

**Supplementary Data File 2: Results of the low-field, room temperature AMS analysis (RT-AMS) averaged per sample**

| Sample  | n  | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | 95% confidence<br>E12/E23/E13 | K <sub>m</sub> | P <sub>1</sub>  | T                | S <sub>0</sub> <sup>AS1</sup> | (S <sub>1</sub> <sup>AK3</sup> ) <sub>norm</sub> |
|---|----|----------------|----------------|----------------|-------------------------------|----------------|-----------------|------------------|-------------------------------|--|
| <b>Site 1 Outcrop 1A, Lostmarc'h area, Crozon peninsula</b> |    |                |                |                |                               |                |                 |                  |                               |  |
| TH003   | 11 | 1.0305         | 0.9905         | 0.9790         | 4.08 / 14.25 / 3.15           | 335.49 ± 39.13 | 1.0524 ± 0.0046 | -0.5400 ± 0.0980 | 74                            | 0.41 ± 0.08                                      |
| TH004   | 10 | 1.0350         | 0.9865         | 0.9785         | 4.34 / 26.7 / 3.73            | 359.64 ± 14.60 | 1.0605 ± 0.0034 | -0.7104 ± 0.0962 | 74                            | 0.41 ± 0.25                                      |
| TH009   | 5  | 1.0262         | 0.9986         | 0.9752         | 5.28 / 6.78 / 2.92            | 283.4 ± 14.15  | 1.0482 ± 0.0077 | -0.0823 ± 0.1395 | 74                            | 0.39 ± 0.04                                      |
| TH010   | 4  | 1.0481         | 0.9995         | 0.9524         | 3.58 / 3.73 / 1.80            | 392.95 ± 10.03 | 1.0874 ± 0.0070 | 0.0089 ± 0.0570  | 65                            | 0.20 ± 0.03                                      |
| TH011   | 6  | 1.0407         | 0.9846         | 0.9747         | 3.45 / 18.90 / 2.92           | 397.57 ± 8.83  | 1.0706 ± 0.0034 | -0.6943 ± 0.0707 | 58                            | 0.77 ± 0.22                                      |
| TH012   | 7  | 1.0433         | 0.9870         | 0.9697         | 3.09 / 10.3 / 2.39            | 340.40 ± 33.54 | 1.0752 ± 0.0054 | -0.5193 ± 0.0758 | 58                            | 0.77 ± 0.10                                      |
| TH013   | 6  | 1.0383         | 0.9890         | 0.9727         | 2.77 / 8.27 / 2.05            | 480.12 ± 14.22 | 1.0663 ± 0.0047 | -0.4914 ± 0.0354 | 79                            | 0.67 ± 0.05                                      |
| TH014   | 8  | 1.0395         | 0.9922         | 0.9683         | 4.45 / 8.90 / 2.96            | 430.91 ± 42.01 | 1.0680 ± 0.0031 | -0.3148 ± 0.0578 | 60                            | 0.78 ± 0.07                                      |
| TH015   | 9  | 1.0261         | 1.0030         | 0.9709         | 4.93 / 3.40 / 1.88            | 310.71 ± 66.92 | 1.0583 ± 0.0069 | 0.1876 ± 0.2707  | 87                            | 0.07 ± 0.03                                      |
| TH016   | 18 | 1.0343         | 0.9942         | 0.9714         | 5.09 / 8.84 / 3.23            | 361.72 ± 43.60 | 1.0587 ± 0.0044 | -0.2608 ± 0.0642 | 66                            | 0.49 ± 0.06                                      |
| TH017   | 6  | 1.0486         | 0.9877         | 0.9637         | 4.10 / 10.70 / 2.97           | 465.22 ± 24.22 | 1.0846 ± 0.0035 | -0.4178 ± 0.0760 | 49                            | 0.69 ± 0.21                                      |
| TH018   | 5  | 1.0399         | 0.9898         | 0.9703         | 3.62 / 9.76 / 2.66            | 439.04 ± 10.21 | 1.0690 ± 0.0036 | -0.4241 ± 0.0537 | 86                            | 0.58 ± 0.04                                      |
| TH019   | 13 | 1.0274         | 0.9922         | 0.9804         | 5.12 / 14.65 / 3.78           | 323.19 ± 16.32 | 1.0469 ± 0.0044 | -0.4870 ± 0.0670 | 77                            | 0.75 ± 0.05                                      |
