




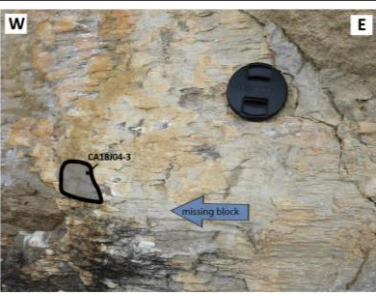

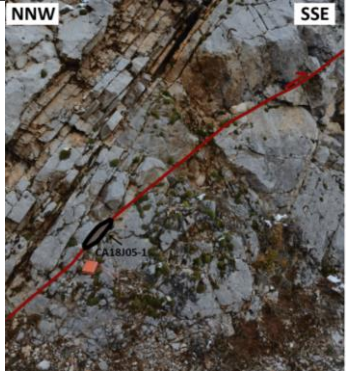







SAMPLE COLLECTION AND PREPARATION

More than twenty fault-related calcites were sampled focusing on simple objects: the faults are decimetric to metric within the same formation, and seem to have only played once during geological time (Table 1). Indeed, the slickensides present on these faults are all in the same direction, which allows us to analyze single-phase fluids that have not undergone secondary remobilization. The calcites were analysed from polished samples at LA-HR-ICPMS to date them using the U-Pb method.

Table 1 - Samples characteristics

| CHARACTERISTICS | | | | | ILLUSTRATIONS | | SAMPLE |
|-----------------|------------------------|----------------------|---------------------------|-----------------------|--|---|-------------------|
| N° Site | Host-rock stratigraphy | Host-rock lithology | Tectonic structure | Strike/ Dip/Pitch | Outcrop | Sample | |
| 7 | Kimmeridgian | Limestone | Normal fault | N137° - 83°N - 78°W | |  | CA18J03-1 dated |
| 8 | Bathonian | Dolostone/ Limestone | Dextral strike-slip fault | N120° - 89°W - 5°NW |  |  | CA18J03-2 dated |
| 9 | Hettangian | Dolostone/ Limestone | Reverse fault | N175° - 30°W - pV45° |  |  | CA18J03-4 dated |
| 11 | Oxfordian | Limestone | Dextral strike-slip fault | N120° - 60°SW - 12°NW |  |  | CA18J04-3 undated |

| | | | | | | | |
|----|-----------|-------------------------|---------------------------------|---------------------------|---|--|--------------------|
| 14 | Bathonian | Dolostone/ Limestone | Reverse fault | N100° - 30°N - Unknown |  |  | CA18J05-1 dated |
| 17 | Bathonian | Dolostone/ Limestone | Reverse fault | N90° - 52°N - 87°W |  |  | CA18J06-1 dated |
| 26 | Oxfordian | Limestone | Dextral strike-slip fault | N155° - 85°E - 9°S |  |  | CA18J09-4 dated |
| 21 | Oxfordian | Limestone | Strike-slip fault | - | - | - | NAV01 dated |

U-PB DATING

Calcite dating by the U-Pb method using LA-ICP-MS is a recent application in Earth Sciences. Only some studies have focused on this dating method since its first report by Li et al. (2014), such as Roberts and Walker (2016), Goodfellow et al. (2017), Nuriel et al. (2017), Beaudoin et al. (2018), Hansman et al. (2018), Parrish et al. (2018). In this contribution, the U-Pb method was applied to synkinematic fault-related calcites in the Grands Causses basin (South of the Massif Central, France).

U-Pb method/analysis

Samples were analysed by LA-HR-ICPMS using a Teledyne CETAC laser system (Analyte Excite Excimer) connected to a Thermo Element II high-resolution ICP-MS at GEOPS laboratory (Paris Sud University).

A "prescan" consisting in carrying out 2 random spots in each sample was carried out in order to select the most favourable ones for dating based on the observation of uranium and lead signals directly during the analysis. Once the samples selected and the ablation spots placed near the one with a relatively good signal during the prescan, the automatic analysis was started for several hours with the operating conditions listed in the table below (Table 2). Because of the low uranium content, the high common lead content and the low probability of having a "good" signal on a heterogeneous sample of uranium and lead, 7 samples out of 22 that had undergone a "prescan" could be dated.

Table 2 - LA-HR-ICPMS analysis conditions

| Laboratory & Sample Preparation | |
|--|--|
| Laboratory name | GEOPS laboratory |
| Sample type/mineral | Calcite |
| Sample preparation | In situ in polished fragments of fault-related calcite, 1µm polish to finish |
| Imaging | none |
| Laser ablation system | |
| Make, Model & type | Teledyne ArF 193 nm |
| Ablation cell & volume | HelEx |
| Laser wavelength (nm) | 193 |
| Pulse width (ns) | 5 |
| Fluence (J.cm ⁻²) | 4 |
| Repetition rate (Hz) | 8 |
| Gas blank (s) | 30 |
| Ablation duration (s) | 30 |
| Washout and/or travel time in between analyses (s) | 50 |
| Spot diameter (µm) | 150 |
| Sampling mode / pattern | Static spot ablation |
| Cell Carrier gas (L/min) | ~ 1 L/min |
| ICP-MS Instrument | |
| Make, Model & type | Thermo Scientific Element XR HF-ICP-MS |
| Sample introduction | Ablation aerosol |
| RF power (W) | 1175 |

| | |
|---|---|
| Carrier gas (L/min) | Ar = 1.1 |
| Masses measured | 206, 207, 208, 232, 238 |
| Integration time per peak/dwell times (ms); quadrupole settling time between mass jumps | 10ms (208, 232, 238) |
| | 30ms (206) |
| | 40ms (207) |
| Data Processing | |
| Calibration strategy | NIST614 for Pb-Pb; WC1 for Pb-U |
| Reference Material info | Primary: WC-1 (254 ± 6 Ma (2s) – (Roberts et al., 2017)) Secondary : Duff Brown (64.04 ± 0.67 Ma (2s) - (Hill et al., 2016) & B6 (42.99 ± 0.98 Ma (2s) – (Pagel et al., 2018) |
| Data processing package used / Correction for LIEF | Thermo element sequence software; Iolite [©] software (no correction for Down-Hole Fractionation as (Nuriel et al., 2017) |
| Common-Pb correction, composition and uncertainty | Unanchored (Model 1) regressions in Tera-Wasserburg plots |
| Uncertainty level & propagation | Ages in the data table are quoted at 2s absolute and include random and systematic uncertainties (except long term variance of validation material) , propagation is by quadratic addition |
| Quality control / Validation | Measurements of Duff Brown ((Hill et al., 2016) and B6 (Pagel et al., 2018)) |

The primary reference materials used were NIST614 and the 254.4 ± 6.4 Ma WC-1 calcite standard dated with ID-IRMS by (Roberts et al., 2017), with the NIST 614 being used in Iolite[©] data processing to correct for $^{207}\text{Pb}/^{206}\text{Pb}$ fractionation and for instrumental drift. The down-hole fractionation has not been corrected. Duff Brown (64.04 ± 0.67 Ma, (Hill et al., 2016)) and the B6 calcite ($42.99 \pm 98\text{Ma}$; (Pagel et al., 2018)) have been used as secondary reference materials in order to validate our results. The obtained ages correspond respectively to 62.8 ± 2.1 Ma and 41.52 ± 0.63 Ma (see Tables 3 & 4 in “results” below).

The ages were obtained from the ratios $^{238}\text{U}/^{206}\text{Pb}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ plotted on the Tera-Wasserburg diagram (Tera and Wasserburg, 1972) on which the different regression lines are not anchored at the common lead pole. No data were removed to obtain the ages of the fault-related calcites except for CA18J06.1 and NAV01 samples (Table 5).

Based on (Horstwood et al., 2016) study, the random uncertainties, associated with ratios $^{207}\text{Pb}/^{206}\text{Pb}$ and $^{238}\text{U}/^{206}\text{Pb}$ of NIST614 glass standard as well as the systematic uncertainties corresponding to the WC-1 primary standard, were propagated by quadratic

addition. Uncertainties associated with decay constants are directly propagated by “isoplot R” during data integration. Systematic long-term uncertainty was not propagated in this study.

