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Supplemental Material

Text. Analytical Methods

Table S1. Major, REE and trace element analyses for the selected samples from the study area.

Table S2. U–Pb isotopic data for zircons from selected samples in the study area.

ANALYTICAL METHODS

1. Major and trace element analyses

After petrographic examination and removal of altered surfaces, whole-rock samples were crushed and pulverized in an agate mill to ~200 mesh. Chemical analyses were conducted in the Key Laboratory of Mineral Resources Evaluation in Northeast Asia, Ministry of Natural Resources of China, Changchun, China. Major element compositions were analyzed by X-ray fluorescence (XRF; PW2404) using fused glass disks (Liu et al., 2009). Trace element compositions were determined by an Agilent 7500a inductively coupled plasma mass spectrometer (ICP-MS) after acid digestion of samples in Teflon bombs. The repeated analyses of the U.S. Geological Survey basalt and andesite standards (BHVO-1, BCR-2, AGV-1) yielded analytical uncertainties (2σ) of <5% for major elements and <10% for trace and rare earth elements (Liu et al., 2009).

2. Zircon U–Pb dating

Zircon U–Pb dating was performed simultaneously with trace element measurements by LA-ICP-MS in the CAS Key Laboratory of Crust-Mantle Materials and Environments at the University of Science and Technology of China (USTC), Hefei. Detailed operating conditions for the LA-ICP-MS and data processing procedures are the same as those described by Liu et al. (2008, 2010a, 2010b). Laser ablation was performed using a GeoLas 2005 system, which was coupled to an Agilent 7500a ICP-MS. Helium was used as the carrier gas and argon was mixed via a T-connector before entering the ICP-MS plasma source. Nitrogen was added into the central gas flow (Ar+He) of the Ar plasma in order to improve the detection limits and precision (Hu et al., 2008). Each U–Pb analysis incorporated a background measurement of ~20–30s (gas blank) followed by 50s of data acquisition. An Agilent Chemstation was utilized for the acquisition of each analysis. Offline selection and integration of background and analyte signals, time-drift correction, and quantitative calibration of trace element analyses and U–Pb dates were performed using the in-house software ICPMSDataCal (Liu et al., 2008, 2010a). Standards 91500, BCR-2G, and BIR-1G were added on the same mount and run in parallel to the unknowns. Zircon 91500 was used as the external standard for U–Pb dating, and was analyzed twice every five analyses. Time-dependent drift of U–Th–Pb isotopic ratios was corrected using a linear interpolation with time for every five analyses according to the variations measured for

91500 (i.e., two 91500 analyses +five sample analyses +two 91500 analyses) (Liu et al., 2010a). Preferred U-Th-Pb isotopic ratios used for 91500 were taken from Wiedenbeck et al. (1995). Common Pb correction of the samples was calculated using ComPbCorr#3.17 (Andersen, 2002). Uncertainties in the values for the external standard 91500 were propagated through the calculations. Concordia diagrams and weighted mean calculations were made using Isoplot/Ex_ver3 (Ludwig, 2003). Trace element compositions of zircons were calibrated against reference materials (BCR-2G and BIR-1G), combined with internal standardization (Liu et al., 2010a). The preferred values of element concentrations for the USGS reference glasses were taken from the GeoReM database (<http://georem.mpch-mainz.gwdg.de/>).

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TABLE S1. MAJOR, REE AND TRACE ELEMENT ANALYSES FOR THE SELECTED SAMPLES FROM THE STUDY AREA

