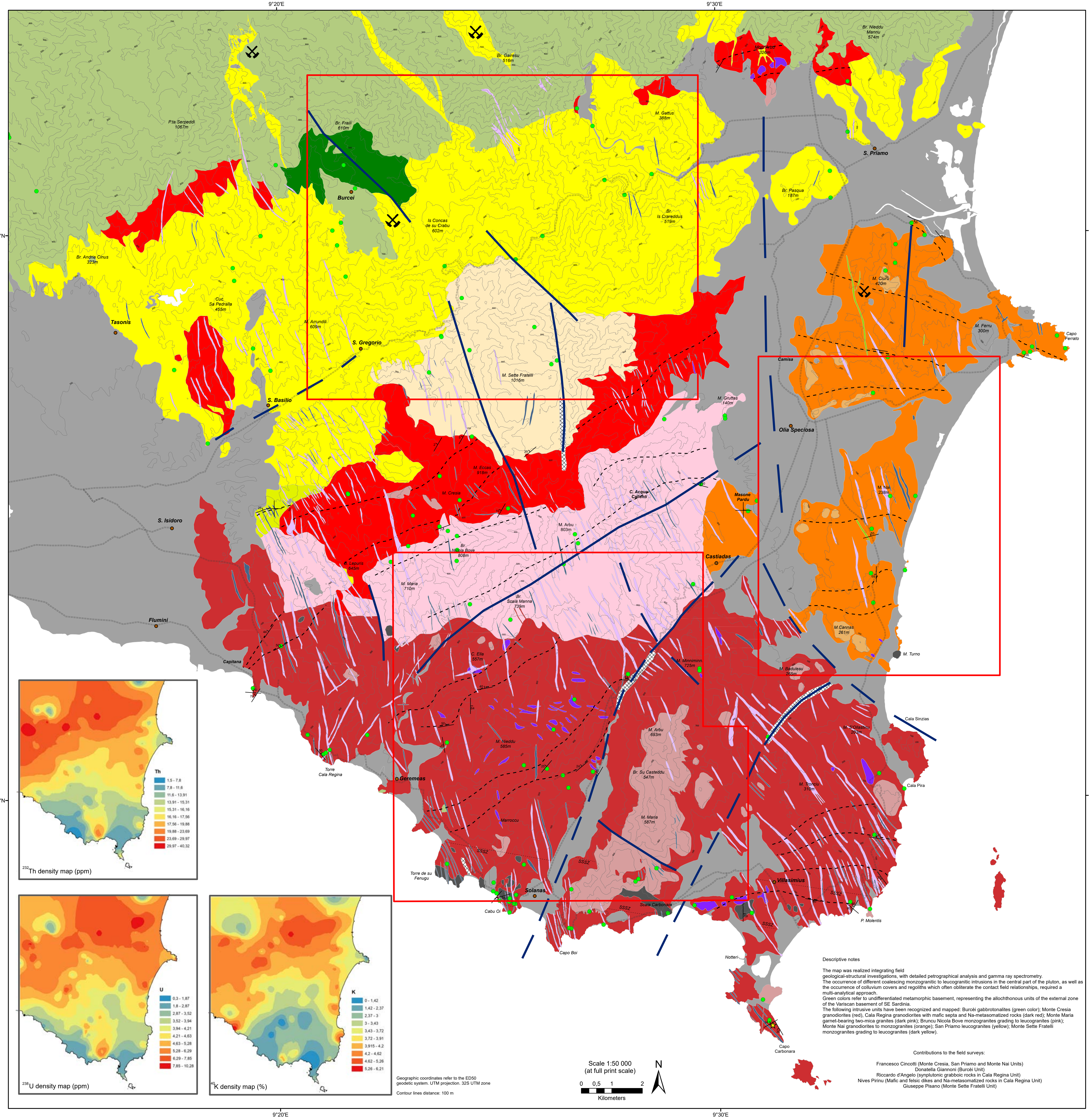


Geology of late-Variscan Sàrrabus pluton (south-eastern Sardinia, Italy)

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Legend

Post-Variscan covers
 PVS - Undifferentiated sedimentary and (Capo Ferrato area) Plio-Pleistocene alkaline volcanics

Late-Variscan magmatism

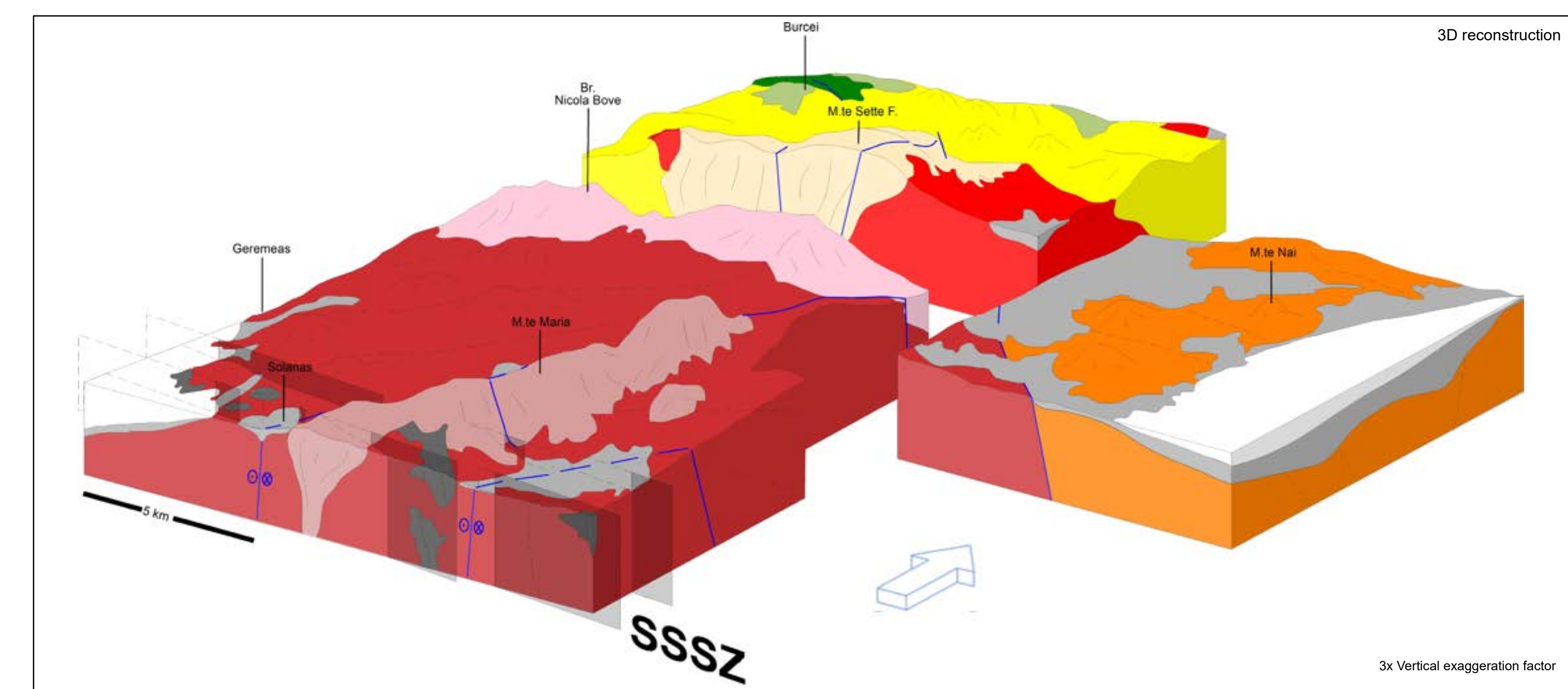
