

New Tectonic map and Cross-Sections of the Tauern Window (Eastern Alps, Austria)

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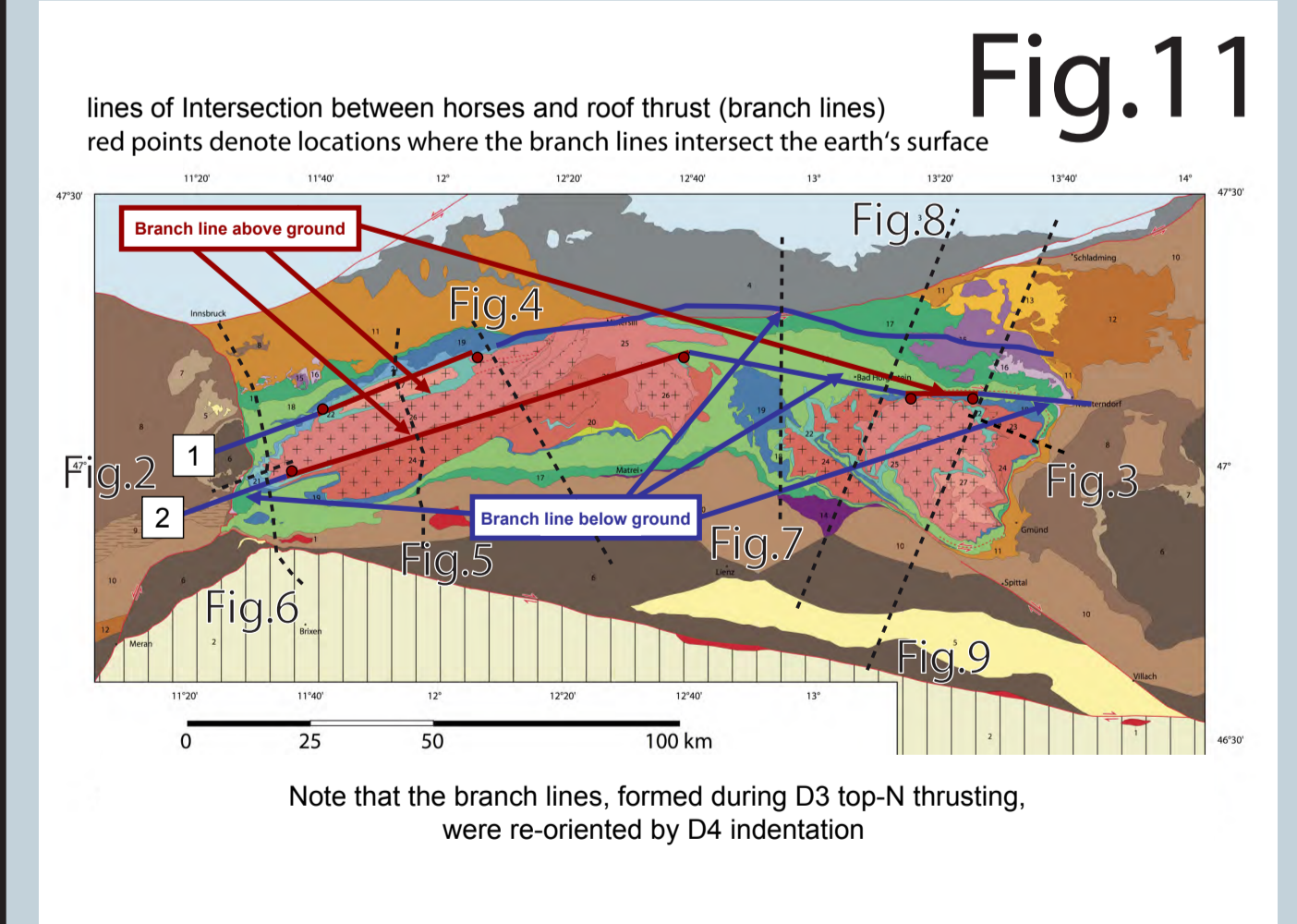
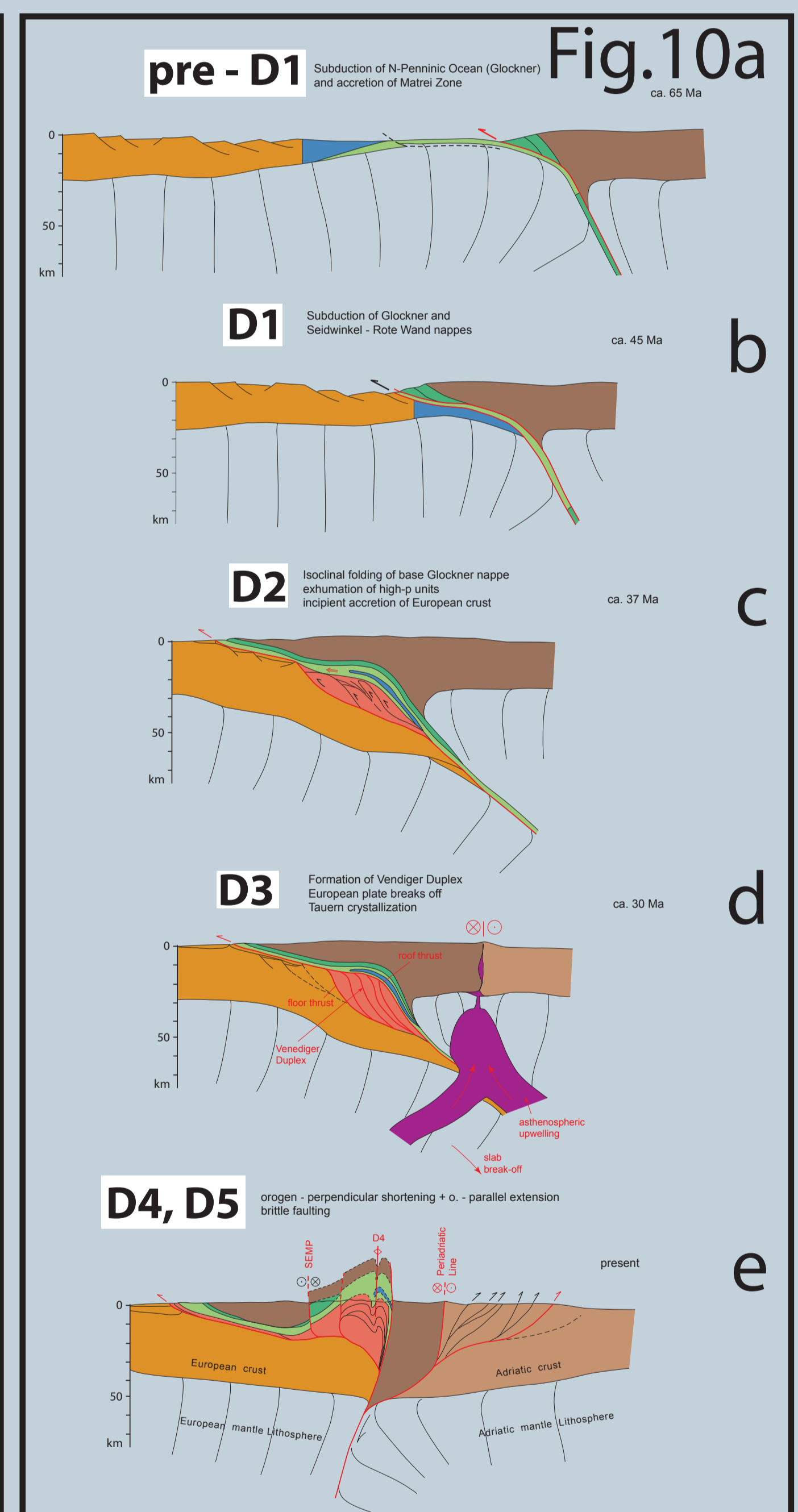