| Sample no. | 14JH-01 | 14JH-02 | 14JH-03 | 14JH-04 | 14JH-05 | 14JH-06 | 14JH-07 | 14JH-08 | 14JH-09 | 14JH-10 |
|---------------------------------|---------|-----------|----------|---------|----------|---------|-----------|---------|---------|---------|
| <u>Major element (wt%)</u> | | | | | | | | | | |
| SiO ₂ | 75.99 | 74.93 | 75.98 | 76.46 | 78.13 | 75.97 | 76.65 | 76.38 | 77.76 | 79.66 |
| Na ₂ O | 2.10 | 2.24 | 2.29 | 2.19 | 2.37 | 2.45 | 2.43 | 2.69 | 3.41 | 2.05 |
| MgO | 1.21 | 1.25 | 1.15 | 1.04 | 1.00 | 1.09 | 1.23 | 1.05 | 0.16 | 0.86 |
| Al ₂ O ₃ | 11.57 | 11.77 | 10.68 | 11.24 | 10.44 | 11.10 | 11.20 | 11.12 | 10.86 | 9.26 |
| P ₂ O ₅ | 0.11 | 0.09 | 0.21 | 0.10 | 0.10 | 0.12 | 0.10 | 0.13 | 0.02 | 0.10 |
| K ₂ O | 2.43 | 2.43 | 2.11 | 2.26 | 1.88 | 2.20 | 1.89 | 1.95 | 3.23 | 1.63 |
| CaO | 1.09 | 1.11 | 1.37 | 1.04 | 1.21 | 1.05 | 1.60 | 1.36 | 1.10 | 0.78 |
| TiO ₂ | 0.48 | 0.46 | 0.44 | 0.44 | 0.41 | 0.44 | 0.47 | 0.43 | 0.15 | 0.34 |
| MnO | 0.07 | 0.07 | 0.06 | 0.05 | 0.06 | 0.06 | 0.09 | 0.04 | 0.05 | 0.06 |
| TFe ₂ O ₃ | 3.48 | 3.55 | 3.17 | 2.98 | 2.80 | 3.21 | 3.19 | 2.93 | 2.10 | 2.65 |
| LOI | 1.78 | 1.80 | 2.27 | 2.05 | 1.76 | 2.27 | 1.31 | 1.79 | 1.07 | 2.53 |
| <u>Trace element (ppm)</u> | | | | | | | | | | |
| Li | 36.5 | 41.7 | 29.9 | 36.9 | 28.7 | 41.1 | 34.2 | 21.2 | 14.6 | 29.8 |
| Be | 1.84 | 2.07 | 1.23 | 2.95 | 2.88 | 1.46 | 1.95 | 1.78 | 1.52 | 1.28 |
| Sc | 14.31 | 13.86 | 8.91 | 11.43 | 8.856 | 13.32 | 11.97 | 9.36 | 7.56 | 8.379 |
| V | 106 | 104 | 78.4 | 87.3 | 73.8 | 94.1 | 90.9 | 77.7 | 3.51 | 71.4 |
| Cr | 60.8 | 53.3 | 45.6 | 55.1 | 47.8 | 51.5 | 64.7 | 62.6 | 4.08 | 39.3 |
| Co | 13.1 | 13.3 | 9.28 | 9.22 | 9.68 | 9.95 | 10.7 | 10.9 | 0.709 | 7.68 |
| Ni | 29.1 | 29.1 | 20.8 | 19.3 | 19.9 | 23.1 | 26.9 | 30.7 | 1.88 | 18.2 |
| Cu | 28.1 | 23.0 | 13.8 | 9.9 | 11.6 | 16.9 | 19.8 | 17.0 | 3.5 | 10.6 |
| Zn | 108 | 135 | 89.3 | 123 | 85.7 | 117 | 106 | 76.5 | 72.7 | 90.1 |
| Ga | 20.4 | 21.3 | 15.8 | 18.8 | 15.8 | 19.3 | 18.5 | 16.9 | 15.7 | 16.6 |
| Ge | 1.42 | 1.4 | 1.3 | 1.27 | 1.03 | 1.24 | 1.33 | 1.08 | 0.879 | 0.998 |
| As | 0.887 | 0.395 | -0.131 | 0.163 | 0.0871 | -0.0568 | -0.168 | 0.129 | 0.771 | 1.1 |
| Rb | 115 | 118 | 93.2 | 109 | 82.9 | 113 | 102 | 83.1 | 108 | 78.6 |
| Sr | 234 | 218 | 202 | 228 | 211 | 221 | 260 | 271 | 141 | 207 |