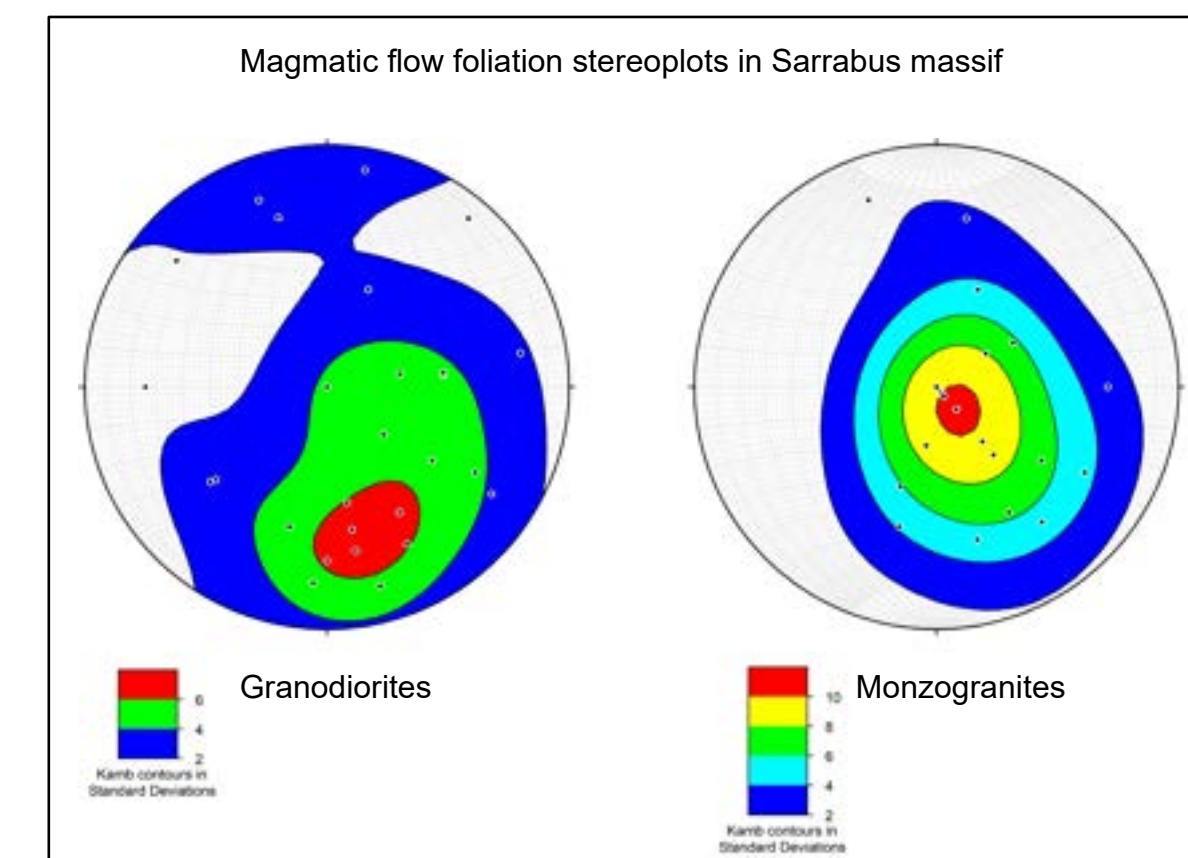
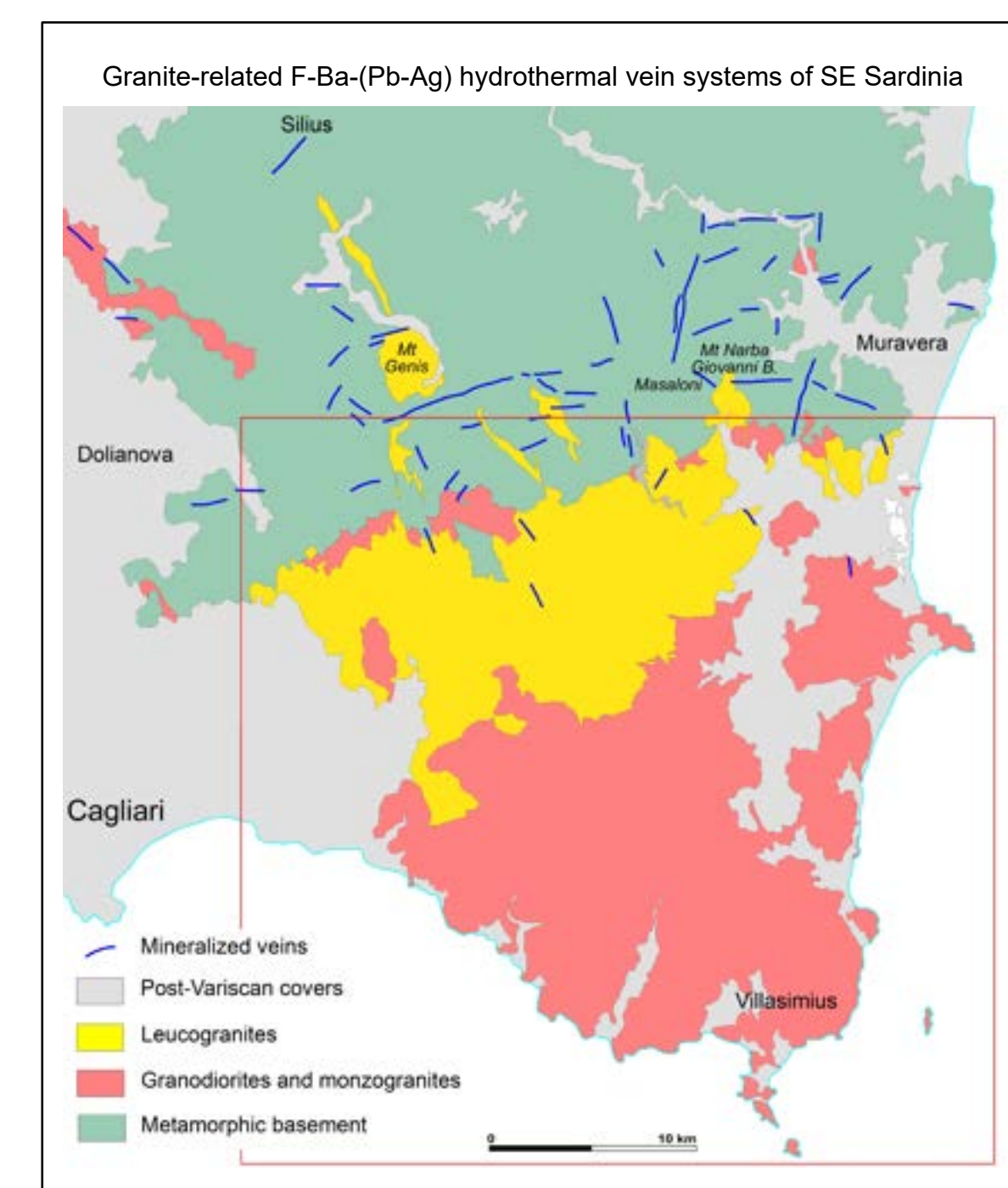
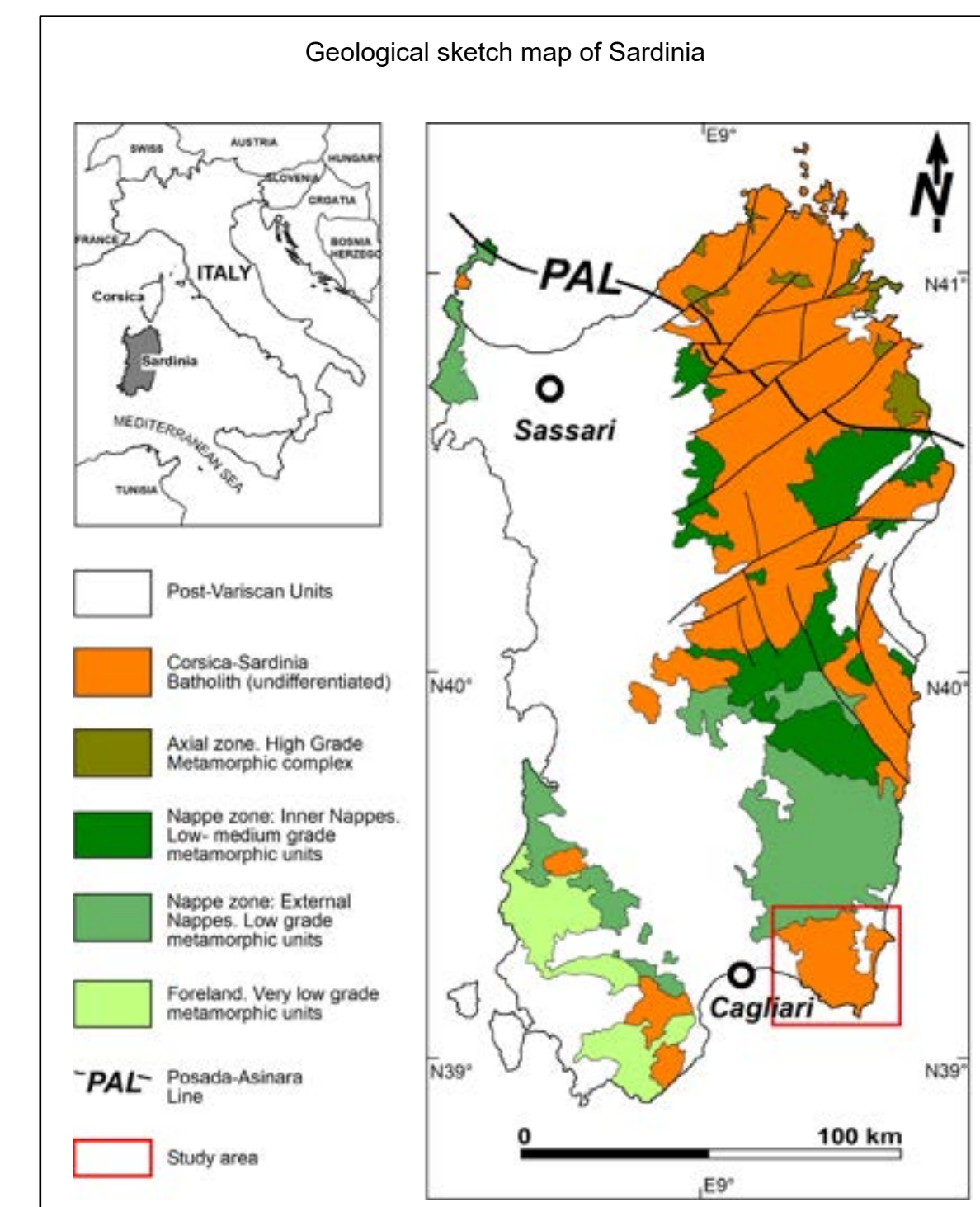
- Quartz and quartz-calcite-fluorite hydrothermal veins
- Hornblende spessartites and subordinate augite spessartites. Olivine plagioclase-phryic mafic dikes
- Metaluminous and peraluminous/garnet-bearing granitic apites and microgranites
- SF - Sette Fratelli unit. Sub-vertical stocks of medium-grained fluorite-bearing hastingsite monzogranites grading to leucogranites
- SP - San Priamo Unit. Coarse-grained pinkish biotite leucogranites densely crosscutted by sub-vertical dikes and plugs of granophyres, microgranites and granitic apites. Pegmatitic pockets, and veins at the top of the intrusion
- BNB - Bruncu Nicola Bove Unit. Whitish monzogranites grading to leucogranites
- MM - Monte Maria Unit. Sub-vertical stocks of medium to coarse-grained garnet-bearing two-mica granites, and their satellite bodies
- CR - Cala Regina Unit.
 - a) Weakly foliated to inequigranular medium-grained biotite granodiorites with large dark enclaves;
 - S) Local Na-metasomatized bodies ("albitites")
 - SO) Synplutonic stocks and dikes of pyroxene-bearing hornblende gabbroic rocks densely interdigitated with hornblende biotite tonalites grading to strongly foliated hornblende biotite granodiorites; local septa of layered cumulophyric coarse-grained olivine-bearing gabbrotonalites
- MN - Monte Nai Unit.
