

Northern Cascadia Drilling: Establishing Plate-Scale Borehole Observatories to Study How Plate Boundaries Communicate

Tianhaozhe Sun^{1,2} (tianhaozhe.sun@nrcan-rncan.ga.ca; thzsun@uvic.ca), Earl Davis², Martin Heesemann³, Keir Becker⁴, Kelin Wang^{1,2}, Harold Tobin⁴, William Wilcock⁴ and many others ¹Pacific Geoscience Centre, Geological Survey of Canada; ²University of Victoria, Canada; ³Ocean Networks Canada; ⁴University of Miami, USA; ⁴University of Washington, USA.





- Studying rheology of the lithosphere-asthenosphere system





and (possibly) inter-seismic strain accumulation. Many other examples exist (e.g., Araki et al., 2017). Upper-right: Concept of using formation fluid pressure to track volumetric strain change.



- Sun et al. (2021), Geophysical Research Letters, doi:10.1029/2021GL095347 Sun et al. (2024), Earth and Planetary Science Letters, doi:10.1016/j.epsl.2024.118619