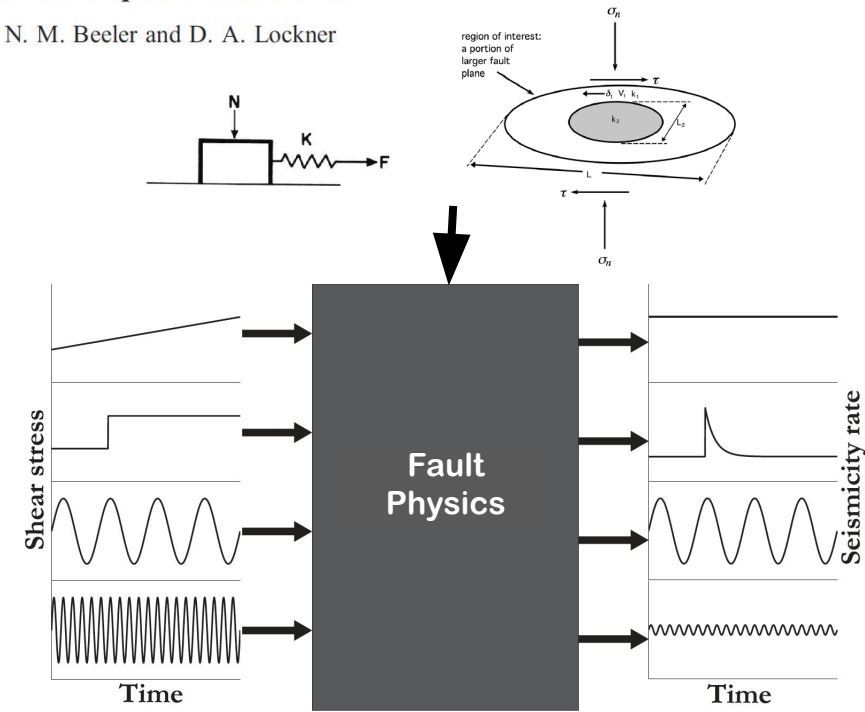


Amplitude & Phase of Periodic Earthquake Modulation Are Frequency-dependent

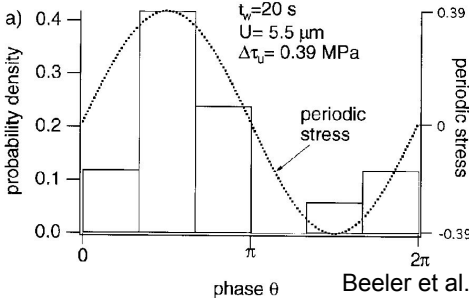
Why earthquakes correlate weakly with the solid Earth tides:
Effects of periodic stress on the rate and probability of earthquake occurrence

N. M. Beeler and D. A. Lockner



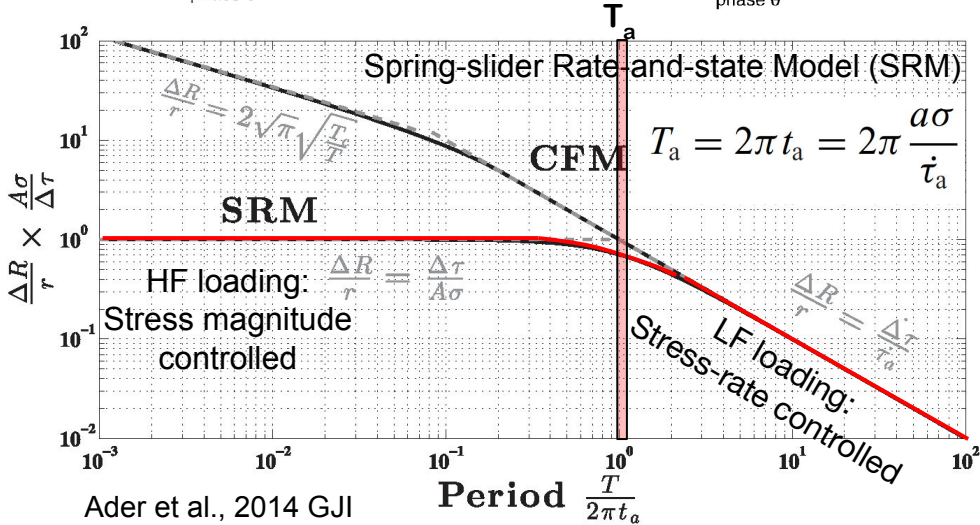
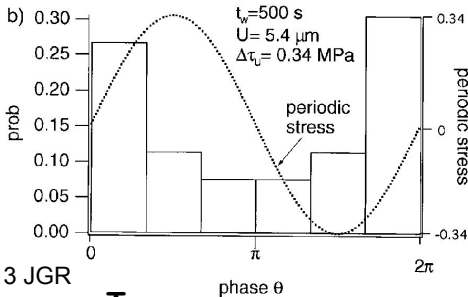
Ader et al., 2014 GJI