Results

- **Secondary reference material - Duff Brown**

Table 3 - Table of U-Pb data for secondary reference material (Duff Brown). Individual spot analysis for Duff Brown are given with $^{238}\text{U}/^{206}\text{Pb}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ ratios corrected from the baseline and their standard error (2s). No data has been removed. See full-text for Tera-Wasserburg diagrams of Duff-Brown.

| DB | 238/206 | 2σ | 207/206 | 2σ | DB. 50 | 43.8462681 | 2.73101328 | 0.402 | 0.019 |
|--------|------------|------------|---------|--------|--------|------------|------------|-------|-------|
| DB. 1 | 33.6781755 | 2.50794924 | 0.434 | 0.013 | DB. 51 | 27.731341 | 1.80073643 | 0.486 | 0.017 |
| DB. 2 | 47.2499775 | 4.58395305 | 0.367 | 0.012 | DB. 52 | 6.88810728 | 0.96285371 | 0.64 | 0.028 |
| DB. 3 | 26.4916192 | 1.99518471 | 0.49 | 0.018 | DB. 53 | 9.67664619 | 0.55545703 | 0.651 | 0.019 |
| DB. 4 | 54.5818706 | 5.17586704 | 0.322 | 0.016 | DB. 54 | 9.84015326 | 0.72554125 | 0.664 | 0.023 |
| DB. 5 | 35.9744147 | 3.88360159 | 0.457 | 0.023 | DB. 55 | 19.7105839 | 1.94073442 | 0.561 | 0.027 |
| DB. 6 | 46.8999777 | 4.16888691 | 0.386 | 0.012 | DB. 56 | 28.7261873 | 1.28816984 | 0.495 | 0.015 |
| DB. 7 | 34.5417184 | 1.07412872 | 0.457 | 0.012 | DB. 57 | 15.8956322 | 1.65661675 | 0.618 | 0.024 |
| DB. 8 | 37.0262982 | 2.38180866 | 0.444 | 0.016 | DB. 58 | 29.7950687 | 1.52439886 | 0.474 | 0.011 |
| DB. 9 | 46.0807641 | 3.08546601 | 0.388 | 0.015 | DB. 59 | 23.6381541 | 2.18064153 | 0.489 | 0.012 |
| DB. 10 | 34.6741347 | 1.84194472 | 0.463 | 0.012 | DB. 60 | 52.0808112 | 5.50447598 | 0.365 | 0.019 |
| DB. 11 | 41.3553037 | 1.9988847 | 0.41 | 0.017 | DB. 61 | 3.33642697 | 0.34754448 | 0.648 | 0.025 |
| DB. 12 | 37.4644792 | 3.32524964 | 0.4226 | 0.0094 | DB. 62 | 37.0285536 | 2.78249247 | 0.455 | 0.015 |
| DB. 13 | 36.811029 | 2.35419372 | 0.444 | 0.013 | DB. 63 | 22.2428464 | 1.46741001 | 0.566 | 0.024 |
| DB. 14 | 45.4196341 | 1.40103606 | 0.392 | 0.014 | DB. 64 | 28.4708434 | 2.40420456 | 0.479 | 0.019 |
| DB. 15 | 40.0727658 | 3.0435012 | 0.434 | 0.017 | DB. 65 | 34.2563624 | 3.48059297 | 0.437 | 0.021 |
| DB. 16 | 47.6410609 | 2.65270015 | 0.393 | 0.018 | DB. 66 | 37.7263827 | 1.9329772 | 0.433 | 0.017 |
| DB. 17 | 30.0070947 | 2.70206066 | 0.489 | 0.022 | DB. 67 | 53.4686343 | 4.7431853 | 0.37 | 0.02 |
| DB. 18 | 40.0474193 | 2.12775662 | 0.43 | 0.014 | DB. 68 | 49.4784377 | 4.80014694 | 0.39 | 0.024 |
| DB. 19 | 37.7099285 | 1.88661941 | 0.446 | 0.011 | DB. 69 | 50.6115317 | 4.24982327 | 0.395 | 0.022 |
| DB. 20 | 49.081372 | 5.70713628 | 0.336 | 0.015 | DB. 70 | 43.0526666 | 3.35475324 | 0.464 | 0.018 |
| DB. 21 | 40.3280063 | 2.8255291 | 0.417 | 0.011 | DB. 71 | 63.143911 | 4.26973113 | 0.327 | 0.014 |
| DB. 22 | 43.877318 | 1.76360668 | 0.3983 | 0.0079 | DB. 72 | 45.7249011 | 5.04550633 | 0.418 | 0.021 |
| DB. 23 | 58.6249721 | 3.36550766 | 0.337 | 0.011 | DB. 73 | 57.1561263 | 4.43452704 | 0.371 | 0.016 |
| DB. 24 | 59.5625305 | 2.63352675 | 0.3162 | 0.0095 | DB. 74 | 49.4784377 | 4.0616628 | 0.408 | 0.024 |
| DB. 25 | 35.5702078 | 2.79765679 | 0.446 | 0.02 | DB. 75 | 51.7169318 | 2.90453907 | 0.386 | 0.016 |
| DB. 26 | 49.081372 | 6.46808779 | 0.34 | 0.028 | DB. 76 | 30.0005007 | 2.03623308 | 0.548 | 0.021 |
| DB. 27 | 55.2486648 | 3.13365027 | 0.326 | 0.012 | DB. 77 | 46.6909201 | 3.28809297 | 0.437 | 0.021 |
| DB. 28 | 58.6249721 | 2.44270717 | 0.293 | 0.014 | DB. 78 | 54.3006606 | 3.11305998 | 0.384 | 0.018 |
| DB. 29 | 39.8207358 | 3.75667319 | 0.448 | 0.016 | DB. 79 | 45.1027936 | 3.37503898 | 0.448 | 0.017 |
| DB. 30 | 47.9658863 | 4.72391304 | 0.375 | 0.021 | DB. 80 | 18.5717385 | 2.91321389 | 0.632 | 0.032 |
| DB. 31 | 60.4150476 | 2.82474936 | 0.293 | 0.011 | DB. 81 | 51.7977395 | 4.85603808 | 0.378 | 0.02 |
| DB. 32 | 59.5625305 | 3.92227388 | 0.337 | 0.013 | DB. 82 | 35.838436 | 3.29326168 | 0.51 | 0.025 |
| DB. 33 | 43.3961411 | 2.02257546 | 0.4002 | 0.0095 | DB. 83 | 52.1645213 | 2.1341897 | 0.407 | 0.011 |
| DB. 34 | 64.3444816 | 3.5310996 | 0.291 | 0.015 | DB. 84 | 37.8863466 | 4.32986818 | 0.524 | 0.049 |
| DB. 35 | 51.6435317 | 3.91749466 | 0.362 | 0.012 | DB. 85 | 48.3949683 | 4.23897532 | 0.389 | 0.028 |
| DB. 36 | 49.081372 | 3.80475752 | 0.382 | 0.018 | DB. 86 | 43.0526666 | 3.07519047 | 0.449 | 0.031 |
| DB. 37 | 65.4080268 | 2.90552185 | 0.295 | 0.013 | DB. 87 | 52.8716958 | 3.75245688 | 0.363 | 0.013 |
| DB. 38 | 47.6052405 | 3.93727553 | 0.377 | 0.017 | DB. 88 | 49.6637502 | 2.64129308 | 0.442 | 0.018 |
| DB. 39 | 52.7624749 | 4.39687291 | 0.366 | 0.031 | DB. 89 | 52.4119419 | 3.6874805 | 0.347 | 0.015 |
| DB. 40 | 55.9319522 | 2.32226303 | 0.335 | 0.016 | DB. 90 | 50.228111 | 4.56619191 | 0.397 | 0.031 |
| DB. 41 | 63.6331356 | 6.20343131 | 0.302 | 0.015 | DB. 91 | 55.9975562 | 3.6890282 | 0.374 | 0.022 |
| DB. 42 | 55.3452534 | 3.38651026 | 0.338 | 0.015 | DB. 92 | 43.0526666 | 3.63431601 | 0.42 | 0.021 |
| DB. 43 | 60.588488 | 2.72503247 | 0.2931 | 0.008 | DB. 93 | 50.4958923 | 3.23050644 | 0.393 | 0.02 |
| DB. 44 | 58.6249721 | 3.58263719 | 0.289 | 0.016 | DB. 94 | 51.5560704 | 3.1671303 | 0.385 | 0.015 |
| DB. 45 | 28.3448663 | 2.0067162 | 0.5056 | 0.0097 | DB. 95 | 30.9818255 | 2.17162328 | 0.559 | 0.022 |
| DB. 46 | 7.97750906 | 0.70535883 | 0.672 | 0.023 | DB. 96 | 40.1824888 | 2.67883259 | 0.453 | 0.024 |
| DB. 47 | 22.9603576 | 0.82295189 | 0.524 | 0.012 | DB. 97 | 55.1589905 | 3.44170074 | 0.357 | 0.015 |
| DB. 48 | 0.04965845 | 0.00423444 | 0.705 | 0.017 | DB. 98 | 34.0005675 | 2.2667045 | 0.508 | 0.018 |
| DB. 49 | 33.7154725 | 2.48429797 | 0.484 | 0.012 | DB. 99 | 57.5530439 | 3.39722829 | 0.36 | 0.02 |