| Y | 29.1 | 29 | 28 | 27.5 | 25.4 | 33.2 | 26.4 | 25.4 | 36.9 | 22.7 |
| Zr | 215 | 209 | 180 | 214 | 188 | 205 | 200 | 203 | 258 | 194 |
| Nb | 12.1 | 12.5 | 9.92 | 12 | 10.6 | 12.4 | 11.8 | 10.9 | 6.65 | 10.3 |
| Cs | 5.02 | 5.99 | 5.58 | 6.06 | 4.63 | 7.25 | 6.22 | 3.52 | 1.63 | 2.28 |
| Ba | 467 | 478 | 385 | 470 | 346 | 510 | 401 | 361 | 528 | 398 |
| La | 33.1 | 33.6 | 26.1 | 26 | 28.4 | 32.6 | 27.7 | 29.5 | 26.3 | 27.4 |
| Ce | 66.3 | 70.4 | 53.5 | 55.3 | 58 | 66.7 | 57.4 | 60.4 | 56.6 | 56.3 |
| Pr | 7.47 | 7.51 | 6.07 | 6 | 6.6 | 7.69 | 6.26 | 6.8 | 6.33 | 6.46 |
| Nd | 27.5 | 29.2 | 22.7 | 22 | 24.2 | 28.6 | 23.3 | 25.7 | 24.4 | 23.5 |
| Sm | 5.45 | 5.46 | 4.78 | 4.38 | 4.74 | 5.97 | 4.65 | 4.89 | 5.26 | 4.69 |
| Eu | 1.10 | 1.06 | 0.97 | 0.92 | 1.04 | 1.19 | 1.02 | 1.07 | 0.87 | 0.80 |
| Gd | 5.25 | 5.61 | 4.47 | 4.26 | 4.45 | 5.66 | 4.48 | 4.61 | 5.72 | 4.06 |
| Tb | 0.838 | 0.849 | 0.765 | 0.733 | 0.741 | 0.952 | 0.727 | 0.747 | 0.976 | 0.666 |
| Dy | 4.71 | 4.49 | 4.43 | 4.22 | 4.14 | 5.15 | 4.07 | 4.17 | 5.76 | 3.64 |
| Ho | 0.985 | 0.943 | 0.952 | 0.884 | 0.836 | 1.09 | 0.841 | 0.817 | 1.26 | 0.815 |
| Er | 2.97 | 2.8 | 2.8 | 2.74 | 2.59 | 3.17 | 2.65 | 2.5 | 3.89 | 2.45 |
| Tm | 0.441 | 0.417 | 0.406 | 0.402 | 0.382 | 0.471 | 0.392 | 0.391 | 0.585 | 0.369 |
| Yb | 3.02 | 2.73 | 2.57 | 2.86 | 2.51 | 2.87 | 2.58 | 2.53 | 4.01 | 2.61 |
| Lu | 0.475 | 0.425 | 0.388 | 0.43 | 0.381 | 0.439 | 0.4 | 0.366 | 0.621 | 0.407 |
| Hf | 5.45 | 5.21 | 4.43 | 5.46 | 4.7 | 5.2 | 4.98 | 5.15 | 6.63 | 4.95 |
| Ta | 0.75 | 0.90 | 0.62 | 0.86 | 0.68 | 0.78 | 0.77 | 0.74 | 0.57 | 0.71 |
| W | 1.95 | 2.48 | 1.64 | 5.38 | 1.59 | 1.81 | 1.32 | 2.22 | 6.09 | 1.48 |
| Re | 0.00389 | -0.000307 | 0.000662 | 0.00387 | 0.000237 | 0.00165 | 0.0000192 | 0.00229 | 0.00198 | 0.0019 |
| Tl | 0.635 | 0.682 | 0.476 | 0.577 | 0.457 | 0.656 | 0.563 | 0.426 | 0.668 | 0.41 |
| Pb | 21.4 | 21.7 | 18.1 | 20.8 | 20.8 | 25 | 23.4 | 23.2 | 14.9 | 17.9 |
| Th | 11.4 | 12.1 | 9.2 | 10.7 | 9.69 | 11.2 | 9.28 | 9.98 | 10.3 | 9.92 |
| U | 2.63 | 2.74 | 2.38 | 2.79 | 2.88 | 2.97 | 2.63 | 2.71 | 2.64 | 1.67 |
| (La/Yb)N | 7.87 | 8.83 | 7.29 | 6.52 | 8.12 | 8.15 | 7.70 | 8.37 | 4.71 | 7.53 |
| Eu/Eu* | 0.62 | 0.58 | 0.63 | 0.65 | 0.68 | 0.62 | 0.68 | 0.68 | 0.48 | 0.55 |