| TH020   | 8  | 1.0264         | 0.9915         | 0.9822         | 4.16 / 14.61 / 3.23           | 329.41 ± 15.90 | 1.0452 ± 0.0054 | -0.5675 ± 0.0878 | 81                            | 0.61 ± 0.07                                      |
| <b>Site 1 Outcrop 1B, Lostmarc'h area, Crozon peninsula</b> |    |                |                |                |                               |                |                 |                  |                               |  |
| TH032   | 13 | 1.0320         | 0.9921         | 0.9760         | 5.20 / 13.66 / 3.56           | 427.78 ± 32.23 | 1.0563 ± 0.0102 | -0.4433 ± 0.2011 | 52                            | 0.63 ± 0.23                                      |
| TH033   | 10 | 1.0498         | 0.9971         | 0.9531         | 3.86 / 4.59 / 2.10            | 360.65 ± 21.61 | 1.0856 ± 0.0047 | -0.0683 ± 0.0551 | 52                            | 0.79 ± 0.05                                      |
| TH034   | 11 | 1.0360         | 0.9949         | 0.9691         | 3.68 / 6.71 / 2.34            | 352.05 ± 34.17 | 1.0616 ± 0.0116 | -0.2428 ± 0.1566 | 52                            | 0.87 ± 0.05                                      |
| TH035   | 14 | 1.0407         | 0.9984         | 0.9610         | 4.07 / 4.65 / 2.16            | 439.08 ± 22.41 | 1.0727 ± 0.0106 | -0.0433 ± 0.0872 | 50                            | 0.74 ± 0.02                                      |
| TH036   | 14 | 1.0429         | 0.9970         | 0.9601         | 5.68 / 7.08 / 3.12            | 464.15 ± 26.13 | 1.0773 ± 0.0073 | -0.0912 ± 0.1229 | 52                            | 0.75 ± 0.02                                      |
| TH038   | 15 | 1.0351         | 0.9928         | 0.9721         | 3.02 / 6.50 / 2.01            | 319.10 ± 17.10 | 1.0601 ± 0.0035 | -0.3329 ± 0.1346 | 52                            | 0.19 ± 0.02                                      |
| TH039   | 5  | 1.0335         | 0.9951         | 0.9714         | 4.08 / 6.24 / 2.46            | 185.70 ± 16.80 | 1.0572 ± 0.0068 | -0.2174 ± 0.0748 | 52                            | 0.40 ± 0.12                                      |
| <b>Site 2 Outcrop 2A, Capucins Area, Crozon peninsula</b>   |    |                |                |                |                               |                |                 |                  |                               |  |
| TH056   | 10 | 1.0711         | 1.0306         | 0.8983         | 7.05 / 2.16 / 1.66            | 318.84 ± 30.96 | 1.2328 ± 0.0071 | 0.5622 ± 0.0393  | 11                            | 0.36 ± 0.10                                      |
| TH057   | 4  | 1.0583         | 1.0187         | 0.9231         | 6.13 / 2.50 / 1.78            | 296.18 ± 6.21  | 1.1726 ± 0.0029 | 0.4420 ± 0.0444  | 9                             | /  |
| TH058   | 7  | 1.0622         | 1.0153         | 0.9225         | 5.20 / 2.61 / 1.73            | 293.30 ± 10.71 | 1.1739 ± 0.0098 | 0.3600 ± 0.0397  | 17                            | 0.22 ± 0.03                                      |
| TH060   | 7  | 1.0644         | 1.0117         | 0.9239         | 4.16 / 2.54 / 1.57            | 165.66 ± 9.12  | 1.1697 ± 0.0054 | 0.2836 ± 0.0344  | 74                            | 0.59 ± 0.04                                      |
| TH061   | 2  | 1.0647         | 1.0045         | 0.9309         | 3.80 / 3.15 / 1.70            | 147.10 ± 3.54  | 1.1482 ± 0.0021 | 0.1329 ± 0.0092  | 50                            | 0.20 ± 0.03                                      |
| TH062   | 4  | 1.0651         | 1.0059         | 0.9290         | 4.50 / 3.43 / 1.93            | 212.20 ± 31.69 | 1.1537 ± 0.0024 | 0.1656 ± 0.0539  | 74                            | 0.65 ± 0.03                                      |
| TH063   | 11 | 1.0519         | 0.9994         | 0.9487         | 4.15 / 4.35 / 2.11            | 333.96 ± 25.45 | 1.0970 ± 0.0085 | 0.0083 ± 0.0676  | 50                            | 0.11 ± 0.03                                      |
