.00210	0.487	415.5	13.0	415.4	12.9	0.1	421.0	66.0	1%	415.4	12.9	g
Z_Temora2_23	2:17:27	142	1.60	2512	0.05490	0.00210	0.50200	0.02400	0.06750	0.00230	0.320	421.1	14.0	421.2	14.1	-0.1	385.0	82.0	-9%	421.2	14.1	g
Z_Temora2_24	2:23:11	207	2.70	2148	0.05550	0.00190	0.49900	0.02200	0.06540	0.00210	0.215	408.5	13.0	408.1	12.9	0.4	409.0	76.0	0%	408.1	12.9	g
Z_Temora2_25	2:29:52	161	2.92	2209	0.05470	0.00220	0.51300	0.02600	0.06810	0.00230	0.312	424.3	14.0	425.0	13.5	-0.7	393.0	85.0	-8%	425.0	14.1	g
Z_Temora2_26	2:35:36	304	1.71	-2630	0.05540	0.00150	0.50700	0.02300	0.06560	0.00220	0.587	409.4	13.0	409.4	13.5	0.0	428.0	61.0	4%	409.4	13.5	g
Z_Temora2_27	2:43:15	336	3.15	4097	0.05510	0.00180	0.51800	0.02400	0.06750	0.00220	0.314	420.8	13.0	421.1	13.5	-0.3	394.0	72.0	-7%	421.1	13.5	g
Z_Temora2_28	2:48:59	1457	2.07	28529	0.05495	0.00120	0.49880	0.01900	0.06550	0.00210	0.625	408.7	13.0	409.0	12.9	-0.3	409.0	52.0	0%	409.0	12.9	DT:TRIM
Z_Temora2_29	2:55:41	202	1.69	-1916	0.05430	0.00190	0.49500	0.02300	0.06610	0.00220	0.345	412.6	13.0	413.0	13.5	-0.4	371.0	79.0	-11%	413.0	13.5	g
Z_Temora2_30	3:01:25	384	1.63	-134000	0.05480	0.00150	0.50400	0.02100	0.06650	0.00220	0.517	414.8	13.0	415.2	13.5	-0.4	398.0	61.0	-4%	415.2	13.5	g
Z_Temora2_31	3:08:06	2455	2.64	11286	0.05585	0.00120	0.50700	0.02300	0.06480	0.00280	0.865	404.0	17.0	404.2	17.1	-0.2	451.0	45.0	10%	404.2	17.1	204SPK:TRIM V.SHORT
Z_Temora2_32	3:14:47	348	1.48	-3156	0.05550	0.00160	0.51100	0.02200	0.06730	0.00220	0.455	419.9	13.0	419.7	13.5	0.2	420.0	65.0	0%	419.7	13.5	g
Z_Temora2_33	3:23:23	449	1.71	-4685	0.05500	0.00150	0.51200	0.02200	0.06720	0.00220	0.325	419.2	13.0	419.4	13.5	-0.2	397.0	62.0	-6%	419.4	13.5	g
Z_Temora2_34	3:29:06	1860	2.03	23228	0.05541	0.00110	0.52200	0.02000	0.06820	0.00220	0.802	425.0	13.0	425.3	13.5	-0.3	430.0	44.0	1%	425.3	13.5	g
Z_Temora2_35	3:35:48	226	1.59	-13100	0.05560	0.00190	0.49800	0.02300	0.06630	0.00220	0.374	414.9	13.0	413.5	13.5	1.4	410.0	75.0	-1%	413.5	13.5	g
Z_Temora2_36	3:41:33	393	2.40	7841	0.05500	0.00150	0.49100	0.02000	0.06450	0.00220	0.480	402.8	13.0	402.8	13.5	0.0	402.0	58.0	0%	402.8	13.5	g
Z_Temora2_37	3:49:11	226	1.74	6085	0.05500	0.00160	0.50400	0.02300	0.06670	0.00220	0.627	416.3	13.0	416.3	13.5	0.0	405.0	60.0	-3%	416.3	13.5	g
Z_Temora2_38	3:54:55	271	3.72	2229	0.05480	0.00250	0.52500	0.03100	0.06860	0.00270	0.501	428.0	17.0	428.0	16.6	0.0	395.0	100.0	-8%	428.0	16.6	DT:TRIM
Z_Temora2_39	4:01:38	135	3.21	3449	0.05500	0.00220	0.50800	0.02500	0.06740	0.00230	0.234	421.3	13.0	420.6	14.1	0.7	392.0	88.0	-7%	420.6	14.1	g
Z_Temora2_40	4:07:21	412	1.37	17625	0.05610	0.00150	0.50100	0.02100	0.06500	0.00210	0.636	406.4	12.0	405.3	12.9	1.1	446.0	58.0	9%	405.3	12.9	g
Z_Temora2_41	4:14:02	764	1.70	-133600	0.05580	0.00140	0.51300	0.02100	0.06720	0.00220	0.617	419.2	13.0	418.9	13.5	0.3	436.0	57.0	4%	418.9	13.5	204SPK:TRIM
Z_Temora2_42	4:25:40	121	1.92	835	0.05370	0.00230	0.49000	0.02500	0.06670	0.00240	0.038	416.2	14.0	416.9	14.8	-0.7	335.0	89.0	-24%	416.9	14.8	g
Z_Temora2_43	4:32:22	267	2.27	2600	0.05490	0.00180	0.48800	0.02300	0.06410	0.00210	0.356	400.2	13.0	400.4	12.9	-0.2	399.0	73.0	0%	400.4	12.9	g
Z_Temora2_44	4:38:06	218	1.71	-76100	0.05430	0.00180	0.49400	0.02300	0.06580	0.00210	0.490	410.9	13.0	411.1	12.9	-0.2	369.0	70.0	-11%	411.1	12.9	g
Z_Temora2_45	4:44:47	1763	2.05	28227	0.05501	0.00110	0.50250	0.02000	0.06590	0.00210	0.753	411.4	13.0	411.4	12.9	0.0	411.0	45.0	0%	411.4	12.9	g
Z_Temora2_46	4:50:31	463	2.31	11943	0.05450	0.00150	0.51000	0.02200	0.06670	0.00220	0.608	416.0	13.0	416.5	13.5	-0.5	387.0	62.0	-8%	416.5	13.5	g
Z_Temora2_47	4:58:10	174	2.33	-2828	0.05530	0.00230	0.50400	0.02700	0.06760	0.00220	0.230	421.7	13.0	422.4	13.5	-0.7	345.0	87.0	-22%	422.4	13.5	g
Z_Temora2_48	5:03:53	849	1.47	-29810	0.05447	0.00130	0.49600	0.02000	0.06630	0.00220	0.671	413.7	13.0	414.1	13.5	-0.4	393.0	52.0	-5%	414.1	13.5	g
Z_Temora2_49	5:10:35	618	1.26	9038	0.05680	0.00140	0.51700	0.02100	0.06640	0.00210	0.609	414.1	13.0	413.6	12.8	0.5	476.0	54.0	13%	413.6	12.8	fair
Z_Temora2_50	5:16:19	154	2.11	4358	0.05780	0.00210	0.54600	0.02600	0.06890	0.00230	0.295	430.3	14.0	428.3	14.1	2.0	520.0	7				

Z_Temora2_79	8:24:36	298	2.41	5340	0.05500	0.00180	0.50700	0.02300	0.06730	0.00210	0.408	419.5	13.0	420.0	12.9	-0.5	395.0	72.0	-6%	420.0	12.9	g
Z_Temora2_80	8:30:19	193	2.59	5338	0.05600	0.00190	0.52500	0.02400	0.06660	0.00210	0.439	415.3	13.0	415.2	12.9	0.1	437.0	75.0	5%	415.2	12.9	g
Z_Temora2_81	8:37:01	289	3.61	2342	0.05340	0.00170	0.48200	0.02200	0.06490	0.00210	0.529	405.3	13.0	406.1	12.9	-0.8	344.0	71.0	-18%	406.1	12.9	g
Z_Temora2_82	8:43:43	238	1.62	-2744	0.05440	0.00180	0.49500	0.02200	0.06610	0.00210	0.385	412.6	13.0	412.9	12.9	-0.3	383.0	74.0	-8%	412.9	12.9	g
Z_Temora2_83	8:50:24	303	3.14	-7779	0.05540	0.00170	0.50700	0.02200	0.06630	0.00210	0.418	413.8	13.0	413.6	12.9	0.2	421.0	65.0	2%	413.6	12.9	g
Z_Temora2_84	8:56:08	160	2.54	1676	0.05610	0.00240	0.52000	0.02700	0.06690	0.00230	0.360	417.0	14.0	417.0	14.1	0.0	435.0	86.0	4%	417.0	14.1	g
Z_Temora2_85	9:02:50	911	2.26	-330800	0.05522	0.00130	0.51300	0.02100	0.06770	0.00220	0.709	421.9	13.0	422.3	13.5	-0.4	419.0	54.0	-1%	422.3	13.5	g
Z_Temora2_86	9:08:33	262	1.78	4143	0.05350	0.00320	0.48700	0.03500	0.06600	0.00280	0.441	412.0	17.0	412.8	17.2	-0.8	360.0	120.0	-15%	412.8	17.2	204SPK:TRIM
Z_Temora2_87	9:16:12	1018	1.51	9753	0.05483	0.00130	0.51100	0.02100	0.06716	0.00210	0.607	418.9	12.0	419.2	12.9	-0.3	399.0	51.0	-5%	419.2	12.9	g
Z_Temora2_88	9:21:57	543	1.71	-4213	0.05570	0.00150	0.51900	0.02100	0.06757	0.00210	0.536	421.4	13.0	421.3	12.9	0.1	429.0	60.0	2%	421.3	12.9	g
Z_Temora2_89	9:28:38	217	2.54	-3497	0.05430	0.00190	0.49200	0.02200	0.06590	0.00210	0.252	411.1	13.0	411.7	12.9	-0.6	357.0	76.0	-15%	411.7	12.9	g
Z_Temora2_90	9:34:22	670	3.37	41050	0.05456	0.00130	0.51400	0.02100	0.06760	0.00210	0.718	421.9	13.0	422.0	12.9	-0.1	392.0	53.0	-8%	422.0	12.9	g
Z_Temora2_91	9:41:03	930	2.24	11552	0.05561	0.00130	0.50840	0.02000	0.06676	0.00210	0.617	416.5	12.0	416.4	12.9	0.1	434.0	51.0	4%	416.4	12.9	g
Z_Temora2_92	9:49:40	157	2.89	-1349	0.05250	0.00210	0.48000	0.02400	0.06700	0.00220	0.247	417.8	13.0	419.4	13.5	-1.6	288.0	83.0	-46%	419.4	13.5	g
Z_Temora2_93	9:56:22	424	1.56	6626	0.05550	0.00150	0.50200	0.02100	0.06650	0.00210	0.515	415.6	13.0	414.8	12.9	0.8	428.0	63.0	3%	414.8	12.9	g
Z_Temora2_94	10:02:06	1349	2.42	14818	0.05471	0.00120	0.50670	0.02000	0.06720	0.00210	0.678	419.1	13.0	419.5	12.9	-0.4	401.0	47.0	-5%	419.5	12.9	g
Z_Temora2_95	10:08:48	269	3.00	-6993	0.05250	0.00160	0.48600	0.02100	0.06700	0.00220	0.440	418.0	13.0	419.4	13.5	-1.4	311.0	69.0	-35%	419.4	13.5	g
Z_Temora2_96	10:14:32	356	2.02	-16238	0.05550	0.00150	0.51200	0.02200	0.06770	0.00220	0.501	422.4	13.0	422.2	13.5	0.2	428.0	59.0	1%	422.2	13.5	g
Z_Temora2_97	10:22:11	157	2.88	941	0.05580	0.00230	0.50900	0.02700	0.06590	0.00230	0.426	412.0	14.0	411.0	14.1	1.0	423.0	88.0	3%	411.0	14.1	g
Z_Temora2_98	10:27:55	204	2.29	1979	0.05610	0.00180	0.51800	0.02300	0.06600	0.00220	0.409	412.6	13.0	411.5	13.5	1.1	438.0	71.0	6%	411.5	13.5	g
Z_Temora2_99	10:34:36	256	1.69	2278	0.05520	0.00170	0.50700	0.02200	0.06670	0.00220	0.435	417.2	13.0	416.2	13.5	1.0	408.0	68.0	-2%	416.2	13.5	g
Z_Temora2_100	10:40:20	160	2.33	1368	0.05450	0.00190	0.48800	0.02400	0.06450	0.00220	0.427	403.0	13.0	403.1	13.5	-0.1	377.0	77.0	-7%	403.1	13.5	g
Z_Temora2_101	10:47:01	164	1.57	-6710	0.05480	0.00200	0.51100	0.02400	0.06790	0.00220	0.254	423.1	14.0	423.7	13.5	-0.6	383.0	80.0	-11%	423.7	13.5	g
Z_Temora2_102	10:53:43	234	1.66	4589	0.05530	0.00190	0.52300	0.02400	0.06840	0.00220	0.260	426.3	13.0	426.5	13.5	-0.2	424.0	77.0	-1%	426.5	13.5	g
Z_Temora2_103	11:00:25	178	1.59	15858	0.05710	0.00190	0.51600	0.02500	0.06530	0.00210	0.497	407.7	13.0	406.7	12.9	1.0	474.0	75.0	14%	406.7	12.9	g
Z_Temora2_104	11:06:09	538	1.61	-12475	0.05670	0.00140	0.51600	0.02100	0.06820	0.00220	0.509	425.3	14.0	425.6	13.5	-0.3	394.0	55.0	-8%	425.6	13.5	g
Z_Temora2_105	11:12:51	284	1.64	6041	0.05460	0.00160	0.49900	0.02200	0.06735	0.00210	0.404	420.1	12.0	420.5	12.9	-0.4	388.0	67.0	-8%	420.5	12.9	g
Z_Temora2_106	11:18:35	211	2.68	2635	0.05610	0.00180	0.50800	0.02300	0.06640	0.00220	0.411	414.5	13.0	413.9	13.5	0.6	443.0	70.0	7%	413.9	13.5	g
Z_Temora2_107	11:26:15	124	1.71	5668	0.05740	0.00250	0.52500	0.02900	0.06710	0.00230	0.304	418.3	14.0	417.5	14.1	0.8	472.0	92.0	12%	417.5	14.1	g
Z_Temora2_108	11:31:59	928	3.82	9606	0.05534	0.00120	0.52930	0.02100	0.06970	0.00230	0.657	434.3	14.0	434.5	14.1	-0.2	425.0	50.0	-2%	434.5	14.1	fair
Z_Temora2_109	11:38:41	251	1.46	4105	0.05500	0.00160	0.50400	0.02100	0.06700	0.00210	0.413	417.9	13.0	418.1	12.9	-0.2	405.0	63.0	-3%	418.1	12.9	g
Z_Temora2_110	11:44:25	197	2.96	4050	0.05590	0.00180	0.52100	0.02400	0.06680	0.00210	0.497	417.7	13.0	416.5	12.9	1.2	438.0	70.0	5%	416.5	12.9	g
Z_Temora2_111	11:51:06	215	2.45	-11171	0.05530	0.00180	0.50400	0.02300	0.06680	0.00220	0.326	416.9	13.0	416.8	13.5	0.1	398.0	72.0	-5%	416.8	13.5	g
Z_Temora2_112	11:57:47	2827	2.47	9864	0.05573	0.00110	0.50510	0.01900	0.06645	0.00200	0.835	414.7	12.0	414.4	12.2	0.3	438.0	43.0	5%	414.4	12.2	g
Z_Temora2_113	12:04:29	166	2.38	2373	0.05550	0.00220	0.50200	0.02400	0.06520	0.00220	0.245	407.9	13.0	406.9	13.5	1.0	397.0	84.0	-2%	406.9	13.5	g
Z_Temora2_114	12:07:21	351	2.26	2024	0.05600	0.00160	0.50600	0.02200	0.06517	0.00200	0.543	406.9	12.0	406.4	12.3	0.5	438.0	62.0	7%	406.4	12.3	g
Z_Temora2_115	12:09:15	205	1.63	1143	0.05700	0.00190	0.50000	0.02400	0.06410	0.00200	0.435	400.2	12.0	399.4	12.3	0.8	471.0	74.0	15%	399.4	12.3	g
Z_Temora2_116	12:10:12	199	2.42	3282	0.05560	0.00170	0.50800	0.02200	0.06620	0.00220	0.396	413.3	13.0	412.9	13.5	0.4	439.0	68.0	6%	412.9	13.5	g
Z_Temora2_117	12:18:49	235	3.18	3046	0.05400	0.00190	0.48300	0.02300	0.06580	0.00220	0.312	410.5	13.0	411.3	13.5	-0.8	356.0	75.0	-16%	411.3	13.5	g
Z_Temora2_118	12:19:47	164	3.01	1711	0.05580	0.00220	0.51600	0.02500	0.06730	0.00220	0.384	419.8	13.0	419.6	13.5	0.2	418.0	82.0	0%	419.6	13.5	g

Methods, column headings, comment codes, etc. described in Appendix DR1.

Grains selected at random.

Table DR2F: U-Th-Pb data from detrital zircons analyzed at University of California Santa Cruz (October 2015)

Run: TDSC18CB (part). Samples TD2F219 (2nd run), TD2F220. Iolite file name TDSC18CB\_T2S6GC3\_All\_Integrations. Excel file name: GSTD4\_TDSC18CB\_T2S6GC3.xlsx