TABLE S2. U-PB ISOTOPIC DATA FOR ZIRCONS FROM SELECTED SAMPLES IN THE STUDY AREA

| Analysis | Isotopic ratios | | | | | | | | | | | | Age (Ma) | | | | | Disc. % |
|----------|-----------------|---------|----------|-----------------------------------|---------|-------------------------------------|---------|----------------------------------|---------|-----------------------------------|-----|-------------------------------------|----------|----------------------------------|----|-----|--|---------|
| | Th | U | Th/U | $^{207}\text{Pb}/^{206}\text{Pb}$ | 1σ | p- $^{207}\text{Pb}/^{235}\text{U}$ | 1σ | $^{206}\text{Pb}/^{238}\text{U}$ | 1σ | $^{207}\text{Pb}/^{206}\text{Pb}$ | 1σ | p- $^{207}\text{Pb}/^{235}\text{U}$ | 1σ | $^{206}\text{Pb}/^{238}\text{U}$ | 1σ | | | |
| JH-01 01 | 91.1 | 85.28 | 1.068246 | 0.05104 | 0.00757 | 0.29255 | 0.04195 | 0.04158 | 0.00173 | 243 | 310 | 261 | 33 | 263 | 11 | 99 | | |
| JH-01 02 | 144.23 | 396.93 | 0.363364 | 0.05697 | 0.00258 | 0.62909 | 0.02722 | 0.08009 | 0.00139 | 490 | 97 | 496 | 17 | 497 | 8 | 100 | | |
| JH-01 03 | 741.62 | 1055.95 | 0.702325 | 0.05341 | 0.00351 | 0.30111 | 0.01888 | 0.04089 | 0.00093 | 346 | 142 | 267 | 15 | 258 | 6 | 103 | | |
| JH-01 04 | 165.45 | 344.26 | 0.480596 | 0.05271 | 0.00503 | 0.34907 | 0.03188 | 0.04803 | 0.00151 | 316 | 203 | 304 | 24 | 302 | 9 | 101 | | |
| JH-01 05 | 266.2 | 514.58 | 0.517315 | 0.05731 | 0.00273 | 0.6315 | 0.02874 | 0.07992 | 0.00145 | 503 | 102 | 497 | 18 | 496 | 9 | 100 | | |
| JH-01 06 | 501.67 | 553.8 | 0.905869 | 0.05078 | 0.00214 | 0.29098 | 0.01175 | 0.04156 | 0.00062 | 231 | 94 | 259 | 9 | 263 | 4 | 99 | | |
| JH-01 07 | 690.24 | 1121.79 | 0.615302 | 0.05222 | 0.00216 | 0.29471 | 0.01163 | 0.04093 | 0.00064 | 295 | 92 | 262 | 9 | 259 | 4 | 101 | | |
| JH-01 08 | 358.37 | 471.53 | 0.760015 | 0.05148 | 0.0054 | 0.29453 | 0.02958 | 0.04149 | 0.00139 | 263 | 224 | 262 | 23 | 262 | 9 | 100 | | |
| JH-01 09 | 677.56 | 991.91 | 0.683086 | 0.05744 | 0.00133 | 0.63193 | 0.01395 | 0.07979 | 0.00092 | 508 | 51 | 497 | 9 | 495 | 5 | 100 | | |
| JH-01 10 | 766.92 | 795.44 | 0.964146 | 0.07174 | 0.00229 | 0.43219 | 0.013 | 0.04369 | 0.00063 | 979 | 64 | 365 | 9 | 276 | 4 | 132 | | |
| JH-01 11 | 284.8 | 595.08 | 0.478591 | 0.05473 | 0.00559 | 0.30377 | 0.02958 | 0.04025 | 0.00136 | 401 | 214 | 269 | 23 | 254 | 8 | 106 | | |
| JH-01 12 | 310.45 | 957.87 | 0.324105 | 0.05225 | 0.00473 | 0.29328 | 0.02533 | 0.04071 | 0.00122 | 296 | 194 | 261 | 20 | 257 | 8 | 102 | | |
| JH-01 13 | 209.3 | 307.8 | 0.679987 | 0.0536 | 0.00604 | 0.3001 | 0.03237 | 0.0406 | 0.00146 | 354 | 236 | 267 | 25 | 257 | 9 | 104 | | |
| JH-01 14 | 322.46 | 437.96 | 0.736277 | 0.05622 | 0.00298 | 0.62426 | 0.03169 | 0.08052 | 0.00157 | 460 | 114 | 493 | 20 | 499 | 9 | 99 | | |