| | | | | | | | | | |
|---------|------------|------------|--------|--------|---------|------------|------------|--------|--------|
| DB. 100 | 39.4649444 | 3.99347651 | 0.469 | 0.03 | DB. 107 | 43.5618309 | 2.28971516 | 0.423 | 0.021 |
| DB. 101 | 36.6304456 | 3.64280675 | 0.527 | 0.032 | DB. 108 | 40.9266609 | 3.28423405 | 0.442 | 0.019 |
| DB. 102 | 39.3945969 | 1.89599664 | 0.475 | 0.016 | DB. 109 | 55.528565 | 3.30194984 | 0.353 | 0.0094 |
| DB. 103 | 36.4291794 | 4.20336686 | 0.455 | 0.031 | DB. 110 | 61.2764386 | 3.22805638 | 0.3441 | 0.0089 |
| DB. 104 | 43.3340566 | 4.24843692 | 0.414 | 0.014 | | | | | |
| DB. 105 | 59.946751 | 2.16805609 | 0.3259 | 0.0095 | | | | | |
| DB. 106 | 44.798045 | 3.32958442 | 0.418 | 0.028 | | | | | |

• **Secondary reference material - B6**

Table 4 - Table of U-Pb data for secondary reference material (B6). Individual spot analysis for B6 are given with $^{238}\text{U}/^{206}\text{Pb}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ ratios corrected from the baseline and their standard error (2s). Because of their unstable signal, 9 data have been removed from the set. See full-text for Tera-Wasserburg diagrams of B6.

| B6 | 238/206 | 2σ | 207/206 | 2σ | | | | | |
|-------|------------|------------|---------|-------|-------|------------|------------|--------|-------|
| B6.1 | 120.830095 | 18.216751 | 0.099 | 0.021 | B6.46 | 127.10198 | 18.9139851 | 0.126 | 0.018 |
| B6.2 | 52.3264214 | 10.8112441 | 0.62 | 0.1 | B6.47 | 131.80946 | 11.6621539 | 0.081 | 0.019 |
| B6.3 | 97.5577348 | 12.476567 | 0.255 | 0.066 | B6.48 | 112.582421 | 10.2887274 | 0.205 | 0.094 |
| B6.4 | 97.7082869 | 9.0470636 | 0.251 | 0.028 | B6.49 | 58.2358161 | 12.1765797 | 0.415 | 0.082 |
| B6.5 | 136.749395 | 12.9956229 | 0.0594 | 0.009 | B6.50 | 77.3664224 | 8.68970686 | 0.376 | 0.063 |
| B6.6 | 21.6092047 | 2.13879501 | 0.713 | 0.071 | B6.51 | 149.67149 | 15.3867887 | 0.068 | 0.011 |
| B6.7 | 52.7624749 | 4.8365602 | 0.526 | 0.046 | B6.52 | 136.007214 | 15.5931838 | 0.0598 | 0.009 |
| B6.8 | 123.420994 | 16.6004846 | 0.123 | 0.044 | B6.53 | 125.853434 | 12.1155565 | 0.226 | 0.039 |
| B6.9 | 25.9487582 | 4.14754741 | 0.65 | 0.055 | B6.54 | 141.411474 | 12.1744978 | 0.096 | 0.027 |
| B6.10 | 109.163741 | 10.9163741 | 0.297 | 0.032 | B6.55 | 79.2814329 | 7.16280272 | 0.438 | 0.041 |
| B6.11 | 116.602155 | 9.87789891 | 0.267 | 0.041 | B6.56 | 146.254333 | 10.0174201 | 0.066 | 0.012 |
| B6.12 | 121.525854 | 11.8960049 | 0.161 | 0.065 | B6.57 | 100.249449 | 12.5507917 | 0.233 | 0.034 |
| B6.13 | 94.4999551 | 12.5529791 | 0.272 | 0.036 | B6.58 | 88.4798311 | 7.69921183 | 0.43 | 0.026 |
| B6.14 | 57.5590636 | 8.89549164 | 0.57 | 0.14 | B6.59 | 141.411474 | 12.1744978 | 0.1 | 0.02 |
| B6.15 | 133.575886 | 14.372089 | 0.087 | 0.015 | B6.60 | 143.953703 | 18.7625051 | 0.21 | 0.17 |
| B6.16 | 93.1102499 | 15.0619522 | 0.297 | 0.029 | B6.61 | 65.64466 | 9.74920692 | 0.516 | 0.064 |
| B6.17 | 121.759558 | 11.2393438 | 0.153 | 0.049 | B6.62 | 156.740205 | 12.5985034 | 0.056 | 0.011 |
| B6.18 | 137.045389 | 15.4250222 | 0.128 | 0.027 | B6.63 | 157.484814 | 13.0925617 | 0.048 | 0.011 |
| B6.19 | 142.280831 | 14.3879492 | 0.077 | 0.019 | B6.64 | 157.484814 | 14.9629277 | 0.049 | 0.01 |
| B6.20 | 90.449957 | 12.9214224 | 0.376 | 0.041 | B6.65 | 154.18862 | 13.6259711 | 0.0471 | 0.008 |
| B6.21 | 120.830095 | 11.9907728 | 0.177 | 0.023 | B6.66 | 158.615087 | 13.2811676 | 0.061 | 0.012 |
| B6.22 | 100.65973 | 15.0429485 | 0.306 | 0.023 | B6.67 | 158.236531 | 13.5955015 | 0.0561 | 0.007 |
| B6.23 | 131.631954 | 9.30454561 | 0.133 | 0.013 | B6.68 | 149.663897 | 13.5136702 | 0.061 | 0.015 |
| B6.24 | 76.0997234 | 5.76235887 | 0.394 | 0.041 | B6.69 | 159.761703 | 18.478462 | 0.0581 | 0.008 |
| B6.25 | 138.544792 | 21.8276259 | 0.0552 | 0.004 | B6.70 | 27.3971515 | 7.69837314 | 0.647 | 0.098 |
| B6.26 | 98.0107893 | 5.91706004 | 0.355 | 0.026 | B6.71 | 103.7576 | 14.4513716 | 0.267 | 0.051 |
| B6.27 | 111.470017 | 13.9337522 | 0.211 | 0.025 | B6.72 | 61.3899135 | 10.2316522 | 0.49 | 0.051 |
| B6.28 | 107.313508 | 25.4642223 | 0.211 | 0.087 | B6.73 | 157.484814 | 7.48146383 | 0.0469 | 0.009 |
| B6.29 | 65.2731649 | 8.0750307 | 0.489 | 0.051 | B6.74 | 152.767527 | 15.1359531 | 0.086 | 0.066 |
| B6.30 | 94.7828891 | 12.6282592 | 0.304 | 0.029 | B6.75 | 77.09431 | 12.5502365 | 0.389 | 0.064 |
| B6.31 | 79.5414195 | 7.99411251 | 0.4 | 0.048 | B6.76 | 169.135476 | 11.6496374 | 0.0496 | 0.007 |
| B6.32 | 78.2632508 | 7.64251769 | 0.389 | 0.038 | B6.77 | 154.548034 | 10.447303 | 0.0595 | 0.007 |
| B6.33 | 113.6714 | 14.0813763 | 0.194 | 0.026 | B6.78 | 151.718779 | 13.5401199 | 0.0905 | 0.007 |
| B6.34 | 82.2272336 | 17.0861784 | 0.265 | 0.073 | B6.79 | 165.752766 | 14.0889851 | 0.055 | 0.012 |
| B6.35 | 110.884361 | 17.0890083 | 0.173 | 0.029 | B6.80 | 111.995112 | 11.1616751 | 0.169 | 0.025 |
| B6.36 | 121.525854 | 20.9929498 | 0.179 | 0.048 | B6.81 | 4.63644102 | 0.42149464 | 0.787 | 0.056 |
| B6.37 | 113.264705 | 10.5362516 | 0.225 | 0.05 | B6.82 | 154.909127 | 13.3916769 | 0.048 | 0.015 |
| B6.38 | 92.7012737 | 9.63658921 | 0.325 | 0.049 | B6.83 | 152.767527 | 8.09597491 | 0.105 | 0.014 |
| B6.39 | 72.7758275 | 10.0380452 | 0.376 | 0.042 | B6.84 | 122.779827 | 9.32217205 | 0.245 | 0.025 |
| B6.40 | 127.138494 | 12.2543127 | 0.201 | 0.02 | B6.85 | 154.18862 | 8.60587646 | 0.0606 | 0.009 |
| B6.41 | 64.6071122 | 9.8888437 | 0.404 | 0.044 | B6.86 | 153.120338 | 7.07253296 | 0.0731 | 0.007 |
| B6.42 | 67.356351 | 10.7483539 | 0.417 | 0.064 | B6.87 | 32.1850032 | 3.90594699 | 0.667 | 0.07 |
| B6.43 | 42.4932684 | 5.13341497 | 0.535 | 0.039 | B6.88 | 2.05904058 | 0.17265247 | 0.811 | 0.052 |
| B6.44 | 139.867681 | 11.91013 | 0.072 | 0.011 | B6.89 | 142.583025 | 12.5718366 | 0.105 | 0.014 |
| B6.45 | 136.296591 | 12.4696881 | 0.178 | 0.031 | B6.90 | 145.079008 | 9.20632653 | 0.103 | 0.015 |
| | | | | | B6.91 | 109.952084 | 9.48177174 | 0.234 | 0.036 |