Grain	Time	hr:min:s	U ppm	U/Th	206Pb/ 204Pb	207Pb/ 206Pb	+2s	207Pb/ 235U	+2s	206Pb/ 238U	+2s	Error	238U age	unc.	207corr	206Pb/ 238Pb age	+2s	207 corr	207Pb /206Pb	uncorr.	discor-	Best Age	+2s	Comments
	Time	GS Excel	GS Excel	Pb206_C PS/Pb204 _CPS	Final207_206 206_Prop 2SE	Final207_235 235_Prop 2SE	Final206_238 238_Prop 2SE	Error	Corr.	elation_6 _38vs7_3	FinalAge2 _Prop2S 5 06_238	FinalAge2 _Prop2S E	GS Excel	TD Excel	FinalAge2 07_206 07_206_P rop2SE	TD Excel	FinalAge2 07_206 TD	TD Excel	TD Excel	TD Excel	TD Excel	TD Excel		
Dromedary_1	21:16:03	2228	1.59	14536	0.04800	0.00130	0.10670	0.00610	0.01614	0.00081	0.311	103.2	5.1	103.2	5.2	0.0	100.0	57.0	-3%	103.2	5.2	g=good (Note 1)		
Dromedary_2	21:17:00	647	2.06	2431	0.04800	0.00180	0.10650	0.00650	0.01601	0.00081	0.132	102.4	5.1	102.4	5.2	0.0	104.0	74.0	2%	102.4	5.2	g		
Dromedary_3	21:17:58	435	1.59	1084	0.04820	0.00250	0.10240	0.00720	0.01596	0.00081	0.128	102.1	5.1	102.1	5.2	0.0	101.0	97.0	-1%	102.1	5.2	g		
Dromedary_4	21:18:55	1787	1.63	-128300	0.04830	0.00120	0.10790	0.00610	0.01610	0.00081	0.505	102.9	5.1	102.9	5.2	0.0	121.0	57.0	15%	102.9	5.2	g (#)		
Dromedary_5	21:41:50	1985	1.38	-4297	0.04890	0.00130	0.10890	0.00620	0.01621	0.00081	0.431	103.7	5.1	103.6	5.1	0.1	140.0	56.0	26%	103.6	5.1	g		
Dromedary_6	22:32:28	2255	1.61	-4195	0.04842	0.00120	0.10330	0.00570	0.01551	0.00077	0.366	99.2	4.9	99.2	4.9	0.0	121.0	52.0	18%	99.2	4.9	g		
Dromedary_7	23:37:27	633	2.29	14627	0.04850	0.00210	0.10360	0.00670	0.01557	0.00079	0.121	99.6	5.0	99.5	5.0	0.1	132.0	86.0	25%	99.5	5.0	g		
Dromedary_8	0:40:32	536	1.37	3707	0.04760	0.00180	0.10140	0.00660	0.01539	0.00078	0.386	98.5	5.0	98.5	5.0	0.0	88.0	75.0	-12%	98.5	5.0	g		
Dromedary_9	1:43:35	721	2.32	-3248	0.04730	0.00180	0.09930	0.00620	0.01506	0.00076	0.208	96.4	4.8	96.4	4.8	0.0	72.0	73.0	-34%	96.4	4.8	g		
Dromedary_10	2:52:30	314	1.63	402	0.04670	0.00240	0.10680	0.00760	0.01670	0.00088	0.110	107.0	5.5	107.0	5.6	0.0	45.0	96.0	-138%	107.0	5.6	g		
Dromedary_11	3:57:26	1366	1.65	-23825	0.04810	0.00130	0.10310	0.00580	0.01560	0.00078	0.252	99.8	4.9	99.8	5.0	0.0	116.0	59.0	14%	99.8	5.0	g		
Dromedary_12	5:00:28	511	1.65	-3174	0.04670	0.00210	0.10010	0.00690	0.01532	0.00078	0.119	98.0	4.9	98.2	5.0	-0.2	60.0	86.0	-64%	98.2	5.0	g		
Dromedary_13	6:03:31	442	2.43	3442	0.04830	0.00230	0.10640	0.00710	0.01576	0.00080	0.166	100.8	5.1	100.8	5.1	0.0	121.0	94.0	17%	100.8	5.1	g		
Dromedary_14	7:06:33	1492	1.45	9727	0.04760	0.00140	0.10590	0.00610	0.01611	0.00080	0.224	103.0	5.1	103.1	5.1	-0.1	76.0	61.0	-36%	103.1	5.1	g		
Dromedary_15	8:11:31	1599	1.63	17743	0.04910	0.00140	0.11600	0.00670	0.01735	0.00086	0.344	110.9	5.5	110.8	5.5	0.1	144.0	60.0	23%	110.8	5.5	g		
Dromedary_16	9:14:35	1603	1.57	#DIV/0!	0.04660	0.00120	0.10650	0.00600	0.01653	0.00082	0.428	105.7	5.2	105.9	5.2	-0.2	36.0	51.0	-194%	105.9	5.2	g		
Dromedary_17	10:17:40	1161	1.07	-4822	0.04710	0.00150	0.10210	0.00600	0.01588	0.00079	0.213	101.6	5.0	101.7	5.0	-0.1	78.0	66.0	-30%	101.7	5.0	g		
Dromedary_18	11:19:49	1693	1.52	6600	0.04880	0.00130	0.10520	0.00590	0.01575	0.00078	0.272	100.7	4.9	100.6	5.0	0.1	139.0	57.0	28%	100.6	5.0	g		
Dromedary_19	11:24:35	607	2.03	491	0.05000	0.00180	0.10400	0.00650	0.01514	0.00077	0.360	96.9	4.9	96.6	4.9	0.3	184.0	76.0	47%	96.6	4.9	g		
FC5Z_1	21:12:13	257	1.60	5385	0.07633	0.00150	2.00500	0.11000	0.19010	0.00950	0.668	1121.0	51.0	1122.8	54.1	-1.8	1099.0	40.0	-2%	1099.0	40.0	g (Note 1)		
FC5Z_2	21:13:11	312	1.60	15341	0.07670	0.00160	1.97700	0.11000	0.18830	0.00950	0.634	1112.0	51.0	1112.1	54.1	-0.1	1107.0	42.0	0%	1107.0	42.0	g		
FC5Z_3	21:14:08	152	2.09	3878	0.07420	0.00180	1.88300	0.11000	0.18560	0.00930	0.504	1097.0	51.0	1099.9	53.1	-2.9	1048.0	50.0	-5%	1048.0	50.0	g		
FC5Z_4	21:15:06	239	1.57	5166	0.07640	0.00180	1.97600	0.11000	0.18730	0.00950	0.522	1106.0	51.0	1106.8	54.1	-0.8	1102.0	48.0	0%	1102.0	48.0	g		
FC5Z_5	21:21:47	796	1.44	13717	0.07647	0.00150	1.93600	0.11000	0.18360	0.00940	0.816	1086.0	51.0	1085.6	53.6	0.4	1106.0	40.0	2%	1106.0	40.0	204SPK:TRIM		
FC5Z_6	21:22:44	393	1.36	-82525	0.07652	0.00150	2.00900	0.11000	0.19050	0.00950	0.437	1124.0	51.0	1124.8	54.1	-0.8	1104.0	40.0	-2%	1104.0	40.0	g		
FC5Z_7	21:28:28	337	1.76	7946	0.07675	0.00160	1.95800	0.11000	0.18560	0.00920	0.674	1097.0	50.0	1096.7	52.4	0.3	1112.0	41.0	1%	1112.0	41.0	g		
FC5Z_8	21:40:52	460	1.46	-20772	0.07652	0.00150	1.97500	0.11000	0.18720	0.00950	0.883	1106.0	52.0	1106.1	54.1	-0.1	1108.0	38.0	0%	1108.0	38.0	g		
FC5Z_9	21:54:15	149	2.14	-17357	0.07570	0.00170	1.91600	0.11000	0.18420	0.00920	0.570	1090.0	50.0	1090.0	52.5	0.0	1082.0	44.0	-1%	1082.0	44.0	g		
FC5Z_10	22:06:41	1065	1.70	-225300	0.07593	0.00140	2.01000	0.11000	0.19190	0.00950	0.777	1133.0	52.0	1133.6	54.1	-0.6	1091.0	37.0	-4%	1091.0	37.0	g		
FC5Z_11	22:19:06	243	1.57	28614	0.07648	0.00160	1.94900	0.11000	0.18500	0.00920	0.536	1094.0	50.0	1093.6	52.4	0.4	1108.0	43.0	1%	1108.0	43.0	g		
FC5Z_12	22:31:31	167	2.03	9047	0.07670	0.00180	1.93100	0.11000	0.18320	0.00920	0.447	1084.0	50.0	1083.1	52.5	0.9	1109.0	47.0	2%	1109.0	47.0	g		
FC5Z_13	22:44:54	159	2.98	5104	0.07700	0.00190	1.95800	0.11000	0.19000	0.01500	-0.194	1116.0	68.0	1121.4	85.3	-5.4	1107.0	51.0	-1%	1107.0	51.0	g		
FC5Z_14	22:57:20	116	2.22	-4815	0.07690	0.00200	1.98200	0.11000	0.18690	0.00930	0.503	1104.0	51.0	1103.9	53.0	0.1	1123.0	49.0	2%	1123.0	49.0	g		
FC5Z_15	23:09:45	243	2.00	6724	0.07640	0.00170	1.88700	0.10000	0.18000	0.00900	0.465	1066.0	49.0	1065.2	51.4	0.8	1097.0	45.0	3%	1097.0	45.0	g		
FC5Z_16	23:24:04	367	1.69	10900	0.07649	0.00160	1.91100	0.10000	0.18040	0.00900	0.638	1069.0	49.0	1067.4	51.4	1.6	1105.0	41.0	3%	1105.0	41.0	g		
FC5Z_17	23:36:29	211	2.00	9965	0.07580	0.00180	1.92000	0.11000	0.18170	0.00910	0.605	1077.0	49.0	1075.6	52.0	1.4	1099.0	45.0	2%	1099.0	45.0	g		
FC5Z_18	23:49:52	289	1.60	8581	0.07695	0.00160	1.91800	0.11000	0.18080	0.00910	0.637	1072.0	49.0	1069.1	51.9	2.9	1124.0	40.0	5%	1124.0	40.0	g		
FC5Z_19	0:02:18	154	2.14	4003	0.07750	0.00190	1.95900	0.11000	0.18300	0.00920	0.607	1083.0	50.0	1080.9	52.4	2.1	1122.0	49.0	4%	1122.0	49.0	g		
FC5Z_20	0:14:44	214	1.72	4586	0.07660	0.00180	1.88200	0.11000	0.17960	0.00900	0.613	1065.0	49.0	1062.7	51.4	2.3	1113.0	46.0	5%	1113.0	46.0	g		
FC5Z_21	0:27:09	198	1.64	10873	0.07700	0.00180	1.96900	0.11000	0.18580	0.00940	0.588	1098.0	51.0	1097.5	53.5	0.5	1117.0	47.0	2%	1117.0	47.0	g		
FC5Z_22	0:39:34	328	1.63	2725	0.07610	0.00160	1.95900	0.11000	0.18700	0.00920	0.253	1106.0	49.0	1105.5	52.4	0.5	1091.0	43.0	-1%	1091.0	43.0	g		
FC5Z_23	0:52:57	139	1.93	3488	0.07720	0.00190	1.96800	0.11000	0.18540	0.00930	0.722	1096.0	51.0	1095.0	53.0	1.0	1142.0	47.0	4%	1142.0	47.0	g		
FC5Z_24	1:05:21	382	1.34	21147	0.07619	0.00150	1.96600	0.11000	0.18690	0.00920	0.													

FC5Z_34	3:17:20	176	1.69	48700	0.07550	0.00180	1.95200	0.11000	0.18720	0.00930	0.414	1106.0	51.0	1107.4	53.0	-1.4	1072.0	47.0	-3%	1072.0	47.0	g
FC5Z_35	3:31:39	668	1.46	14827	0.07671	0.00140	1.96800	0.11000	0.18690	0.00920	0.677	1104.0	50.0	1104.1	52.4	-0.1	1117.0	37.0	1%	1117.0	37.0	g
FC5Z_36	3:44:04	240	1.51	10363	0.07640	0.00170	1.96100	0.11000	0.18390	0.00920	0.157	1088.0	50.0	1087.4	52.5	0.6	1098.0	46.0	1%	1098.0	46.0	g
FC5Z_37	3:56:28	214	1.54	4383	0.07690	0.00180	1.96100	0.11000	0.18370	0.00920	0.177	1087.0	50.0	1085.7	52.4	1.3	1110.0	46.0	2%	1110.0	46.0	g
FC5Z_38	4:09:51	207	1.63	24457	0.07753	0.00160	2.00300	0.11000	0.18650	0.00920	0.649	1102.0	50.0	1100.8	52.4	1.2	1132.0	41.0	3%	1132.0	41.0	g
FC5Z_39	4:22:16	660	1.60	15949	0.07634	0.00140	1.99700	0.11000	0.19030	0.00940	0.742	1123.0	51.0	1123.9	53.5	-0.9	1102.0	36.0	-2%	1102.0	36.0	g
FC5Z_40	4:34:41	342	1.55	56640	0.07708	0.00160	1.98500	0.11000	0.18670	0.00930	0.662	1105.0	49.0	1102.5	52.9	2.5	1124.0	41.0	2%	1124.0	41.0	g
FC5Z_41	4:47:06	379	1.55	-38738	0.07668	0.00160	1.93600	0.10000	0.18400	0.00920	0.570	1089.0	50.0	1087.6	52.4	1.4	1113.0	42.0	2%	1113.0	42.0	g
FC5Z_42	4:59:31	130	2.37	-3881	0.07520	0.00180	1.86600	0.10000	0.18060	0.00910	0.599	1071.0	51.0	1070.1	52.0	0.9	1067.0	48.0	0%	1067.0	48.0	g
FC5Z_43	5:12:53	135	2.53	27408	0.07670	0.00190	1.88200	0.11000	0.17960	0.00910	0.520	1064.0	49.0	1062.5	51.9	1.5	1124.0	49.0	5%	1124.0	49.0	g
FC5Z_44	5:25:19	176	2.03	-71600	0.07700	0.00170	1.92300	0.11000	0.18160	0.00910	0.629	1077.0	49.0	1073.6	51.9	3.4	1112.0	46.0	3%	1112.0	46.0	g
FC5Z_45	5:37:44	200	1.54	10787	0.07630	0.00180	1.92300	0.11000	0.18360	0.00920	0.407	1086.0	50.0	1085.8	52.5	0.2	1103.0	47.0	2%	1103.0	47.0	g
FC5Z_46	5:50:09	542	1.68	16152	0.07679	0.00150	1.89700	0.10000	0.18010	0.00900	0.799	1067.0	49.0	1065.3	51.3	1.7	1115.0	38.0	4%	1115.0	38.0	g
FC5Z_47	6:02:34	278	1.65	11705	0.07620	0.00160	1.87800	0.10000	0.17870	0.00890	0.557	1060.0	49.0	1058.0	50.8	2.0	1094.0	42.0	3%	1094.0	42.0	g
FC5Z_48	6:15:56	808	1.65	-33500	0.07644	0.00140	1.97300	0.11000	0.18780	0.00930	0.758	1109.0	50.0	1109.6	53.0	-0.6	1106.0	37.0	0%	1106.0	37.0	g
FC5Z_49	6:28:21	264	2.43	10780	0.07590	0.00160	1.93700	0.11000	0.18520	0.00920	0.691	1095.0	50.0	1095.5	52.5	-0.5	1093.0	41.0	0%	1093.0	41.0	g
FC5Z_50	6:40:45	245	2.38	-21778	0.07590	0.00160	1.88400	0.10000	0.18160	0.00910	0.605	1076.0	49.0	1074.9	51.9	1.1	1089.0	43.0	1%	1089.0	43.0	g
FC5Z_51	6:53:10	216	1.55	22175	0.07720	0.00170	1.94800	0.11000	0.18260	0.00920	0.641	1086.0	49.0	1079.0	52.4	7.0	1125.0	43.0	4%	1125.0	43.0	g
FC5Z_52	7:05:35	372	1.40	11507	0.07663	0.00150	1.95700	0.11000	0.18510	0.00920	0.689	1096.0	49.0	1094.0	52.4	2.0	1113.0	41.0	2%	1113.0	41.0	g
FC5Z_53	7:18:58	107	2.38	-2943	0.07670	0.00210	1.94200	0.11000	0.18440	0.00930	0.408	1090.0	51.0	1089.9	53.0	0.1	1098.0	55.0	1%	1098.0	55.0	g
FC5Z_54	7:33:19	844	1.00	-719000	0.07567	0.00140	1.98900	0.11000	0.19070	0.00940	0.726	1126.0	50.0	1127.1	53.5	-1.1	1087.0	35.0	-4%	1087.0	35.0	g
FC5Z_55	7:45:44	313	3.17	-19885	0.07594	0.00150	1.91400	0.11000	0.18380	0.00920	0.753	1087.0	50.0	1087.4	52.5	-0.4	1092.0	40.0	0%	1092.0	40.0	g
FC5Z_56	7:58:09	87	2.51	8904	0.07680	0.00230	1.95300	0.11000	0.18460	0.00930	0.113	1092.0	51.0	1090.9	53.0	1.1	1112.0	62.0	2%	1112.0	62.0	g
FC5Z_57	8:10:34	554	1.63	465100	0.07651	0.00140	1.97900	0.11000	0.18810	0.00920	0.720	1112.0	51.0	1111.2	52.4	0.8	1108.0	38.0	0%	1108.0	38.0	g
FC5Z_58	8:23:56	220	1.57	26514	0.07660	0.00160	1.97000	0.11000	0.18660	0.00930	0.605	1103.0	51.0	1102.6	53.0	0.4	1110.0	43.0	1%	1110.0	43.0	g
FC5Z_59	8:36:21	188	1.65	#DIV/0!	0.07560	0.00180	1.94800	0.11000	0.18660	0.00930	0.380	1103.0	51.0	1103.8	53.1	-0.8	1079.0	50.0	-2%	1079.0	50.0	g
FC5Z_60	8:48:47	604	1.69	10479	0.07641	0.00150	1.96700	0.11000	0.18630	0.00930	0.732	1104.0	52.0	1101.1	53.0	2.9	1112.0	37.0	1%	1112.0	37.0	g
FC5Z_61	9:01:12	179	1.72	5363	0.07620	0.00200	2.00800	0.12000	0.19130	0.00990	0.657	1128.0	54.0	1129.8	56.4	-1.8	1097.0	51.0	-3%	1097.0	51.0	zoned:TRIM
FC5Z_62	9:13:38	345	1.45	19440	0.07636	0.00160	1.99600	0.11000	0.19000	0.00950	0.688	1121.0	52.0	1122.2	54.1	-1.2	1100.0	40.0	-2%	1100.0	40.0	g
FC5Z_63	9:27:01	214	2.10	9195	0.07497	0.00150	1.89400	0.10000	0.18290	0.00910	0.653	1082.0	50.0	1083.5	52.0	-1.5	1075.0	40.0	-1%	1075.0	40.0	g
FC5Z_64	9:39:26	230	4.66	211600	0.07566	0.00160	2.13000	0.12000	0.20440	0.01000	0.617	1199.0	55.0	1205.6	56.8	-6.6	1081.0	42.0	-12%	1081.0	42.0	rev:disc:DEL
FC5Z_65	9:51:51	75	2.85	2238	0.07610	0.00220	1.96900	0.12000	0.18870	0.00950	0.399	1114.0	51.0	1115.1	54.2	-1.1	1085.0	57.0	-3%	1085.0	57.0	g
FC5Z_66	10:04:17	306	1.67	13458	0.07667	0.00160	1.96400	0.11000	0.18770	0.00930	0.542	1110.0	50.0	1108.7	53.0	1.3	1107.0	41.0	0%	1107.0	41.0	g
FC5Z_67	10:16:43	253	1.51	3356	0.07674	0.00160	1.95600	0.11000	0.18570	0.00920	0.600	1098.0	50.0	1097.2	52.4	0.8	1112.0	41.0	1%	1112.0	41.0	g
FC5Z_68	10:30:06	194	1.54	8075	0.07510	0.00170	1.93700	0.11000	0.18600	0.00930	0.600	1099.0	51.0	1101.0	53.1	-2.0	1068.0	45.0	-3%	1068.0	45.0	g
FC5Z_69	10:42:31	241	1.49	8475	0.07619	0.00160	1.99000	0.11000	0.18840	0.00940	0.627	1114.0	52.0	1113.3	53.6	0.7	1109.0	40.0	0%	1109.0	40.0	g
FC5Z_70	10:54:57	230	1.62	5959	0.07650	0.00170	1.95400	0.11000	0.18650	0.00920	0.621	1102.0	50.0	1102.1	52.4	-0.1	1103.0	43.0	0%	1103.0	43.0	g
FC5Z_71	11:07:22	101	2.70	7582	0.07460	0.00200	1.89100	0.11000	0.18460	0.00940	0.408	1091.0	51.0	1093.7	53.7	-2.7	1052.0	53.0	-4%	1052.0	53.0	g
FC5Z_72	11:18:51	235	2.19	7492	0.07600	0.00160	1.95300	0.11000	0.18700	0.00930	0.427	1105.0	50.0	1105.6	53.0	-0.6	1088.0	43.0	-2%	1088.0	43.0	g
FC5Z_73	11:22:41	828	1.04	13206	0.07653	0.00140	1.99000	0.11000	0.18890	0.00920	0.623	1116.3	49.0	1115.7	52.4	0.6	1110.0	36.0	-1%	1110.0	36.0	g
FC5Z_74	11:23:38	468	1.24	7042	0.07668	0.00150	1.93800	0.11000	0.18380	0.00910	0.654	1087.0	49.0	1086.5	51.9	0.5	1112.0	40.0	2%	1112.0	40.0	g
FC5Z_75	11:25:32	684	1.18	18737	0.07634	0.00140	1.93200	0.10000	0.18320	0.00910	0.744	1084.0	49.0	1083.5	51.9	0.5	1105.0	38.0	2%	1105.0	38.0	g
FC5Z_76	11:26:30	290	3.05	6706	0.07671	0.00160	1.97000	0.11000	0.18740	0.00930	0.580	1107.0	50.0	1107.0	53.0	0.0	1111.0	42.0	0%	1111.0	42.0	g
Madder_1	20:58:51	3285	8.00	-121000	0.05695	0.00100	0.72100	0.03900	0.09140	0.00450	0.828	564.0	27.0	565.1	27.1	-1.1	489.0	40.0	-16%	565.1	27.1	g (Note 1)
Madder_2	20:59:48	3287	8.01	-74000	0.05714	0.00100	0.72070	0.03900	0.09170	0.00460	0.809	565.7	27.0	566.8	27.7	-1.1	499.0	39.0	-14%	566.8	27.7	g
Madder_3	21:00:45	3438	7.92	153444	0.05768	0.00100	0.72270	0.03900	0.09031	0.00450	0.819	557.9	26.0	558.1	27.1	-0.2	519.0	40.0	-8%	558.1	27.1	g
Madder_4	21:01:43	3637	8.13	18100	0.05691	0.00100	0.7															

