Mapping on the Northern Chukchi Borderland and Canada Basin, Amerasia Basin, Arctic Ocean (2021)

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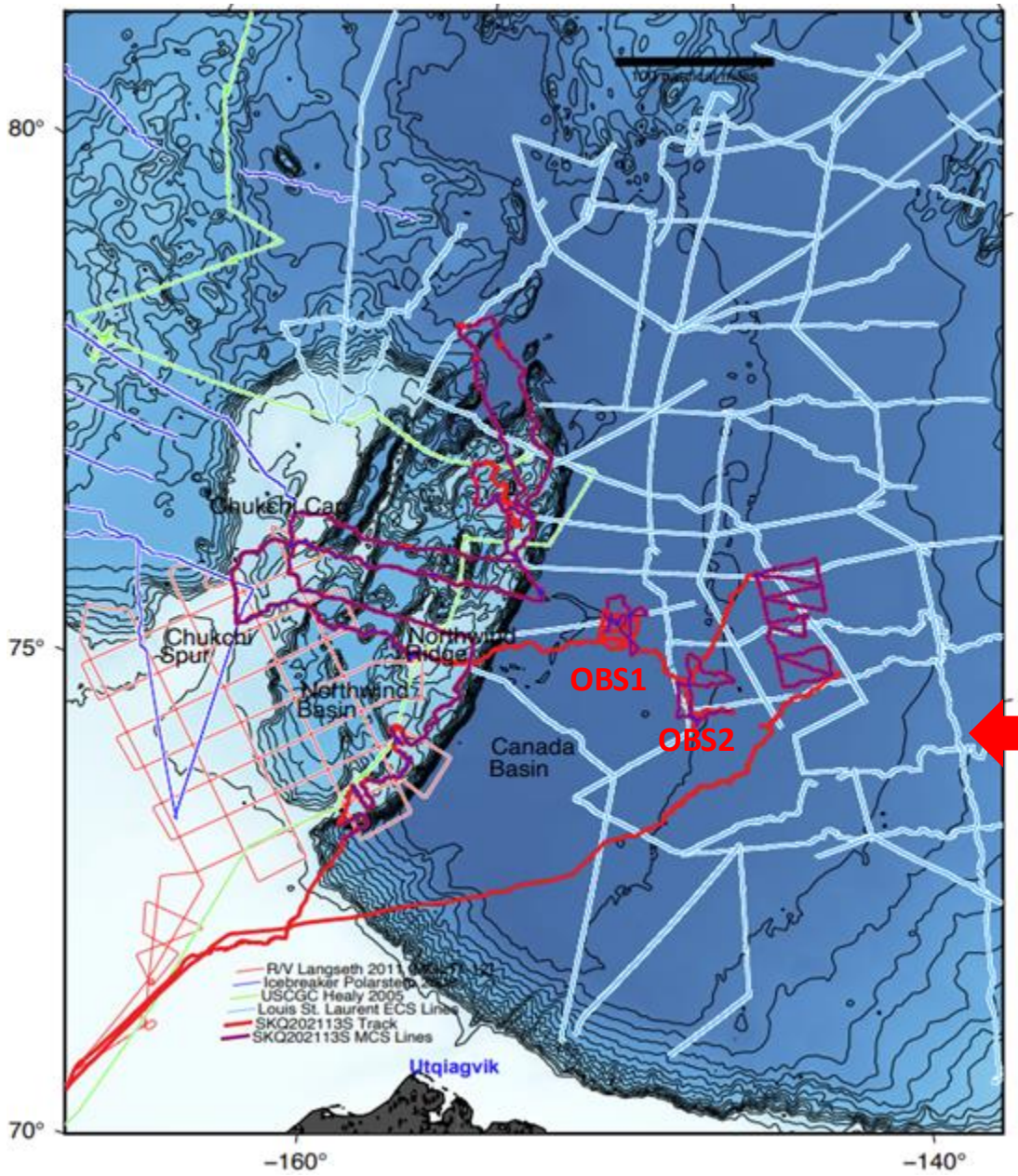
AGU 2024 | Poster T51D-3180

