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W17_geowave “3D full waveform geophysical models”
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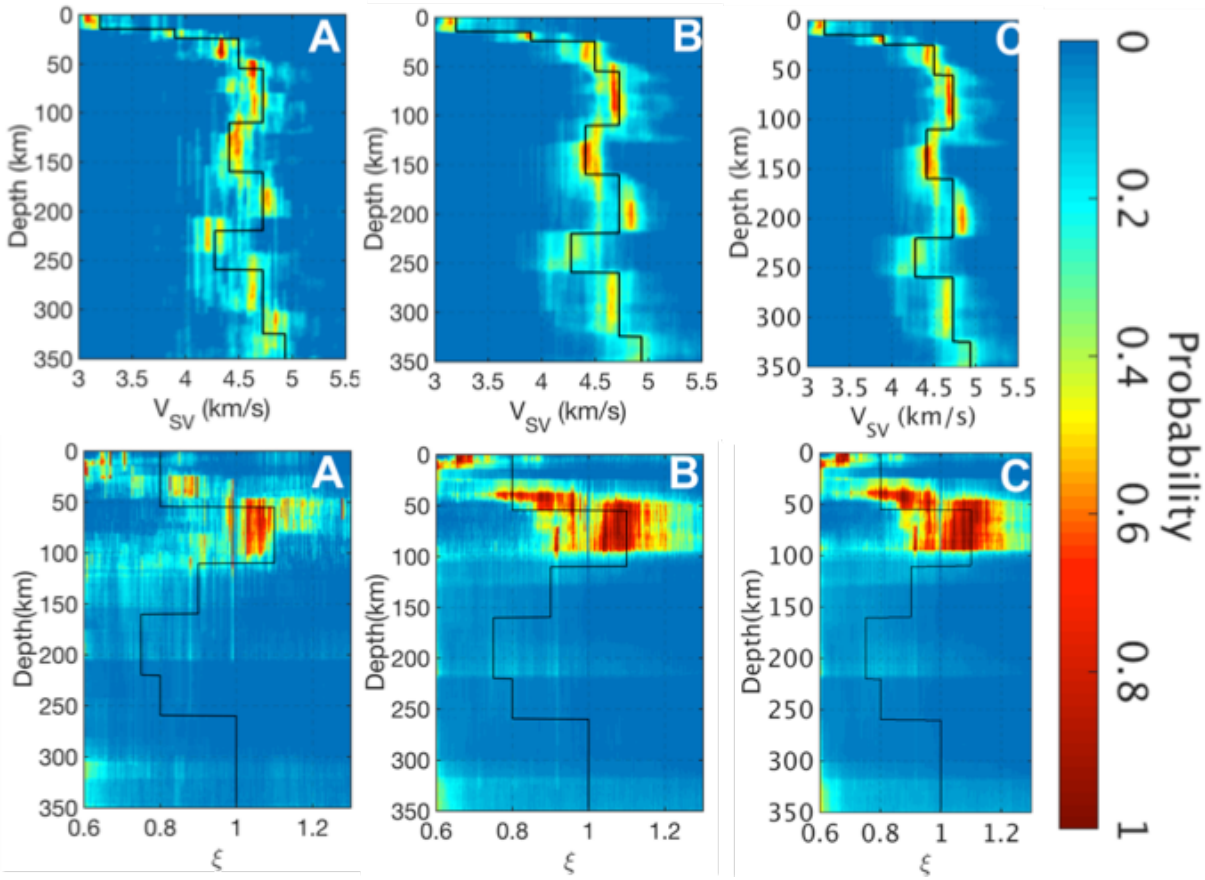

The HPC resources of LANL allowed MCMC inversion of the elastic structure North America.

Performance of the MCMC inversion according to the number of cores for the computation. A) 64 cores. B) 480 cores. C) 816 cores. The true model is represented by the black line.

Vsv is the wave speed of S waves polarized in the vertical plane, *ξ is* an anisotropy parameter. The Earth is highly anisotropics; the wavespeed of seismic waves depends on the polarization of the wave.

Seismic inversion of the elastic structure is usually limited to isotropic information such as Vsv. Our research looked at the inversion of Earth anisotropy.