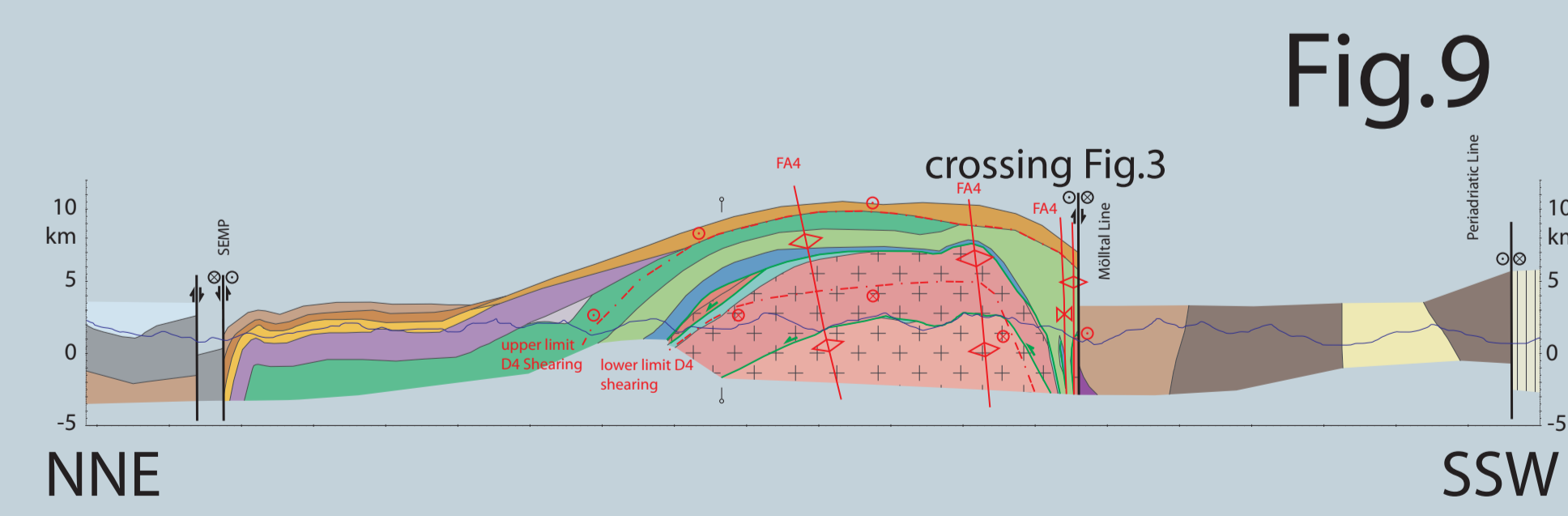
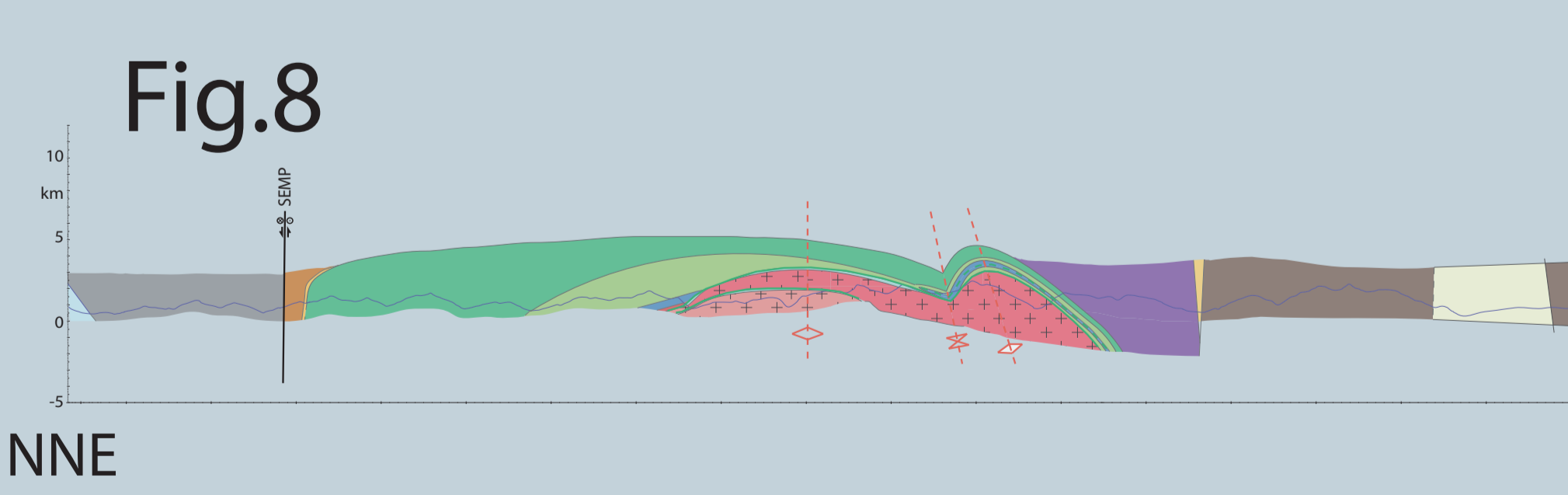
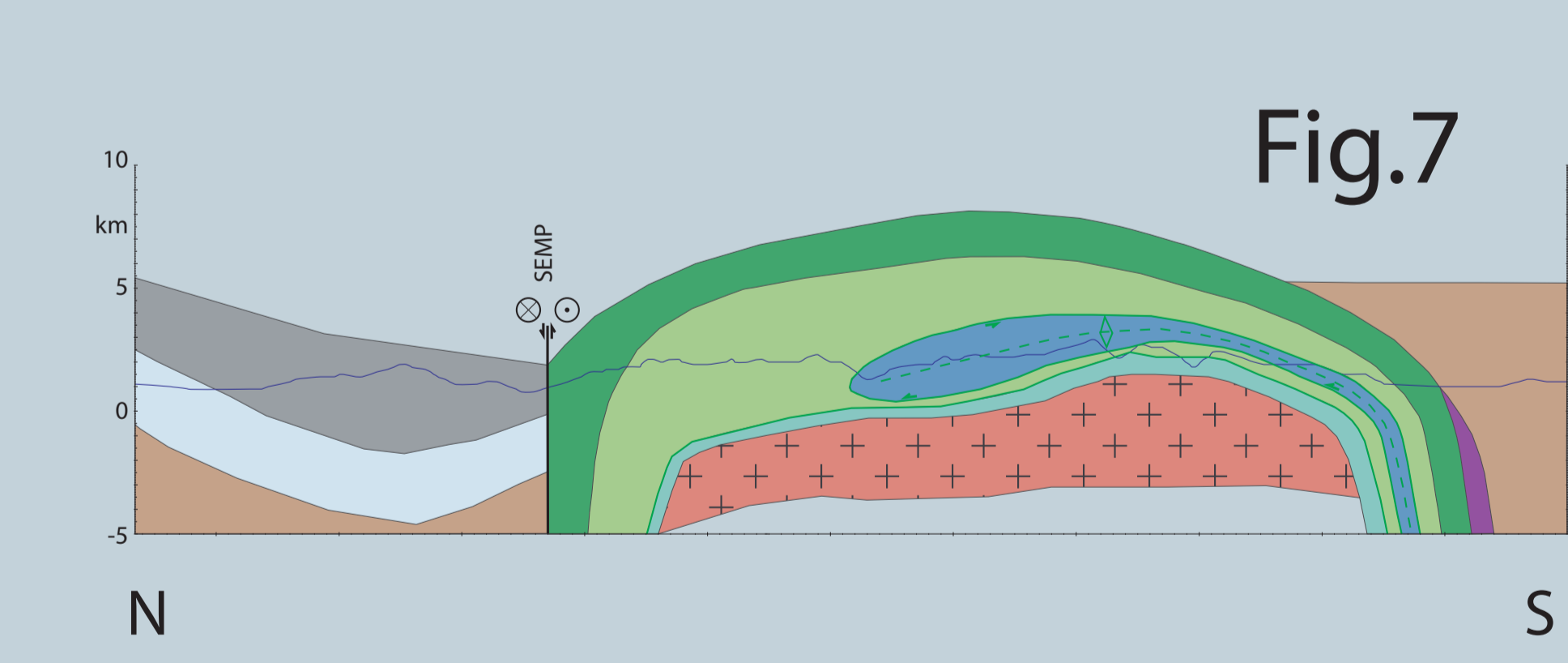
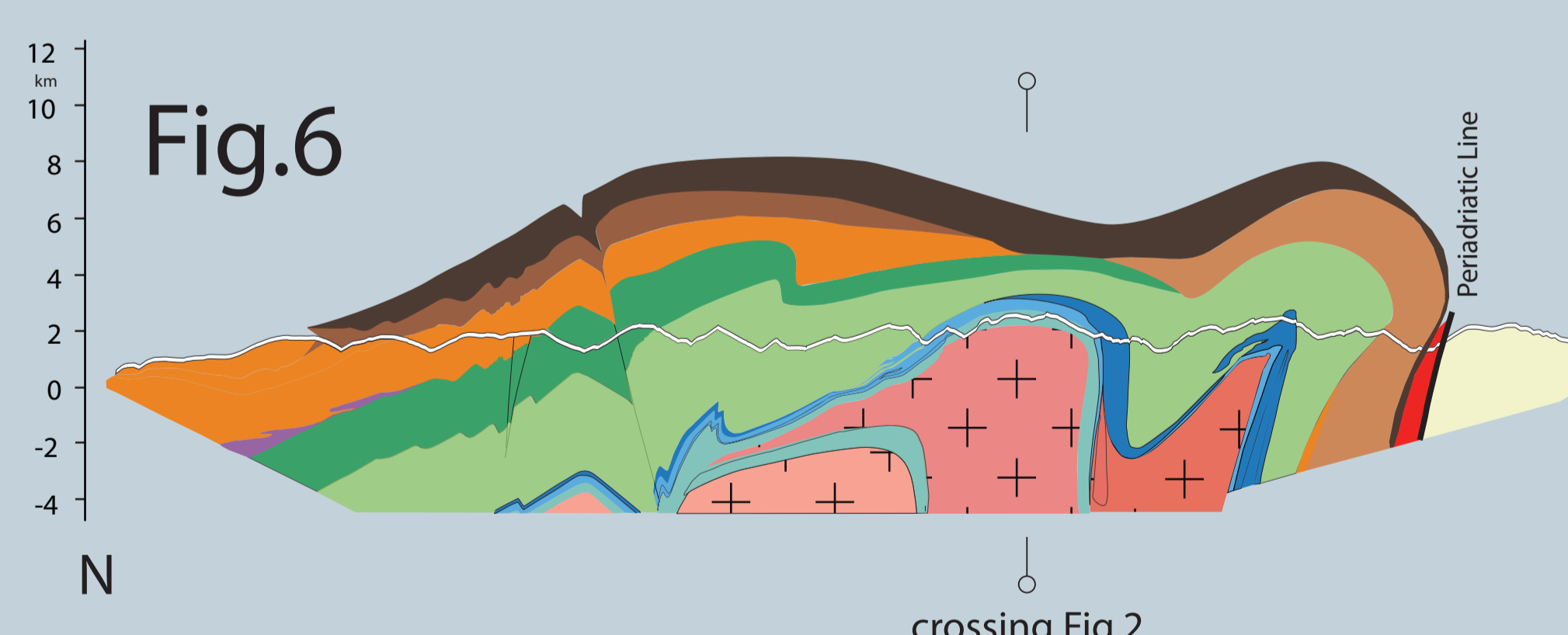
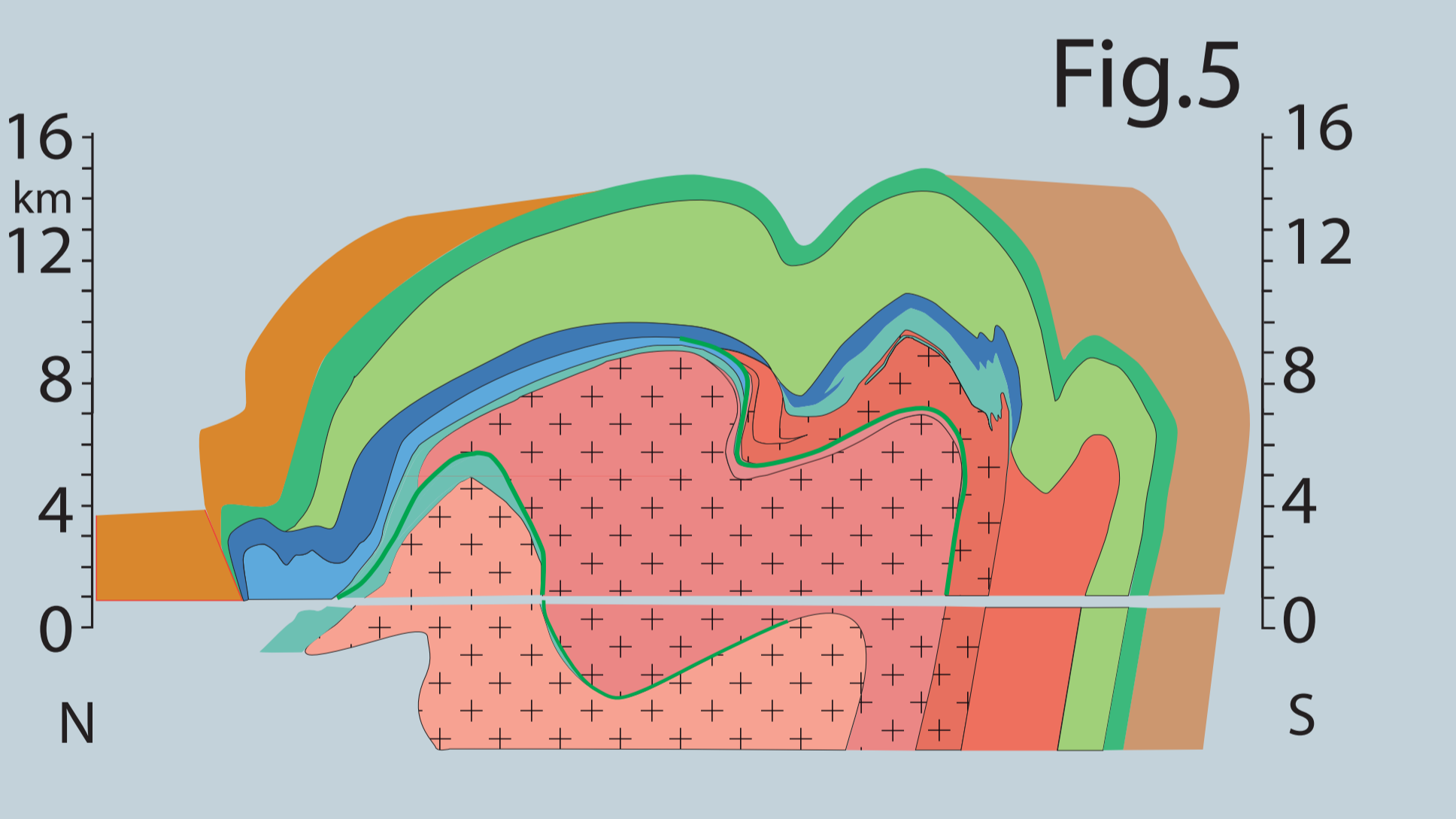
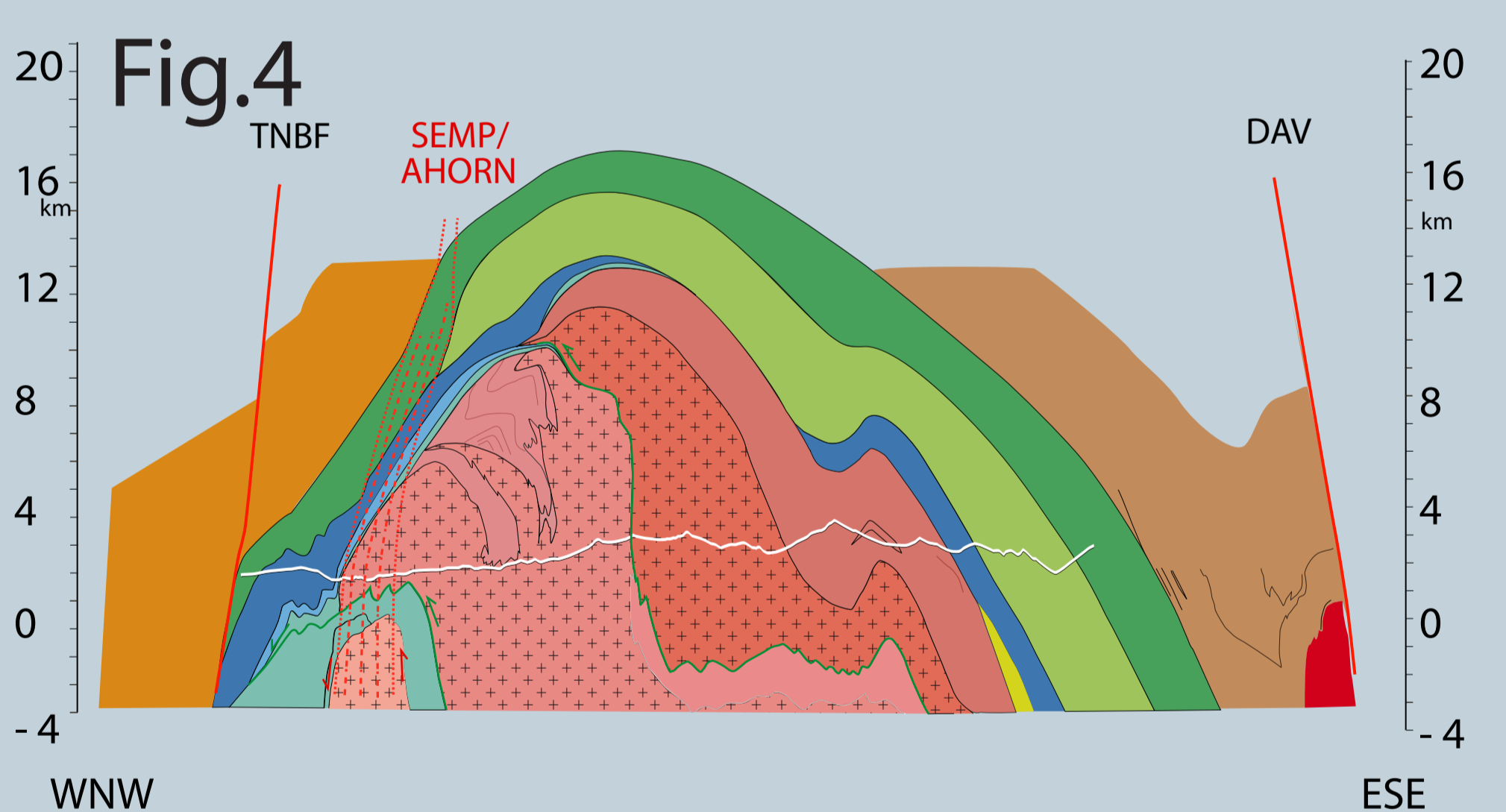