| JH-01 15 | 377.14 | 550.18 | 0.685485 | 0.05138 | 0.00421 | 0.2971 | 0.02332 | 0.04193 | 0.00111 | 258 | 178 | 264 | 18 | 265 | 7 | 100 | | |
| JH-01 16 | 235.69 | 328.55 | 0.717364 | 0.0522 | 0.00403 | 0.30336 | 0.02251 | 0.04214 | 0.00103 | 294 | 167 | 269 | 18 | 266 | 6 | 101 | | |
| JH-01 17 | 299.74 | 700.27 | 0.428035 | 0.05112 | 0.0018 | 0.29422 | 0.00993 | 0.04173 | 0.00057 | 246 | 79 | 262 | 8 | 264 | 4 | 99 | | |
| JH-01 18 | 62.83 | 115.22 | 0.545305 | 0.05138 | 0.00736 | 0.29944 | 0.04122 | 0.04225 | 0.00184 | 258 | 300 | 266 | 32 | 267 | 11 | 100 | | |
| JH-01 19 | 27.95 | 69.45 | 0.402448 | 0.05195 | 0.00876 | 0.30424 | 0.04973 | 0.04246 | 0.00192 | 283 | 346 | 270 | 39 | 268 | 12 | 101 | | |
| JH-01 20 | 1763.42 | 1707.1 | 1.032992 | 0.05456 | 0.00178 | 0.30161 | 0.00936 | 0.04008 | 0.00054 | 394 | 71 | 268 | 7 | 253 | 3 | 106 | | |
| JH-01 21 | 75.3 | 217.67 | 0.345937 | 0.06976 | 0.00268 | 1.49814 | 0.05492 | 0.1557 | 0.00265 | 921 | 77 | 930 | 22 | 933 | 15 | 100 | | |
| JH-01 22 | 123.49 | 173.3 | 0.712579 | 0.05176 | 0.00539 | 0.34555 | 0.03465 | 0.0484 | 0.00155 | 275 | 222 | 301 | 26 | 305 | 10 | 99 | | |
| JH-01 23 | 165.07 | 223.49 | 0.738601 | 0.05274 | 0.00508 | 0.29405 | 0.02712 | 0.04042 | 0.00124 | 317 | 205 | 262 | 21 | 256 | 8 | 102 | | |
| JH-01 24 | 432.48 | 1372.11 | 0.315193 | 0.05628 | 0.00195 | 0.60082 | 0.01989 | 0.07739 | 0.00111 | 463 | 75 | 478 | 13 | 481 | 7 | 99 | | |
| JH-01 25 | 209.24 | 457.19 | 0.457665 | 0.05308 | 0.0022 | 0.34218 | 0.01362 | 0.04674 | 0.00071 | 332 | 91 | 299 | 10 | 294 | 4 | 101 | | |
| JH-01 26 | 350.29 | 456.61 | 0.767154 | 0.05139 | 0.00384 | 0.28996 | 0.0208 | 0.0409 | 0.00099 | 258 | 163 | 259 | 16 | 258 | 6 | 100 | | |
| JH-01 27 | 423.62 | 666.68 | 0.635417 | 0.05272 | 0.00176 | 0.34895 | 0.01115 | 0.04798 | 0.00064 | 317 | 74 | 304 | 8 | 302 | 4 | 101 | | |
| JH-01 28 | 339.87 | 292.61 | 1.161512 | 0.05353 | 0.00392 | 0.31021 | 0.02175 | 0.04201 | 0.00101 | 351 | 157 | 274 | 17 | 265 | 6 | 103 | | |
| JH-03 01 | 335.76 | 401.13 | 0.881909 | 0.05088 | 0.00137 | 0.29761 | 0.00773 | 0.04242 | 0.00049 | 235 | 61 | 265 | 6 | 268 | 3 | 99 | | |
| JH-03 02 | 150.51 | 259.32 | 0.580403 | 0.05042 | 0.00299 | 0.29374 | 0.01671 | 0.04225 | 0.00084 | 214 | 132 | 262 | 13 | 267 | 5 | 98 | | |
| JH-03 03 | 155.66 | 301.9 | 0.515601 | 0.05292 | 0.00288 | 0.29963 | 0.01561 | 0.04107 | 0.00078 | 325 | 119 | 266 | 12 | 259 | 5 | 103 | | |
| JH-03 04 | 250.73 | 510.29 | 0.491348 | 0.05191 | 0.00174 | 0.30393 | 0.00973 | 0.04247 | 0.00057 | 281 | 75 | 270 | 8 | 268 | 4 | 101 | | |
| JH-03 05 | 166.72 | 282.91 | 0.589304 | 0.05168 | 0.00219 | 0.30048 | 0.01223 | 0.04217 | 0.00064 | 271 | 94 | 267 | 10 | 266 | 4 | 100 | | |
| JH-03 06 | 229.04 | 408.46 | 0.56074 | 0.05204 | 0.00272 | 0.29136 | 0.01459 | 0.04061 | 0.00075 | 287 | 115 | 260 | 11 | 257 | 5 | 101 | | |