| | | | | | | | | | |
|-------|------------|------------|-------|-------|-------|------------|------------|--------|-------|
| B6.92 | 154.548034 | 15.4908286 | 0.085 | 0.018 | B6.97 | 144.446855 | 11.6438641 | 0.092 | 0.016 |
| B6.93 | 131.28932 | 7.01942899 | 0.19 | 0.031 | B6.98 | 131.28932 | 13.7788791 | 0.19 | 0.026 |
| B6.94 | 151.372389 | 12.7871653 | 0.054 | 0.01 | B6.99 | 163.706436 | 12.5306161 | 0.0629 | 0.008 |
| B6.95 | 136.985757 | 15.0005065 | 0.107 | 0.051 | B6.10 | 161.710016 | 6.70504944 | 0.059 | 0.013 |
| B6.96 | 157.859778 | 25.5582497 | 0.093 | 0.021 | B6.10 | 138.415671 | 9.53594395 | 0.118 | 0.016 |

• **Samples**

Table 5 - Table of U-Pb data for all samples. Individual spot analysis for each sample are given with $^{238}\text{U}/^{206}\text{Pb}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ ratios corrected from the baseline and their standard error (2s). Because of their unstable signal, 2 data have been removed from the CA18J06-1 sample, and 5 data from the NAV01 sample. See full-text for Tera-Wasserburg diagrams of samples.

