

HR: 0800h
AN: **G21B-1281 [Abstracts]**
TI: **Strain Patterns Across the Eastern California Shear Zone**
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AB: The Eastern California Shear Zone (ECSZ), Central Nevada Seismic Belt (CNSB) and Walker Lane Belt (WLB) accommodate approximately 30% of relative Pacific-North America plate motion. Strain is partitioned across the ECSZ by three sub-parallel, dextral oblique-slip fault systems: the Owens Valley-Chalfant Valley, Panamint Valley-Hunter Mountain and Death Valley-Furnace Creek-Fish Lake Valley faults. North of the ECSZ, strain is partitioned between the CNSB and the WLB via extension and dextral transtension, respectively. The ECSZ and WLB are connected by a right step-over fault system called the Mina Deflection. A GPS velocity field spanning the ECSZ indicates dextral shear roughly parallel to the major faults with rates decreasing west to east. Farther north, the velocity field indicates extension across the CNSB, grading to dextral shear across the WLB. We examine earthquake cycle effects on the observed velocity field and the partitioning of strain across the different fault systems by employing 2D finite element models.
DE: 0545 Modeling (4255)
DE: 8110 Continental tectonics: general (0905)
DE: 8118 Dynamics and mechanics of faulting (8004)
DE: 8158 Plate motions: present and recent (3040)
SC: Geodesy [G]
MN: Fall Meeting 2005