| JH-03 07 | 69.16 | 110.61 | 0.62526 | 0.05895 | 0.00221 | 0.5396 | 0.01942 | 0.06639 | 0.00095 | 565 | 80 | 438 | 13 | 414 | 6 | 106 | | |
| JH-03 08 | 103.74 | 376.52 | 0.275523 | 0.07144 | 0.00077 | 1.57602 | 0.01589 | 0.16 | 0.00153 | 970 | 22 | 961 | 6 | 957 | 9 | 100 | | |
| JH-03 09 | 345.91 | 476.49 | 0.725954 | 0.05152 | 0.00281 | 0.28311 | 0.01478 | 0.03986 | 0.00076 | 264 | 121 | 253 | 12 | 252 | 5 | 100 | | |
| JH-03 10 | 450.5 | 971.32 | 0.463802 | 0.05133 | 0.00164 | 0.28254 | 0.00861 | 0.03992 | 0.00053 | 256 | 72 | 253 | 7 | 252 | 3 | 100 | | |
| JH-03 11 | 197.32 | 363.08 | 0.543461 | 0.0522 | 0.00245 | 0.29379 | 0.01319 | 0.04082 | 0.00069 | 294 | 104 | 262 | 10 | 258 | 4 | 101 | | |
| JH-03 12 | 218.2 | 220.79 | 0.988269 | 0.05129 | 0.00439 | 0.29477 | 0.02422 | 0.04168 | 0.00114 | 254 | 186 | 262 | 19 | 263 | 7 | 100 | | |
| JH-03 13 | 88.55 | 114.27 | 0.774919 | 0.05196 | 0.00271 | 0.29867 | 0.01515 | 0.04169 | 0.00066 | 284 | 115 | 265 | 12 | 263 | 4 | 101 | | |
| JH-03 14 | 273.36 | 360.01 | 0.759312 | 0.05248 | 0.00158 | 0.29993 | 0.00867 | 0.04145 | 0.00052 | 306 | 67 | 266 | 7 | 262 | 3 | 102 | | |
| JH-03 15 | 185.97 | 333.06 | 0.558368 | 0.05079 | 0.00121 | 0.67955 | 0.01345 | 0.08503 | 0.00095 | 528 | 45 | 527 | 8 | 526 | 6 | 100 | | |
| JH-03 16 | 152.12 | 130.28 | 1.167639 | 0.05871 | 0.00241 | 0.6917 | 0.02723 | 0.08545 | 0.00136 | 557 | 87 | 534 | 16 | 529 | 8 | 101 | | |
| JH-03 17 | 520.58 | 268.84 | 1.936393 | 0.05136 | 0.00168 | 0.28889 | 0.00912 | 0.04079 | 0.00051 | 257 | 74 | 258 | 7 | 258 | 3 | 100 | | |
| JH-03 18 | 60.44 | 150.29 | 0.402156 | 0.05464 | 0.00203 | 0.49574 | 0.02012 | 0.06581 | 0.001 | 398 | 91 | 409 | 14 | 411 | 6 | 100 | | |
| JH-03 19 | 197.92 | 606.17 | 0.326509 | 0.05352 | 0.00091 | 0.30579 | 0.00498 | 0.04144 | 0.00042 | 351 | 38 | 271 | 4 | 262 | 3 | 103 | | |
| JH-03 20 | 171.68 | 294.35 | 0.583251 | 0.05119 | 0.00167 | 0.29572 | 0.0091 | 0.04133 | 0.00054 | 281 | 72 | 263 | 7 | 261 | 3 | 101 | | |
| JH-03 21 | 64.08 | 114.85 | 0.557945 | 0.05361 | 0.00297 | 0.30725 | 0.01634 | 0.04157 | 0.00076 | 355 | 120 | 272 | 13 | 263 | 5 | 104 | | |
| JH-03 22 | 79.85 | 134.07 | 0.595584 | 0.0504 | 0.00224 | 0.29413 | 0.01266 | 0.04233 | 0.00061 | 213 | 100 | 262 | 10 | 267 | 4 | 98 | | |
| JH-03 23 | 70.6 | 361.97 | 0.195044 | 0.05343 | 0.00196 | 0.30351 | 0.01063 | 0.0412 | 0.00059 | 347 | 81 | 269 | 8 | 260 | 4 | 103 | | |
| JH-03 24 | 109.83 | 129.94 | 0.845236 | 0.05281 | 0.00284 | 0.30455 | 0.01579 | 0.04183 | 0.00074 | 321 | 118 | 270 | 12 | 264 | 5 | 102 | | |
| JH-03 25 | 731.24 | 652.38 | 1.12088 | 0.05674 | 0.00196 | 0.31475 | 0.01035 | 0.04023 | 0.00057 | 481 | 75 | 278 | 8 | 254 | 4 | 109 | | |
| JH-03 26 | 469.54 | 744.62 | 0.630577 | 0.05196 | 0.00235 | 0.30504 | 0.01319 | 0.04258 | 0.00071 | 283 | 100 | 270 | 10 | 269 | 4 | 101 | | |