| Sample | 238/206 | 2 σ | 207/206 | 2 σ | | | | | |
|--------------|------------|------------|---------|------------|--------------|------------|------------|-------|-------|
| CA18J03-1.1 | 4.27749075 | 0.77270801 | 0.789 | 0.059 | CA18J03-2.2 | 1.90652969 | 0.31208075 | 0.745 | 0.045 |
| CA18J03-1.2 | 8.84014754 | 2.00376678 | 0.713 | 0.093 | CA18J03-2.3 | 0.88971386 | 0.13592851 | 0.753 | 0.042 |
| CA18J03-1.3 | 11.4312253 | 2.56217118 | 0.76 | 0.15 | CA18J03-2.4 | 0.95611041 | 0.15697335 | 0.76 | 0.041 |
| CA18J03-1.4 | 4.42007377 | 0.82508044 | 0.741 | 0.039 | CA18J03-2.5 | 0.95043617 | 0.1353737 | 0.753 | 0.037 |
| CA18J03-1.5 | 4.0427504 | 0.64092384 | 0.883 | 0.08 | CA18J03-2.6 | 3.95428381 | 0.70786562 | 0.76 | 0.048 |
| CA18J03-1.6 | 7.53421665 | 2.39725075 | 0.709 | 0.094 | CA18J03-2.7 | 1.53988937 | 0.24801103 | 0.776 | 0.054 |
| CA18J03-1.7 | 11.6317731 | 3.6731915 | 0.616 | 0.099 | CA18J03-2.8 | 7.36314917 | 1.35414238 | 0.727 | 0.05 |
| CA18J03-1.8 | 12.0547466 | 2.19177212 | 0.66 | 0.1 | CA18J03-2.9 | 16.9022158 | 2.58661877 | 0.685 | 0.058 |
| CA18J03-1.9 | 16.5752766 | 2.56916788 | 0.6 | 0.16 | CA18J03-2.10 | 15.0374173 | 2.43563802 | 0.711 | 0.043 |
| CA18J03-1.10 | 3.4352905 | 1.35275688 | 0.76 | 0.2 | CA18J03-2.11 | 1.20866788 | 0.22805054 | 0.76 | 0.046 |
| CA18J03-1.11 | 14.8324623 | 2.62139714 | 0.565 | 0.06 | CA18J03-2.12 | 10.1681584 | 1.77539273 | 0.74 | 0.067 |
| CA18J03-1.12 | 2.7284406 | 0.32561637 | 0.784 | 0.042 | CA18J03-2.13 | 6.67285393 | 1.4596868 | 0.75 | 0.063 |
| CA18J03-1.13 | 34.8953192 | 4.77514895 | 0.35 | 0.13 | CA18J03-2.14 | 0.64059398 | 0.10249504 | 0.794 | 0.05 |
| CA18J03-1.14 | 12.4860841 | 1.45788553 | 0.667 | 0.047 | CA18J03-2.15 | 1.17756246 | 0.20131123 | 0.767 | 0.043 |
| CA18J03-1.15 | 18.3659575 | 3.00163848 | 0.49 | 0.13 | CA18J03-2.16 | 19.9561987 | 4.22748134 | 0.687 | 0.056 |
| CA18J03-1.16 | 18.2647676 | 3.32086685 | 0.66 | 0.13 | CA18J03-2.17 | 6.219359 | 1.08687827 | 0.737 | 0.053 |
| CA18J03-1.17 | 0.9608856 | 0.3202952 | 0.95 | 0.11 | CA18J03-2.18 | 7.27947702 | 1.07537729 | 0.736 | 0.046 |
| CA18J03-1.18 | 3.56457562 | 1.20735626 | 0.69 | 0.2 | CA18J03-2.19 | 1.94709416 | 0.40835713 | 0.763 | 0.046 |
| CA18J03-1.19 | 9.08234336 | 1.74181928 | 0.713 | 0.056 | CA18J03-2.20 | 8.42886812 | 1.77449855 | 0.757 | 0.053 |
| CA18J03-1.20 | 11.0501844 | 2.02586714 | 0.651 | 0.091 | CA18J03-2.21 | 4.64198534 | 0.90821452 | 0.745 | 0.05 |
| CA18J03-1.21 | 2.41094933 | 0.34191645 | 0.784 | 0.039 | CA18J03-2.22 | 4.10637165 | 0.65807238 | 0.749 | 0.044 |
| CA18J03-1.22 | 21.1150021 | 2.9587901 | 0.478 | 0.068 | CA18J03-2.23 | 2.56237591 | 0.40998015 | 0.766 | 0.047 |
| CA18J03-1.23 | 7.98808513 | 1.15490387 | 0.692 | 0.068 | CA18J03-2.24 | 7.27947702 | 1.24081995 | 0.746 | 0.044 |
| CA18J03-1.24 | 4.42007377 | 0.94294907 | 0.826 | 0.081 | CA18J03-2.25 | 2.38139025 | 0.41607934 | 0.75 | 0.044 |
| CA18J03-1.25 | 1.86239063 | 0.32434893 | 0.789 | 0.076 | CA18J03-2.26 | 3.29765468 | 0.48090797 | 0.75 | 0.048 |
| CA18J03-1.26 | 4.51027936 | 0.3375039 | 0.81 | 0.049 | CA18J03-2.27 | 6.46071122 | 1.12073562 | 0.725 | 0.033 |
| CA18J03-1.27 | 11.4312253 | 1.97090091 | 0.71 | 0.11 | CA18J03-2.28 | 1.30816054 | 0.16487147 | 0.727 | 0.046 |
| CA18J03-1.28 | 1.58995459 | 0.24020897 | 0.833 | 0.037 | CA18J03-2.29 | 7.91437124 | 1.18715569 | 0.758 | 0.06 |
| CA18J03-1.29 | 13.0257577 | 1.76577069 | 0.559 | 0.054 | CA18J03-2.30 | 5.91728691 | 0.99543144 | 0.745 | 0.041 |
| CA18J03-1.30 | 2.87017777 | 1.09340106 | 0.78 | 0.13 | CA18J03-2.31 | 13.8848618 | 1.73560773 | 0.726 | 0.046 |
| CA18J03-1.31 | 8.0855008 | 1.38045136 | 0.83 | 0.1 | CA18J03-2.32 | 7.19488294 | 1.30816054 | 0.769 | 0.049 |
| CA18J03-1.32 | 2.33454601 | 0.78914231 | 0.781 | 0.065 | CA18J03-2.33 | 2.4074133 | 0.50345145 | 0.76 | 0.054 |
| CA18J03-1.33 | 5.34686343 | 1.16423639 | 0.775 | 0.045 | CA18J03-2.34 | 1.00499952 | 0.15633326 | 0.767 | 0.039 |
| CA18J03-1.34 | 6.564466 | 1.36488897 | 0.687 | 0.056 | CA18J03-2.35 | 7.3622058 | 0.94167749 | 0.782 | 0.033 |
| CA18J03-1.35 | 29.2075359 | 4.88936725 | 0.501 | 0.066 | CA18J03-2.36 | 5.14755853 | 0.83700139 | 0.784 | 0.053 |
| CA18J03-1.36 | 13.7269372 | 2.13151198 | 0.573 | 0.071 | CA18J03-2.37 | 0.55056496 | 0.11011299 | 0.807 | 0.047 |
| CA18J03-1.37 | 14.7335792 | 1.63706436 | 0.635 | 0.043 | CA18J03-2.38 | 0.32636582 | 0.04878664 | 0.812 | 0.055 |
| CA18J03-1.38 | 7.05330921 | 0.72033796 | 0.775 | 0.075 | CA18J03-2.39 | 0.54581871 | 0.08469601 | 0.745 | 0.034 |
| CA18J03-1.39 | 15.1372389 | 2.66111278 | 0.665 | 0.06 | CA18J03-2.40 | 1.18567359 | 0.16208647 | 0.776 | 0.048 |
| CA18J03-1.40 | 22.8624505 | 4.25714596 | 0.414 | 0.062 | CA18J03-2.41 | 0.9311025 | 0.24646831 | 0.759 | 0.047 |
| CA18J03-1.41 | 10.7283344 | 1.30198233 | 0.682 | 0.057 | CA18J03-2.42 | 0.48703823 | 0.14985792 | 0.757 | 0.041 |
| CA18J03-1.42 | 8.84014754 | 1.41442361 | 0.7 | 0.083 | CA18J03-2.43 | 0.43968729 | 0.0580143 | 0.756 | 0.039 |
| CA18J03-1.43 | 6.69708147 | 1.42059304 | 0.718 | 0.062 | CA18J03-2.44 | 8.11730383 | 1.97729196 | 0.708 | 0.046 |
| CA18J03-2.1 | 4.51122519 | 1.14369089 | 0.732 | 0.037 | CA18J03-2.45 | 1.58287425 | 0.43529042 | 0.796 | 0.069 |
| | | | | | CA18J03-2.46 | 1.2662994 | 0.27858587 | 0.735 | 0.047 |