Madder_20	11:28:25	2608	8.28	24543	0.05748	0.00100	0.76200	0.04100	0.09670	0.00490	0.808	594.8	29.0	596.7	29.5	-1.9	507.0	40.0	-18%	596.7	29.5	fair
TD2F219_8	1:52:11	120	1.57	-1250	0.05250	0.00740	0.04940	0.00740	0.00696	0.00043	0.111	44.7	2.7	44.4	2.8	0.3	370.0	250.0	88%	44.4	2.8	g
TD2F219_43	2:42:00	648	1.98	743	0.04910	0.00320	0.04710	0.00370	0.00703	0.00037	-0.144	45.1	2.4	45.0	2.4	0.1	170.0	120.0	74%	45.0	2.4	g
TD2F219_70	3:15:25	157	1.88	-122	0.04810	0.00570	0.04640	0.00570	0.00704	0.00043	-0.106	45.2	2.7	45.2	2.8	0.0	90.0	200.0	50%	45.2	2.8	g
TD2F219_30	2:24:47	191	1.87	506	0.05150	0.00510	0.05140	0.00550	0.00712	0.00039	-0.034	45.8	2.5	45.5	2.5	0.3	210.0	180.0	78%	45.5	2.5	g
TD2F219_58	3:01:06	1082	4.40	-887	0.04750	0.00210	0.04720	0.00320	0.00709	0.00036	0.269	45.5	2.3	45.5	2.3	0.0	86.0	86.0	47%	45.5	2.3	g
TD2F219_59	3:02:03	941	1.53	#DIV/0!	0.04660	0.00230	0.04590	0.00330	0.00711	0.00036	0.310	45.7	2.3	45.7	2.3	0.0	55.0	93.0	17%	45.7	2.3	g
TD2F219_37	2:34:21	250	1.61	308	0.04690	0.00360	0.04630	0.00410	0.00712	0.00039	0.010	45.8	2.5	45.7	2.5	0.1	70.0	140.0	35%	45.7	2.5	g
TD2F219_55	2:57:17	686	4.08	2441	0.04700	0.00280	0.04650	0.00360	0.00713	0.00037	0.204	45.8	2.4	45.8	2.4	0.0	60.0	100.0	24%	45.8	2.4	g
TD2F219_12	2:03:46	434	1.61	219	0.04540	0.00330	0.04410	0.00370	0.00713	0.00039	0.190	45.8	2.5	45.9	2.5	-0.1	-20.0	130.0	329%	45.9	2.5	g
TD2F219_25	2:19:03	114	1.51	413	0.05430	0.00870	0.05240	0.00780	0.00722	0.00045	-0.128	46.4	2.9	45.9	2.9	0.5	110.0	240.0	58%	45.9	2.9	g
TD2F219_69	3:14:28	122	1.62	80	0.04970	0.00660	0.04780	0.00660	0.00718	0.00046	0.102	46.3	2.9	46.0	3.0	0.3	140.0	230.0	67%	46.0	3.0	g
TD2F219_3	1:46:27	119	3.59	379	0.05150	0.00640	0.04910	0.00610	0.00721	0.00043	-0.221	46.3	2.7	46.0	2.8	0.3	170.0	220.0	73%	46.0	2.8	g
TD2F219_90	3:42:09	448	1.29	-1586	0.05380	0.00340	0.05400	0.00430	0.00727	0.00038	0.122	46.7	2.4	46.3	2.4	0.4	340.0	130.0	86%	46.3	2.4	g
TD2F219_77	3:26:52	301	1.44	503	0.05130	0.00410	0.05120	0.00460	0.00727	0.00039	0.030	46.7	2.5	46.4	2.5	0.3	170.0	130.0	73%	46.4	2.5	g
TD2F219_32	2:28:37	531	2.44	327	0.05440	0.00380	0.05410	0.00460	0.00737	0.00039	0.078	47.3	2.5	46.9	2.5	0.4	300.0	140.0	84%	46.9	2.5	g
TD2F219_72	3:19:14	252	2.82	-431	0.04960	0.00410	0.04880	0.00460	0.00734	0.00043	0.116	47.1	2.8	47.0	2.8	0.1	150.0	150.0	69%	47.0	2.8	g
TD2F219_54	2:56:20	189	1.43	1027	0.05090	0.00620	0.05010	0.00600	0.00736	0.00041	-0.027	47.3	2.7	47.0	2.6	0.3	70.0	180.0	33%	47.0	2.6	g
TD2F219_48	2:47:44	1049	2.52	-2831	0.04790	0.00240	0.04820	0.00330	0.00735	0.00037	-0.042	47.2	2.4	47.2	2.4	0.1	94.0	94.0	50%	47.2	2.4	g
TD2F219_13	2:04:43	284	1.52	192	0.06070	0.00500	0.06360	0.00620	0.00752	0.00040	0.158	48.3	2.6	47.5	2.5	0.8	550.0	160.0	91%	47.5	2.5	g
TD2F219_56	2:59:11	280	1.81	218	0.04410	0.00350	0.04400	0.00410	0.00739	0.00041	0.098	47.5	2.6	47.6	2.6	-0.1	-60.0	130.0	179%	47.6	2.6	g
TD2F219_42	2:41:02	178	4.16	200	0.07600	0.04100	0.07900	0.04100	0.00772	0.00045	0.094	49.6	2.9	47.8	2.8	-1.8	750.0	220.0	94%	47.8	2.8	207spk:DEL
TD2F219_79	3:28:47	170	2.50	132	0.10900	0.01100	0.12700	0.01600	0.00814	0.00050	0.042	52.2	3.2	48.2	3.0	4.0	1520.0	210.0	97%	48.2	3.0	207spk:DEL
TD2F219_62	3:06:50	552	2.48	958	0.04570	0.00270	0.04810	0.00360	0.00754	0.00040	0.053	48.4	2.6	48.5	2.6	-0.1	50.0	110.0	3%	48.5	2.6	g
TD2F219_35	2:31:29	96	1.04	120	0.04840	0.00750	0.04790	0.00750	0.00761	0.00047	-0.097	48.9	3.0	48.8	3.0	0.1	-50.0	230.0	198%	48.8	3.0	g
TD2F219_66	3:11:36	346	2.41	513	0.04590	0.00360	0.04790	0.00430	0.00760	0.00041	0.017	48.8	2.6	48.9	2.6	-0.1	30.0	140.0	-63%	48.9	2.6	g
TD2F219_29	2:23:50	1731	1.86	-4577	0.04640	0.00140	0.04880	0.00290	0.00761	0.00038	0.419	48.9	2.4	48.9	2.4	0.0	36.0	61.0	-36%	48.9	2.4	g
TD2F219_86	3:38:20	185	1.26	716	0.05350	0.00530	0.05760	0.00590	0.00778	0.00045	-0.045	50.0	2.9	49.6	2.9	0.4	320.0	180.0	85%	49.6	2.9	g
TD2F219_91	3:45:01	710	2.56	-8257	0.04550	0.00230	0.05020	0.00340	0.00794	0.00041	0.023	51.0	2.6	51.1	2.6	-0.1	6.0	92.0	-751%	51.1	2.6	g
TD2F219_38	2:35:19	178	1.41	347	0.04510	0.00470	0.04950	0.00570	0.00796	0.00046	0.013	51.1	2.9	51.2	3.0	-0.1	-10.0	170.0	612%	51.2	3.0	g
TD2F219_24	2:18:06	399	2.86	#DIV/0!	0.04500	0.00270	0.04830	0.00380	0.00800	0.00044	0.108	51.3	2.8	51.5	2.8	-0.2	-20.0	110.0	357%	51.5	2.8	g
TD2F219_41	2:40:05	1526	18.19	-3821	0.04810	0.00160	0.06330	0.00380	0.00964	0.00049	0.287	61.8	3.1	61.8	3.1	0.0	110.0	66.0	44%	61.8	3.1	g
TD2F219_57	3:00:09	1675	4.65	5546	0.04790	0.00160	0.06480	0.00390	0.00979	0.00049	0.253	62.8	3.1	62.8	3.1	0.0	120.0	71.0	48%	62.8	3.1	g
TD2F219_47	2:46:46	40	2.63	44	0.61900	0.06800	2.77000	0.02600	0.03600	0.00340	0.224	224.0	20.0	64.6	47.1	156.4	4430.0	160.0	99%	64.6	47.1	high-207corr:DEL
TD2F219_51	2:53:28	134	11.88	-693	0.05230	0.00570	0.07490	0.00870	0.01059	0.00062	0.000	67.9	3.9	67.5	4.0	0.4	170.0	180.0	60%	67.5	4.0	g
TD2F219_40	2:37:13	840	2.37	2274	0.04530	0.00180	0.07270	0.00450	0.01170	0.00059	0.202	75.0	3.7	75.2	3.8	-0.2	-8.0	75.0	1040%	75.2	3.8	g
TD2F219_33	2:29:34	889	2.36	3147	0.04660	0.00170	0.07580	0.00470	0.01181	0.00059	0.281	75.7	3.8	75.8	3.8	-0.1	45.0	70.0	-68%	75.8	3.8	g
TD2F219_76	3:25:55	254	2.58	-703	0.04450	0.00320	0.07350	0.00650	0.01184	0.00064	0.208	75.8	4.1	76.2	4.1	-0.4	-10.0	130.0	862%	76.2	4.1	g
TD2F219_10	1:59:56	228	13.37	-1389	0.04890	0.00340	0.08150	0.00700	0.01207	0.00063	0.017	77.3	4.0	77.2	4.0	0.1	110.0	130.0	30%	77.2	4.0	g
TD2F219_1	1:44:33	349	3.33	-1588	0.04830	0.00290	0.08660	0.00680	0.01306	0.00070	0.310	83.6	4.4	83.6	4.5	0.0	140.0	120.0	40%	83.6	4.5	g
TD2F219_6	1:50:16	242	2.09	-1353	0.04860	0.00280	0.09170	0.00710	0.01385	0.00072	0.240	88.6	4.6	88.6	4.6	0.0	120.0	110.0	26%	88.6	4.6	g
TD2F219_68	3:13:31	241	3.14	1840	0.04520	0.00310	0.08750	0.00720	0.01382	0.00075	0.088	88.5	4.8	88.8	4.8	-0.3	20.0	120.0	-344%	88.8	4.8	g
TD2F219_71	3:18:17	440	2.53	-3786	0.04800	0.00260	0.09010	0.00640	0.01388	0.00077	0.379	88.9	4.9	88.8	4.9	0.1	102.0	100.0	13%	88.8	4.9	zoned:TRIM
TD2F219_44	2:42:57	173	3.85	514	0.08090	0.00480	0.17420	0.01300	0.01528	0.00084	0.004	97.8	5.1	93.7	5.0	4.4	1210.0	120.0	92%	93.7	5.0	207spk:DEL
TD2F219_46	2:45:49	685	2.63	11385	0.04790	0.00190	0.09770	0.00620	0.01477	0.00074	0.299	94.5	4.7	94.5	4.7	0.0	113.0	81.0	16%	94.5	4.7	g
TD2F219_96	3:50:45	296	3.38	389	0.05280	0.00310	0.10700	0.00820	0.01502	0.00079	0.194	96.1	5.0	95.5	5.0	0.6	280.0	110.0	66%	95.5	5.0	g
TD2F219_2	1:45:30	740	5.59	1908	0.05090	0.00160	0.10780	0.00670	0.01538	0.00078	0.424	98.4	4.9	98.0	5.0	0.4	230.0	70.0	57%	98.0	5.0	g
TD2F219_65	3:09:41	1520	2.82	2242	0.05600	0.00210	0.12600	0.00820	0.01646	0.00083	0.											

TD2F219_53	2:55:22	200	2.18	-4976	0.05140	0.00250	0.19650	0.01300	0.02804	0.00150	0.013	178.3	9.1	177.9	9.4	0.4	227.0	98.0	22%	177.9	9.4	g
TD2F219_34	2:30:32	417	1.75	4719	0.04920	0.00170	0.19220	0.01100	0.02807	0.00140	0.254	178.4	9.0	178.6	8.8	-0.2	145.0	71.0	-23%	178.6	8.8	g
TD2F219_83	3:34:30	556	5.86	5214	0.05810	0.00180	0.22710	0.01400	0.02903	0.00160	0.702	184.4	10.0	182.6	10.0	1.8	529.0	68.0	65%	182.6	10.0	var160-220:KEEP
TD2F219_60	3:03:00	199	2.61	-1974	0.04960	0.00250	0.19730	0.01300	0.02897	0.00150	0.191	184.1	9.3	184.1	9.5	0.0	203.0	98.0	9%	184.1	9.5	g
TD2F219_11	2:02:49	200	1.82	2698	0.05170	0.00270	0.21700	0.01600	0.03025	0.00150	0.022	192.1	9.7	191.7	9.4	0.4	237.0	100.0	19%	191.7	9.4	g
TD2F219_85	3:36:25	347	2.05	1409	0.05110	0.00230	0.21990	0.01400	0.03172	0.00160	-0.121	201.3	10.0	201.1	10.1	0.2	225.0	90.0	11%	201.1	10.1	g
TD2F219_80	3:29:44	502	2.24	7340	0.05120	0.00150	0.22970	0.01400	0.03290	0.00180	0.673	208.6	11.0	208.4	11.3	0.2	239.0	62.0	13%	208.4	11.3	var180-230:KEEP
TD2F219_50	2:49:38	86	4.45	-1342	0.05010	0.00400	0.23700	0.02100	0.03466	0.00190	0.022	220.1	11.0	219.8	12.0	0.3	190.0	150.0	-16%	219.8	12.0	g
TD2F219_97	3:54:42	538	3.84	2419	0.09990	0.00770	0.60209	0.04090	0.03744	0.00440	0.986	236.0	27.0	222.4	26.0	12.6	4436.0	470.0	84%	222.4	26.0	var100-450:DEL
TD2F219_88	3:40:14	528	2.17	21375	0.05710	0.00140	0.59900	0.03500	0.07570	0.00390	0.634	470.2	23.0	470.0	23.7	0.2	486.0	57.0	3%	470.0	23.7	fair
TD2F219_98	3:52:39	73	2.25	12920	0.05770	0.00260	0.63200	0.04300	0.07950	0.00410	0.167	493.0	24.0	492.7	24.9	0.3	491.0	98.0	0%	492.7	24.9	g
TD2F219_95	3:48:50	1057	7.33	56750	0.09073	0.00170	1.21500	0.07200	0.09714	0.00530	0.937	597.0	31.0	575.4	30.6	21.6	1438.0	37.0	60%	575.4	30.6	high-207corr:DEL
TD2F219_17	2:09:39	830	5.26	7620	0.08550	0.00180	1.21700	0.08400	0.10360	0.00650	0.954	634.0	38.0	616.9	37.7	17.1	1326.0	41.0	53%	616.9	37.7	high-207corr:DEL
TD2F219_19	2:11:24	427	3.27	6422	0.09230	0.00290	1.46000	0.13000	0.11270	0.00990	0.974	686.0	52.0	664.1	64.6	20.9	1470.0	42.0	55%	664.1	54.6	high-207corr:DEL
TD2F219_61	3:05:52	784	1.01	16200	0.06285	0.00130	0.97100	0.05200	0.11150	0.00550	0.655	681.4	32.0	680.9	32.6	0.5	709.0	43.0	4%	680.9	32.6	g
TD2F219_22	2:16:44	542	3.73	12285	0.10380	0.00210	1.72000	0.19000	0.11900	0.01200	0.992	714.0	72.0	690.3	67.6	23.7	1694.0	39.0	59%	690.3	67.6	high-207corr:DEL
TD2F219_78	3:27:49	218	3.78	3265	0.09490	0.00210	1.56000	0.13000	0.11820	0.00970	0.960	727.0	57.0	693.4	55.3	33.6	1630.0	42.0	55%	693.4	55.3	high-207corr:DEL
TD2F219_63	3:07:47	852	4.80	6286	0.09630	0.00360	1.72000	0.24000	0.12200	0.01600	0.995	727.0	94.0	713.8	99.0	13.2	1523.0	87.0	53%	713.8	99.0	var80-1300:DEL
TD2F219_75	3:22:06	344	3.64	24111	0.14760	0.00299	2.83300	0.17000	0.13000	0.00770	0.928	838.0	44.0	759.9	40.9	78.1	2318.0	33.0	67%	759.9	40.9	high-207corr:DEL
TD2F219_16	2:08:32	660	3.08	10669	0.08716	0.00160	2.64700	0.15000	0.20200	0.01100	0.876	1286.0	59.0	1281.6	61.5	4.4	1362.0	36.0	6%	1362.0	36.0	76good
TD2F219_36	2:33:24	426	4.75	3262	0.08760	0.00230	3.26790	0.19000	0.26940	0.01400	0.598	1639.0	71.0	1851.6	78.2	-12.6	1372.0	62.0	-13%	1372.0	62.0	rev-disc:DEL
TD2F219_4	1:47:25	509	1.68	6525	0.08846	0.00160	2.87000	0.15000	0.23500	0.01200	0.751	1360.0	61.0	1358.4	66.9	1.6	1394.0	37.0	3%	1394.0	37.0	g
TD2F219_81	3:32:36	208	1.84	6184	0.09200	0.00210	2.58300	0.17000	0.20540	0.01300	0.774	1200.0	70.0	1188.2	72.5	11.8	1463.0	43.0	19%	1463.0	43.0	76g
TD2F219_64	3:08:44	100	0.62	54250	0.09280	0.00220	3.10600	0.17000	0.24370	0.01200	0.551	1405.0	64.0	1400.0	66.6	5.0	1483.0	45.0	6%	1483.0	45.0	g
TD2F219_49	2:48:41	1727	4.06	-245000	0.09313	0.00160	3.27100	0.18000	0.25360	0.01300	0.906	1456.0	65.0	1454.3	72.0	1.7	1491.0	33.0	2%	1491.0	33.0	g
TD2F219_39	2:36:16	117	1.28	2847	0.10030	0.00230	3.66200	0.21000	0.26560	0.01400	0.173	1520.0	70.0	1508.6	77.0	11.4	1622.0	43.0	7%	1622.0	43.0	g
TD2F219_20	2:12:22	243	1.25	26417	0.10480	0.00200	4.16800	0.23000	0.29030	0.01400	0.756	1642.0	72.0	1636.1	76.7	5.9	1709.0	35.0	9%	1709.0	35.0	g
TD2F219_87	3:39:17	810	2.84	99990	0.10470	0.00190	4.06200	0.22000	0.28140	0.01400	0.821	1598.0	71.0	1587.5	76.6	10.5	1709.0	34.0	7%	1709.0	34.0	g
TD2F219_82	3:33:33	748	2.51	21294	0.10616	0.00200	3.25900	0.18000	0.22280	0.01200	0.909	1298.0	62.0	1264.3	65.6	33.7	1734.0	33.0	27%	1734.0	33.0	76g
TD2F219_5	1:48:22	299	2.88	17774	0.10630	0.00210	4.46800	0.24000	0.30360	0.01500	0.580	1711.0	76.0	1706.1	82.2	4.9	1736.0	35.0	2%	1736.0	35.0	g
TD2F219_73	3:20:11	233	4.57	20714	0.10690	0.00230	4.31000	0.25000	0.29290	0.01500	0.093	1655.0	74.0	1646.4	82.0	8.6	1741.0	39.0	5%	1741.0	39.0	g
TD2F219_31	2:27:40	449	3.49	45846	0.10806	0.00200	4.57600	0.25000	0.30540	0.01500	0.796	1717.0	75.0	1712.5	82.1	4.5	1767.0	33.0	3%	1767.0	33.0	g
TD2F219_14	2:05:41	237	1.88	9936	0.10860	0.00210	4.66500	0.25000	0.31240	0.01600	0.633	1752.0	77.0	1749.8	87.6	2.2	1773.0	36.0	1%	1773.0	36.0	g
TD2F219_100	3:54:34	42	1.75	12310	0.10860	0.00280	4.90000	0.29000	0.32780	0.01700	0.593	1826.0	82.0	1834.1	93.5	-8.1	1774.0	47.0	-3%	1774.0	47.0	g
TD2F219_21	2:15:14	315	6.46	7196	0.10920	0.00220	4.19200	0.23000	0.27710	0.01400	0.750	1576.0	70.0	1556.0	76.2	20.0	1785.0	37.0	13%	1785.0	37.0	76g
TD2F219_23	2:17:09	360	2.83	-24195	0.11000	0.00210	4.45300	0.24000	0.29320	0.01500	0.930	1657.0	73.0	1642.3	81.7	14.7	1799.0	34.0	9%	1799.0	34.0	g
TD2F219_74	3:21:09	353	3.03	238500	0.11180	0.00210	4.61500	0.25000	0.29730	0.01500	0.746	1677.0	74.0	1661.2	81.6	15.8	1829.0	35.0	9%	1829.0	35.0	g
TD2F219_18	2:10:27	96	1.66	15457	0.18270	0.00360	12.74000	0.70000	0.50500	0.02500	0.779	2633.0	110.0	2620.2	143.7	12.8	2678.0	32.0	2%	2678.0	32.0	g
TD2F219_92	3:46:58	964	3.12	189222	0.21660	0.00560	11.85000	0.94000	0.39200	0.02400	0.983	2122.0	110.0	1929.8	117.4	192.2	2950.0	41.0	36%	2950.0	41.0	disc:DEL
TD2F220_179	7:42:52	659	1.67	704	0.04780	0.00250	0.04580	0.00330	0.00699	0.00037	0.241	44.9	2.4	44.9	2.4	0.1	99.0	99.0	55%	44.9	2.4	g
TD2F220_10	4:07:56	328	1.30	10210	0.04370	0.00350	0.04240	0.00390	0.00697	0.00038	0.155	44.8	2.4	45.0	2.5	-0.2	-50.0	140.0	190%	45.0	2.5	g
TD2F220_102	6:05:26	472	2.19	2492	0.05480	0.00350	0.05360	0.00430	0.00709	0.00037	-0.073	45.6	2.3	45.1	2.4	0.5	330.0	130.0	86%	45.1	2.4	g
TD2F220_109	6:13:04	136	1.14	-112	0.04750	0.00570	0.04610	0.00570	0.00706	0.00045	-0.043	45.3	2.9	45.3	2.9	0.0	50.0	200.0	9%	45.3	2.9	g
TD2F220_63	5:15:45	64	0.88	2030	0.06100	0.01100	0.06000	0.01100	0.00722	0.00053	-0.049	46.4	3.4	45.6	3.4	0.8	170.0	310.0	73%	45.6	3.4	g
TD2F220_62	5:14:48	373	1.90	493	0.05350	0.00460	0.05320	0.00530	0.00717	0.00038	0.038	46.1	2.4	45.7	2.4	0.4	250.0	150.0	82%	45.7	2.4	g
TD2F220_42	4:49:04	340	1.41	265	0.06710	0.00440	0.06720	0.00540	0.00730	0.00039	0.164	46.9	2.5	45.7	2.4	1.2	810.0	130.0	9			