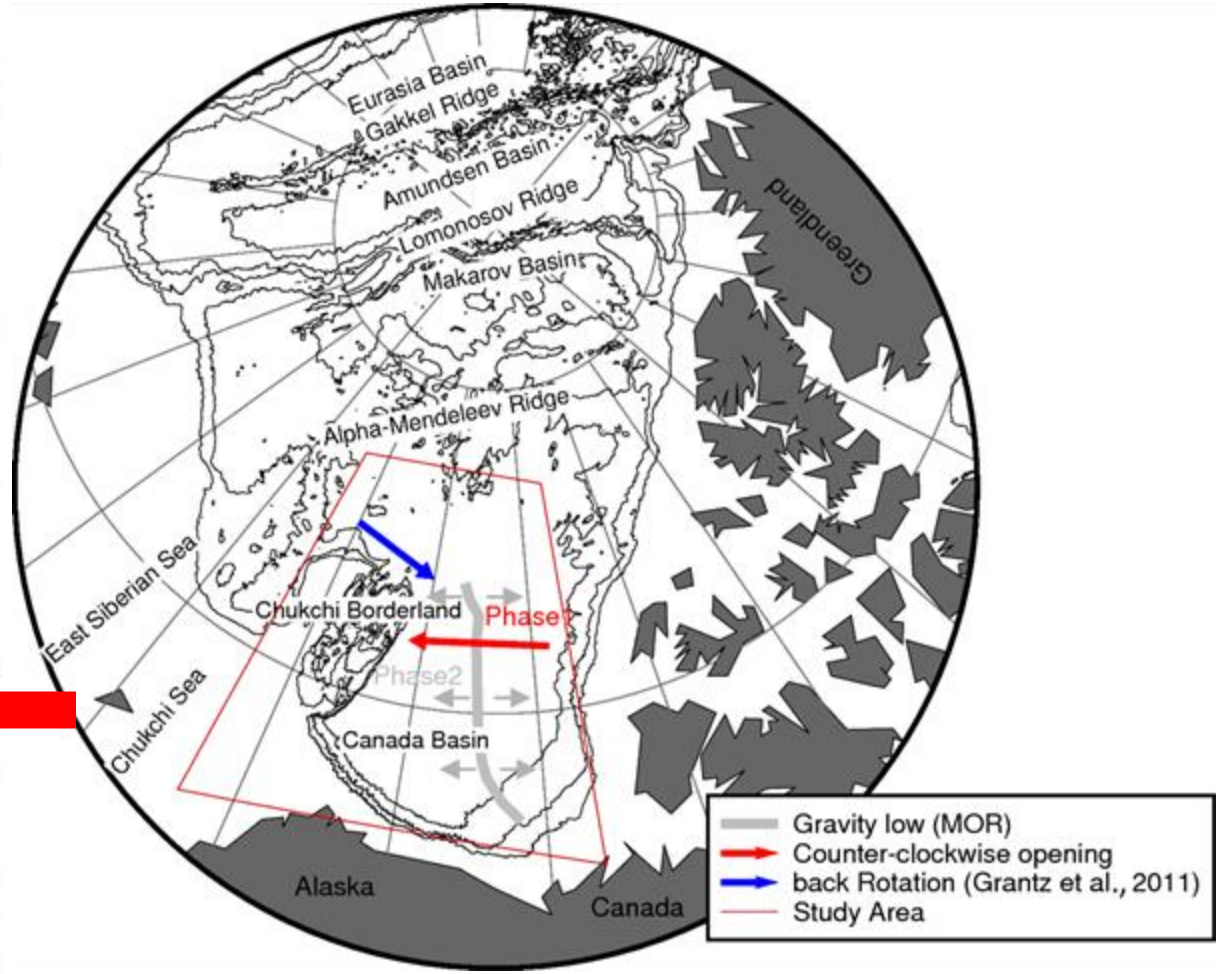
Seismic Evidence of the Fossil Spreading Ridge Characteristic in the Canada Basin, Arctic Ocean