| | | | | | | | | | |
|--------------|------------|------------|-------|-------|--------------|------------|------------|-------|-------|
| CA18J03-2.47 | 1.4656243 | 0.20695158 | 0.76 | 0.04 | CA18J05-1.2 | 14.865719 | 3.09980238 | 0.687 | 0.063 |
| CA18J03-2.48 | 2.06911666 | 0.2839964 | 0.753 | 0.032 | CA18J05-1.3 | 3.94649444 | 1.19804295 | 0.766 | 0.055 |
| CA18J03-2.49 | 0.68820619 | 0.08976603 | 0.763 | 0.045 | CA18J05-1.4 | 2.00912444 | 0.53576652 | 0.844 | 0.068 |
| CA18J03-2.50 | 0.95931773 | 0.1744214 | 0.755 | 0.043 | CA18J05-1.5 | 0.1601476 | 0.03713568 | 0.82 | 0.11 |
| CA18J03-2.51 | 24.3519115 | 2.80983594 | 0.658 | 0.035 | CA18J05-1.6 | 0.6765419 | 0.08974535 | 0.795 | 0.049 |
| CA18J03-2.52 | 20.2932596 | 3.31716743 | 0.683 | 0.041 | CA18J05-1.7 | 12.2779827 | 2.7284406 | 0.712 | 0.047 |
| CA18J03-2.53 | 7.62830963 | 1.10288814 | 0.737 | 0.041 | CA18J05-1.8 | 2.97314379 | 0.4799694 | 0.799 | 0.074 |
| CA18J03-2.54 | 38.1415481 | 5.28467233 | 0.592 | 0.036 | CA18J05-1.9 | 19.6739189 | 4.26170943 | 0.568 | 0.061 |
| CA18J03-2.55 | 0.71140416 | 0.12789288 | 0.764 | 0.05 | CA18J05-1.10 | 53.0408852 | 5.09192498 | 0.353 | 0.031 |
| CA18J03-2.56 | 0.82227234 | 0.19221951 | 0.766 | 0.049 | CA18J05-1.11 | 6.26072772 | 0.5379851 | 0.838 | 0.044 |
| CA18J03-2.57 | 0.8556077 | 0.16187173 | 0.793 | 0.066 | CA18J05-1.12 | 2.00912444 | 0.3592071 | 0.886 | 0.055 |
| CA18J03-2.58 | 0.52326421 | 0.09946345 | 0.771 | 0.053 | CA18J05-1.13 | 19.5003255 | 6.88246781 | 0.587 | 0.052 |
| CA18J03-2.59 | 0.83528984 | 0.08595331 | 0.763 | 0.037 | CA18J05-1.14 | 1.70002837 | 0.47949518 | 0.79 | 0.056 |
| CA18J03-2.60 | 0.61470845 | 0.07758456 | 0.781 | 0.032 | CA18J05-1.15 | 17.0002837 | 6.10266596 | 0.563 | 0.053 |
| CA18J03-2.61 | 7.90449063 | 0.62170151 | 0.771 | 0.032 | CA18J05-1.16 | 19.3862885 | 2.77756765 | 0.689 | 0.046 |
| CA18J03-2.62 | 0.5106046 | 0.08235558 | 0.829 | 0.046 | CA18J05-1.17 | 22.8624505 | 5.04550633 | 0.619 | 0.075 |
| CA18J03-2.63 | 0.46215307 | 0.07084098 | 0.771 | 0.03 | CA18J05-1.18 | 4.73579333 | 0.91333157 | 0.83 | 0.066 |
| CA18J03-2.64 | 0.46215307 | 0.09445464 | 0.787 | 0.071 | CA18J05-1.19 | 10.0304246 | 1.21396969 | 0.78 | 0.059 |
| CA18J03-2.65 | 0.70349967 | 0.14069993 | 0.769 | 0.044 | CA18J05-1.20 | 2.08494046 | 0.41961066 | 0.91 | 0.12 |
| CA18J03-4.1 | 13.4212766 | 2.22782325 | 0.738 | 0.054 | CA18J05-1.21 | 0.39701261 | 0.05943303 | 0.826 | 0.038 |
| CA18J03-4.2 | 17.1320689 | 2.65613471 | 0.688 | 0.033 | CA18J05-1.22 | 0.88401475 | 0.2239504 | 0.812 | 0.061 |
| CA18J03-4.3 | 44.2007377 | 7.36678962 | 0.543 | 0.068 | CA18J05-1.23 | 3.76710833 | 0.94177708 | 0.803 | 0.081 |
| CA18J03-4.4 | 14.1066184 | 3.00140817 | 0.747 | 0.056 | CA18J05-1.24 | 40.6755255 | 6.73766373 | 0.418 | 0.056 |
| CA18J03-4.5 | 9.77892427 | 1.21154814 | 0.742 | 0.033 | CA18J05-1.25 | 2.93367728 | 0.77885238 | 0.812 | 0.077 |
| CA18J03-4.6 | 5.22055957 | 0.69881506 | 0.787 | 0.035 | CA18J05-1.26 | 2.50192855 | 0.60423935 | 0.819 | 0.063 |
| CA18J03-4.7 | 8.81663651 | 0.73862779 | 0.782 | 0.059 | CA18J05-1.27 | 2.10479703 | 0.20713876 | 0.833 | 0.029 |
| CA18J03-4.8 | 52.2055957 | 7.39921829 | 0.465 | 0.092 | CA18J05-1.28 | 24.465353 | 3.88195638 | 0.616 | 0.059 |
| CA18J03-4.9 | 11.6317731 | 2.04066194 | 0.753 | 0.054 | CA18J05-1.29 | 20.213752 | 3.08136463 | 0.605 | 0.045 |
| CA18J03-4.10 | 4.19627257 | 0.84987799 | 0.834 | 0.083 | CA18J05-1.30 | 23.0212176 | 3.91680438 | 0.579 | 0.054 |
| CA18J03-4.11 | 7.709431 | 1.07573456 | 0.787 | 0.036 | CA18J05-1.31 | 2.89524483 | 0.44250467 | 0.84 | 0.1 |
| CA18J03-4.12 | 8.28763832 | 1.76112314 | 0.761 | 0.038 | CA18J05-1.32 | 7.709431 | 1.70324638 | 0.738 | 0.044 |
| CA18J03-4.13 | 13.2602213 | 3.71286197 | 0.793 | 0.061 | CA18J05-1.33 | 7.36678962 | 2.37374332 | 0.726 | 0.042 |
| CA18J03-4.14 | 19.6739189 | 4.84550524 | 0.75 | 0.11 | CA18J05-1.34 | 4.11808115 | 1.73931378 | 0.765 | 0.093 |
| CA18J03-4.15 | 22.2486935 | 0.97058059 | 0.691 | 0.069 | CA18J05-1.35 | 24.1094933 | 4.20820247 | 0.654 | 0.046 |
| CA18J03-4.16 | 4.30526666 | 0.67095065 | 0.809 | 0.027 | CA18J05-1.36 | 1.32337538 | 0.17697834 | 0.803 | 0.044 |
| CA18J03-4.17 | 4.22300042 | 0.6724523 | 0.819 | 0.062 | CA18J05-1.37 | 4.11808115 | 0.46040659 | 0.792 | 0.034 |
| CA18J03-4.18 | 5.89343169 | 0.38241823 | 0.788 | 0.046 | CA18J05-1.38 | 16.8705106 | 3.26249059 | 0.699 | 0.052 |
| CA18J03-4.19 | 7.53421665 | 2.22601856 | 0.778 | 0.063 | CA18J05-1.39 | 2.89524483 | 0.64479252 | 0.813 | 0.082 |
| CA18J03-4.20 | 50.228111 | 6.84928787 | 0.465 | 0.065 | CA18J05-1.40 | 19.5003255 | 2.92504882 | 0.639 | 0.042 |
| CA18J03-4.21 | 5.36851065 | 0.26081833 | 0.786 | 0.017 | CA18J05-1.41 | 0.80855008 | 0.2366488 | 0.781 | 0.045 |
| CA18J03-4.22 | 10.2792413 | 1.19526062 | 0.745 | 0.079 | CA18J05-1.42 | 1.57859778 | 0.41344227 | 0.852 | 0.084 |
| CA18J03-4.23 | 7.80013018 | 0.91766237 | 0.807 | 0.059 | CA18J05-1.43 | 0.41698809 | 0.06556417 | 0.814 | 0.033 |
| CA18J03-4.24 | 16.5339418 | 1.44311213 | 0.737 | 0.032 | CA18J06-1.1 | 2.94671585 | 0.27502681 | 0.826 | 0.077 |
| CA18J03-4.25 | 27.8576078 | 3.74556071 | 0.637 | 0.056 | CA18J06-1.2 | 5.13962066 | 0.51794627 | 0.755 | 0.051 |
| CA18J03-4.26 | 8.53296095 | 0.82364488 | 0.81 | 0.055 | CA18J06-1.3 | 8.0855008 | 1.57765869 | 0.856 | 0.094 |
| CA18J03-4.27 | 5.93033153 | 0.3341779 | 0.777 | 0.038 | CA18J06-1.4 | 4.70220614 | 0.40018776 | 0.74 | 0.061 |
| CA18J03-4.28 | 16.1316561 | 3.84647761 | 0.687 | 0.091 | CA18J06-1.5 | 2.38493189 | 0.27452453 | 0.77 | 0.1 |
| CA18J03-4.29 | 3.51543513 | 0.17148464 | 0.813 | 0.028 | CA18J06-1.6 | 2.04633045 | 0.1642117 | 0.844 | 0.065 |
| CA18J03-4.30 | 3.3317139 | 0.65294895 | 0.813 | 0.037 | CA18J06-1.7 | 6.564466 | 0.97492069 | 0.749 | 0.056 |
| CA18J03-4.31 | 2.88265681 | 0.33839884 | 0.819 | 0.024 | CA18J06-1.8 | 9.31195317 | 1.09860122 | 0.737 | 0.075 |
| CA18J03-4.32 | 4.70220614 | 0.56693266 | 0.804 | 0.046 | CA18J06-1.9 | 14.4446855 | 1.76231457 | 0.699 | 0.066 |
| CA18J03-4.33 | 0.94177708 | 0.06287432 | 0.843 | 0.018 | CA18J06-1.10 | 10.7982258 | 1.03761453 | 0.737 | 0.072 |
| CA18J03-4.34 | 30.709174 | 1.28014157 | 0.637 | 0.059 | CA18J06-1.11 | 1.36703312 | 0.25085762 | 0.827 | 0.077 |
| CA18J03-4.35 | 80.6582805 | 7.55558102 | 0.306 | 0.06 | CA18J06-1.12 | 7.62081685 | 1.13874275 | 0.776 | 0.056 |
| CA18J03-4.36 | 4.54117168 | 1.5862997 | 0.822 | 0.056 | CA18J06-1.13 | 9.47158665 | 1.35308381 | 0.656 | 0.074 |
| CA18J03-4.37 | 4.4497387 | 1.13483269 | 0.815 | 0.055 | CA18J06-1.14 | 3.4352905 | 0.37378808 | 0.837 | 0.046 |
| CA18J03-4.38 | 20.213752 | 3.51275568 | 0.659 | 0.045 | CA18J06-1.15 | 2.71725847 | 0.46772482 | 0.811 | 0.083 |
| CA18J03-4.39 | 13.000217 | 1.4274748 | 0.784 | 0.047 | CA18J06-1.16 | 7.36678962 | 1.47335792 | 0.79 | 0.11 |
| CA18J03-4.40 | 7.03087026 | 0.58155661 | 0.78 | 0.02 | CA18J06-1.17 | 0.55250922 | 0.10129336 | 0.883 | 0.052 |
| CA18J03-4.41 | 9.76452232 | 1.20798214 | 0.746 | 0.031 | CA18J06-1.18 | 1.72210666 | 0.33547532 | 0.904 | 0.083 |
| CA18J03-4.42 | 29.5987083 | 7.79608834 | 0.581 | 0.089 | CA18J06-1.19 | 8.28763832 | 2.07190958 | 0.78 | 0.15 |
| CA18J03-4.43 | 21.1150021 | 1.1431689 | 0.674 | 0.022 | CA18J06-1.20 | 30.5535053 | 3.23838997 | 0.62 | 0.11 |
| CA18J05-1.1 | 3.48953192 | 0.58771064 | 0.821 | 0.04 | CA18J06-1.21 | 20.0912444 | 2.49618491 | 0.633 | 0.056 |