TD2F220_169	7:30:27	309	1.38	#DIV/0!	0.04970	0.00390	0.05070	0.00440	0.00751	0.00043	0.093	48.3	2.8	48.1	2.8	0.2	220.0	150.0	78%	48.1	2.8	g
TD2F220_155	7:11:20	545	1.87	952	0.04830	0.00330	0.05000	0.00420	0.00751	0.00040	0.097	48.3	2.5	48.2	2.6	0.1	100.0	120.0	52%	48.2	2.6	g
TD2F220_104	6:07:20	165	2.40	-164	0.04510	0.00470	0.04620	0.00520	0.00749	0.00042	0.093	48.1	2.7	48.2	2.7	-0.1	-10.0	160.0	582%	48.2	2.7	g
TD2F220_165	7:25:40	2345	1.92	3762	0.04930	0.00150	0.05130	0.00300	0.00759	0.00038	0.375	48.8	2.4	48.6	2.4	0.2	155.0	65.0	69%	48.6	2.4	g
TD2F220_49	4:56:39	362	1.72	620	0.04870	0.00360	0.05020	0.00440	0.00764	0.00040	0.126	49.1	2.5	49.0	2.6	0.1	190.0	140.0	74%	49.0	2.6	g
TD2F220_87	5:45:22	425	1.67	862	0.04580	0.00250	0.04990	0.00380	0.00765	0.00040	0.108	49.1	2.5	49.2	2.6	-0.1	60.0	110.0	18%	49.2	2.6	g
TD2F220_152	7:08:27	387	1.41	-1894	0.04880	0.00370	0.05060	0.00450	0.00770	0.00041	0.109	49.4	2.6	49.3	2.6	0.1	130.0	140.0	62%	49.3	2.6	g
TD2F220_194	8:01:58	262	1.45	683	0.04840	0.00370	0.05360	0.00470	0.00770	0.00042	0.066	49.5	2.7	49.4	2.7	0.1	220.0	140.0	78%	49.4	2.7	g
TD2F220_89	5:47:17	152	1.51	750	0.05150	0.00470	0.05360	0.00540	0.00779	0.00046	0.055	50.0	2.9	49.7	2.9	0.3	220.0	160.0	77%	49.7	2.9	g
TD2F220_19	4:19:24	385	1.99	346	0.05750	0.00430	0.06210	0.00550	0.00787	0.00042	0.313	50.5	2.7	49.9	2.7	0.6	460.0	150.0	89%	49.9	2.7	g
TD2F220_175	7:38:05	106	1.96	1203	0.05400	0.00750	0.05620	0.00740	0.00784	0.00049	-0.049	50.3	3.1	49.9	3.1	0.4	220.0	230.0	77%	49.9	3.1	g
TD2F220_193	8:01:01	180	3.94	218	0.04790	0.00480	0.05030	0.00560	0.00781	0.00045	0.069	50.1	2.9	50.1	2.9	0.0	40.0	170.0	-25%	50.1	2.9	g
TD2F220_122	6:30:15	332	1.07	233	0.04630	0.00350	0.05030	0.00450	0.00787	0.00042	-0.032	50.5	2.7	50.6	2.7	-0.1	20.0	130.0	-153%	50.6	2.7	g
TD2F220_174	7:37:08	110	1.51	145	0.05290	0.00620	0.05890	0.00720	0.00795	0.00048	0.064	51.1	3.1	50.7	3.1	0.4	290.0	210.0	83%	50.7	3.1	g
TD2F220_8	4:06:01	235	1.24	-4075	0.05420	0.00510	0.05880	0.00590	0.00801	0.00047	-0.036	51.4	3.0	51.0	3.0	0.4	320.0	180.0	84%	51.0	3.0	g
TD2F220_84	5:41:33	171	0.96	208	0.05670	0.00520	0.06360	0.00660	0.00817	0.00047	0.088	52.4	3.0	51.8	3.0	0.6	360.0	170.0	86%	51.8	3.0	g
TD2F220_20	4:20:22	252	2.14	-753	0.04780	0.00400	0.05290	0.00500	0.00808	0.00045	0.277	51.9	2.9	51.8	2.9	0.1	150.0	150.0	65%	51.8	2.9	g
TD2F220_35	4:39:27	389	1.37	-260	0.04830	0.00520	0.05230	0.00630	0.00813	0.00046	0.170	52.2	2.9	52.1	3.0	0.1	100.0	200.0	48%	52.1	3.0	207spk:TRIM
TD2F220_147	7:00:49	100	3.64	115	0.04700	0.00630	0.05080	0.00670	0.00820	0.00050	-0.158	52.6	3.2	52.6	3.2	0.0	10.0	220.0	-426%	52.6	3.2	g
TD2F220_184	7:49:34	747	4.86	#DIV/0!	0.04780	0.00210	0.06050	0.00410	0.00930	0.00047	0.241	59.6	3.0	59.6	3.0	0.0	112.0	88.0	47%	59.6	3.0	g
TD2F220_100	6:00:40	1713	93.45	7350	0.04780	0.00160	0.06410	0.00380	0.00985	0.00050	0.382	63.2	3.2	63.1	3.2	0.1	92.0	66.0	31%	63.1	3.2	g
TD2F220_116	6:22:37	1022	3.74	46160	0.04540	0.00180	0.06380	0.00400	0.01010	0.00051	0.092	64.8	3.3	64.9	3.3	-0.1	-2.0	76.0	3347%	64.9	3.3	g
TD2F220_101	6:04:29	877	16.46	#DIV/0!	0.04700	0.00200	0.06630	0.00440	0.01018	0.00052	0.125	65.3	3.3	65.3	3.3	0.0	90.0	87.0	27%	65.3	3.3	g
TD2F220_26	4:28:58	49	74.59	154	0.06700	0.01100	0.09400	0.01500	0.01059	0.00075	-0.027	67.9	4.8	66.2	4.8	-1.7	610.0	300.0	89%	66.2	4.8	high-207corr:DEL
TD2F220_59	5:10:02	1025	3.19	-2405	0.04620	0.00250	0.06800	0.00510	0.01061	0.00055	0.263	68.0	3.5	68.1	3.5	-0.1	31.0	100.0	-120%	68.1	3.5	zoned:TRIM
TD2F220_114	6:19:45	1181	6.37	-7814	0.04770	0.00280	0.07220	0.00510	0.01111	0.00058	-0.135	71.2	3.7	71.2	3.7	0.0	90.0	120.0	21%	71.2	3.7	zoned:TRIM
TD2F220_195	8:02:55	62	1.26	71	0.05030	0.00800	0.07600	0.01200	0.01156	0.00073	0.170	74.1	4.6	73.8	4.7	0.3	110.0	260.0	33%	73.8	4.7	g
TD2F220_95	5:54:56	290	1.60	83	0.22800	0.02400	0.52200	0.07300	0.01495	0.00097	0.109	96.6	6.4	74.0	5.6	21.6	2570.0	270.0	97%	74.0	5.6	207spk:DEL
TD2F220_186	7:52:25	177	3.03	783	0.05250	0.00490	0.08230	0.00840	0.01165	0.00067	0.066	74.7	4.3	74.2	4.3	0.5	210.0	160.0	65%	74.2	4.3	fair
TD2F220_107	6:11:40	35	0.70	58	0.37200	0.02500	0.97700	0.07800	0.01957	0.00049	0.319	124.9	8.0	74.3	6.3	50.6	3778.0	99.0	98%	74.3	6.3	high-207corr:DEL
TD2F220_142	6:55:05	104	1.48	-669	0.04440	0.00440	0.07080	0.00790	0.01160	0.00066	0.124	74.4	4.2	74.6	4.2	-0.2	-50.0	160.0	249%	74.6	4.2	g
TD2F220_185	7:50:30	185	2.51	343	0.04480	0.00380	0.07160	0.00690	0.01169	0.00062	-0.038	74.9	3.9	75.2	4.0	-0.3	0.0	150.0	#DIV/0!	75.2	4.0	g
TD2F220_46	4:53:47	243	2.10	-387	0.05040	0.00380	0.08510	0.00790	0.01219	0.00066	0.014	78.1	4.2	77.8	4.2	0.3	170.0	140.0	54%	77.8	4.2	g
TD2F220_103	6:06:23	957	5.77	-17270	0.04750	0.00180	0.07990	0.00500	0.01223	0.00063	0.244	78.4	4.0	78.4	4.0	0.0	84.0	75.0	7%	78.4	4.0	g
TD2F220_153	7:09:25	100	1.19	-553	0.05260	0.00490	0.09010	0.00930	0.01239	0.00074	0.166	79.4	4.7	78.9	4.7	0.5	330.0	170.0	76%	78.9	4.7	g
TD2F220_80	5:35:49	1457	4.43	1594	0.04930	0.00140	0.08580	0.00500	0.01260	0.00063	0.407	80.7	4.0	80.5	4.0	0.2	156.0	62.0	48%	80.5	4.0	g
TD2F220_134	6:44:34	225	1.38	-1877	0.05250	0.00420	0.09320	0.00890	0.01276	0.00068	0.239	81.7	4.3	81.2	4.3	0.5	300.0	150.0	73%	81.2	4.3	g
TD2F220_143	6:56:02	204	1.76	327	0.04760	0.00410	0.08210	0.00770	0.01272	0.00067	0.079	81.5	4.2	81.5	4.3	0.0	50.0	140.0	-63%	81.5	4.3	g
TD2F220_47	4:54:45	38	1.47	78	0.05300	0.01000	0.09000	0.01800	0.01285	0.00085	0.009	82.3	5.4	81.8	5.5	0.5	100.0	320.0	18%	81.8	5.5	g
TD2F220_127	6:36:59	174	1.93	177	0.16900	0.01300	0.33100	0.03400	0.01606	0.00081	0.454	96.3	6.1	82.9	4.7	13.4	2380.0	160.0	97%	82.9	4.7	207spk:DEL
TD2F220_74	5:29:08	1157	10.62	3214	0.04870	0.00160	0.08730	0.00510	0.01304	0.00065	0.120	83.5	4.2	83.4	4.1	0.1	152.0	69.0	45%	83.4	4.1	g
TD2F220_126	6:35:02	573	2.27	3350	0.04740	0.00180	0.08670	0.00550	0.01303	0.00067	0.334	83.4	4.3	83.5	4.3	-0.1	89.0	75.0	6%	83.5	4.3	g
TD2F220_161	7:19:56	75	2.04	107	0.04520	0.00500	0.08210	0.00990	0.01311	0.00079	0.108	84.0	5.0	84.2	5.1	-0.2	10.0	180.0	-742%	84.2	5.1	g
TD2F220_7	4:05:04	42	1.77	-413	0.04750	0.00830	0.08300	0.01500	0.01319	0.00095	0.082	84.9	6.1	84.5	6.1	0.4	-60.0	270.0	241%	84.5	6.1	g
TD2F220_133	6:43:37	39	2.09	-2380	0.05540	0.00820	0.10700	0.01600	0.01352	0.00095	-0.041	86.5	6.0	85.7	6.1	0.8	380.0	260.0	77%	85.7	6.1	g
TD2F220_131	6:41:43	183	2.32	371	0.04650	0.00320	0.08780	0.00720	0.01338	0.00072	0.060	85.7	4.6	85.8	4.6	-0.1	60.0	130.0	-43%	85.8	4.6	g
TD2F220_97	5:57:47	115	2.37	353	0.05050	0.00490	0.09730	0.01000	0.01368	0.00077	0.049	87.6	4.9	87.3	4.9	0.3	190.0	170.0	54%	87.3	4.9	g
TD2F220_57	5:08:07	273	1.28	509	0.04880	0.00310	0.09290	0.00720	0.0													

TD2F220_168	7:29:30	847	1.66	3387	0.04970	0.00170	0.10360	0.00610	0.01521	0.00078	0.153	97.3	4.9	97.1	5.0	0.2	173.0	71.0	44%	97.1	5.0	g
TD2F220_187	7:53:22	331	2.49	1679	0.04990	0.00250	0.10390	0.00720	0.01523	0.00079	0.128	97.4	5.0	97.2	5.0	0.2	185.0	100.0	47%	97.2	5.0	g
TD2F220_125	6:33:07	1091	5.15	4329	0.04770	0.00130	0.09970	0.00580	0.01520	0.00077	0.543	97.2	4.9	97.3	4.9	-0.1	92.0	58.0	-6%	97.3	4.9	g
TD2F220_9	4:06:58	351	1.81	2556	0.04820	0.00260	0.10380	0.00790	0.01543	0.00081	0.244	98.7	5.2	98.7	5.2	0.0	141.0	100.0	30%	98.7	5.2	g
TD2F220_183	7:48:36	360	2.65	1110	0.04900	0.00260	0.10610	0.00760	0.01545	0.00080	0.091	98.8	5.1	98.7	5.1	0.1	160.0	110.0	38%	98.7	5.1	zoned:TRIM
TD2F220_85	5:42:31	268	1.85	796	0.04890	0.00300	0.10390	0.00790	0.01547	0.00081	-0.053	99.0	5.1	98.9	5.2	0.1	140.0	110.0	29%	98.9	5.2	g
TD2F220_66	5:19:35	77	1.66	110	0.05390	0.00690	0.11700	0.01800	0.01561	0.00100	0.205	99.8	6.5	99.1	6.4	0.7	180.0	200.0	45%	99.1	6.4	fair
TD2F220_182	7:47:39	61	23.80	#DIV/0!	0.05360	0.00540	0.11600	0.01300	0.01568	0.00099	0.208	100.3	6.3	99.6	6.3	0.7	290.0	190.0	66%	99.6	6.3	g
TD2F220_79	5:34:52	519	2.07	497	0.04880	0.00240	0.10580	0.00750	0.01564	0.00080	0.217	100.0	5.1	99.9	5.1	0.1	147.0	95.0	32%	99.9	5.1	zoned:TRIM
TD2F220_23	4:25:08	424	2.37	780	0.05010	0.00230	0.10890	0.00760	0.01568	0.00080	0.248	100.3	5.1	100.0	5.1	0.3	224.0	99.0	55%	100.0	5.1	207spk:TRIM
TD2F220_124	6:32:10	266	1.64	-765	0.04690	0.00300	0.10000	0.00790	0.01564	0.00081	0.043	100.1	5.1	100.2	5.2	-0.1	60.0	120.0	-67%	100.2	5.2	g
TD2F220_181	7:46:41	91	37.36	179	0.04730	0.00440	0.10070	0.01000	0.01568	0.00090	0.174	100.3	5.7	100.4	5.8	-0.1	50.0	160.0	-101%	100.4	5.8	g
TD2F220_41	4:48:03	264	2.44	4640	0.04760	0.00340	0.10340	0.00850	0.01593	0.00082	-0.056	101.9	5.2	101.9	5.2	0.0	60.0	120.0	-70%	101.9	5.2	g
TD2F220_2	3:59:20	70	1.90	-1253	0.04630	0.00580	0.10200	0.01300	0.01612	0.00095	-0.090	103.0	6.0	103.3	6.1	-0.3	80.0	210.0	-29%	103.3	6.1	g
TD2F220_137	6:48:24	99	2.58	-7180	0.05050	0.00430	0.11340	0.01100	0.01650	0.00092	0.992	105.5	5.8	105.2	5.9	0.3	150.0	150.0	30%	105.2	5.9	g
TD2F220_55	6:06:45	448	2.37	673	0.06690	0.00560	0.16900	0.01600	0.01743	0.00094	0.150	111.4	6.0	108.9	6.9	2.6	690.0	180.0	84%	108.9	5.9	high:207corr:DEL
TD2F220_151	7:07:30	170	1.81	2175	0.04580	0.00320	0.10810	0.00940	0.01705	0.00090	0.212	109.2	5.6	109.3	5.8	-0.1	0.0	120.0	#DIV/0!	109.3	5.8	g
TD2F220_172	7:35:14	136	3.69	714	0.04960	0.00370	0.12230	0.01000	0.01758	0.00095	-0.094	112.6	5.9	112.2	6.0	0.4	200.0	140.0	44%	112.2	6.0	g
TD2F220_27	4:29:55	75	2.35	-488	0.04270	0.00470	0.10700	0.01300	0.01773	0.00100	0.163	113.3	6.6	114.1	6.4	-0.8	-50.0	170.0	328%	114.1	6.4	g
TD2F220_96	5:56:50	110	1.70	2893	0.04670	0.00420	0.11680	0.01100	0.01782	0.00096	-0.103	113.9	6.1	114.1	6.1	-0.2	80.0	160.0	-43%	114.1	6.1	g
TD2F220_77	5:32:57	191	2.31	749	0.04880	0.00310	0.12070	0.00940	0.01812	0.00097	0.196	115.8	6.2	115.7	6.2	0.1	160.0	120.0	28%	115.7	6.2	g
TD2F220_16	4:16:32	47	0.02	-403	0.08400	0.01500	0.23000	0.04400	0.02029	0.00150	0.020	128.8	9.3	123.2	9.4	5.6	680.0	350.0	82%	123.2	9.4	U/Th v low:DEL
TD2F220_72	5:27:13	82	2.44	-1228	0.05270	0.00480	0.15000	0.01600	0.02053	0.00110	-0.105	131.0	7.2	130.3	7.0	0.7	210.0	150.0	38%	130.3	7.0	g
TD2F220_110	6:14:01	248	1.98	-3374	0.04820	0.00260	0.14140	0.00970	0.02135	0.00110	-0.085	136.2	7.0	136.3	7.0	-0.1	106.0	100.0	-29%	136.3	7.0	g
TD2F220_158	7:15:09	247	2.29	-5775	0.04870	0.00250	0.14280	0.01000	0.02151	0.00110	0.214	137.2	7.2	137.2	7.0	0.0	147.0	100.0	7%	137.2	7.0	g
TD2F220_145	6:57:57	86	2.87	835	0.05150	0.00480	0.15500	0.01600	0.02183	0.00120	0.090	139.2	7.7	138.7	7.6	0.5	220.0	180.0	37%	138.7	7.6	g
TD2F220_149	7:02:44	679	6.28	1156	0.05430	0.00250	0.16830	0.01100	0.02259	0.00120	0.184	144.0	7.6	143.0	7.6	1.0	376.0	100.0	62%	143.0	7.6	zoned:TRIM
TD2F220_173	7:36:11	141	3.04	-575	0.04890	0.00310	0.15100	0.01200	0.02273	0.00120	0.209	144.9	7.5	144.9	7.6	0.0	160.0	120.0	9%	144.9	7.6	g
TD2F220_14	4:13:40	175	2.36	-1103	0.04550	0.00310	0.14580	0.01100	0.02304	0.00120	0.001	146.8	7.7	147.5	7.6	-0.7	20.0	120.0	-637%	147.5	7.6	g
TD2F220_154	7:10:22	317	1.80	-834	0.04930	0.00200	0.15860	0.01000	0.02329	0.00120	0.053	148.4	7.6	148.4	7.6	0.0	163.0	84.0	9%	148.4	7.6	g
TD2F220_188	7:54:19	189	2.55	359	0.07590	0.00460	0.26800	0.02100	0.02599	0.00130	0.237	163.2	8.4	157.5	8.9	5.7	980.0	130.0	84%	157.5	8.9	high:207corr:DEL
TD2F220_60	5:10:59	397	1.42	1187	0.05530	0.00220	0.19890	0.01300	0.02608	0.00130	0.365	166.0	8.2	164.7	8.2	1.3	396.0	86.0	58%	164.7	8.2	g
TD2F220_170	7:31:25	225	1.86	788	0.04910	0.00260	0.17290	0.01200	0.02604	0.00140	0.133	165.7	8.5	165.8	8.9	-0.1	170.0	100.0	2%	165.8	8.9	g
TD2F220_196	8:04:50	704	1.33	-6933	0.06320	0.00160	0.19890	0.04200	0.02664	0.00140	0.654	169.3	8.7	168.5	8.8	0.8	332.0	66.0	49%	168.5	8.8	erratic:DEL
TD2F220_86	5:44:25	71	4.22	575	0.04970	0.00380	0.18900	0.01700	0.02695	0.00150	0.050	171.4	9.6	171.4	9.5	0.0	170.0	140.0	-1%	171.4	9.5	fair
TD2F220_128	6:36:56	581	3.05	4216	0.05120	0.00180	0.19420	0.01200	0.02775	0.00140	0.316	175.5	8.7	176.1	8.8	0.4	242.0	74.0	27%	176.1	8.8	g
TD2F220_64	5:16:43	963	1.53	-13456	0.04910	0.00130	0.19160	0.01100	0.02822	0.00140	0.400	179.4	8.8	179.5	8.8	-0.1	151.0	56.0	-19%	179.5	8.8	g
TD2F220_192	8:00:03	320	3.24	-20170	0.04970	0.00210	0.19480	0.01300	0.02874	0.00140	0.084	182.7	9.1	182.7	8.8	0.0	166.0	83.0	-10%	182.7	8.8	g
TD2F220_190	7:56:14	532	3.91	5185	0.05030	0.00160	0.20480	0.01200	0.02942	0.00150	0.363	186.9	9.3	186.8	9.4	0.1	205.0	68.0	9%	186.8	9.4	g
TD2F220_4	3:58:23	924	6.23	-3730	0.06270	0.00160	0.22600	0.02300	0.03060	0.00270	0.969	194.0	17.0	193.6	16.9	0.4	300.0	62.0	35%	193.6	16.9	var100-350:DEL
TD2F220_70	5:23:24	142	2.77	-846	0.04720	0.00250	0.20200	0.01500	0.03064	0.00160	0.285	194.5	9.9	195.2	10.1	-0.7	120.0	110.0	-63%	195.2	10.1	g
TD2F220_167	7:28:32	138	3.00	-785	0.04710	0.00280	0.20100	0.01500	0.03077	0.00160	0.169	195.4	10.0	196.1	10.1	-0.7	80.0	110.0	-145%	196.1	10.1	g
TD2F220_144	6:57:00	65	6.58	-1112	0.05000	0.00400	0.23700	0.02100	0.03458	0.00190	0.071	219.1	12.0	219.3	12.0	-0.2	160.0	150.0	-37%	219.3	12.0	g
TD2F220_136	6:47:27	688	4.03	1750	0.144360	0.00840	0.07000	0.07000	0.04060	0.00600	0.992	267.0	39.0	227.4	33.3	39.6	2280.0	400.0	90%	227.4	33.3	76var500-2500:DEL
TD2F220_12	4:11:46	405	5.13	2932	0.08700	0.00320	0.71000	0.01000	0.05830	0.00770	0.985	361.0	46.0	350.5	45.5	10.5	1366.0	69.0	74%	350.5	45.5	76var700-1500:DEL
TD2F220_93	5:53:04	867	7.94	2879	0.09270	0.00250	0.96000	0.01100	0.07300	0.00760	0.988	454.0	45.0	434.4	44.3	16.9	1482.0	52.0	71%	434.4	44.3	76var900-1600:DEL
TD2F220_156	7:13:14	495	4.21	5390	0.09590	0.00230	1.03200	0.09500	0.07750	0.00630	0.984	479.0	38.0	458.4								

