Figure S1: Map view of earthquakes for different periods colored by the stress drop estimation from S-wave single spectra. Mapped faults are marked the same as in Figure 1. Subfigures A, C, D show the aftershocks within four days after the Amatrice, Visso, and Norcia earthquake (each epicentral location of the mainshocks is marked with a star in the same color used in Figure 1), respectively. The seismicity between the Amatrice and Visso earthquakes is shown in subfigure B, and after the Norcia earthquake in subfigure E. Earthquakes with a reported magnitude $M \geq 4$ are marked with a brown star, and earthquakes without a spectral estimation with a grey circle. Mainshock locations are shown in all subfigures despite their potential occurrence after the particular time window.
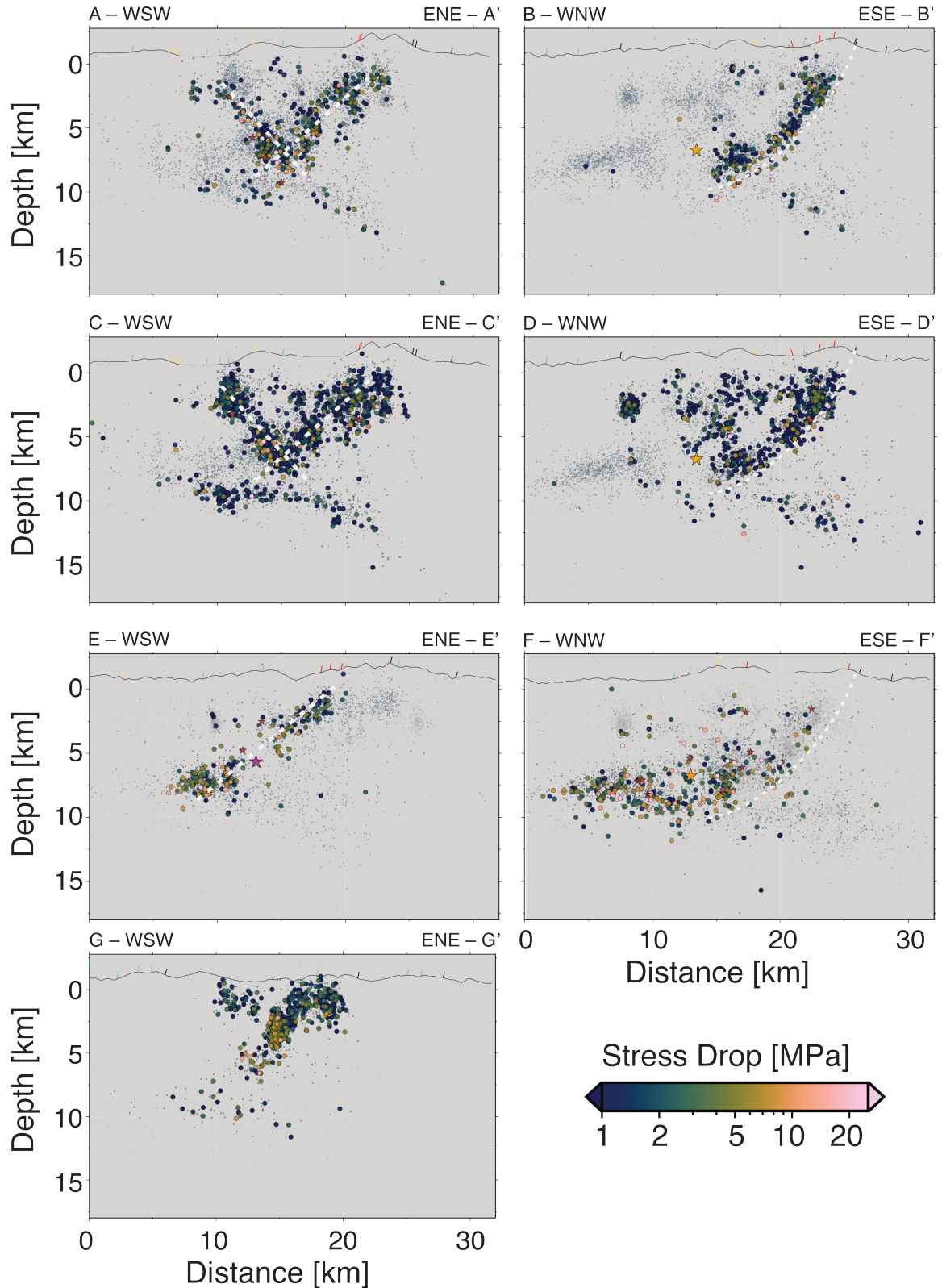
Figure S2: Earthquakes colored in their stress drop estimation from S-wave single spectra of the AVN seismic sequence projected (3 km width) onto different cross-sections, which are shown in Figure S1. Colors and symbols are the same as in Figure 5. The white dashed lines show interpretations of fault locations at depth from previous studies (Chiaraluce et al. 2017, Improta et al. 2019.)