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Crustal strain rate patterns of the western North America Plate boundary

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The knowledge of the crustal strain rate tensor provides a description of geodynamic processes such as fault strain accumulation. We use interpolation of GPS geodetic measurements to derive the regional strain rate field for selected regions within the western North America plate boundary. We applied the interpolation scheme to data from the Eastern California Shear Zone, the Mendocino triple junction region, and the transition from the Sierra block to the Pacific North West. Our results allow us to define regions of localization of the strain rate at the northern end of the San Andrea Fault system and within the boundary between the Sierra Nevada and Basin and Range. These results help to understand the way in which strain is accommodated in the Sierra/Pacific North West transition. The results will be compared with geologic and tectonic observation of the region.