Two fun-sized M5.7 earthquakes in the central Walker Lane

Christie Rowe
Papers led by Bogolub, Koehler, Martin
Many coauthors

all M5+ WL and NV

- 1855 - 1864
- 1864 - 1914
- 1914 - 1954
- 1954 - 2000
- 2000 - 2026

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The 09 December 2024 Mw5.7 Parker Butte Earthquake: Orthogonal surface fracturing and associated ground disturbances near Yerington, Nevada, central Walker Lane

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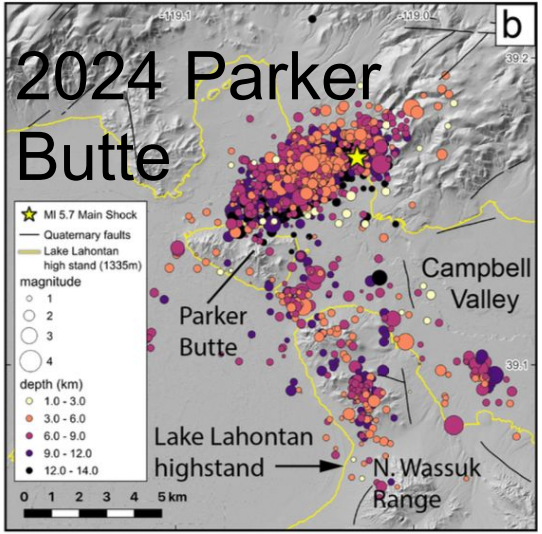
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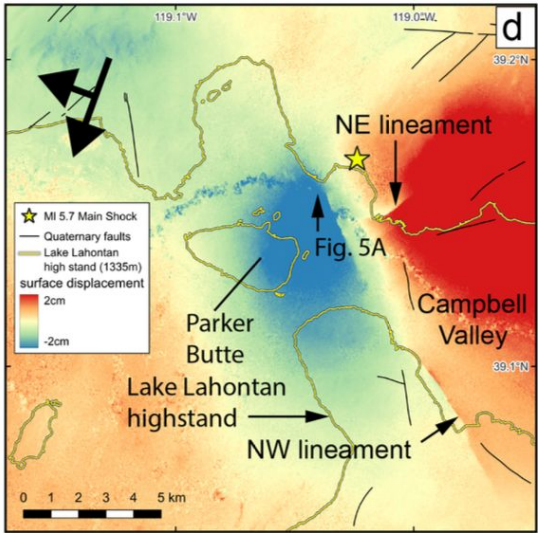
The M 5.7 Parker Butte Earthquake near Yerington, Nevada: Anatomy of a Dual-Plane Rupture in the Walker Lane from High-Precision Relocated Earthquakes, InSAR, GPS, and Strong-Motion Data

Kyren R. Bogolub[*1], Daniel T. Trugman[1], Yu Jiang[1], William C. Hammond[2], Kenneth D. Smith[1], Rich D. Koehler[2], and Christie D. Rowe[1]

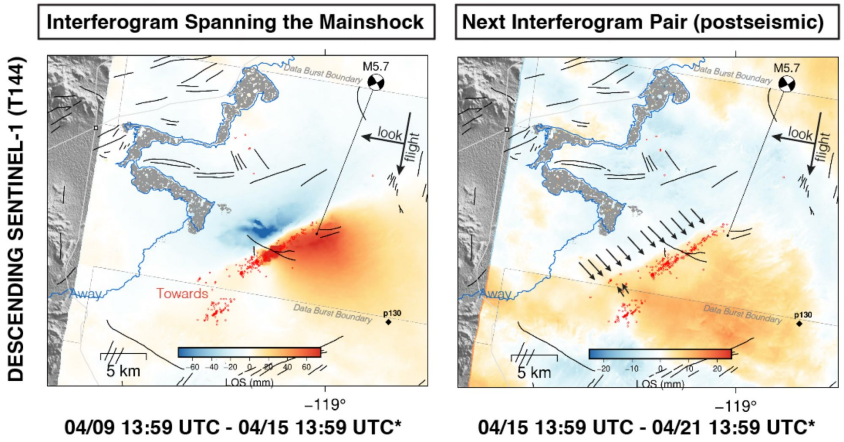
2024 Parker Butte	2026 Lake Lahontan
M5.7 sinistral rupture plane 062/79S 8 km MT depth	M5.7 sinistral rupture plane 061/80S 5 km MT depth
No surface rupture	Surface rupture - extensive Mode I and Mode I/III cracks
Minor liquefaction in Walker River bed	Liquefaction above mainshock on dry playa with shallow water table
Low aftershock productivity	High aftershock productivity (3x PB)
Triggered slip on perpendicular sinistral fault (coseismic or very soon after mainshock)	Afterslip on mainshock plane and extending to the west

2024 Parker Butte





Preliminary Information-Subject to Revision. Not for Citation or Distribution







2026 Lake Lahontan