 - a) Monzogranites and monzogranitic granodiorites locally grading to leucogranites;
 - b) Inequigranular granodiorites with large K-feldspars grading to medium-grained monzogranites
- MC - Monte Cresia Unit. Medium to coarse-grained biotite monzogranitic granodiorites grading upward to porphyritic hornblende-bearing biotite monzogranites with rare rounded dark enclaves; local Na-metasomatized bodies ("albitites")
- BU - Burcei Unit. Sill-shaped intrusion of medium/fine-grained two pyroxene biotite gabbrotonalites

Paleozoic basement

MET - Undifferentiated low-grade metamorphic basement. (Cambrian - early Carboniferous)

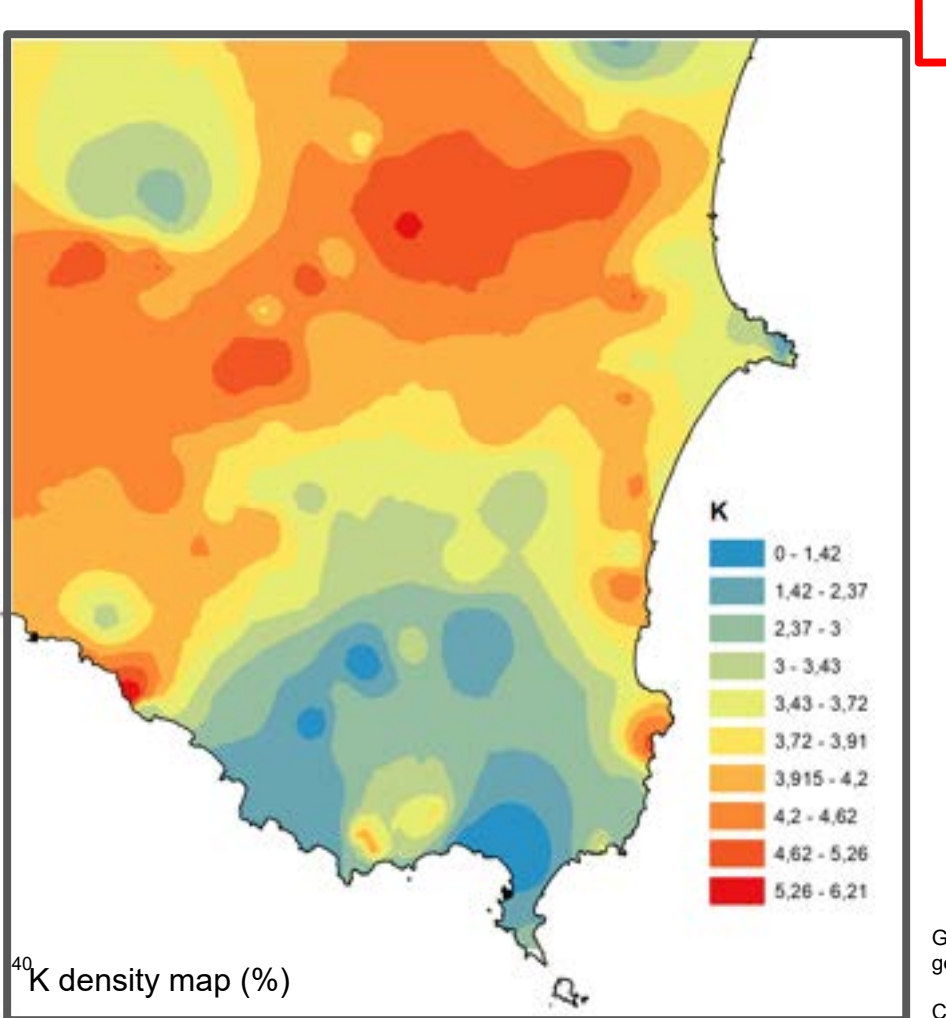
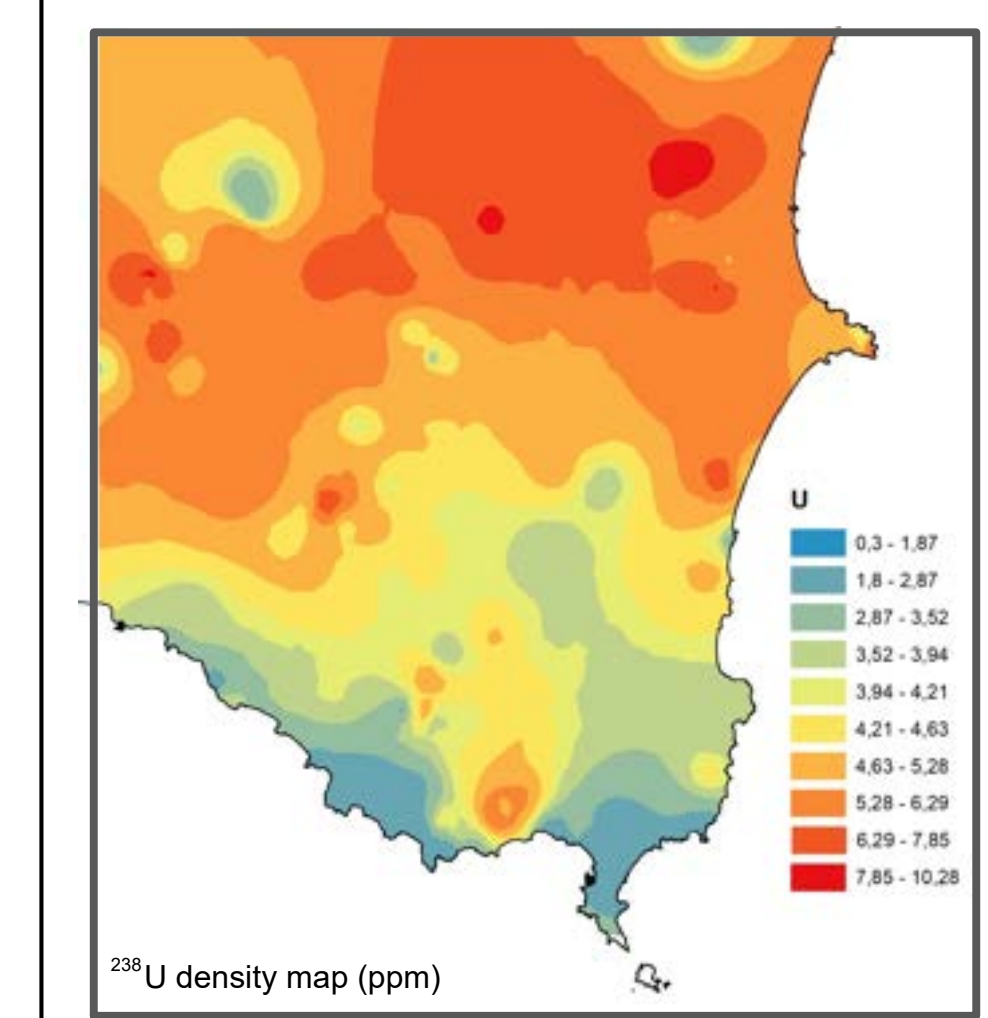
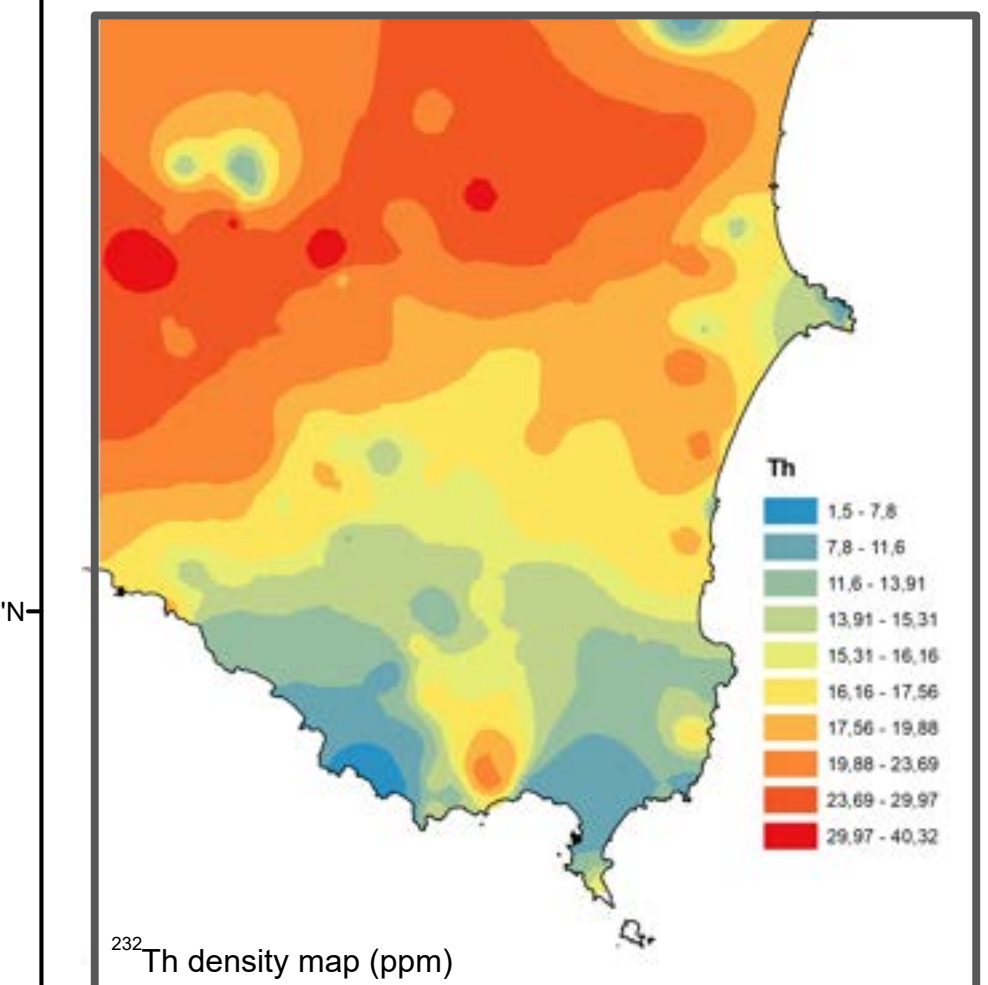
Symbols

- Faults
- Inferred faults
- 3D reconstruction
- Horizontal magmatic flow foliation