HF loading:
Stress-magnitude controlled



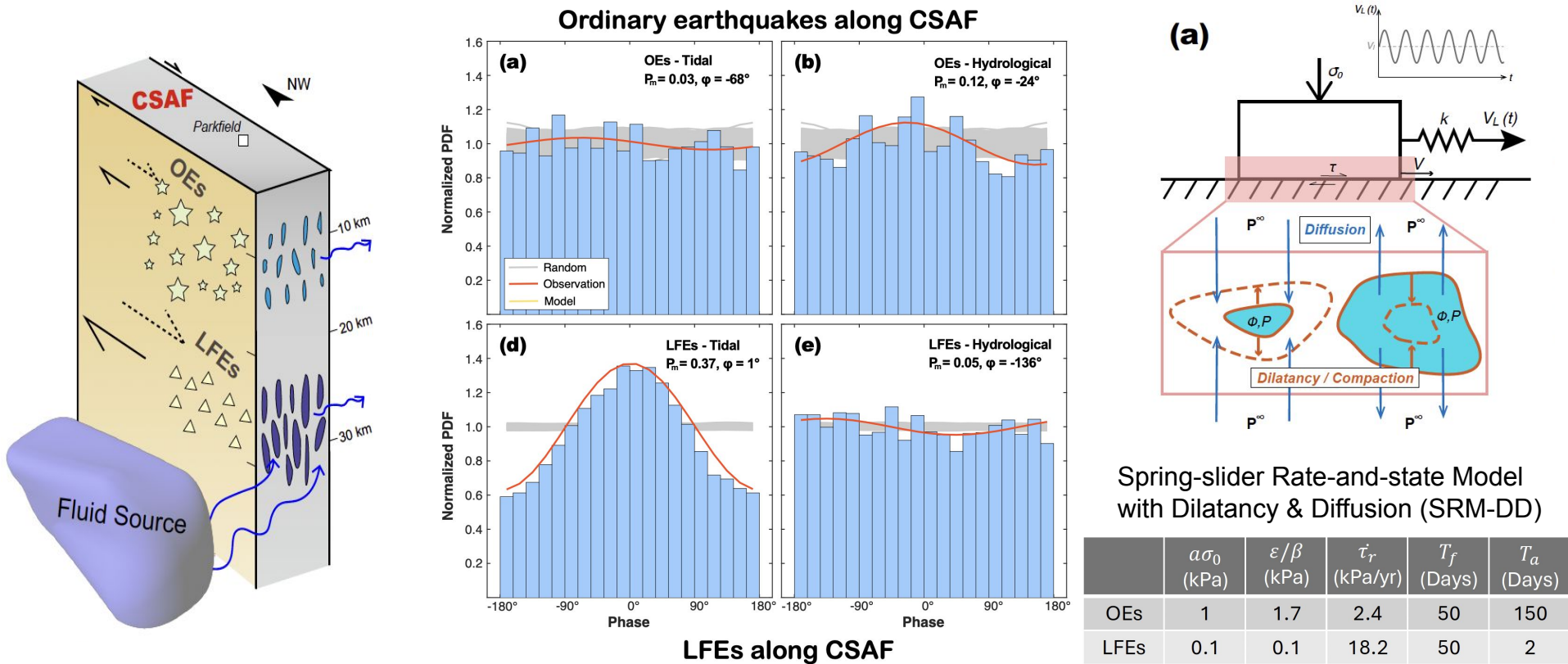
Beeler et al., 2013 JGR

LF loading:
Stress-rate controlled

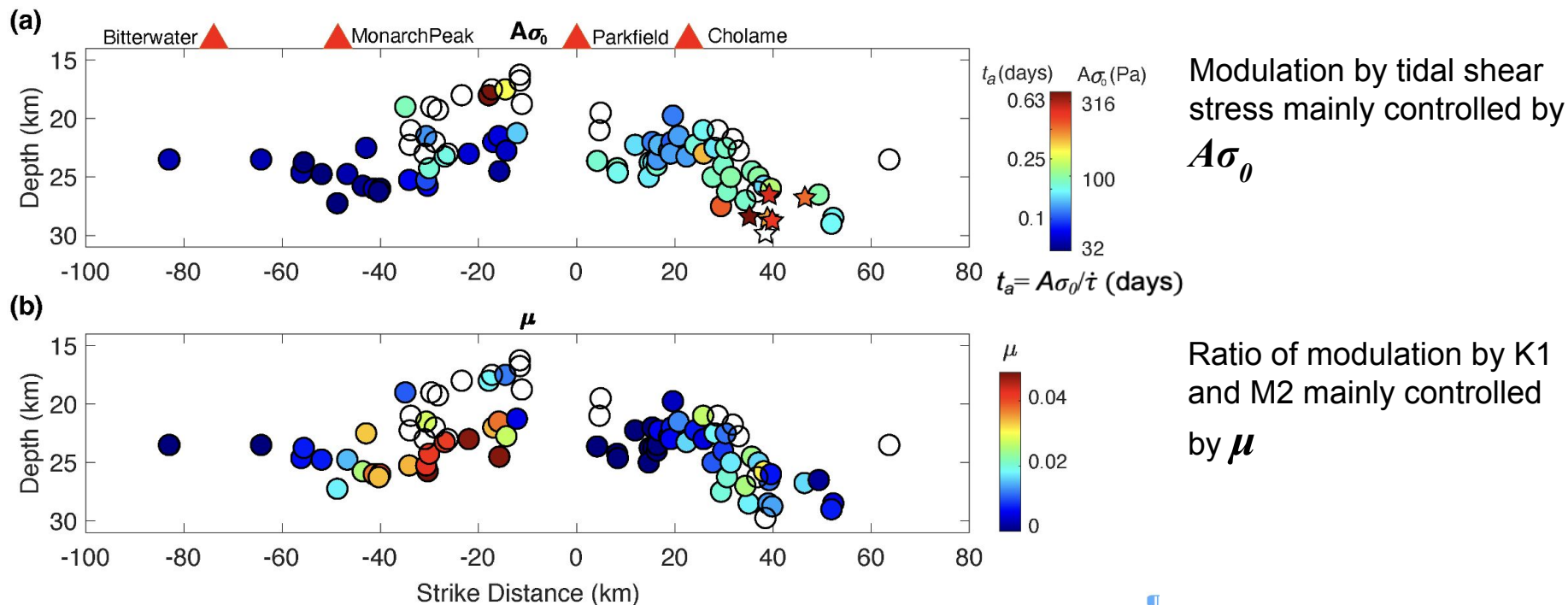


Ader et al., 2014 GJI

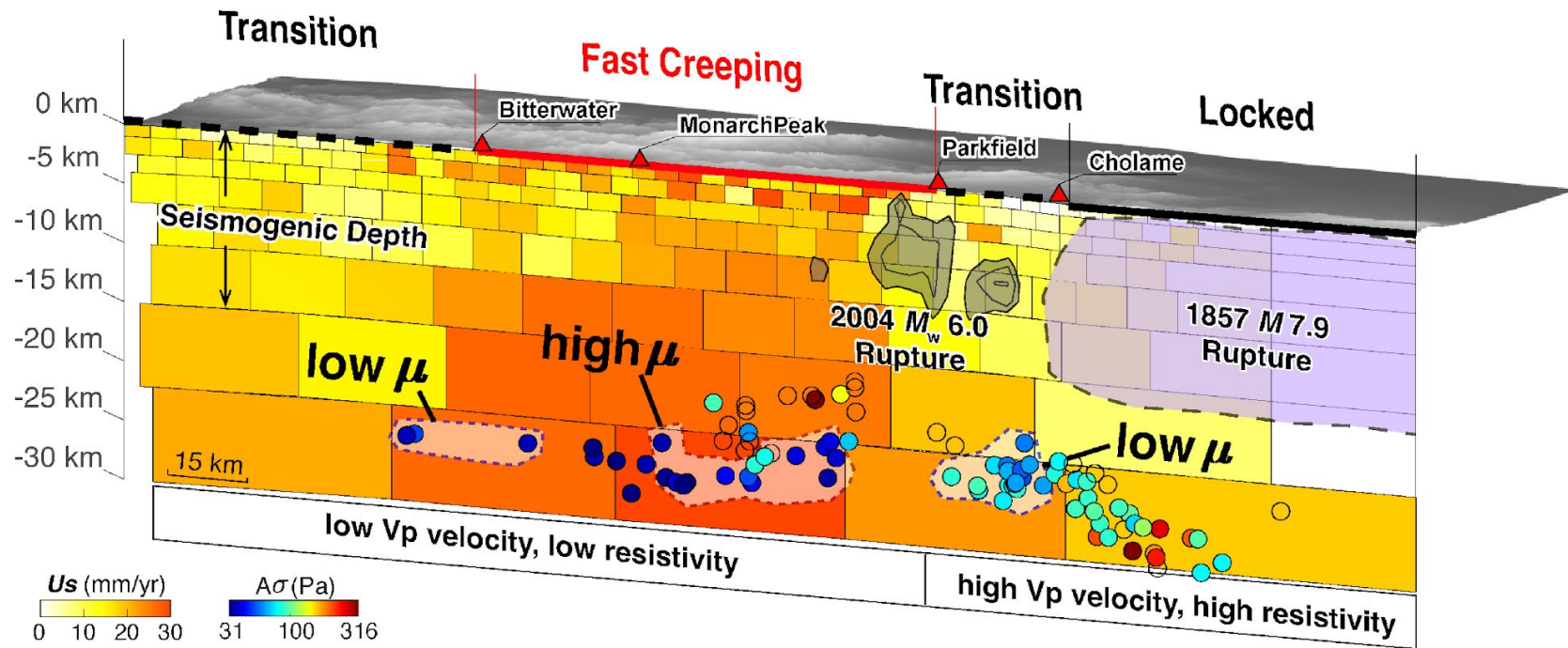
Contrasting Seasonal and Tidal Modulation of OEs and LFEs Reveals Frictional and Fluid Diffusion Parameters



Spatially Variable Tidal Modulation Reveals Frictional Properties of Lower-crustal CSAF Based on RSF Model



Probing Frictional Fault Properties From Tidal and Hydrological Seismicity Modulations



Zeyan Zhao, Lian Xue, Roland Bürgmann, Elías R. Heimisson, Weifan Lu, Han Yue 2025, Tidal and Hydrological Seismicity Modulations Reveal Pore Fluid Diffusion during Earthquake Nucleation, Science Advances, in revision

Xue, L., R. Bürgmann, Z. Zhao, N. M. Beeler, E. R. Heimisson, and D. R. Shelly (2025), Probing lower-crustal fault properties with frequency-dependent tidal tremor triggering, Earth Planet. Sci. Lett., <https://doi.org/10.1016/j.epsl.2025.119480>