TD2F220_43	4:49:58	136	2.27	#DIV/0!	0.08840	0.00190	2.82400	0.16000	0.23150	0.01100	0.526	1342.0	60.0	1339.0	61.4	3.0	1386.0	41.0	3%	1386.0	41.0	g
TD2F220_24	4:26:05	130	1.94	4175	0.08900	0.00190	2.99800	0.17000	0.24350	0.01200	0.758	1404.0	64.0	1404.9	66.9	-0.9	1404.0	42.0	0%	1404.0	42.0	g
TD2F220_200	8:08:39	142	1.98	5556	0.08910	0.00210	3.00600	0.17000	0.24290	0.01200	0.650	1401.0	64.0	1401.4	66.9	-0.4	1412.0	44.0	1%	1412.0	44.0	g
TD2F220_48	4:55:42	91	1.85	7608	0.08910	0.00200	3.02900	0.17000	0.24710	0.01300	0.543	1422.0	65.0	1424.8	72.4	-2.8	1418.0	46.0	0%	1418.0	46.0	g
TD2F220_120	6:26:26	266	3.29	16619	0.08946	0.00180	2.78000	0.15000	0.22490	0.01100	0.725	1307.0	59.0	1300.6	61.3	6.4	1418.0	37.0	8%	1418.0	37.0	g
TD2F220_123	6:31:13	212	1.24	6877	0.09060	0.00200	2.74200	0.15000	0.21950	0.01100	0.598	1283.0	59.0	1268.8	61.3	14.2	1431.0	43.0	11%	1431.0	43.0	g
TD2F220_157	7:14:12	1550	3.06	29821	0.09156	0.00170	3.06100	0.16000	0.24380	0.01200	0.181	1406.0	63.0	1402.5	66.7	3.5	1456.0	35.0	4%	1456.0	35.0	g
TD2F220_178	7:41:55	223	1.24	15769	0.09290	0.00190	3.22300	0.18000	0.25210	0.01300	0.742	1448.0	66.0	1446.4	72.1	1.6	1482.0	38.0	2%	1482.0	38.0	g
TD2F220_94	5:53:58	484	2.96	41462	0.09522	0.00180	3.24500	0.18000	0.24940	0.01200	0.812	1435.0	64.0	1427.7	66.4	7.3	1534.0	36.0	7%	1534.0	36.0	g
TD2F220_50	4:57:37	205	4.95	53650	0.09650	0.00210	3.10300	0.18000	0.23240	0.01200	0.791	1351.0	63.0	1331.7	66.3	19.3	1555.0	41.0	14%	1555.0	41.0	76fair
TD2F220_112	6:17:50	712	34.65	155800	0.09690	0.00180	3.27400	0.18000	0.24530	0.01200	0.834	1413.0	63.0	1402.3	66.2	10.7	1565.0	34.0	10%	1565.0	34.0	g
TD2F220_17	4:17:30	86	1.01	7387	0.09720	0.00240	3.87900	0.22000	0.29090	0.01500	0.641	1645.0	73.0	1653.4	83.0	-8.4	1573.0	45.0	-5%	1573.0	45.0	g
TD2F220_130	6:38:51	109	1.42	-13580	0.09850	0.00220	3.78600	0.21000	0.27680	0.01400	0.666	1574.0	70.0	1573.3	77.2	0.7	1592.0	41.0	1%	1592.0	41.0	g
TD2F220_162	7:20:53	252	1.09	39388	0.09920	0.00200	3.86600	0.21000	0.28100	0.01400	0.733	1598.0	69.0	1595.2	77.1	2.8	1612.0	37.0	1%	1612.0	37.0	g
TD2F220_22	4:24:11	302	1.91	16945	0.09969	0.00190	3.81700	0.21000	0.27860	0.01400	0.764	1584.0	70.0	1581.1	77.1	2.9	1616.0	35.0	2%	1616.0	35.0	g
TD2F220_58	5:09:04	206	0.65	14918	0.09980	0.00200	3.86100	0.21000	0.27880	0.01400	0.449	1584.0	71.0	1582.0	77.1	2.0	1618.0	39.0	2%	1618.0	39.0	g
TD2F220_139	6:50:18	76	1.77	6638	0.10000	0.00250	3.48200	0.20000	0.25190	0.01300	0.524	1448.0	66.0	1433.7	71.5	14.3	1626.0	46.0	12%	1626.0	46.0	g
TD2F220_39	4:44:14	119	0.62	-6514	0.10050	0.00220	3.82000	0.21000	0.27370	0.01400	0.468	1559.0	69.0	1552.7	77.0	6.3	1630.0	40.0	5%	1630.0	40.0	g
TD2F220_71	5:26:16	522	5.04	48636	0.10110	0.00220	3.40000	0.26000	0.24200	0.01600	0.988	1389.0	87.0	1377.5	87.9	11.5	1634.0	44.0	16%	1634.0	44.0	76var 1400-1700
TD2F220_180	7:43:49	122	1.99	-15956	0.10030	0.00210	3.65400	0.20000	0.26260	0.01300	0.773	1502.0	68.0	1492.1	71.5	9.9	1635.0	38.0	9%	1635.0	38.0	g
TD2F220_115	6:20:42	188	1.37	6700	0.10050	0.00210	3.82400	0.21000	0.27430	0.01400	0.722	1564.0	69.0	1556.0	77.0	8.0	1637.0	37.0	5%	1637.0	37.0	g
TD2F220_38	4:43:17	156	0.93	10956	0.10090	0.00220	3.96400	0.22000	0.28440	0.01400	0.544	1613.0	72.0	1610.8	77.0	2.2	1638.0	41.0	2%	1638.0	41.0	g
TD2F220_31	4:35:38	182	0.90	#DIV/0!	0.10120	0.00200	4.10600	0.22000	0.29370	0.01500	0.688	1659.0	73.0	1661.4	82.6	-2.4	1646.0	38.0	-1%	1646.0	38.0	g
TD2F220_25	4:27:03	150	2.19	-32717	0.10160	0.00210	4.13900	0.22000	0.29340	0.01500	0.628	1660.0	74.0	1659.0	82.5	1.0	1657.0	39.0	0%	1657.0	39.0	g
TD2F220_177	7:40:57	505	2.21	8800	0.10214	0.00190	3.89900	0.21000	0.27690	0.01400	0.836	1575.0	70.0	1567.4	76.8	7.6	1663.0	33.0	6%	1663.0	33.0	g
TD2F220_44	4:50:55	180	1.54	7587	0.10250	0.00200	3.92200	0.22000	0.28030	0.01400	0.766	1592.0	71.0	1585.4	76.8	6.6	1671.0	38.0	9%	1671.0	38.0	g
TD2F220_54	5:04:18	1023	13.74	53458	0.104450	0.00240	3.622000	0.28000	0.24700	0.01800	0.995	1427.0	93.0	1399.5	98.4	27.5	1677.0	63.0	47%	1677.0	63.0	var100-1750:DEL
TD2F220_105	6:08:18	460	1.79	-72500	0.10325	0.00190	3.95100	0.21000	0.27870	0.01400	0.829	1584.0	70.0	1575.3	76.7	8.7	1685.0	34.0	7%	1685.0	34.0	g
TD2F220_11	4:10:48	507	3.41	-119250	0.10344	0.00190	3.31000	0.23000	0.23250	0.01500	0.959	1347.0	78.0	1321.6	82.2	25.4	1689.0	33.0	22%	1689.0	33.0	76good
TD2F220_129	6:37:54	786	2.04	70000	0.10352	0.001900	2.57500	0.165000	0.181100	0.01000	0.960	1072.0	54.0	1038.0	55.3	34.0	1690.0	35.0	39%	1690.0	35.0	disc:DEL
TD2F220_37	4:42:19	208	2.96	16556	0.10370	0.00200	4.09000	0.22000	0.28470	0.01400	0.743	1614.0	72.0	1607.4	76.8	6.6	1691.0	36.0	5%	1691.0	36.0	g
TD2F220_52	5:02:23	604	3.64	9443	0.10462	0.00190	3.15700	0.19000	0.21910	0.01200	0.955	1275.0	64.0	1246.3	65.8	28.7	1706.0	34.0	27%	1706.0	34.0	76good
TD2F220_6	4:04:07	796	3.78	118000	0.10486	0.00190	2.92400	0.16000	0.20410	0.01000	0.876	1197.0	55.0	1163.4	55.0	33.6	1712.0	33.0	32%	1712.0	33.0	disc:DEL
TD2F220_82	5:39:39	294	5.26	-20850	0.10540	0.00200	4.59800	0.25000	0.31910	0.01600	0.751	1789.0	80.0	1792.9	88.1	-3.9	1720.0	35.0	-4%	1720.0	35.0	g
TD2F220_78	5:33:55	208	3.39	-6710	0.10570	0.00220	4.25100	0.23000	0.28970	0.01400	0.669	1642.0	70.0	1631.1	76.6	10.9	1722.0	38.0	5%	1722.0	38.0	g
TD2F220_56	5:07:10	295	2.16	-62417	0.10550	0.00200	4.15300	0.22000	0.28590	0.01400	0.654	1620.0	71.0	1610.7	76.6	9.3	1723.0	35.0	7%	1723.0	35.0	g
TD2F220_98	5:58:45	175	3.75	18123	0.10670	0.00230	4.46400	0.25000	0.30400	0.01500	0.617	1710.0	75.0	1707.5	82.2	2.5	1745.0	37.0	2%	1745.0	37.0	g
TD2F220_5	4:02:12	382	2.48	37846	0.10760	0.00210	4.36000	0.24000	0.29220	0.01500	0.744	1654.0	74.0	1641.3	81.9	12.7	1757.0	35.0	7%	1757.0	35.0	g
TD2F220_88	5:46:20	618	2.83	-54067	0.10773	0.00200	4.40600	0.24000	0.29700	0.01500	0.815	1676.0	73.0	1667.3	82.0	8.7	1761.0	34.0	5%	1761.0	34.0	g
TD2F220_33	4:37:33	276	2.78	18440	0.10840	0.00210	4.48500	0.24000	0.30110	0.01500	0.749	1696.0	74.0	1688.4	82.0	7.6	1770.0	35.0	5%	1770.0	35.0	g
TD2F220_118	6:24:32	92	1.08	-7575	0.10810	0.00250	4.42200	0.25000	0.29410	0.01500	0.628	1661.0	74.0	1650.7	81.9	10.3	1770.0	43.0	7%	1770.0	43.0	g
TD2F220_150	7:03:41	714	6.36	-69071	0.10841	0.00190	4.57300	0.25000	0.30650	0.01500	0.842	1723.0	75.0	1717.9	82.0	5.1	1775.0	33.0	3%	1775.0	33.0	g
TD2F220_13	4:12:43	316	3.86	7063	0.10871	0.00200	4.81400	0.26000	0.32060	0.01600	0.807	1792.0	78.0	1794.4	87.8	-2.4	1780.0	34.0	-1%	1780.0	34.0	g
TD2F220_45	4:51:53	165	2.08	30343	0.10950	0.00220	4.27700	0.24000	0.28370	0.01500	0.535	1612.0	72.0	1591.4	81.7	20.6	1787.0	37.0	11%	1787.0	37.0	76good
TD2F220_140	6:51:16	325	3.09	15379	0.10990	0.00220	4.67700	0.25000	0.30880	0.01500	0.701	1734.0	75.0	1727.6	81.9	6.4	1795.0	36.0	4%	1795.0	36.0	g
TD2F220_141	6:54:08	326	2.17	-37800	0.11000	0.00210	4.36700	0.24000	0.28810													