| JH-03 27 | 95.14 | 376.48 | 0.252709 | 0.05284 | 0.00311 | 0.30169 | 0.01693 | 0.04141 | 0.00085 | 322 | 128 | 268 | 13 | 262 | 5 | 102 | | |
| JH-03 28 | 162.84 | 122.84 | 1.325627 | 0.05515 | 0.00208 | 0.53267 | 0.01924 | 0.07005 | 0.00102 | 418 | 82 | 434 | 13 | 437 | 6 | 99 | | |
| JH-03 29 | 53.77 | 76.69 | 0.701134 | 0.04894 | 0.00689 | 0.28168 | 0.03843 | 0.04174 | 0.0016 | 145 | 300 | 252 | 30 | 264 | 10 | 96 | | |
| JH-05 01 | 187.39 | 330.72 | 0.566612 | 0.05189 | 0.00151 | 0.30357 | 0.00848 | 0.04243 | 0.00052 | 281 | 65 | 269 | 7 | 268 | 3 | 100 | | |
| JH-05 02 | 459.21 | 573.15 | 0.801204 | 0.06967 | 0.00063 | 1.50162 | 0.01272 | 0.15631 | 0.00146 | 919 | 19 | 931 | 5 | 936 | 8 | 99 | | |
| JH-05 03 | 108.68 | 168.77 | 0.643953 | 0.05278 | 0.00186 | 0.30453 | 0.01034 | 0.04185</ | | | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|-----|-----|-----|----|-----|----|-----|
| JH-05 25 | 420.21 | 549.39 | 0.764866 | 0.05159 | 0.00099 | 0.30043 | 0.00548 | 0.04223 | 0.00045 | 267 | 43 | 267 | 4 | 267 | 3 | 100 |
| JH-05 26 | 16.58 | 39.89 | 0.415643 | 0.05193 | 0.00779 | 0.34671 | 0.05018 | 0.04842 | 0.00208 | 283 | 311 | 302 | 38 | 305 | 13 | 99 |
| JH-05 27 | 35.73 | 80.31 | 0.444901 | 0.05277 | 0.00407 | 0.29995 | 0.02226 | 0.04123 | 0.001 | 319 | 166 | 266 | 17 | 260 | 6 | 102 |
| JH-05 28 | 58.28 | 164.03 | 0.355301 | 0.05276 | 0.00231 | 0.30209 | 0.01271 | 0.04153 | 0.00064 | 318 | 96 | 268 | 10 | 262 | 4 | 102 |
| JH-07 01 | 81.17 | 313.24 | 0.25913 | 0.07054 | 0.00119 | 1.52547 | 0.02433 | 0.15688 | 0.00169 | 944 | 34 | 941 | 10 | 939 | 9 | 100 |
| JH-07 02 | 728.81 | 1456.29 | 0.500457 | 0.05246 | 0.00119 | 0.29511 | 0.00635 | 0.04081 | 0.00046 | 306 | 51 | 263 | 5 | 258 | 3 | 102 |
| JH-07 03 | 354.86 | 220.58 | 1.608759 | 0.05094 | 0.00327 | 0.28133 | 0.01728 | 0.04006 | 0.00086 | 238 | 141 | 252 | 14 | 253 | 5 | 99 |
| JH-07 04 | 105.72 | 156.39 | 0.676002 | 0.05655 | 0.00177 | 0.55386 | 0.01654 | 0.07105 | 0.00094 | 473 | 68 | 448 | 11 | 443 | 6 | 101 |
| JH-07 05 | 276.75 | 1286.74 | 0.215078 | 0.05643 | 0.00072 | 0.54082 | 0.00649 | 0.06953 | 0.00066 | 468 | 28 | 439 | 4 | 433 | 4 | 101 |
| JH-07 06 | 157.2 | 202.41 | 0.776641 | 0.05313 | 0.00352 | 0.36613 | 0.02324 | 0.04999 | 0.00112 | 334 | 143 | 317 | 17 | 314 | 7 | 101 |
| JH-07 07 | 172.89 | 336.68 | 0.513514 | 0.06931 | 0.00085 | 1.44986 | 0.01679 | 0.15175 | 0.00148 | 908 | 25 | 910 | 7 | 911 | 8 | 100 |
| JH-07 08 | 44.81 | 78.32 | 0.57214 | 0.05797 | 0.00447 | 0.67037 | 0.04952 | 0.08389 | 0.00227 | 528 | 161 | 521 | 30 | 519 | 14 | 100 |
| JH-07 09 | 1661.87 | 1255.44 | 1.323735 | 0.0514 | 0.00127 | 0.28226 | 0.00663 | 0.03984 | 0.00046 | 259 | 56 | 252 | 5 | 252 | 3 | 100 |
| JH-07 10 | 146.01 | 321.77 | 0.453771 | 0.05265 | 0.00239 | 0.28849 | 0.01254 | 0.03975 | 0.00066 | 314 | 100 | 257 | 10 | 251 | 4 | 102 |