- Magmatic flow foliation
- Magmatic flow trajectories
- Cataclastic zones
- SSSSZ
- U, Th, K measured sites
- U/Pb Age sample
- Abandoned mine
- Town
- Main roads



Descriptive notes
 The map was realized integrating field geology-structural investigations, with detailed petrographical analysis and gamma ray spectrometry. The occurrence of different coalescing monzogranitic to leucogranitic intrusions in the central part of the pluton, as well as the occurrence of calcicium covers and regoliths which obliterate the contact field relationships, required a multi-analytical approach.
 Green colors refer to undifferentiated metamorphic basement, representing the allochthonous units of the external zone of the Variscan basement of SE Sardinia.
 The following intrusive units have been recognized and mapped: Burcei gabbrotonalites (green color), Monte Cresia granodiorites (red), Cala Regina granodiorites with mafic-septa and Na-metasomatized rocks (dark red), Monte Maria garnet-bearing two-mica granites (dark pink), Bruncu Nicola Bove monzogranites grading to leucogranites (pink), Monte Nai granodiorites to monzogranites (orange), San Priamo leucogranites (yellow), Monte Sette Fratelli monzogranites grading to leucogranites (dark yellow).

Contributions to the field surveys:
 Francesco Cincotti (Monte Cresia, San Priamo and Monte Nai Units)
 Donatella Giannoni (Burcei Unit)
 Riccardo d'Angelo (syngabbroic gabbroic rocks in Cala Regina Unit)
 Nives Pirinu (Mafic and felsic dikes and Na-metasomatized rocks in Cala Regina Unit)
 Giuseppe Pisano (Monte Sette Fratelli Unit)



Geographic coordinates refer to the ED50 geodesic system, UTM projection, 32S UTM zone. Contour lines distance: 100 m.