| | | | | | | | | | |
|--------------|------------|------------|-------|-------|--------------|------------|------------|-------|-------|
| CA18J06-1.22 | 3.04133516 | 0.96262443 | 0.71 | 0.12 | CA18J09-4.44 | 13.2081232 | 0.76253083 | 0.717 | 0.019 |
| CA18J06-1.23 | 10.4411191 | 1.26608846 | 0.72 | 0.083 | CA18J09-4.45 | 1.71281812 | 0.15113101 | 0.8 | 0.035 |
| CA18J06-1.24 | 16.9568047 | 2.38522829 | 0.624 | 0.054 | CA18J09-4.46 | 6.10089502 | 0.81345267 | 0.769 | 0.023 |
| CA18J06-1.25 | 5.97307266 | 0.86098345 | 0.79 | 0.1 | CA18J09-4.47 | 4.74514057 | 0.56238703 | 0.686 | 0.024 |
| CA18J06-1.26 | 1.70439863 | 0.2453633 | 0.92 | 0.12 | CA18J09-4.48 | 10.7122739 | 1.11063709 | 0.713 | 0.022 |
| CA18J06-1.27 | 0.49111931 | 0.10913762 | 0.896 | 0.071 | CA18J09-4.49 | 6.47064624 | 0.84968082 | 0.748 | 0.024 |
| CA18J06-1.28 | 2.98653633 | 0.49775606 | 0.72 | 0.14 | CA18J09-4.50 | 9.15134253 | 1.56880158 | 0.717 | 0.028 |
| CA18J06-1.29 | 2.05904058 | 0.36448855 | 0.82 | 0.062 | CA18J09-4.51 | 5.45818706 | 0.70580005 | 0.766 | 0.024 |
| CA18J06-1.30 | 2.88265681 | 0.62666452 | 0.87 | 0.11 | CA18J09-4.52 | 5.55394473 | 0.77950101 | 0.709 | 0.021 |
| CA18J06-1.31 | 5.0228111 | 0.38051599 | 0.93 | 0.19 | CA18J09-4.53 | 22.3727809 | 2.52978441 | 0.543 | 0.025 |
| CA18J06-1.32 | 3.01368666 | 0.57534018 | 0.78 | 0.16 | CA18J09-4.54 | 4.5880413 | 0.79792023 | 0.733 | 0.017 |
| CA18J06-1.33 | 1.06937269 | 0.22422331 | 0.9 | 0.11 | CA18J09-4.55 | 12.0599943 | 1.69988491 | 0.64 | 0.024 |
| CA18J06-1.34 | 0.69790638 | 0.21304511 | 0.866 | 0.08 | CA18J09-4.56 | 1.55565037 | 0.13377829 | 0.807 | 0.024 |
| CA18J06-1.35 | 1.44762241 | 0.30027102 | 0.9 | 0.12 | CA18J09-4.57 | 3.61799828 | 0.33078841 | 0.777 | 0.043 |
| CA18J06-1.36 | 3.70397243 | 0.60008492 | 0.72 | 0.1 | CA18J09-4.58 | 4.4588007 | 0.94200015 | 0.76 | 0.029 |
| CA18J06-1.37 | 2.13874537 | 0.13108439 | 0.861 | 0.06 | CA18J09-4.59 | 8.79374582 | 1.58775966 | 0.684 | 0.026 |
| CA18J06-1.38 | 18.1646867 | 2.1399494 | 0.644 | 0.093 | CA18J09-4.60 | 6.80806128 | 1.17127936 | 0.687 | 0.024 |
| CA18J06-1.39 | 5.52509221 | 0.69063653 | 0.88 | 0.12 | CA18J09-4.61 | 7.91437124 | 1.48394461 | 0.683 | 0.021 |
| CA18J06-1.40 | 1.38127305 | 0.23884513 | 0.877 | 0.081 | CA18J09-4.62 | 8.22272336 | 2.02898369 | 0.677 | 0.028 |
| CA18J06-1.41 | 2.09151756 | 0.29690312 | 0.804 | 0.068 | CA18J09-4.63 | 5.18975163 | 1.36124633 | 0.731 | 0.033 |
| CA18J09-4.1 | 3.51974713 | 0.52216029 | 0.775 | 0.031 | CA18J09-4.64 | 6.42139654 | 0.50798066 | 0.748 | 0.024 |
| CA18J09-4.2 | 8.65667537 | 1.169821 | 0.697 | 0.032 | CA18J09-4.65 | 1.42601284 | 0.13168137 | 0.818 | 0.032 |
| CA18J09-4.3 | 4.13286437 | 0.61326375 | 0.765 | 0.037 | CA18J09-4.66 | 6.957689 | 1.14687181 | 0.705 | 0.014 |
| CA18J09-4.4 | 2.50232022 | 0.48873442 | 0.77 | 0.032 | CA18J09-4.67 | 11.6174257 | 1.66267744 | 0.673 | 0.036 |
| CA18J09-4.5 | 4.21443406 | 0.52680426 | 0.761 | 0.035 | CA18J09-4.68 | 7.19488294 | 1.38992057 | 0.664 | 0.033 |
| CA18J09-4.6 | 6.34251463 | 0.94195762 | 0.713 | 0.024 | CA18J09-4.69 | 5.50564956 | 1.0532547 | 0.696 | 0.022 |
| CA18J09-4.7 | 4.24234422 | 0.50570991 | 0.79 | 0.038 | CA18J09-4.70 | 7.50177369 | 0.59551995 | 0.681 | 0.024 |
| CA18J09-4.8 | 4.81649607 | 0.68807087 | 0.75 | 0.027 | CA18J09-4.71 | 2.05568084 | 0.09344004 | 0.79 | 0.019 |
| CA18J09-4.9 | 3.61917501 | 0.38849901 | 0.797 | 0.038 | CA18J09-4.72 | 6.65073213 | 0.57285718 | 0.731 | 0.027 |
| CA18J09-4.10 | 4.02889294 | 0.40542319 | 0.754 | 0.028 | CA18J09-4.73 | 3.76874821 | 0.4486605 | 0.76 | 0.026 |
| CA18J09-4.11 | 4.24234422 | 0.61808989 | 0.764 | 0.027 | CA18J09-4.74 | 5.75590636 | 0.78489632 | 0.74 | 0.026 |
| CA18J09-4.12 | 4.57567127 | 0.68635069 | 0.726 | 0.023 | CA18J09-4.75 | 7.3622058 | 1.19849862 | 0.686 | 0.027 |
| CA18J09-4.13 | 8.58705064 | 1.10503601 | 0.664 | 0.023 | CA18J09-4.76 | 3.65982485 | 0.65580677 | 0.733 | 0.029 |
| CA18J09-4.14 | 5.87700897 | 1.13226778 | 0.696 | 0.031 | CA18J09-4.77 | 3.65982485 | 0.67696182 | 0.747 | 0.013 |
| CA18J09-4.15 | 22.9603576 | 2.1396749 | 0.551 | 0.017 | CA18J09-4.78 | 1.67057968 | 0.07934152 | 0.81 | 0.018 |
| CA18J09-4.16 | 4.92764598 | 0.37904969 | 0.754 | 0.02 | CA18J09-4.79 | 4.50961324 | 0.26016999 | 0.773 | 0.031 |
| CA18J09-4.17 | 5.42876252 | 0.82811632 | 0.742 | 0.033 | CA18J09-4.80 | 1.57499925 | 0.09402981 | 0.821 | 0.024 |
| CA18J09-4.18 | 9.02245039 | 1.77907472 | 0.687 | 0.036 | CA18J09-4.81 | 2.51249881 | 0.13958327 | 0.81 | 0.02 |
| CA18J09-4.19 | 10.5708577 | 1.13383787 | 0.685 | 0.025 | CA18J09-4.82 | 4.36654965 | 0.75285339 | 0.725 | 0.026 |
| CA18J09-4.20 | 10.3488526 | 1.25389975 | 0.699 | 0.025 | CA18J09-4.83 | 4.5880413 | 0.8311669 | 0.711 | 0.025 |
| CA18J09-4.21 | 14.7262983 | 1.86194577 | 0.597 | 0.03 | CA18J09-4.84 | 5.45818706 | 0.47053337 | 0.74 | 0.017 |
| CA18J09-4.22 | 11.4391782 | 2.6555235 | 0.65 | 0.031 | CA18J09-4.85 | 1.33294673 | 0.151535 | 0.796 | 0.049 |
| CA18J09-4.23 | 1.7266684 | 0.35371105 | 0.797 | 0.029 | CA18J09-4.86 | 1.00499952 | 0.20738085 | 0.805 | 0.05 |
| CA18J09-4.24 | 1.51440657 | 0.2685118 | 0.796 | 0.038 | CA18J09-4.87 | 0.80145532 | 0.11159504 | 0.858 | 0.065 |
| CA18J09-4.25 | 4.02889294 | 0.58279583 | 0.76 | 0.023 | CA18J09-4.88 | 1.69291363 | 0.12221569 | 0.82 | 0.024 |
| CA18J09-4.26 | 6.28033311 | 0.80043461 | 0.728 | 0.034 | CA18J09-4.89 | 6.7356351 | 1.0031797 | 0.78 | 0.029 |
| CA18J09-4.27 | 5.2941651 | 0.78756175 | 0.752 | 0.035 | CA18J09-4.90 | 6.97301431 | 0.64508062 | 0.755 | 0.026 |
| CA18J09-4.28 | 1.69469306 | 0.23313238 | 0.808 | 0.038 | NAV01.1 | 1.22779827 | 0.29558106 | 0.88 | 0.17 |
| CA18J09-4.29 | 1.70825061 | 0.21865608 | 0.827 | 0.046 | NAV01.2 | 1.8416974 | 0.51158261 | 0.85 | 0.13 |
| CA18J09-4.30 | 3.59884257 | 0.34370968 | 0.778 | 0.024 | NAV01.3 | 2.16670283 | 0.54521607 | 1.02 | 0.25 |
| CA18J09-4.31 | 5.12475182 | 0.65596823 | 0.761 | 0.028 | NAV01.4 | 11.6317731 | 3.4691253 | 1.05 | 0.28 |
| CA18J09-4.32 | 9.57539578 | 1.13072686 | 0.717 | 0.029 | NAV01.5 | 3.9231424 | 1.27676232 | 0.93 | 0.18 |
| CA18J09-4.33 | 6.10089502 | 0.69724515 | 0.734 | 0.032 | NAV01.6 | 4.0427504 | 0.73952751 | 0.74 | 0.13 |
| CA18J09-4.34 | 6.48374471 | 0.53812456 | 0.655 | 0.024 | NAV01.7 | 21.5263333 | 5.94070887 | 0.57 | 0.18 |
| CA18J09-4.35 | 18.3551283 | 1.57780472 | 0.605 | 0.022 | NAV01.8 | 2.43754068 | 0.69900064 | 0.86 | 0.2 |
| CA18J09-4.36 | 4.15970115 | 0.81033139 | 0.774 | 0.031 | NAV01.9 | 2.17380677 | 0.62006947 | 0.92 | 0.23 |
| CA18J09-4.37 | 5.25077031 | 0.77470382 | 0.735 | 0.023 | NAV01.10 | 1.16317731 | 0.22447281 | 0.84 | 0.12 |
| CA18J09-4.38 | 5.61924542 | 0.83795765 | 0.773 | 0.036 | NAV01.11 | 2.33454601 | 0.28770813 | 0.93 | 0.064 |
| CA18J09-4.39 | 5.61924542 | 0.7393744 | 0.781 | 0.031 | NAV01.12 | 0.75342167 | 0.22260186 | 0.817 | 0.093 |
| CA18J09-4.40 | 2.9934298 | 0.34969974 | 0.772 | 0.039 | NAV01.13 | 16.3706436 | 2.42528053 | 0.838 | 0.085 |
| CA18J09-4.41 | 9.20393646 | 0.71409852 | 0.72 | 0.036 | NAV01.14 | 2.55004256 | 0.71597349 | 1.1 | 0.32 |
| CA18J09-4.42 | 4.92764598 | 0.41695466 | 0.731 | 0.023 | NAV01.15 | 1.88892041 | 0.34980008 | 0.89 | 0.094 |
| CA18J09-4.43 | 6.219359 | 0.84534977 | 0.705 | 0.028 | NAV01.16 | 141.669031 | 24.2169284 | 0.38 | 0.16 |