Z_Temora2_12	22:00:00	465	2.10	8165	0.05540	0.00140	0.51200	0.02900	0.06739	0.00340	0.480	420.3	20.0	420.3	20.8	0.0	415.0	57.0	-1%	420.3	20.8	g
Z_Temora2_13	22:05:44	352	2.14	-2869	0.05540	0.00160	0.51300	0.02900	0.06629	0.00330	0.163	413.7	20.0	413.6	20.2	0.1	433.0	67.0	4%	413.6	20.2	g
Z_Temora2_14	22:12:25	612	3.77	9279	0.05427	0.00130	0.49960	0.02800	0.06672	0.00330	0.503	416.3	20.0	416.8	20.2	-0.5	391.0	54.0	-7%	416.8	20.2	g
Z_Temora2_15	22:18:09	280	3.36	1652	0.05580	0.00150	0.50700	0.02900	0.06650	0.00340	0.429	414.9	20.0	414.7	20.8	0.2	435.0	63.0	5%	414.7	20.8	g
Z_Temora2_16	22:24:50	145	3.12	956	0.05730	0.00210	0.50600	0.03200	0.06470	0.00330	0.229	404.0	20.0	402.9	20.2	1.1	483.0	82.0	17%	402.9	20.2	g
Z_Temora2_17	22:30:34	91	3.04	783	0.05460	0.00250	0.48100	0.03200	0.06430	0.00330	0.272	401.8	20.0	401.8	20.3	0.0	381.0	99.0	-5%	401.8	20.3	g
Z_Temora2_18	22:38:12	423	3.97	2223	0.05550	0.00150	0.49500	0.02800	0.06552	0.00330	0.318	409.1	20.0	408.8	20.2	0.3	426.0	60.0	4%	408.8	20.2	g
Z_Temora2_19	22:43:56	187	2.78	2288	0.05490	0.00170	0.50500	0.03100	0.06580	0.00330	0.449	410.5	20.0	410.8	20.2	-0.3	398.0	69.0	-3%	410.8	20.2	g
Z_Temora2_20	22:50:38	302	3.84	-86500	0.05570	0.00170	0.48400	0.02800	0.06414	0.00320	0.366	400.7	19.0	400.3	19.6	0.4	425.0	67.0	6%	400.3	19.6	g
Z_Temora2_21	22:56:23	179	2.04	5156	0.05820	0.00200	0.52000	0.03100	0.06490	0.00330	0.376	405.3	20.0	403.7	20.2	1.6	503.0	74.0	20%	403.7	20.2	g
Z_Temora2_22	23:03:04	153	2.10	-1751	0.05410	0.00210	0.49000	0.03100	0.06690	0.00350	0.177	417.1	21.0	418.0	21.5	-0.9	350.0	83.0	-19%	418.0	21.5	g
Z_Temora2_23	23:08:47	197	1.71	-7253	0.05450	0.00190	0.49300	0.03000	0.06660	0.00340	-0.113	415.6	21.0	415.9	20.8	-0.3	372.0	78.0	-12%	415.9	20.8	g
Z_Temora2_24	23:15:28	334	1.99	2784	0.05540	0.00150	0.48700	0.02800	0.06380	0.00320	0.409	398.8	20.0	398.3	19.6	0.5	419.0	59.0	5%	398.3	19.6	g
Z_Temora2_25	23:23:06	106	3.62	-415	0.05560	0.00500	0.50700	0.04800	0.06500	0.00510	0.169	406.0	31.0	405.6	31.3	0.4	500.0	220.0	19%	405.6	31.3	g
Z_Temora2_26	23:29:49	227	2.23	2627	0.05460	0.00170	0.49800	0.02900	0.06529	0.00330	0.386	407.7	20.0	407.9	20.2	-0.2	392.0	68.0	-4%	407.9	20.2	g
Z_Temora2_27	23:35:32	626	4.60	-14238	0.05467	0.00120	0.50460	0.02800	0.06663	0.00330	0.603	415.8	20.0	416.0	20.2	-0.2	395.0	47.0	-5%	416.0	20.2	g
Z_Temora2_28	23:43:11	457	1.80	8927	0.05520	0.00140	0.50100	0.02900	0.06528	0.00330	0.489	407.6	20.0	407.5	20.2	0.1	410.0	59.0	1%	407.5	20.2	g
Z_Temora2_29	23:48:55	286	2.05	2767	0.05420	0.00150	0.48800	0.02800	0.06511	0.00330	0.358	406.6	20.0	407.0	20.2	-0.4	381.0	62.0	-7%	407.0	20.2	g
Z_Temora2_30	23:55:37	399	3.09	2771	0.05540	0.00150	0.49200	0.02900	0.06440	0.00330	1.000	402.3	20.0	402.0	20.2	0.3	423.0	60.0	5%	402.0	20.2	g
Z_Temora2_31	0:01:21	383	1.87	2702	0.05520	0.00140	0.49700	0.02800	0.06546	0.00320	0.464	408.7	20.0	408.6	19.6	0.1	412.0	57.0	1%	408.6	19.6	g
Z_Temora2_32	0:08:02	147	3.22	1578	0.05740	0.00240	0.52100	0.03400	0.06600	0.00340	0.049	412.1	20.0	410.8	20.8	1.3	452.0	85.0	9%	410.8	20.8	g
Z_Temora2_33	0:13:47	151	2.81	7222	0.05500	0.00210	0.49000	0.03100	0.06480	0.00330	0.269	404.8	20.0	404.7	20.2	0.1	381.0	81.0	-6%	404.7	20.2	g
Z_Temora2_34	0:20:28	175	1.83	1053	0.05530	0.00200	0.47500	0.02800	0.06340	0.00330	0.044	396.1	20.0	395.9	20.2	0.2	393.0	78.0	-1%	395.9	20.2	g
Z_Temora2_35	0:26:11	490	2.93	-34675	0.05640	0.00140	0.48600	0.02800	0.06359	0.00320	0.623	397.4	19.0	396.6	19.6	0.8	467.0	55.0	15%	396.6	19.6	g
Z_Temora2_36	0:32:52	348	2.01	1828	0.05500	0.00160	0.49000	0.02800	0.06390	0.00320	0.438	399.0	20.0	399.1	19.6	-0.1	417.0	63.0	4%	399.1	19.6	g
Z_Temora2_37	0:38:36	1458	1.85	12257	0.05557	0.00120	0.51680	0.02800	0.06719	0.00340	0.641	420.4	20.0	419.0	20.8	1.4	430.0	49.0	3%	419.0	20.8	g
Z_Temora2_38	0:46:15	312	1.86	4375	0.05610	0.00150	0.51500	0.03000	0.06580	0.00330	0.566	410.6	20.0	410.2	20.2	0.4	455.0	57.0	10%	410.2	20.2	g
Z_Temora2_39	0:51:59	435	2.15	6410	0.05570	0.00150	0.50800	0.02900	0.06672	0.00330	0.354	416.3	20.0	416.1	20.2	0.2	427.0	60.0	3%	416.1	20.2	g
Z_Temora2_40	0:58:40	241	3.07	1795	0.05330	0.00160	0.51500	0.03100	0.06692	0.00350	0.391	431.8	21.0	433.0	21.4	-1.2	331.0	66.0	-31%	433.0	21.4	g
Z_Temora2_41	1:04:24	269	2.07	-7818	0.05350	0.00160	0.48900	0.02900	0.06621	0.00330	0.326	413.2	20.0	414.0	20.3	-0.8	344.0	67.0	-20%	414.0	20.3	g
Z_Temora2_42	1:11:05	131	3.34	1666	0.05360	0.00220	0.49000	0.03200	0.06600	0.00340	0.193	411.9	21.0	412.7	20.9	-0.8	350.0	89.0	-18%	412.7	20.9	g
Z_Temora2_43	1:16:49	212	1.81	-4461	0.05480	0.00180	0.49900	0.02900	0.06660	0.00340	0.258	415.5	20.0	415.8	20.8	-0.3	395.0	70.0	-5%	415.8	20.8	g
Z_Temora2_44	1:23:31	180	2.03	2868	0.05540	0.00200	0.51600	0.03200	0.06780	0.00340	0.343	423.3	21.0	422.8	20.8	0.5	421.0	78.0	0%	422.8	20.8	g
Z_Temora2_45	1:29:15	125	2.70	-9528	0.05320	0.00220	0.49900	0.03300	0.06760	0.00360	0.152	421.6	21.0	422.7	22.1	-1.1	329.0	87.0	-28%	422.7	22.1	g
Z_Temora2_46	1:35:56	162	3.41	-7011	0.05540	0.00180	0.52500	0.03200	0.06840	0.00350	0.276	426.3	21.0	426.5	21.4	-0.2	440.0	78.0	3%	426.5	21.4	g
Z_Temora2_47	1:41:41	155	1.99	22750	0.05460	0.00200	0.50000	0.03000	0.06700	0.00340	0.291	417.7	21.0	418.3	20.8	-0.6	390.0	78.0	-7%	418.3	20.8	g
Z_Temora2_48	1:49:19	406	1.99	-62000	0.05450	0.00140	0.52100	0.03000	0.06887	0.00340	0.351	429.3	21.0	429.8	20.8	-0.5	382.0	61.0	-13%	429.8	20.8	g
Z_Temora2_49	2:00:54	331	4.97	3920	0.05480	0.00150	0.51600	0.03000	0.06760	0.00340	0.426	421.8	21.0	421.9	20.8	-0.1	392.0	61.0	-8%	421.9	20.8	g
Z_Temora2_50	2:07:35	130	2.80	1498	0.05430	0.00220	0.48600	0.03100	0.066470	0.00330	0.327	404.0	20.0	404.4	20.3	-0.4	363.0	89.0	-11%	404.4	20.3	g
Z_Temora2_51	2:13:19	289	3.48	41700	0.05560	0.00160	0.50300	0.03000	0.06535	0.00330	0.361	408.0	20.0	407.7	20.2	0.3	421.0	64.0	3%	407.7	20.2	g
Z_Temora2_52	2:20:01	123	2.06	-4032	0.05500	0.00210	0.50800	0.03100	0.06630	0.00340	0.190	414.4	21.0	413.8	20.8	0.6	397.0	83.0	-4%	413.8	20.8	g
Z_Temora2_53	2:25:44	295	2.07	2132	0.05620	0.00150	0.52700	0.03000	0.06825	0.00340	0.364	425.6	21.0	425.2	20.8	0.4	445.0	62.0	4%	425.2	20.8	g
Z_Temora2_54	2:32:27	63	3.06	2358	0.05530	0.00310	0.50500	0.03700	0.06690	0.00350	0.141	417.6	21.0	417.4	21.5	0.2	410.0	110.0	-2%	417.4	21.5	g
Z_Temora2_55	2:38:10	293	4.73	11100	0.05510	0.00140	0.51900	0.03000	0.06791	0.00340	0.502	423.5	20.0	423.6	20.8	-0.1	406.0	59.0	-4%	423.6	20.8	g
Z_Temora2_56	2:44:52	957	1.79	-15100	0.05454	0.00110	0.49270	0.02700	0.06592	0.00330	0.656	411.5	20.0	411.7	20.2	-0.2	391.0	46.0	-5%	411.7	20.2	g
Z_Temora2_57	2:50:36	224	4.04	-7278	0.05560	0.00160	0.50700	0.03000	0.06530	0.00330	0.355	408.2	20.0	407.4	20.2	0.8	436.0	66.0	7%	407.4	20.2	g
Z_Temora2_58	2:58:14	125	2.13	2413	0.05500	0.00260	0.49400	0.03300	0.06510	0.00350	-0.016	406.6	21.0	406.5	21.5	0.1	369.0	97.0	-10%	406.5	21.5</td	

Z_Temora2_75	4:46:09	136	2.18	2426	0.05700	0.00900	0.53200	0.08000	0.06820	0.00350	0.024	425.0	21.0	424.4	21.8	0.6	320.0	110.0	-33%	424.4	21.8	g
Z_Temora2_76	4:52:50	201	2.22	-59070	0.05420	0.00170	0.49200	0.02900	0.06600	0.00330	0.326	412.0	20.0	412.4	20.2	-0.4	370.0	64.0	-11%	412.4	20.2	g
Z_Temora2_77	4:58:34	178	2.20	2886	0.05630	0.00180	0.51300	0.03000	0.06560	0.00330	0.285	409.2	20.0	408.9	20.2	0.3	452.0	71.0	10%	408.9	20.2	g
Z_Temora2_78	5:06:12	479	1.82	-28360	0.05610	0.00150	0.51500	0.02900	0.06659	0.00330	0.125	415.5	20.0	415.1	20.2	0.4	438.0	59.0	5%	415.1	20.2	g
Z_Temora2_79	5:11:56	147	1.98	-2743	0.05420	0.00230	0.50000	0.03200	0.06676	0.00340	0.051	417.2	21.0	417.1	20.9	0.1	346.0	89.0	-21%	417.1	20.9	g
Z_Temora2_80	5:18:37	131	3.48	3816	0.05520	0.00210	0.50300	0.03200	0.06460	0.00330	0.238	403.6	20.0	403.3	20.2	0.3	413.0	84.0	2%	403.3	20.2	g
Z_Temora2_81	5:24:21	701	1.70	-25488	0.05535	0.00120	0.50070	0.02800	0.06565	0.00330	0.623	409.8	20.0	409.7	20.2	0.1	419.0	48.0	2%	409.7	20.2	g
Z_Temora2_82	5:31:03	285	1.58	-2843	0.05620	0.00170	0.52300	0.03100	0.06691	0.00340	0.367	417.4	20.0	417.0	20.8	0.4	440.0	65.0	5%	417.0	20.8	g
Z_Temora2_83	5:36:46	149	2.00	1215	0.05330	0.00190	0.49900	0.03100	0.06830	0.00350	0.348	425.9	21.0	427.0	21.5	-1.1	325.0	77.0	-31%	427.0	21.5	g
Z_Temora2_84	5:43:28	94	1.93	1216	0.05580	0.00260	0.51900	0.03500	0.06740	0.00350	0.294	420.2	21.0	420.2	21.4	0.0	427.0	96.0	2%	420.2	21.4	g
Z_Temora2_85	5:49:12	223	1.86	-3153	0.05400	0.00180	0.50100	0.03000	0.06726	0.00340	0.295	419.6	20.0	420.2	20.8	-0.6	362.0	73.0	-16%	420.2	20.8	g
Z_Temora2_86	5:55:53	2349	1.71	45938	0.05585	0.00100	0.53750	0.02900	0.06696	0.00340	0.677	435.9	21.0	435.8	20.8	0.1	443.0	41.0	2%	435.8	20.8	g
Z_Temora2_87	6:01:37	369	2.10	5742	0.05440	0.00130	0.49730	0.02800	0.06645	0.00330	0.380	414.7	20.0	415.1	20.2	-0.4	384.0	56.0	-8%	415.1	20.2	g
Z_Temora2_88	6:09:15	103	2.36	4523	0.05710	0.00270	0.53500	0.03600	0.06820	0.00360	0.097	425.4	21.0	424.4	22.0	1.0	441.0	96.0	4%	424.4	22.0	g
Z_Temora2_89	6:14:58	268	2.02	3483	0.05460	0.00160	0.51100	0.03000	0.06800	0.00340	0.378	423.9	21.0	424.5	20.8	-0.6	384.0	66.0	-11%	424.5	20.8	g
Z_Temora2_90	6:21:40	170	3.80	16783	0.05480	0.00210	0.50600	0.03200	0.06700	0.00340	0.228	418.0	20.0	418.2	20.8	-0.2	373.0	81.0	-12%	418.2	20.8	g
Z_Temora2_91	6:27:23	160	2.74	#DIV/0!	0.05680	0.00220	0.52700	0.03300	0.06670	0.00340	0.365	415.9	21.0	415.4	20.8	0.5	470.0	82.0	12%	415.4	20.8	g
Z_Temora2_92	6:34:04	94	3.10	#DIV/0!	0.05480	0.00270	0.51400	0.03600	0.06810	0.00350	0.126	424.3	21.0	425.0	21.5	-0.7	366.0	100.0	-16%	425.0	21.5	g
Z_Temora2_93	6:39:48	89	1.82	-691	0.05600	0.00270	0.52800	0.03700	0.06830	0.00350	0.071	426.0	21.0	425.6	21.4	0.4	398.0	100.0	-7%	425.6	21.4	g
Z_Temora2_94	6:46:29	543	1.81	-7232	0.05560	0.00150	0.50600	0.02900	0.06596	0.00330	0.426	411.7	20.0	411.5	20.2	0.2	431.0	59.0	5%	411.5	20.2	g
Z_Temora2_95	6:52:13	328	1.89	4591	0.05570	0.00160	0.53300	0.03100	0.06960	0.00350	0.356	433.7	21.0	433.7	21.4	0.0	424.0	66.0	-2%	433.7	21.4	g
Z_Temora2_96	6:58:55	233	2.06	-5776	0.05380	0.00180	0.48800	0.03000	0.06636	0.00330	0.413	414.1	20.0	414.8	20.2	-0.7	346.0	70.0	-20%	414.8	20.2	g
Z_Temora2_97	7:04:38	321	1.96	3396	0.05590	0.00190	0.51500	0.03100	0.06655	0.00340	-0.012	415.9	21.0	414.9	20.8	1.0	429.0	71.0	3%	414.9	20.8	g
Z_Temora2_98	7:12:17	133	2.01	-9875	0.05680	0.00230	0.52100	0.03300	0.06740	0.00340	0.216	420.4	21.0	419.7	20.8	0.7	461.0	85.0	9%	419.7	20.8	g
Z_Temora2_99	7:18:01	82	3.21	2478	0.05450	0.00230	0.51900	0.03500	0.06820	0.00350	0.298	425.0	21.0	425.7	21.4	-0.7	394.0	92.0	-8%	425.7	21.4	g
Z_Temora2_100	7:26:37	251	3.30	2583	0.05500	0.00150	0.50600	0.02900	0.06730	0.00340	0.492	419.9	21.0	420.0	20.8	-0.1	398.0	62.0	-6%	420.0	20.8	g
Z_Temora2_101	7:32:22	580	1.81	3893	0.05490	0.00140	0.50400	0.02900	0.06619	0.00330	0.241	413.1	20.0	413.2	20.2	-0.1	404.0	56.0	-2%	413.2	20.2	g
Z_Temora2_102	7:39:03	1881	1.56	24154	0.05482	0.00110	0.52350	0.02800	0.06872	0.00340	0.674	428.4	21.0	428.7	20.8	-0.3	403.0	44.0	-6%	428.7	20.8	g
Z_Temora2_103	7:44:47	149	2.17	756	0.05800	0.00230	0.52600	0.03300	0.06620	0.00340	0.148	413.2	20.0	411.7	20.8	1.5	501.0	86.0	18%	411.7	20.8	g
Z_Temora2_104	7:51:28	487	1.74	3332	0.05520	0.00150	0.50300	0.02900	0.06678	0.00340	0.013	416.7	20.0	416.7	20.8	0.0	414.0	58.0	-1%	416.7	20.8	g
Z_Temora2_105	7:57:12	346	2.00	2263	0.05400	0.00160	0.50600	0.03000	0.06823	0.00340	-0.081	425.4	21.0	426.2	20.8	-0.8	350.0	65.0	-22%	426.2	20.8	g
Z_Temora2_106	8:03:53	472	3.33	5816	0.05550	0.00140	0.53200	0.03000	0.06966	0.00350	0.590	434.0	21.0	434.1	21.4	-0.1	428.0	55.0	-1%	434.1	21.4	g
Z_Temora2_107	8:09:37	169	3.52	1572	0.05520	0.00160	0.51200	0.03100	0.06722	0.00340	0.396	419.3	20.0	419.4	20.8	-0.1	413.0	66.0	-2%	419.4	20.8	g
Z_Temora2_108	8:17:15	128	2.54	2764	0.05540	0.00210	0.51300	0.03200	0.06740	0.00340	0.316	420.5	21.0	420.4	20.8	0.1	399.0	82.0	-5%	420.4	20.8	g
Z_Temora2_109	8:22:59	83	2.16	-4383	0.05480	0.00310	0.48900	0.03500	0.07110	0.00880	-0.019	439.0	45.0	443.3	53.8	-4.3	370.0	120.0	-20%	443.3	53.8	g
Z_Temora2_110	8:29:40	224	1.68	5973	0.05540	0.00180	0.50900	0.03100	0.06650	0.00340	0.532	414.9	20.0	414.9	20.8	0.0	419.0	74.0	1%	414.9	20.8	g
Z_Temora2_111	8:35:24	599	2.02	-10418	0.05518	0.00130	0.50440	0.02800	0.06591	0.00330	0.485	411.4	20.0	411.4	20.2	0.0	414.0	50.0	1%	411.4	20.2	g
Z_Temora2_112	8:42:05	161	1.71	903	0.05550	0.00180	0.50700	0.03100	0.06670	0.00340	0.359	416.2	20.0	416.0	20.8	0.2	421.0	73.0	1%	416.0	20.8	g
Z_Temora2_113	8:47:49	163	3.68	969	0.05440	0.00190	0.49800	0.03000	0.06670	0.00340	0.324	416.7	20.0	416.6	20.8	0.1	373.0	77.0	-12%	416.6	20.8	g
Z_Temora2_114	8:54:30	140	3.27	1442	0.05470	0.00200	0.48900	0.03000	0.06500	0.00330	0.334	405.9	20.0	406.0	20.2	-0.1	395.0	79.0	-3%	406.0	20.2	g
Z_Temora2_115	9:00:15	762	2.02	4071	0.05504	0.00130	0.48600	0.02700	0.06510	0.00320	0.585	406.5	20.0	406.5	19.6	0.0	411.0	51.0	1%	406.5	19.6	g
Z_Temora2_116	9:06:57	375	1.94	18350	0.05590	0.00150	0.49800	0.02800	0.06527	0.00330	0.378	407.5	20.0	407.1	20.2	0.4	444.0	60.0	8%	407.1	20.2	g
Z_Temora2_117	9:12:40	188	1.77	4607	0.05630	0.00180	0.50800	0.03000	0.06611	0.00330	0.292	412.6	20.0	412.0	20.2	0.6	454.0	70.0	9%	412.0	20.2	g
Z_Temora2_118	9:20:19	333	3.21	5494	0.05530	0.00160	0.50500	0.02900	0.06600	0.00330	0.406	412.0	20.0	411.9	20.2	0.1	421.0	63.0	2%	411.9	20.2	g
Z_Temora2_119	9:26:03	113	1.81	5610	0.05570	0.00210	0.51500	0.03300	0.06670	0.00340	0.363	416.4	21.0	415.9	20.8	0.5	427.0	83.0	3%	415.9	20.8	g
Z_Temora2_120	9:32:44	359	4.06	10388	0.05620	0.00140	0.50000	0.02800	0.06448	0.00320	0.117	402.8	20.0	402.1	19.6	0.7	444.0	57.0	9%	402.1	19.6	g
Z_Temora2_121	9:38:29	623	3.33	16582	0.05660	0.00210	0.50500	0.03200	0.06547	0.00330	0.095	408.7	20.0	408.0	20.2	0.7	446.0	61.0	9%	408.0	20.2	g
Z_Temora2_122	9:45:10	45	3.36	403	0.05300	0.00330	0.48300	0.03700	0.06590	0.00350	-0.008	411.3	21.0	412.4	21.5	-1.1	350.0	130.0	-18%	412.4	21.5	g
Z_Temora2_123	9:50:54	200	2.33	2795	0.05630	0.00210	0.51200	0.03200	0.06603	0.00330	0.067	412.2	20.0	411.5	20.2	0.7	430.0	78.0	4%	411.5	20.2	g
unnamed																						
Z_Temora2_124	10:03:20	125	3.15	1210	0.05310	0.00210	0.48900	0.03100	0.06688	0.00340	0.218	417.3	20.0	418.4	20.9	-1.1	314.0	86.0	-33%	418.4	20.9	g
Z_Temora2_125	10:10:01	70	3.09	-612	0.05480	0.00260	0.															

Z_Temora2_137	11:20:46	266	3.33	-8679	0.05490	0.00160	0.49600	0.02800	0.06561	0.00330	0.193	409.6	20.0	409.7	20.2	-0.1	402.0	66.0	-2%	409.7	20.2	g
Z_Temora2_138	11:21:44	123	3.09	1131	0.05550	0.00230	0.51000	0.03300	0.06725	0.00340	0.090	419.5	20.0	419.4	20.8	0.1	394.0	88.0	-6%	419.4	20.8	g
Z_Temora2_139	11:29:22	342	2.04	1329	0.05500	0.00150	0.51700	0.02900	0.06745	0.00330	0.366	420.7	20.0	420.9	20.2	-0.2	413.0	59.0	-2%	420.9	20.2	g
Z_Temora2_140	11:30:19	236	1.71	9797	0.05460	0.00170	0.48900	0.02900	0.06545	0.00330	0.333	408.6	20.0	408.8	20.2	-0.2	403.0	72.0	-1%	408.8	20.2	g

NOTE 1: Due to instrument crash and restart, some grain numbers do not match correctly in raw data files. This applies to Temora, FC5Z5, Dromedary, Madder, TD2F538, and TD2F549.

#Indicates position where grain numbers diverge.

