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The inversion of the Adjara-Trialeti basin (Georgia) what is the role of its structures on the propagation front of the Greater Caucasus since the Cenozoic?

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During the late Early Cretaceous the opening of the Black Sea (BS) in back-arc basin setting occurred within the strong continental lithosphere south of the western Greater Caucasus (GC) basin. From Paleocene to Eocene the Adjara-Trialeti intra-arc basin opened south of the Greater Caucasus and east of the Eastern Black Sea.
This intra-arc basin filled by thick flysch deposits and volcanism until the Upper Eocene. South of this basin, the Paleocene first collision stage was evidenced in the Lesser Caucasus (e.g. Sosson et al. 2010, 2016). In the Crimean Mountains (northwestern continuation of the GC) the compression and inversion of the BS margin started during Paleocene-Early Eocene (Sheremet et al., 2016) and also in the western Greater Caucasus (Saintot et Angelier 2002). However, the first evidences of compression and inversion in the southern Greater Caucasus (in Georgian area) is still a matter of debate: Late Eocene (Mosar et al., 2010, Vincent et al. 2016), Oligocene-Middle Miocene (e.g. Adamia et al. 2010) or Middle Miocene (Alania et al. 2009). It is clearly evidenced that the compressional deformations were actived from Miocene to recent time in Kura and Rioni foreland basins (Alania et al. 2015, Forte et al., 2010; 2013; Mosar et al., 2010, Tibaldi et al. 2018).
The different timing can be interpreted to be the result of the Taurides - Anatolides -South Armenian microcontinent collision with Eurasia, followed by the collision with Arabia.
One question is: what is the cause and the effect of the opening of the Adjara-Trialeti basin on the timing of the propagation of deformation at the frontal part of the southern Greater Caucasus in Georgia?
We investigated the deformations caused by the different tectonic stages since Late Jurassic until Pliocene in the frontal parts of southern Greater Caucasus and northern Adjara-Trialeti and the continuation into the foreland basins (Rioni to the west and Kura to the east). We highlighted that the inherited structures can be reactivated and so the inheritance plays a major role in the geometry (thick- or thin-skinned tectonics) and localisation of the deformation. We present several cross sections of the basin and propose a tectonic reconstitution from the southern part of the Greater Caucasus to central-southern part of Adjara-Trialeti. This allow to evidence the influence of the Adjara Trialeti inverted basin on the propagation of the south Greater Caucasus front during the Cenozoic.