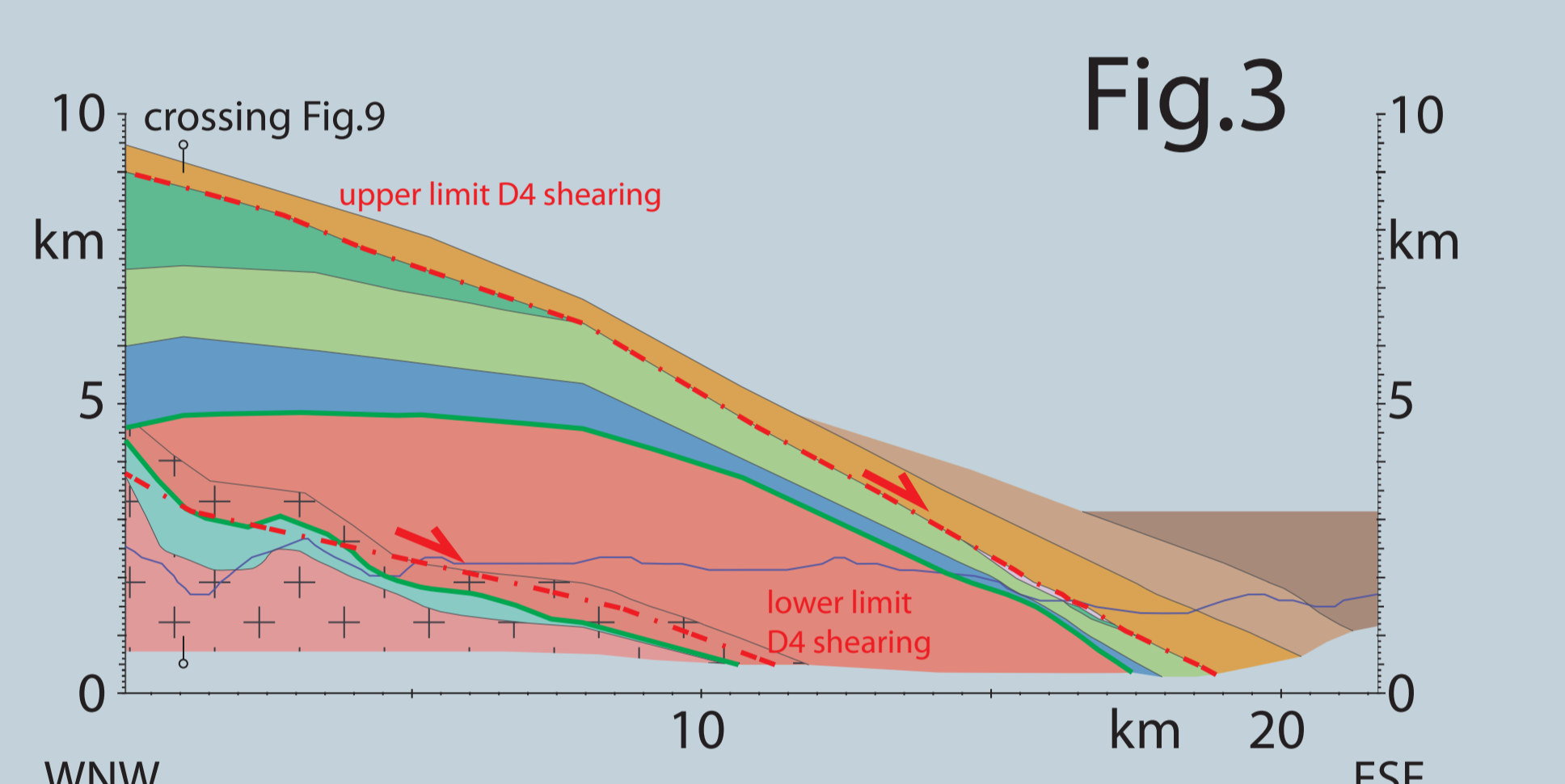
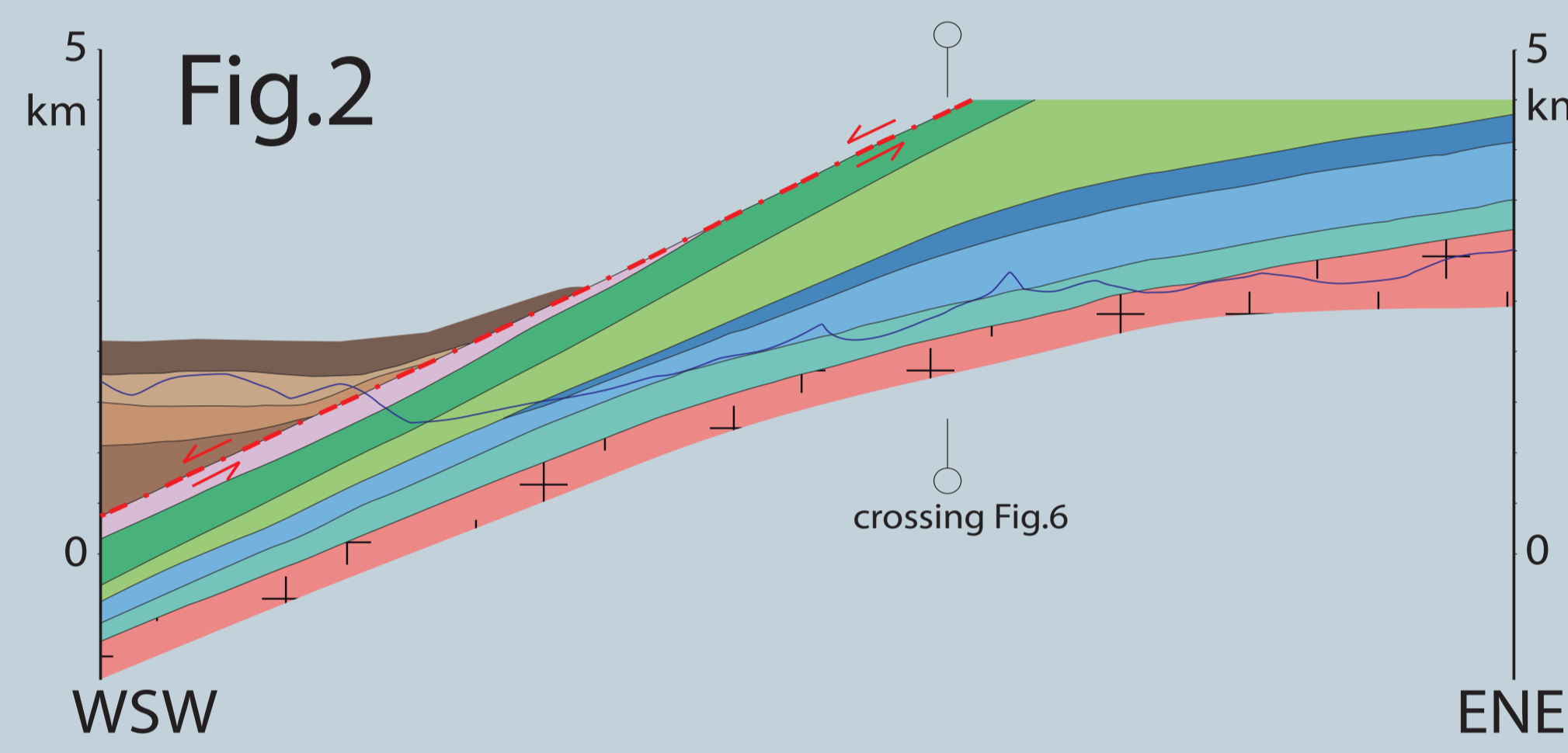
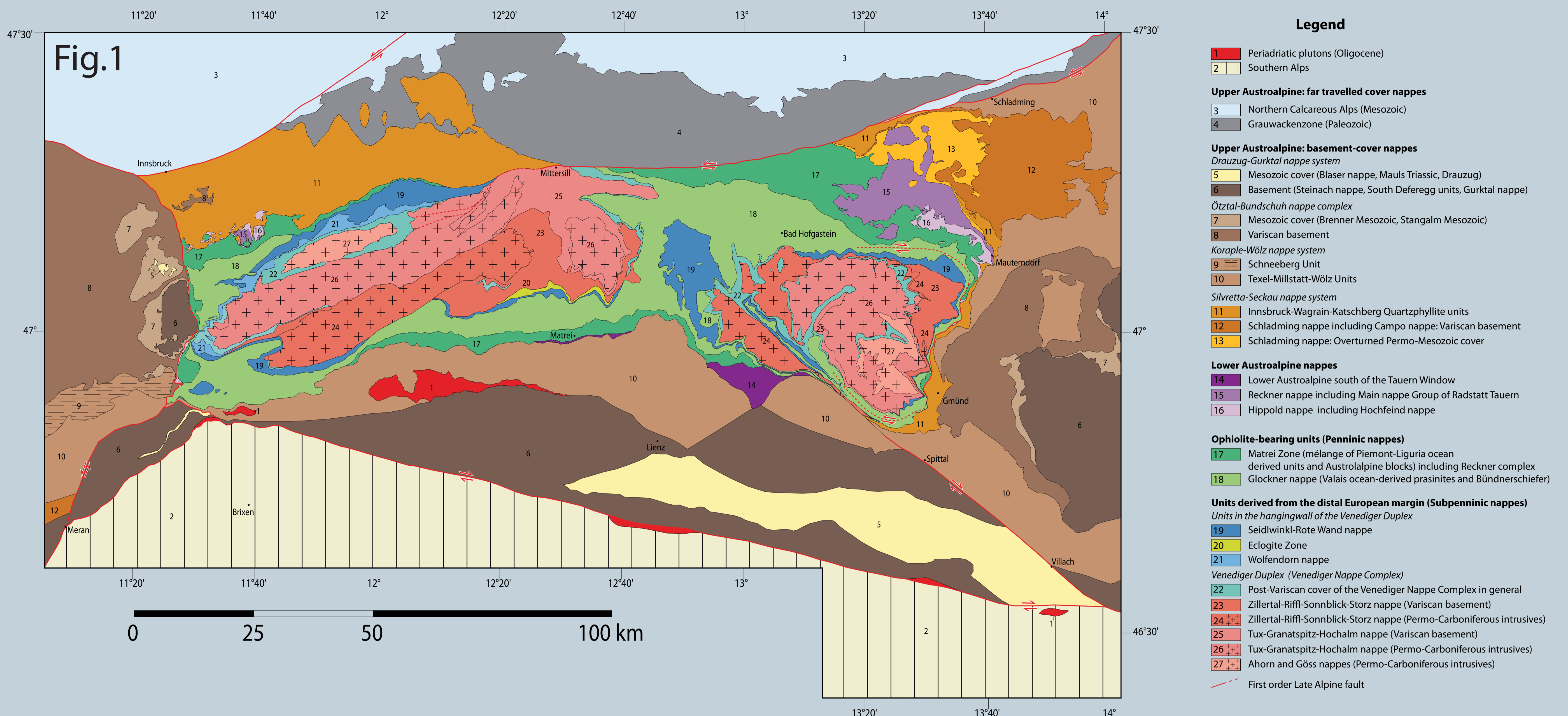


Fig. 1 depicts the major tectonic units, from top to bottom: (1) the Austroalpine Nappe System; (2) the Matrie Zone, remnants of the Alpine Tethys (Piemont-Liguria Ocean) accreted to the Austroalpine already in Cretaceous times; (3) the Glockner Nappe comprising units deposited on oceanic lithosphere of the Valais branch of Alpine Tethys; (4) units derived from the European distal margin that entered the Alpine subduction zone early on (Seidlwinkl - Rote Wand Nappe, Eclogite Zone, Wolfendorn Nappe) (5) the crustal scale duplex of the Venediger Nappe Complex, subdivided into three major thrust sheets. Figs. 2 & 3 depict profiles across Brenner and Katschberg Normal Faults, respectively, while Figs. 4 - 9 depict a series of strike-perpendicular cross sections, moving progressively from west (Fig. 4) to east (Fig. 9). Fig. 10 illustrates the sequence of kinematic steps, constructed for the cross section shown in Fig. 7. Note that the activity of the Katschberg and Brenner Kinematic Systems, starting at around 25 Ma ago not only leads to orogen-perpendicular compression but also to contemporaneous orogen-parallel extension and strike-slip motions. Fig. 11 shows that D3 top-N duplex formation was re-deformed by D4 indentation & the traces of the cross sections (Figs 2 - 9).