| <b>Site 2 Outcrop 2B, Capucins Area, Crozon peninsula</b>   |    |                |                |                |                               |                |                 |                  |                               |  |
| TH041   | 10 | 1.0630         | 1.0170         | 0.9200         | 4.37 / 2.14 / 1.42            | 360.17 ± 21.93 | 1.1800 ± 0.0098 | 0.3878 ± 0.0528  | 6                             | /  |
| TH043   | 10 | 1.0624         | 1.0140         | 0.9236         | 5.03 / 2.70 / 1.75            | 313.51 ± 18.36 | 1.1710 ± 0.0075 | 0.3343 ± 0.0315  | 6                             | /  |
| TH049   | 6  | 1.0685         | 0.9939         | 0.9376         | 2.55 / 3.85 / 1.47            | 268.37 ± 51.73 | 1.1351 ± 0.0153 | -0.1231 ± 0.2378 | 5                             | /  |
| <b>Site 2 Outcrop 2C, Capucins Area, Crozon peninsula</b>   |    |                |                |                |                               |                |                 |                  |                               |  |
| TH053   | 5  | 1.0742         | 1.0210         | 0.9048         | 5.56 / 2.54 / 1.74            | 256.50 ± 16.16 | 1.2174 ± 0.0082 | 0.4077 ± 0.0330  | 43                            | 0.09 ± 0.01                                      |
| TH054   | 5  | 1.0802         | 1.0319         | 0.8879         | 7.66 / 2.64 / 1.96            | 343.22 ± 23.17 | 1.2595 ± 0.0088 | 0.5325 ± 0.0709  | 43                            | 0.33 ± 0.07                                      |
| TH055   | 7  | 1.0820         | 1.0259         | 0.8920         | 6.46 / 2.80 / 1.93            | 697.63 ± 47.63 | 1.2492 ± 0.0125 | 0.4487 ± 0.0843  | 42                            | 0.17 ± 0.05                                      |

| Sample  | n  | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | 95% confidence<br>E12/E23/E13 | K <sub>m</sub> | P <sub>J</sub>  | T                | S <sub>0</sub> ^S <sub>1</sub> | (S <sub>1</sub> ^K <sub>3</sub> ) <sub>norm</sub> |
|---|----|----------------|----------------|----------------|-------------------------------|----------------|-----------------|------------------|--------------------------------|---|
| <b>Site 3 Outcrop 3A, Roc'h Trevezel Area, Monts d'Arrées</b> |    |                |                |                |                               |                |                 |                  |                                |   |
| TH121   | 13 | 1.0888         | 1.0333         | 0.8779         | 7.25 / 2.62 / 1.92            | 514.32 ± 50.18 | 1.2858 ± 0.0178 | 0.5150 ± 0.0538  | 13                             | 0.51 ± 0.05                                       |
| TH123   | 11 | 1.0940         | 1.0361         | 0.8700         | 8.98 / 3.17 / 2.35            | 446.45 ± 36.08 | 1.3068 ± 0.0179 | 0.5255 ± 0.0540  | 16                             | 0.33 ± 0.01                                       |
| TH124   | 13 | 1.0961         | 1.0372         | 0.8667         | 9.85 / 3.41 / 2.54            | 486.77 ± 32.65 | 1.3157 ± 0.0259 | 0.5302 ± 0.0418  | 9                              | /   |
| TH127   | 12 | 1.0894         | 1.0329         | 0.8777         | 7.50 / 2.73 / 1.99            | 466.38 ± 53.98 | 1.2863 ± 0.0140 | 0.5078 ± 0.0501  | 3                              | /   |
| TH129   | 8  | 1.1006         | 1.0563         | 0.8431         | 12.18 / 2.61 / 2.14           | 340.11 ± 23.18 | 1.3767 ± 0.0156 | 0.6949 ± 0.0775  | 17                             | 0.29 ± 0.03                                       |
| TH131   | 10 | 1.1091         | 1.0630         | 0.8280         | 13.60 / 2.72 / 2.25           | 360.83 ± 62.14 | 1.4193 ± 0.0240 | 0.7102 ± 0.0647  | 10                             | 0.20 ± 0.05                                       |