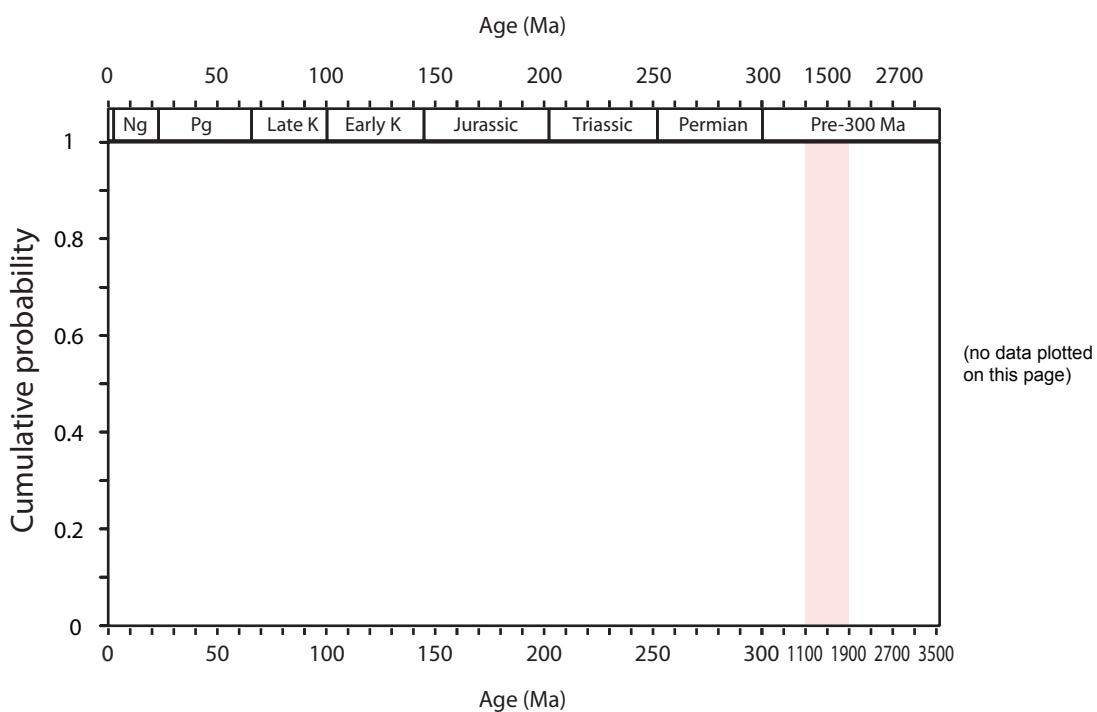
Methods, column headings, comment codes, etc. described in Appendix DR1.

Grains selected at random.

Figure DR1: Supplemental zircon plots: cumulative probability distributions of Type E samples (7 pages of plots). Note 40x change in age scale at 300 Ma. Constructed using Excel spreadsheet of G.E. Gehrels:

[https://docs.google.com/document/d/1MYwm8GcdYFOsfNV62B6PULb\\_g2r1AS3vmm4gHMOFxg/preview?pli=1](https://docs.google.com/document/d/1MYwm8GcdYFOsfNV62B6PULb_g2r1AS3vmm4gHMOFxg/preview?pli=1)

In their data repository, Sharman et al. (2015) presented a very useful, semi-interactive PDF compilation of CPD for over 200 sandstone samples from California and nearby areas. Here, we have plotted the Type E samples in an identical format for ease of comparison. Sharman et al. recommended viewing using Adobe Reader (or equivalent) in “Single Page View” mode (View -> Page Display -> Single Page View). Some readers may wish to merge the two sets of plots into a single PDF file using Acrobat Pro.



The following U-Pb data conventions were used in all figures and tables in this paper:

- For zircon grains younger than 1000 Ma,  $^{206}\text{Pb}/^{238}\text{U}$  ages are used, as reported by the original authors. Original authors corrected these ages for common lead using  $^{204}\text{Pb}$ ,  $^{207}\text{Pb}$ , or  $^{208}\text{Pb}$  methods.
- For zircons older than 1000 Ma,  $^{207}\text{Pb}/^{206}\text{Pb}$  ages are used, generally as reported by the original authors. In some older reports where  $^{207}\text{Pb}/^{206}\text{Pb}$  ages were not reported, they were back calculated from reported isotopic ratios or from  $^{206}\text{Pb}/^{238}\text{U}$  and  $^{207}\text{Pb}/^{235}\text{U}$  ages. Original authors corrected for common lead using  $^{204}\text{Pb}$  or  $^{208}\text{Pb}$  methods, or by trimming out any zones with detectable  $^{204}\text{Pb}$  with Iolite software then reporting uncorrected ages (Paton et al., 2010; see Dumitru et al., 2015, Appendix DR1).
- For grains older than 800 Ma, ages are rejected if discordance is  $>30\%$  or reverse discordance is  $>5\%$  (this does not apply to the concordia plots in Fig. DR2).
- PDP in Fig. 2 were constructed with Isoplot (Ludwig, 2008). In those PDP, the age scale changes by a factor a 10x at 300 Ma, and the histogram bin width also increases from 10 million years to 100 million years. This results in each grain contributing an equal area to its histogram. There is no vertical exaggeration in either the PDP curve or the histogram bins for the grains  $>300$  Ma.
- Note that Fig. 2A and 2B show very small numbers of detrital zircon ages in Proterozoic Belt rocks that are younger than deposition. These are clearly spurious and presumably are disturbed by strong metamorphism, young overgrowths, and/or lead loss. We still plot them for consistency, given that they should appear in Belt-derived detritus, albeit in essentially undetectable numbers.

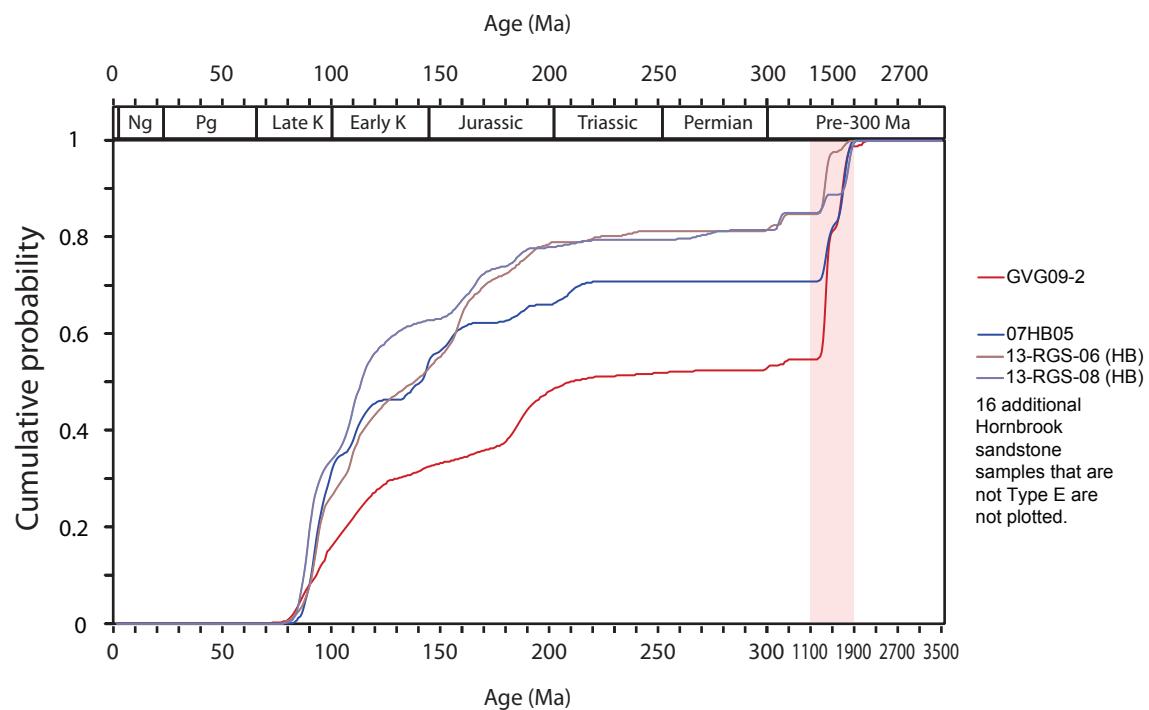
#### *Additional References*

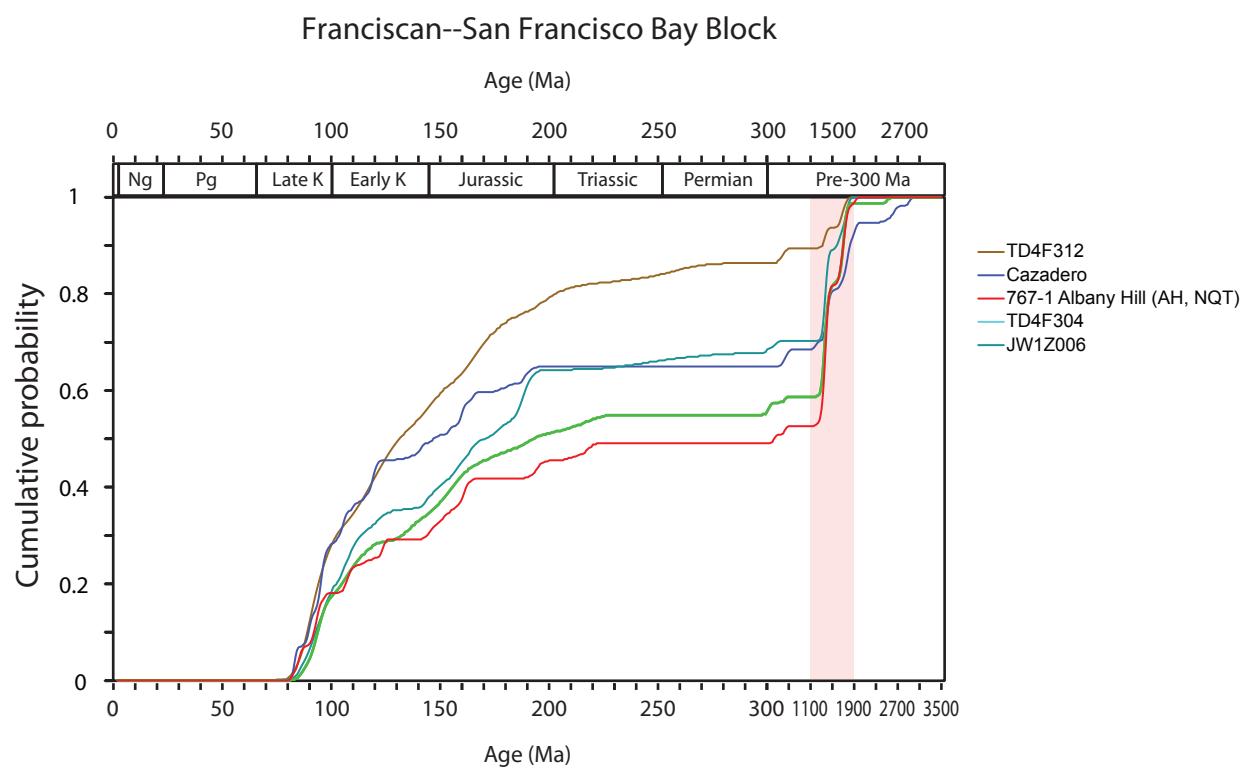
Ludwig, K., 2008, Isoplot 3.70: Special Publication 4, Berkeley Geochronology Center, Berkeley, Calif., [http://www.bgc.org/isoplot\\_etc/isoplot.html](http://www.bgc.org/isoplot_etc/isoplot.html).

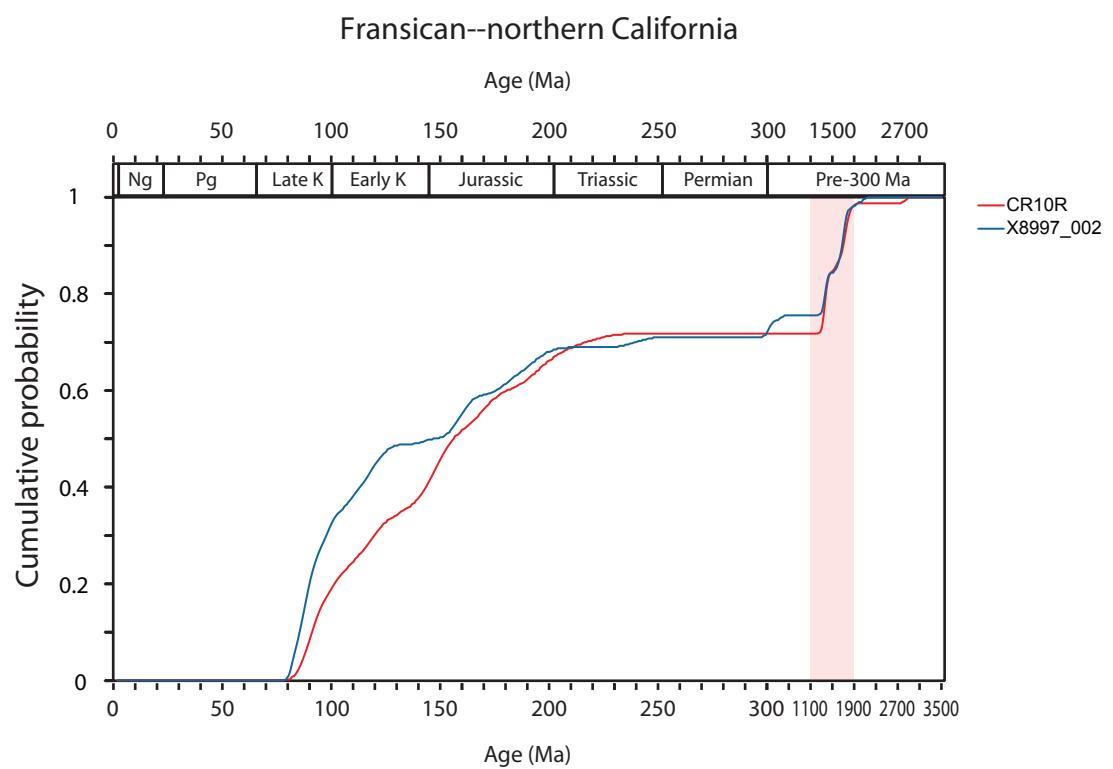
Paton, C., Woodhead, J.D., Hellstrom, J.C., Hergt, J.M., Greig, A., and Maas, R., 2010, Improved laser ablation U-Pb zircon geochronology through robust downhole fractionation correction: *Geochemistry, Geophysics, Geosystems*, v. 11, article Q0AA06. doi:10.1029/2009GC002618.

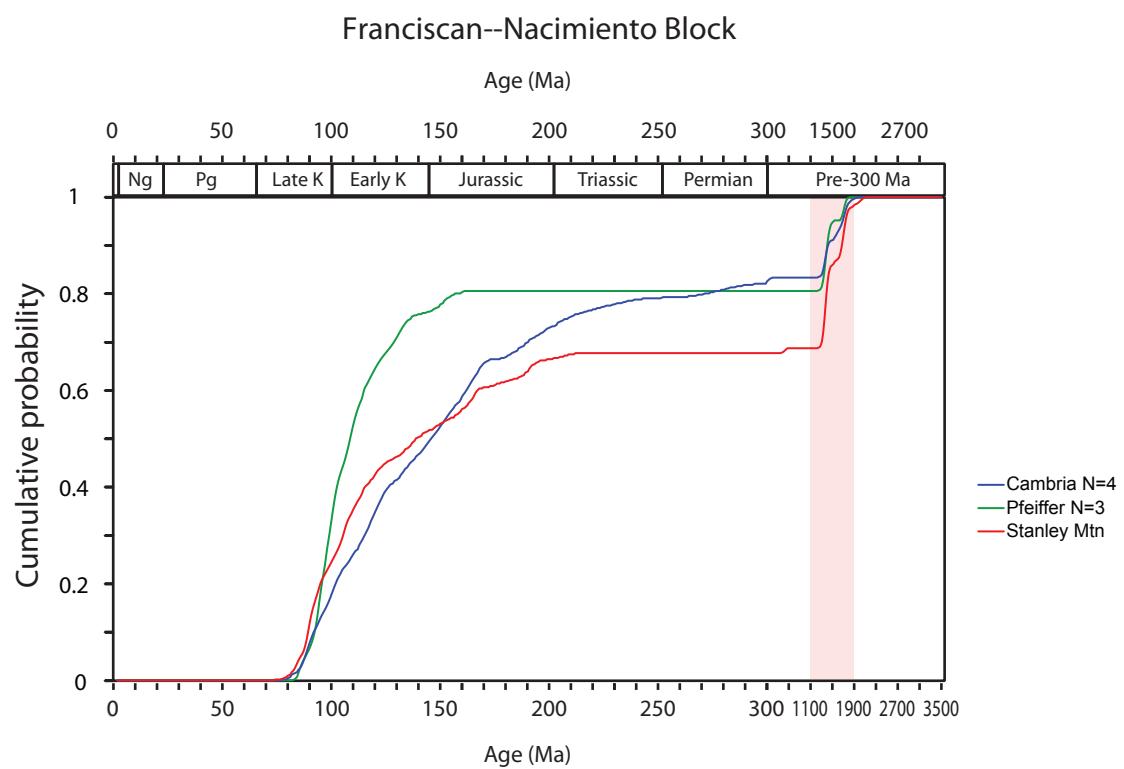
Dumitru et al., 2015/2016, *Geology*, Figure DR1

### Great Valley and Hornbrook--Campanian

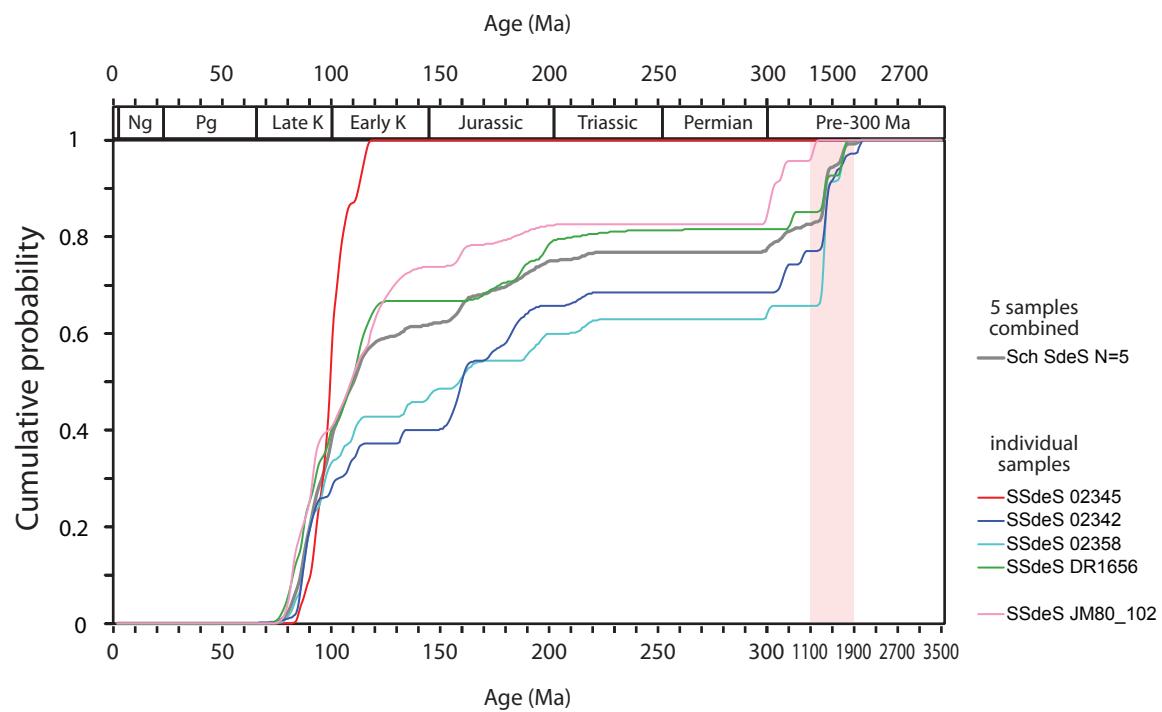


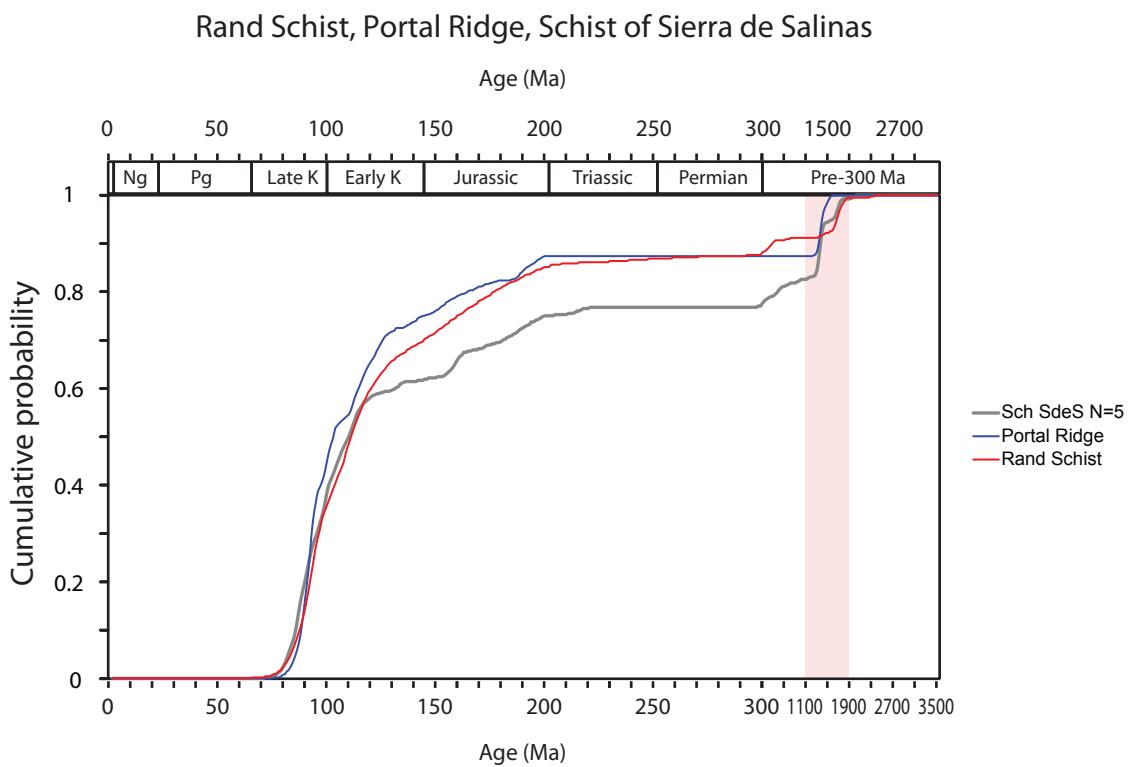






Schist of Sierra de Salinas (see also next page)





This plot compares data from the three southern California schist units that have been correlated (e.g., Jacobson et al., 2011). As shown in the previous plot, 3 of 5 samples from the Schist of Sierra de Salinas are Type E. The Rand Schist does not appear to be Type E, as there are few or no 1380 Ma grains. Portal Ridge appears to be Type E but there is not enough data to be sure. Despite the differences, the correlation remains reasonable. The differences are easily explained by the three units having only slightly different depositional ages ranges and/or depositional locations and thus receiving different amounts of Idaho-sourced detritus.

