



## Filling in the Gap: Reprocessing Legacy Active-Source Seismic Data from the Southern Cascadia Subduction Zone to Assess Hazards



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AGU Fall Meeting 2024  
T53A-3188

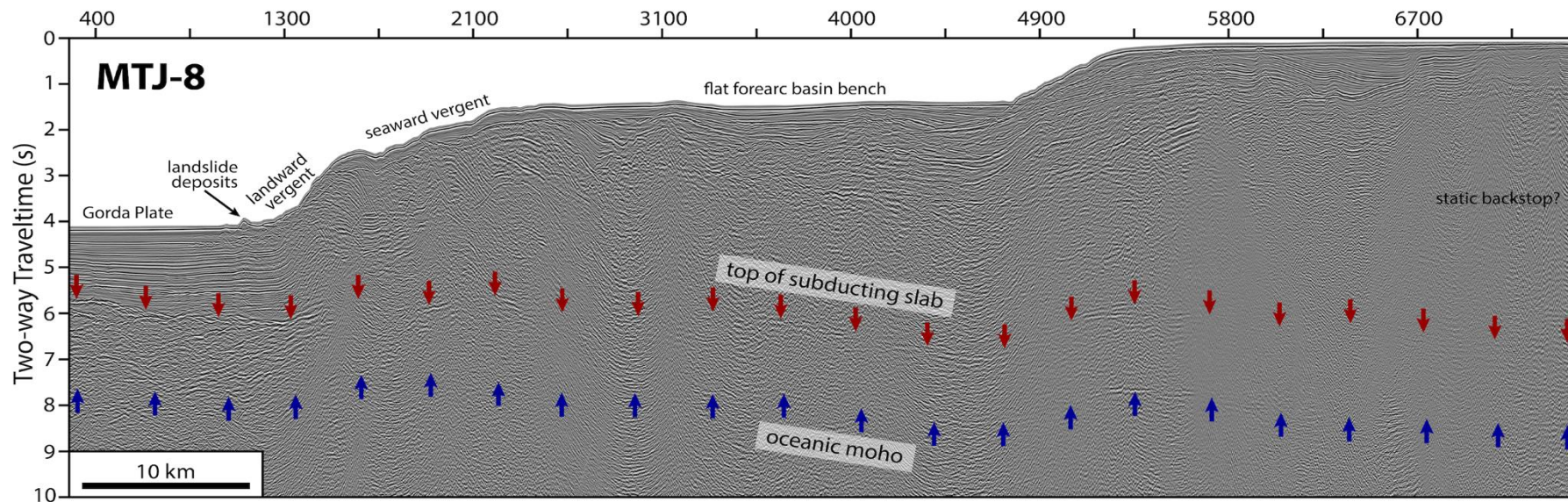
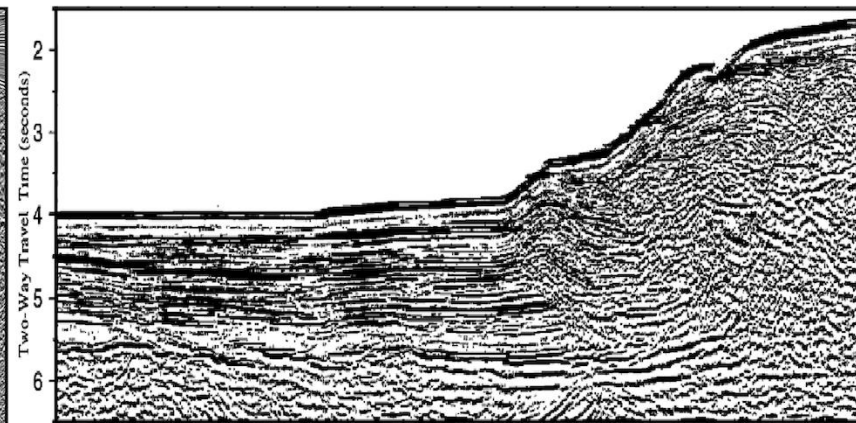
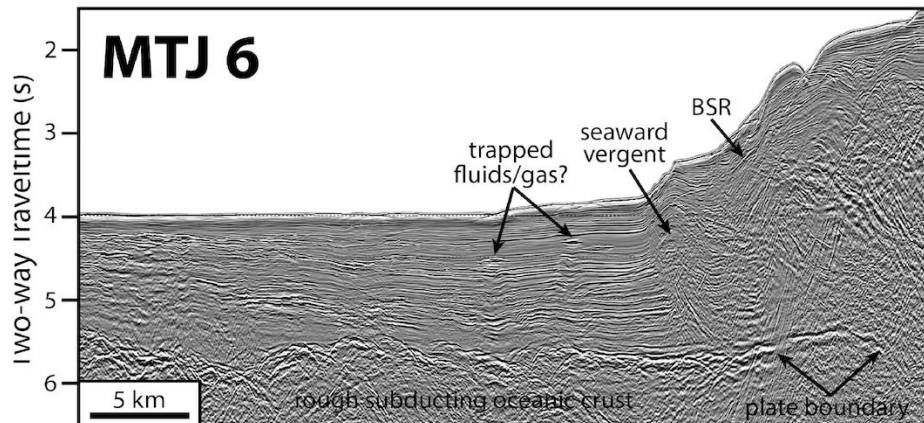
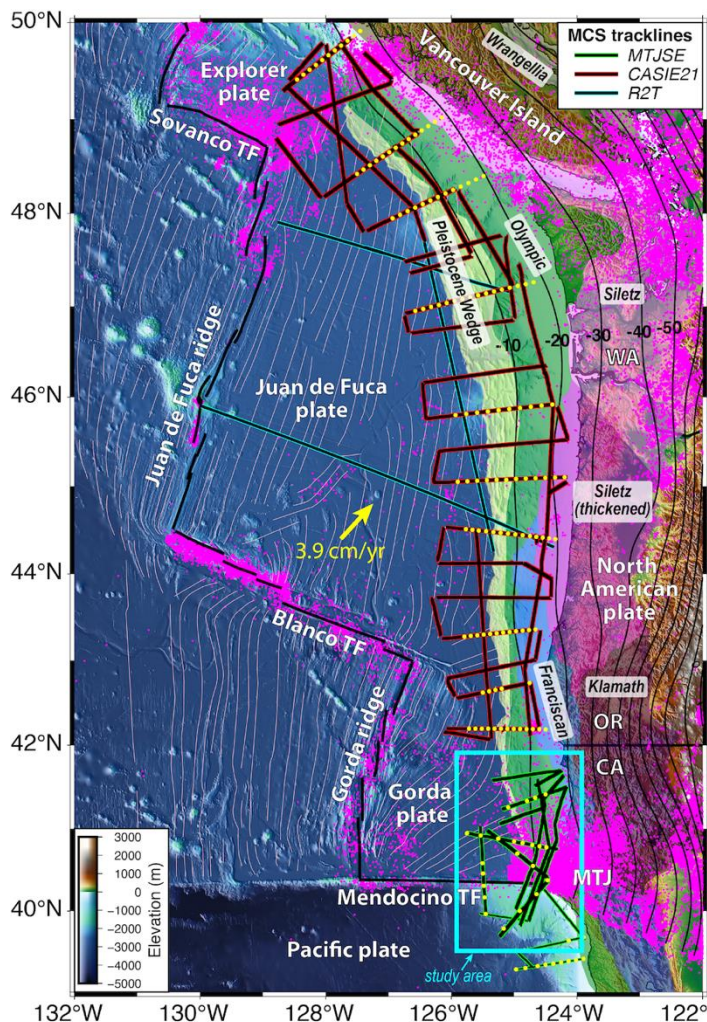
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T53A-3188; Friday Afternoon Poster

Preliminary re-processed seismic images

Initial seismic images from Gulick et al. (1998)



# Fall 2025 R/V *Langseth* Active-Source Seismic Survey in Atlantic

Brandon Shuck (LSU), Anne Bécel (LDEO), Harm Van Avendonk (UTIG), Joshua Russell (Syracuse)

43-day cruise; Sep 27–Nov 10, 2025; NSF-MGG

**Stay tuned for open Apply-To-Sail announcement in Spring !  
PhD position at LSU to analyze data !**

Project will involve MCS reflection imaging, OBS inversion for velocity structure, 3D mantle anisotropy characterization, and petrological modeling of mantle melting and magmatic accretion

1. How does the elevated mantle temperature and chemical enrichment associated with the Pangea supercontinent dissipate during early seafloor spreading?

2. What processes control asthenospheric flow during incipient seafloor spreading and when do mantle fabrics become aligned in the spreading-parallel direction?