| TH132   | 17 | 1.1042         | 1.0364         | 0.8594         | 6.69 / 2.49 / 1.78            | 499.22 ± 45.38 | 1.3349 ± 0.0389 | 0.4873 ± 0.1210  | 21                             | 0.56 ± 0.03                                       |
| TH133   | 5  | 1.0907         | 1.0045         | 0.9047         | 2.82 / 2.36 / 1.28            | 368.56 ± 43.02 | 1.2021 ± 0.0225 | 0.1186 ± 0.0733  | 21                             | 0.45 ± 0.01                                       |
| <b>Site 4 Outcrop 4A, Saint-Rivoal Area</b>                   |    |                |                |                |                               |                |                 |                  |                                |   |
| TH107   | 9  | 1.0311         | 1.0239         | 0.9451         | 30.48 / 2.54 / 2.33           | 352.68 ± 44.61 | 1.1172 ± 0.0043 | 0.8390 ± 0.0973  | 13                             | 0.60 ± 0.02                                       |
| TH108   | 11 | 1.0451         | 1.0283         | 0.9266         | 19.40 / 2.58 / 2.33           | 599.35 ± 70.44 | 1.1612 ± 0.0073 | 0.7287 ± 0.1109  | 18                             | 0.72 ± 0.03                                       |
| TH111   | 11 | 1.0291         | 1.0233         | 0.9475         | 23.79 / 1.77 / 1.64           | 463.51 ± 07.41 | 1.1115 ± 0.0041 | 0.8635 ± 0.0498  | 9                              | /   |
| TH112   | 15 | 1.0461         | 1.0265         | 0.9274         | 12.65 / 2.40 / 2.02           | 537.52 ± 22.44 | 1.1601 ± 0.0054 | 0.6843 ± 0.0464  | 5                              | /   |
| <b>Site 4 Outcrop 4B, Saint-Rivoal Area</b>                   |    |                |                |                |                               |                |                 |                  |                                |   |
| TH103   | 13 | 1.0627         | 1.0023         | 0.9350         | 2.48 / 2.24 / 1.18            | 784.90 ± 54.30 | 1.1333 ± 0.0127 | 0.0848 ± 0.0656  | 50                             | 0.39 ± 0.07                                       |
| <b>Site 5 Outcrop 5A, Roch du Feu Area, Montagnes Noires</b>  |    |                |                |                |                               |                |                 |                  |                                |   |
| TH142   | 15 | 1.0658         | 1.0061         | 0.9281         | 3.16 / 2.41 / 1.37            | 473.14 ± 18.12 | 1.1564 ± 0.0086 | 0.1660 ± 0.0215  | 33                             | 0.26 ± 0.05                                       |
| TH143   | 11 | 1.0670         | 1.0011         | 0.9319         | 3.66 / 3.39 / 1.75            | 609.64 ± 61.20 | 1.1353 ± 0.0128 | 0.0599 ± 0.0714  | 19                             | 0.51 ± 0.07                                       |
| TH144   | 4  | 1.0627         | 0.9999         | 0.9374         | 3.53 / 3.78 / 1.80            | 594.73 ± 40.58 | 1.1238 ± 0.0145 | 0.0266 ± 0.0980  | 19                             | 0.56 ± 0.14                                       |
| TH148   | 15 | 1.0726         | 1.0206         | 0.9068         | 6.87 / 3.08 / 2.12            | 508.01 ± 33.18 | 1.2121 ± 0.0100 | 0.4071 ± 0.0611  | 35                             | 0.16 ± 0.07                                       |
| TH149   | 5  | 1.0664         | 1.0196         | 0.9140         | 6.12 / 2.66 / 1.84            | 661.34 ± 58.81 | 1.1944 ± 0.0049 | 0.4188 ± 0.0659  | 23                             | 0.26 ± 0.10                                       |
| <b>Site 5 Outcrop 5B, Roch du Feu Area, Montagnes Noires</b>  |    |                |                |                |                               |                |                 |                  |                                |   |