Rand includes 5 samples from Grove et al. (2003) and Jacobson et al. (2011): RA58, RA89, RA169, RA170, RA175; plus 3 samples from M. Grove (unpublished data): RA83, RA185C, RA281.

Portal Ridge includes one sample from Grove et al. (2003) and Jacobson et al. (2011): PR150.

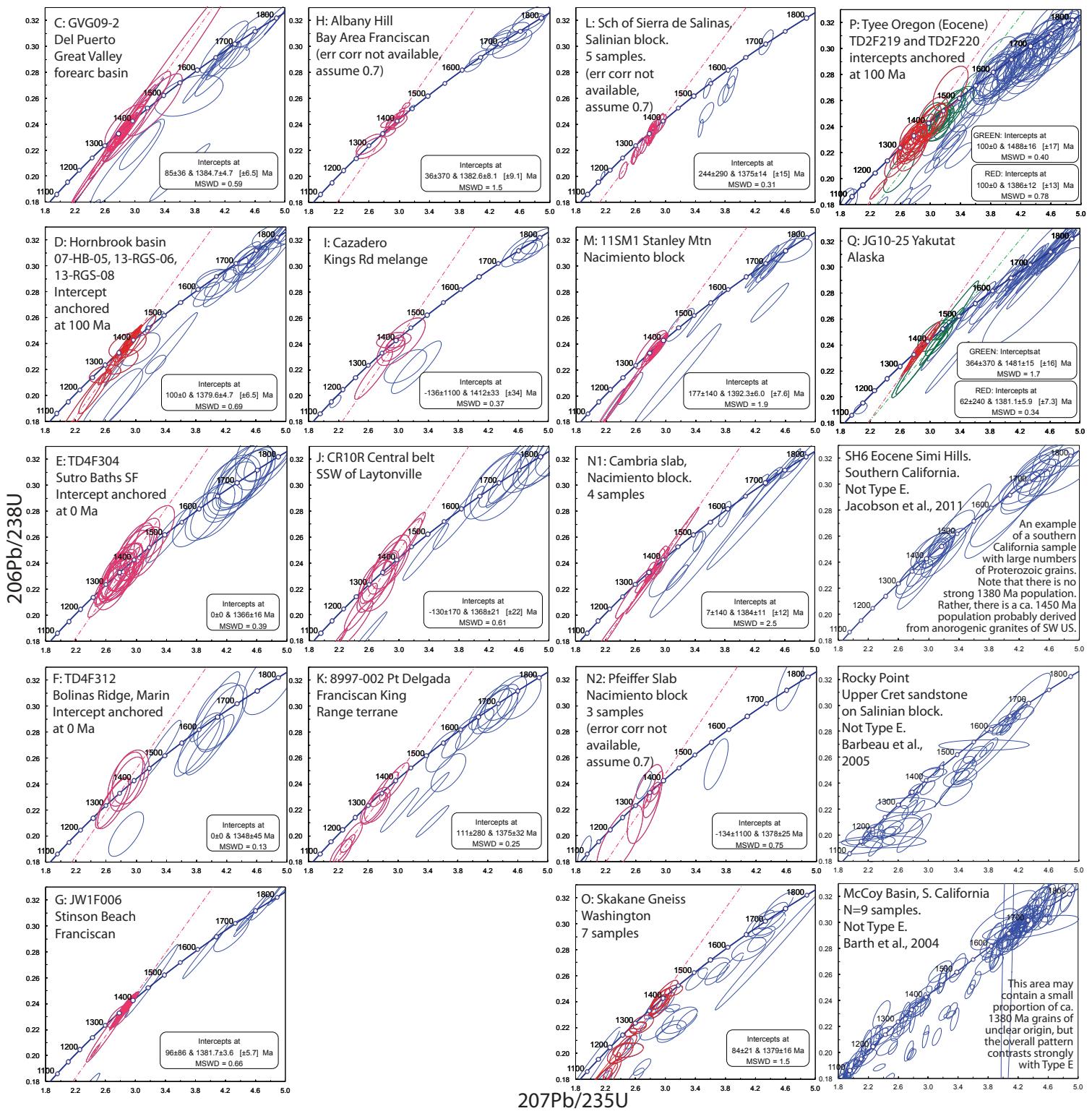


Figure DR2. Supplemental zircon plots: U-Pb concordia plots of ca. 1100-1800 Ma detrital zircon grains (Ludwig, 2008). Grains in red are interpreted to be sourced from the 1380 Ma plutonic rocks intruding the Lemhi subbasin. Most grains plotting below the concordia curve probably experienced lead loss, except Swakane where there are extensive Late Cretaceous metamorphic overgrowths. 14 plots are for Tyee E samples, three plots are non-Type E samples from southern California and Salinian block for comparison, and two plots are for the variant of Type E observed in Tyee and Yakutat samples (which have additional grains clustering around ca. 1485 Ma, shown in green).

Some unpublished isotopic ratios were back-calculated from ages. All error ellipses and intercept uncertainties are ±2 sigma. MSWD is mean square weighted deviation.

#### Additional references:

- Barbeau, D.L., Jr., Ducea, M.N., Gehrels, G.E., Kidder, S., Wetmore, P.H., and Saleby, J.B., 2005, U-Pb detrital zircon geochronology of northern Salinian basement and cover rocks: Geological Society of America Bulletin, v. 117, p. 466–481, doi: 10.1130/B25496.1.
- Barth, A.P., Wooden, J.L., Jacobson, C.E., and Probst, K., 2004, U-Pb geochronology and geochemistry of the McCoy Mountains Formation, southeastern California: A Cretaceous retro-arc foreland basin: Geological Society of America Bulletin, v. 116, p. 142–153, doi:10.1130/B25288.1.

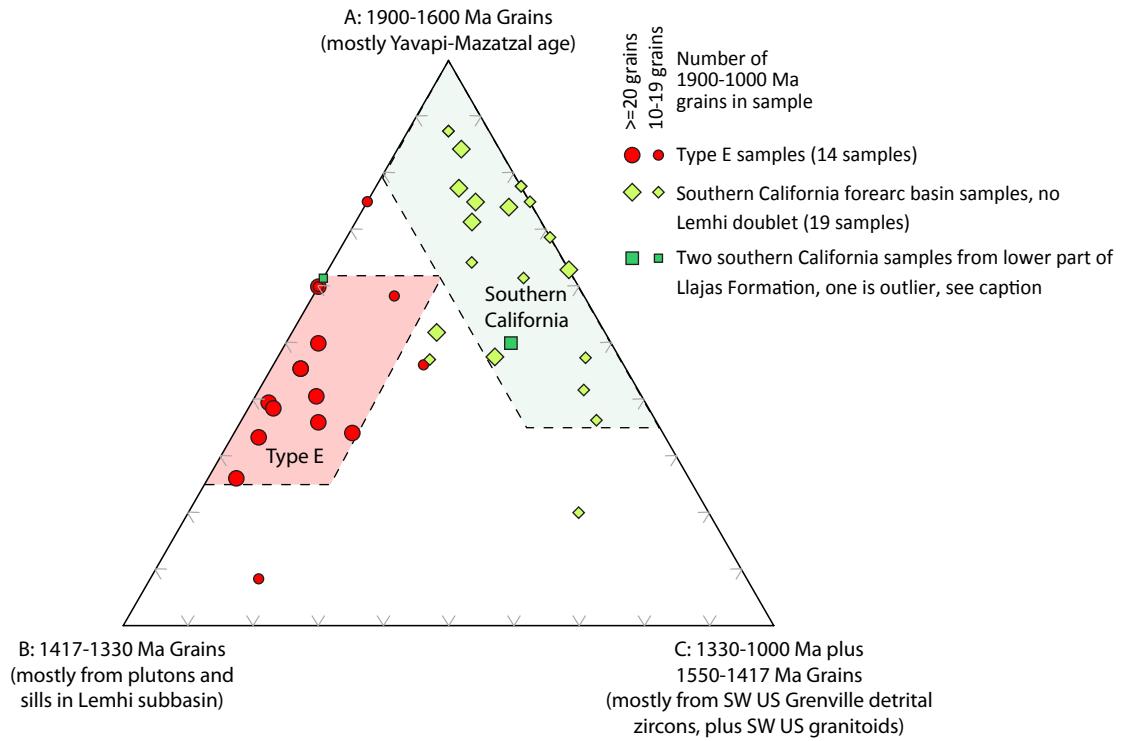


Figure DR3.

Supplemental zircon plot: Ternary plot of the older single-grain zircon ages (1900-1000 Ma), designed to demonstrate distinct differences between Type E samples from northern and central California versus forearc basin samples from southern California. We use these differences to infer that old grains in Type E samples were not sourced from basement rocks or sedimentary rocks in Arizona and/or southern California (AZ-SCal).

Potential source rocks in AZ-SCal include abundant ca. 1800-1650 Ma Yavapi-Mazatzal basement (YMB), sparse ca. 1450-1400 anorogenic granitoids, Triassic and Jurassic sandstones with Grenville age detrital zircons (ca. 1310-912 Ma), and a diversity of other rock units (e.g., Sharman et al., 2015, Appendix DR1 therein). Potential source rocks in the Proterozoic Lemhi subbasin in Idaho contain detrital zircon apparently originally sourced from the southwestern United States (or from correlative belts that have rifted away) and so also including substantial YMB-age zircon and possible minor anorogenic granite age zircon. Lemhi strata also host 1380 Ma intrusive rocks which are rare in the SW U.S. The key distinguishing features then are the presence, absence, and/or abundances of zircons with ages representative of Grenville, anorogenic granite, and 1380 Ma sources. In order to evaluate this, we constructed this ternary plot of only the 1900-1000 Ma zircon grains, discarding younger and older grains (for most samples, we discarded most of the grains, which are Jurassic and Cretaceous and not very diagnostic). We then constructed a ternary plot with these three poles: (A) proportion of 1900-1600 Ma grains (YMB), (B) proportion of 1417-1330 Ma (to attempt to isolate 1380 Ma zircons from the Lemhi), and (C) proportion of 1330-1000 Ma grains plus 1550-1417 grains (to attempt to isolate AZ-SCal grains from the Grenville and the anorogenic granites).

We plot 14 of the 15 Type E samples (or composite samples), omitting Pfeiffer which has only 8 old grains. For the southern California samples, we plot all 21 available samples which have these characteristics: (1) they are forearc basin samples from southern California that were compiled on pages 89 to 109 of the Supplementary Materials PDF file of Sharman et al. (2015); (2) they contain at least 10 grains between 1900-1000 Ma (after checking discordance, see below); (3) many of the samples in Sharman et al. are 'mini-samples' where  $\approx$ 10-30 grains were dated from multiple samples; in this case we combined mini-samples that were from the same area and had similar depositional ages; (4) a few samples were analyzed twice at different laboratories and we plotted these as two samples. We discarded grains that were more than 30% discordant or 5% reverse discordant.

The southern California samples tend to have 40-90% "A" grains (1900-1600 Ma), 10-60% "C" grains, and 0-20% "B" grains (1417-1330 Ma). The "B" grains do not really indicate strongly that more than trace numbers of 1380 Ma grains are present in southern California, because a measured age might be  $1405 \pm 60$  Ma for example, which would plot at pole B but which could instead be a zircon from a 1450 Ma anorogenic granite. Similarly, the Type E samples have 0-20% "C" grains, but some might be ages such as  $1425 \pm 60$  Ma for example, consistent with a 1380 Ma true age. In addition, small numbers of ca. 1500-1400 detrital grains are present in Lemhi strata (Figure 2A) (some of these might originally be from the anorogenic granites in the SW U.S.).

Thus, the uncertainties on the ages are large enough to prevent a complete separation on the plot of 1380 Ma zircons from the Idaho and 1450-1400 Ma zircons from the SW U.S. However, the separation of the Type E and southern California samples into two distinct fields is very clear. Therefore the two areas had different sources for most of their 1900-1000 Ma grains and the Type E samples are highly unlikely to have been sourced from AZ-SCal.

We have highlighted an outlier from the Llajas Formation on the plot. It plots far from another, normal-looking Llajas sample; we do not assign much significance to this outlier and it might represent minor analytical problems.

A related point is that in the Mojave region of southern California, bodies of ca. 1380 Ma rock are generally associated with larger bodies of 1440-1400 Ma rock, so that 1380 Ma detrital zircons should be accompanied older zircons and sharp 1380 Ma peaks should not form.

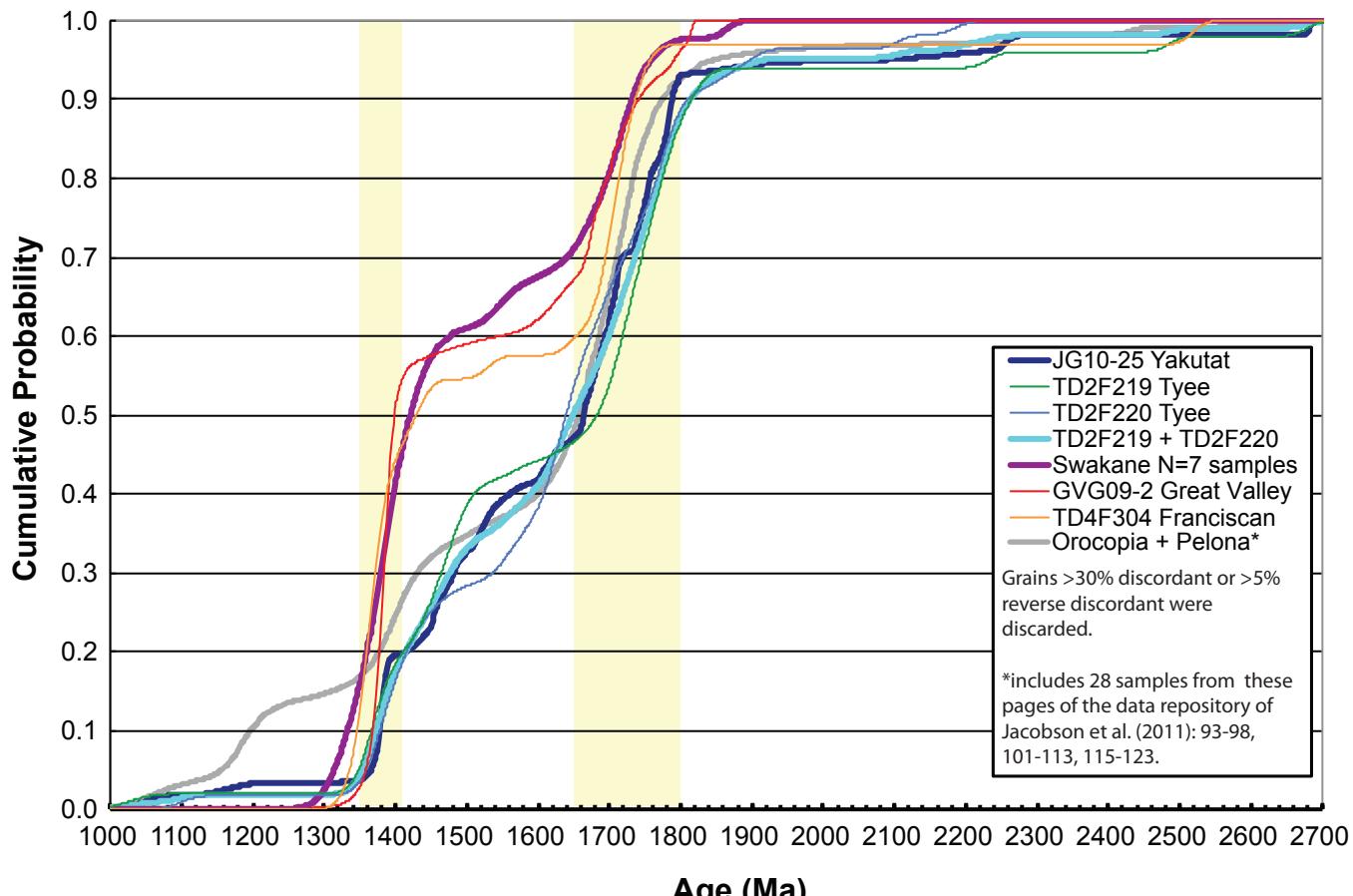


Figure DR4. Supplementary zircon plot: comparison of cumulative probability distributions of 1000-2700 Ma zircon grains in selected samples. Grains younger than 1000 Ma are discarded and there are no grains older than 2700 Ma in these samples.

(1) We consider the Great Valley and Franciscan samples shown here to be generally representative of the Lemhi doublet. Note excellent match of Swakane gneiss to Lemhi doublet, evidence Swakane detritus was partly sourced from the Lemhi subbasin. Swakane zircons have been disturbed by high-grade metamorphism and, if not for this, may have shown an even better match.

(2) Note pronounced differences between Lemhi doublet (Late Cretaceous) versus the pattern shown by Tyee strata (Eocene, ca. 48 Ma). Tyee pattern is easily explained as a mixture of  $\approx$ 25% zircon from Lemhi subbasin and  $\approx$ 75% zircon from the main Belt basin, presumably the western side of the main Belt basin (Figures 1 and 2A-2B). The topography and river systems of Central Idaho were probably reorganized by 53-50 Ma extension and core complex development and by 51-43 Ma Challis magmatism, altering zircon signatures (e.g., Dumitru et al., 2013, 2015).

(3) Note essentially perfect match between Yakutat (ca. 71-65 Ma) and Tyee patterns. Garver and Davidson (2015, "GD") proposed that Yakutat strata were deposited in southern California then translated  $\approx$ 3200 km north to southeastern Alaska, which would represent a strong positive test for the Baja British Columbia translation hypothesis. However, the perfect match suggests a Yakutat River could instead have carried Belt detritus northwest out of Idaho and deposited it in a trench off Washington or British Columbia, from which it was translated to Alaska. That would represent a negative test of the Baja-BC hypothesis, but only for the Yakutat strata, which have not been central to the Baja-BC controversy. Also shown is the pattern from Orocopia and Pelona schists in southern California and southwesternmost Arizona, which GD (their fig. 5) showed for comparison to the Yakutat data. GD emphasized that Yakutat and Belt zircons have different Hf isotopic patterns, but the Belt Hf data (Stewart et al., 2010, cited in Table DR1) are currently quite limited and variable and are from the south end of the basin, whereas the western part of the basin was the likelier sediment source. These issues need of further investigation. (Note that GD used different uncertainty parameters to construct PDP's in their fig. 2 vs. their fig. 5. We call attention to the sharp 1380 Ma peak apparent in their fig. 2, their data table, our Fig. 2, and our Fig. DR1.)

[Dumitru et al. (2013) presented Tyee zircon ages from earlier analyses. They plotted and discussed only grains younger than 250 Ma, but included older grains in their data repository. Grains older than 1000 Ma were dated using methods that do not meet the current state-of-the art. For example, some analyses were completed in 1997; others were completed on a system that did not measure  $^{204}\text{Pb}$  such that only  $^{206}\text{Pb}/^{238}\text{U}$  age were calculated, rather than the  $^{207}\text{Pb}/^{206}\text{Pb}$  ages generally preferred for old grains (see Andersen, 2002, as cited in Table DR1). We therefore completed new analyses on the two Tyee samples plotted here and these should supersede previous Tyee analyses for older grains.]