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# Seismic Anisotropy in the Eastern Mediterranean from Shear-Wave Splitting Analysis

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The eastern Mediterranean has a complex tectonic history and currently exhibits subduction, collision, major strike-slip faulting, extension, uplift, and volcanism. A variety of geodynamical scenarios have been suggested for the underlying mantle, including lithosphere delamination, tearing and/or break-off of subducting slabs, and ascension of anomalously hot material. The historic and current deformation associated with these scenarios may be recorded as seismic anisotropy in the upper mantle. To investigate the anisotropy, we perform shear-wave splitting analysis on SKS arrivals throughout the region from 1999 to 2018. We find that the anisotropy in this region is more complex than previously recognised and varies over relatively short length scales, suggesting that in some areas a shallow (perhaps lithospheric) component is present. We interpret these results in relation to the possible asthenospheric flow regimes and lithospheric deformation history, alongside new body-wave tomographic images of the region.