| TH151   | 12 | 1.0709         | 0.9915         | 0.9377         | 3.58 / 5.27 / 2.13            | 397.48 ± 31.11 | 1.1246 ± 0.0028 | -0.1598 ± 0.0379 | 16                             | 0.72 ± 0.11                                       |
| TH152   | 15 | 1.0753         | 1.0093         | 0.9154         | 5.62 / 3.92 / 2.33            | 400.60 ± 31.62 | 1.1877 ± 0.0090 | 0.2120 ± 0.0461  | 12                             | 0.34 ± 0.20                                       |
| TH153   | 11 | 1.0722         | 1.0094         | 0.9184         | 5.86 / 4.65 / 2.77            | 511.83 ± 31.07 | 1.1811 ± 0.0064 | 0.2199 ± 0.0255  | 5                              | /   |
| TH154   | 13 | 1.0668         | 0.9998         | 0.9335         | 4.68 / 4.71 / 2.35            | 446.52 ± 38.29 | 1.1283 ± 0.0129 | 0.0293 ± 0.0617  | 19                             | 0.24 ± 0.07                                       |
| TH155   | 11 | 1.0682         | 0.9881         | 0.9437         | 2.29 / 4.51 / 1.48            | 573.45 ± 62.79 | 1.1203 ± 0.0062 | -0.2633 ± 0.1555 | 45                             | 0.89 ± 0.04                                       |
| TH157   | 12 | 1.0722         | 0.9883         | 0.9395         | 2.94 / 5.58 / 1.84            | 322.19 ± 47.22 | 1.1275 ± 0.0052 | -0.2438 ± 0.2087 | 45                             | 0.35 ± 0.07                                       |
| TH158   | 13 | 1.0750         | 0.9851         | 0.9399         | 2.12 / 4.32 / 1.42            | 357.72 ± 42.50 | 1.1331 ± 0.0026 | -0.3028 ± 0.1021 | 45                             | 0.28 ± 0.08                                       |
| TH159   | 11 | 1.0682         | 0.9802         | 0.9516         | 2.12 / 6.81 / 1.55            | 319.55 ± 48.76 | 1.1209 ± 0.0057 | -0.4944 ± 0.1856 | 63                             | 0.51 ± 0.28                                       |
| TH160   | 8  | 1.0716         | 0.9721         | 0.9563         | 3.59 / 22.43 / 3.14           | 214.81 ± 26.68 | 1.1278 ± 0.0109 | -0.7110 ± 0.0797 | 63                             | 0.23 ± 0.18                                       |
| TH161   | 10 | 1.0620         | 1.0046         | 0.9334         | 3.23 / 2.92 / 1.46            | 674.79 ± 62.81 | 1.1409 ± 0.0349 | 0.1151 ± 0.2302  | 25                             | 0.17 ± 0.08                                       |
| TH162   | 5  | 1.0639         | 0.9951         | 0.9411         | 3.72 / 4.68 / 2.06            | 505.16 ± 97.79 | 1.1152 ± 0.0040 | -0.0884 ± 0.1302 | 75                             | 0.38 ± 0.13                                       |
| TH164   | 6  | 1.0790         | 0.9800         | 0.9411         | 2.15 / 5.47 / 1.52            | 482.70 ± 18.74 | 1.1412 ± 0.0025 | -0.4097 ± 0.1117 | 45                             | 0.28 ± 0.12                                       |
| TH166   | 13 | 1.0670         | 0.9978         | 0.9353         | 3.01 / 3.32 / 1.56            | 677.50 ± 40.11 | 1.1255 ± 0.0141 | -0.0213 ± 0.1140 | 19                             | 0.66 ± 0.12                                       |

n - number of cubic specimens from the sample;  $K_1 > K_2 > K_3$  - mean maximum, intermediate and minimum principal susceptibility axis;  $E_{12}, E_{23}, E_{13}$  - mean 95% confidence angle of  $K_1, K_2$  and  $K_3$ , respectively;  $K_m$  - mean bulk susceptibility, expressed in  $10^{-6}$  SI:  $K_m = (K_1 + K_2 + K_3)/3$ ;  $P_J$  - mean corrected degree of anisotropy:  $P_J = \exp 2[(\eta_1 - \eta_m)^2 + (\eta_2 - \eta_m)^2 + (\eta_3 - \eta_m)^2]^{1/2}$ , with  $\eta_1 = \ln K_1, \eta_2 = \ln K_2, \eta_3 = \ln K_3$  and  $\eta_m = (\eta_1 \eta_2 \eta_3)^{1/3}$ ; T - mean shape parameter:  $T = (2\eta_2 - \eta_1 - \eta_3)/(\eta_1 - \eta_3)$ ;  $S_0 \wedge S_1$  - the angle between bedding and cleavage;  $(S_1 \wedge K_3)_{norm}$  - mean normalized difference angle between the pole to cleavage and  $K_3$ :  $(S_1 \wedge K_3)_{norm} = (S_1 \wedge K_3)/[(S_0 \wedge K_3) + (S_1 \wedge K_3)]$ .