| | | | | | | | | | |
|----------|------------|------------|-------|-------|----------|------------|------------|-------|-------|
| NAV01.17 | 3.02744779 | 0.52531058 | 0.75 | 0.1 | NAV01.29 | 3.99404256 | 0.9142989 | 0.77 | 0.21 |
| NAV01.18 | 0.44497387 | 0.06570084 | 0.837 | 0.099 | NAV01.30 | 1.17555153 | 0.1667449 | 0.9 | 0.14 |
| NAV01.19 | 10.3433864 | 1.5490875 | 0.86 | 0.14 | NAV01.31 | 11.105713 | 1.35798501 | 0.81 | 0.093 |
| NAV01.20 | 1.7919218 | 0.53273351 | 0.81 | 0.12 | NAV01.32 | 5.52509221 | 2.25607932 | 0.94 | 0.41 |
| NAV01.21 | 18.416974 | 5.62740874 | 0.87 | 0.29 | NAV01.33 | 72.0664202 | 20.366597 | 0.59 | 0.19 |
| NAV01.22 | 53.9033387 | 6.57357789 | 0.54 | 0.079 | NAV01.34 | 8.84014754 | 1.65016087 | 0.98 | 0.22 |
| NAV01.23 | 15.8236531 | 3.43664065 | 0.728 | 0.098 | NAV01.35 | 1.81150564 | 0.48504796 | 0.88 | 0.18 |
| NAV01.24 | 17.6802951 | 3.67750138 | 1.03 | 0.33 | NAV01.36 | 2.88265681 | 0.37599871 | 0.86 | 0.16 |
| NAV01.25 | 2.13874537 | 0.75890965 | 0.919 | 0.082 | NAV01.37 | 35.0799506 | 8.16676098 | 0.71 | 0.21 |
| NAV01.26 | 2.22486935 | 0.31357219 | 0.92 | 0.14 | NAV01.38 | 3.70397243 | 0.82770334 | 0.835 | 0.059 |
| NAV01.27 | 8.72382981 | 1.95138298 | 0.72 | 0.18 | | | | | |
| NAV01.28 | 4.70220614 | 0.53358368 | 0.97 | 0.29 | | | | | |

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