

Plate S1
Geological map of the Gioia Sannitica Fault (Matese, southern Apennines)

Supplement to:
Late Quaternary faulting in southern Matese (Italy): implications for earthquake potential and slip rate variability in the southern Apennines.
P. Boncio, E. Auciello, V. Amato, P. P. C. Aucelli, P. Petrosino, A. C. Tangari, B. R. Jicha

Quaternary units

- al** Alluvial plain and river deposits (Holocene)
- U4** Alluvial fan deposits. Gravely and sandy layers made up of heterometric, sub-angular to sub-rounded calcareous pebbles. In the distal part of the alluvial fan system, the size of the clasts decreases and the deposits are supported by sandy matrix and contain paleosols and archaeological remains. (U4) (late Holocene)
- sd2** Slope deposits. Angular and sub-angular coarse-medium grain sized calcareous gravel deposits. They are matrix to clast supported and contain reworked tephra layers, paleosols and in the upper part also archaeological remains. Unit sd2 includes thin layers of Holocene colluvial deposits accumulated mostly in the hanging wall and in proximity of the GF trace. (Late pleistocene - Holocene)
- U3** Alluvial fan deposits. Medium grain sized gravel deposits, characterised by heterometric sub-rounded pebbles, mainly of calcareous origin, with floating sub-rounded larger clasts (10 to 40 cm), presenting massive textural characters as debris and hyperconcentrated flows. These deposits are matrix to clast supported and contain reworked tephra layers and paleosols developed on pyroclastic materials, ascribed to the late Pleistocene fall-outs of the Neapolitan volcanoes, mainly to the Neapolitan Yellow Tuff (NYT) eruption. Furthermore, they show a better organisation than the deposits of the other generations. In some cases the succession was also deposited within the entrenchment of the older fans, forming little terraced deposits. (U3) (Late Pleistocene - Holocene)
- CI** Campanian Ignimbrite Formation. Terraced volcanoclastic deposits, referred to the pyroclastic flow of the Campanian Ignimbrite Formation (CI). (39 ka BP)
- U2** Alluvial fan deposits. Coarse-medium grain sized gravel deposits with floating sub-angular larger clasts (10 to 50 cm) made up of heterometric, sub-angular to sub-rounded calcareous pebbles. They show mainly a massive structure, locally with a horizontal stratification generated by differences in grain size and texture. (U2) (late Middle Pleistocene - Late Pleistocene)
- U1** Alluvial fan deposits. Coarse-medium grain sized and reversely to normally graded gravel deposits, made up of heterometric, angular to subangular calcareous pebbles, locally well cemented and mainly clast-supported and locally interbedded with sandy layers. In the distal part of the fan system, the grain size decreases, pebbles are less angular and the deposit is clast- to reddish matrix-supported. Reworked and primary pyroclastic layers are interbedded in these deposits, together with paleosols partially developed on pyroclastic material. (U1) (Middle Pleistocene)
- sd1** Slope deposits. Calcareous heterometric and angular stratified gravel deposits, locally well cemented and/or reddish matrix-supported. Laterally interfingered with polygenic, heterometric and sub-rounded pebbles, moderately well-sorted, in abundant sandy-silty matrix, referred to debris flow facies. (Early - Middle Pleistocene)

Pre-Quaternary units

- M** Siliciclastic deposits. Arenites, marls and clays. (Late Miocene)
- VC** Varicolored Clays. (Cenozoic)
- bx** Bauxites. (Cretaceous)
- K** Carbonate shelf deposits. Calcareenites and calcilutites (Early Cretaceous)
- J** Carbonate and shelf deposits. Calcareenites and limestones with rare dolostones. (Jurassic)
- T** Carbonate shelf dolostones. Limestones and dolostones. (Late Triassic - Jurassic)