| JH-07 11 | 1077.28 | 1602.64 | 0.672191 | 0.0523 | 0.00058 | 0.2875 | 0.00302 | 0.03987 | 0.00037 | 299 | 25 | 257 | 2 | 252 | 2 | 102 |
| JH-07 12 | 388.47 | 431.19 | 0.900925 | 0.05183 | 0.00106 | 0.28309 | 0.00552 | 0.03962 | 0.00042 | 278 | 46 | 253 | 4 | 251 | 3 | 101 |
| JH-07 13 | 98.72 | 136.35 | 0.724019 | 0.05687 | 0.00202 | 0.54235 | 0.01847 | 0.06917 | 0.00098 | 486 | 77 | 440 | 12 | 431 | 6 | 102 |
| JH-07 14 | 91.37 | 118.54 | 0.770795 | 0.05216 | 0.00207 | 0.33623 | 0.01286 | 0.04676 | 0.00065 | 292 | 88 | 294 | 10 | 295 | 4 | 100 |
| JH-07 15 | 244.42 | 648.98 | 0.376622 | 0.05602 | 0.00239 | 0.31149 | 0.01266 | 0.04033 | 0.00066 | 453 | 93 | 275 | 10 | 255 | 4 | 108 |
| JH-07 16 | 196.21 | 289.82 | 0.677006 | 0.05027 | 0.00141 | 0.28183 | 0.00759 | 0.04067 | 0.00049 | 207 | 64 | 252 | 6 | 257 | 3 | 98 |
| JH-07 17 | 62.86 | 278.79 | 0.225474 | 0.05456 | 0.00125 | 0.36727 | 0.00805 | 0.04883 | 0.00055 | 394 | 50 | 318 | 6 | 307 | 3 | 103 |
| JH-07 18 | 251.26 | 713.24 | 0.35228 | 0.05101 | 0.00168 | 0.27856 | 0.00873 | 0.03961 | 0.00053 | 241 | 74 | 250 | 7 | 250 | 3 | 100 |
| JH-07 19 | 71.82 | 115.3 | 0.622897 | 0.05335 | 0.00656 | 0.31018 | 0.03652 | 0.04217 | 0.00165 | 344 | 257 | 274 | 28 | 266 | 10 | 103 |
| JH-07 20 | 571.87 | 1038.29 | 0.550781 | 0.0521 | 0.00062 | 0.33514 | 0.00373 | 0.04666 | 0.00043 | 290 | 27 | 294 | 3 | 294 | 3 | 100 |
| JH-07 21 | 220.58 | 481.74 | 0.457882 | 0.05282 | 0.00279 | 0.31006 | 0.01565 | 0.04258 | 0.0008 | 321 | 116 | 274 | 12 | 269 | 5 | 102 |
| JH-07 22 | 474.06 | 280.58 | 1.689572 | 0.05194 | 0.00251 | 0.29147 | 0.01345 | 0.0407 | 0.00071 | 283 | 107 | 260 | 11 | 257 | 4 | 101 |
| JH-07 23 | 65.32 | 140.24 | 0.465773 | 0.0512 | 0.00252 | 0.27667 | 0.01318 | 0.0392 | 0.00062 | 250 | 110 | 248 | 10 | 248 | 4 | 100 |
| JH-07 24 | 61.01 | 165.22 | 0.369265 | 0.05058 | 0.00189 | 0.27957 | 0.01008 | 0.04009 | 0.00054 | 222 | 84 | 250 | 8 | 253 | 3 | 99 |
| JH-07 25 | 254.37 | 747.88 | 0.340121 | 0.05158 | 0.00079 | 0.27983 | 0.00404 | 0.03935 | 0.00038 | 267 | 35 | 251 | 3 | 249 | 2 | 101 |
| JH-07 26 | 154.54 | 245.44 | 0.629645 | 0.05637 | 0.00125 | 0.61361 | 0.01298 | 0.07895 | 0.00088 | 466 | 49 | 486 | 8 | 490 | 5 | 99 |
| JH-07 27 | 129.31 | 158.12 | 0.817797 | 0.04998 | 0.00199 | 0.29453 | 0.01133 | 0.04274 | 0.00058 | 194 | 90 | 262 | 9 | 270 | 4 | 97 |
| JH-07 28 | 20.3 | 44.7 | 0.454139 | 0.05229 | 0.00604 | 0.34693 | 0.03913 | 0.04812 | 0.00136 | 298 | 243 | 302 | 30 | 303 | 8 | 100 |

Errors are 1-sigma and Pb* indicates the corrected radiogenic portions. Data were ^{204}Pb corrected, using measured values.

% Disc = % discordance defined as $\left[\left(^{206}\text{Pb} / ^{238}\text{Pb} \text{ age} \right) / \left(^{207}\text{Pb} / ^{235}\text{U} \text{ age} \right) \right] \times 100$ (shadow area show the data with the discordance over 10%).