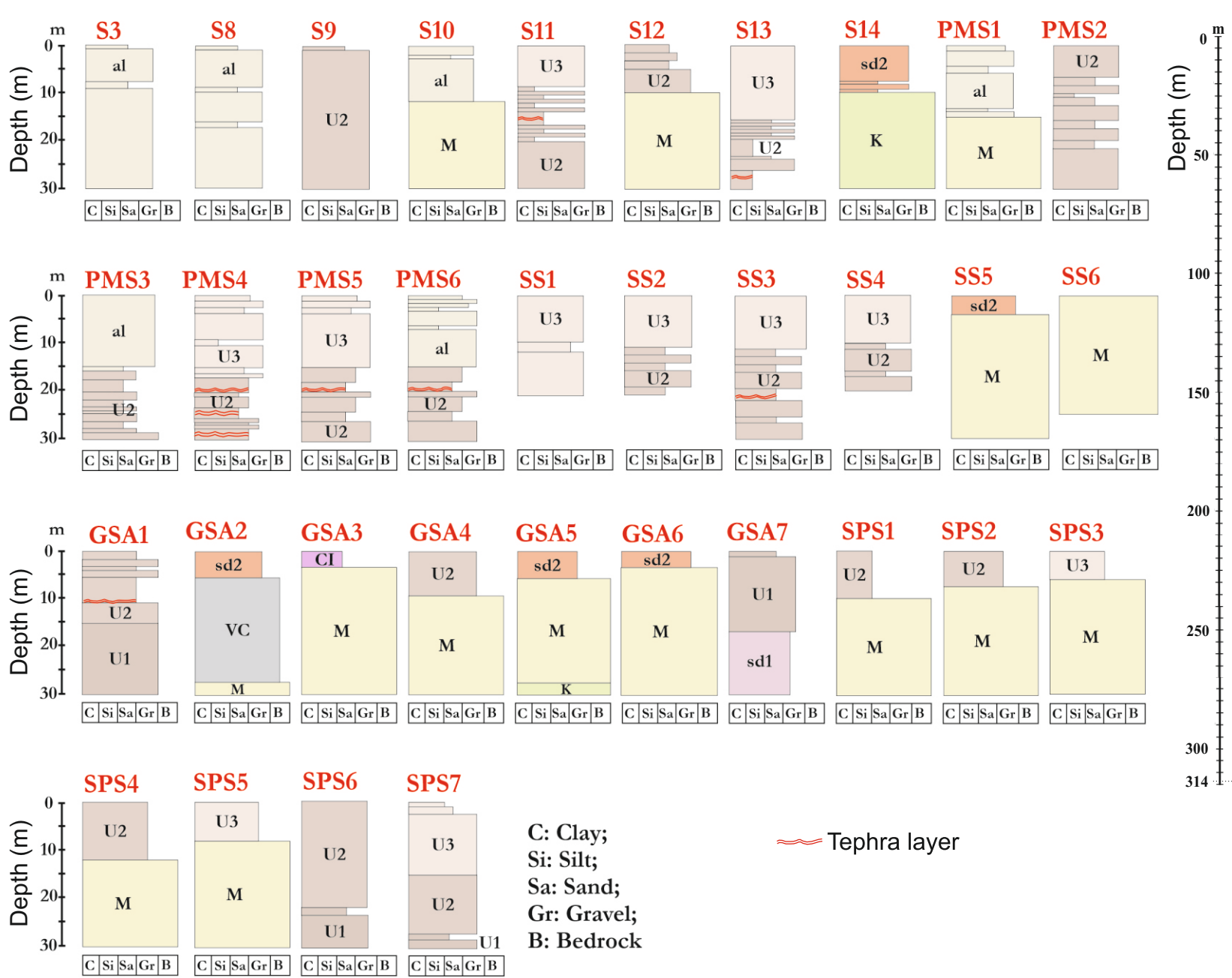
Faults

- Active normal fault (Late Pleistocene - Holocene). Dashed if inferred or buried.
- Quaternary normal fault. Dashed if inferred or buried.
- Normal fault. Dashed if inferred or buried.
- Fault. Dashed if inferred or buried.

Other symbols

- Fluvial raiser's edge
- Drill hole
- Bedding
- Drill hole (in geologic section)
- Geological section

Drill holes



C: Clay;
Si: Silt;
Sa: Sand;
Gr: Gravel;
B: Bedrock

Tephra layer