Friday, 13 December 2024

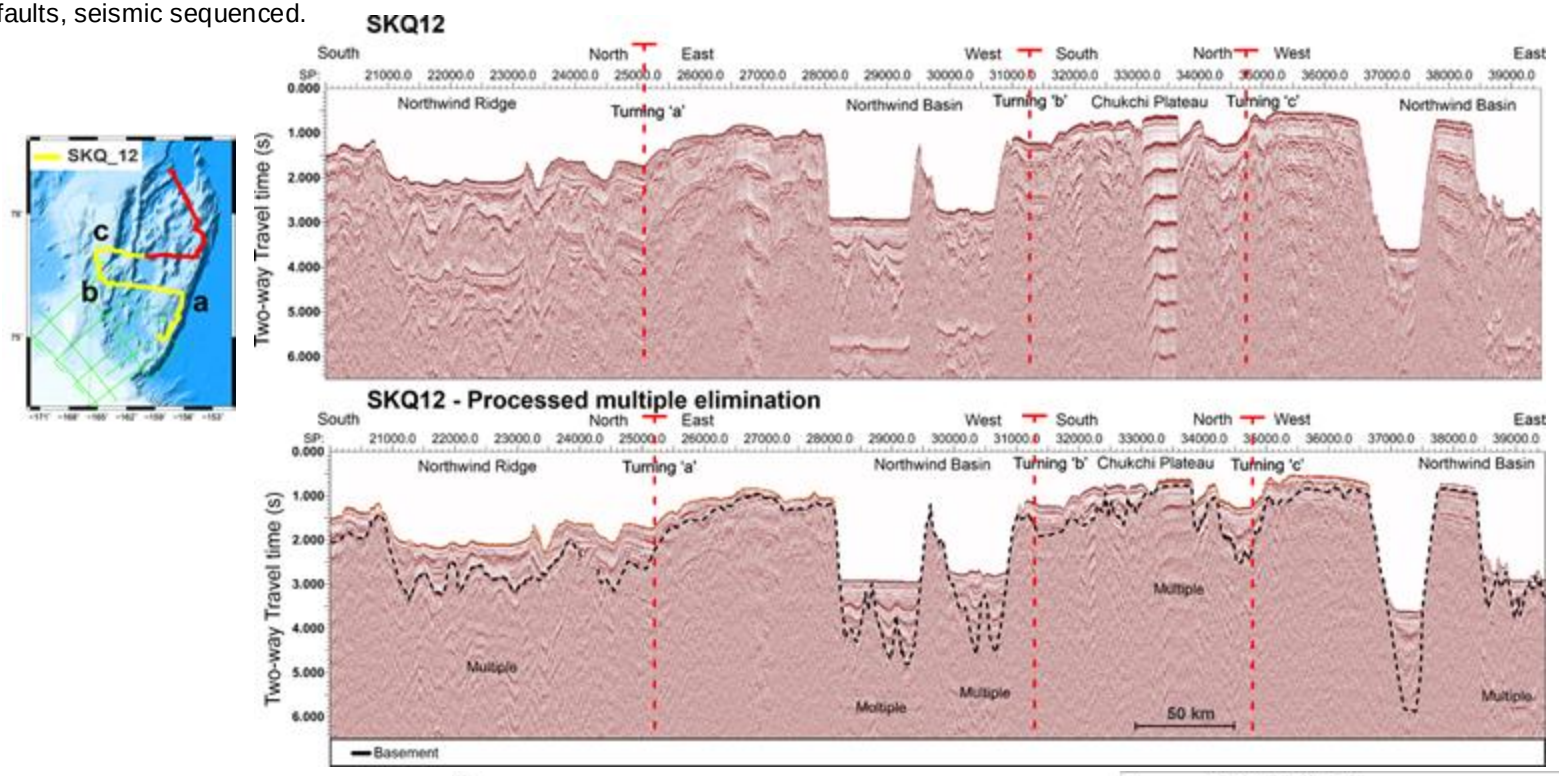
08:30 - 12:20

Seismic Reflection Survey

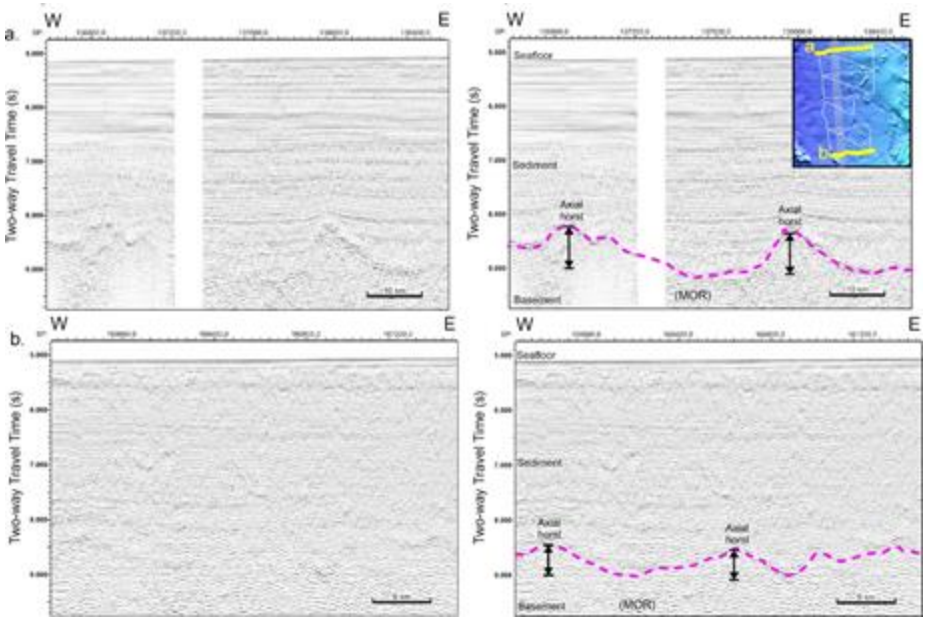


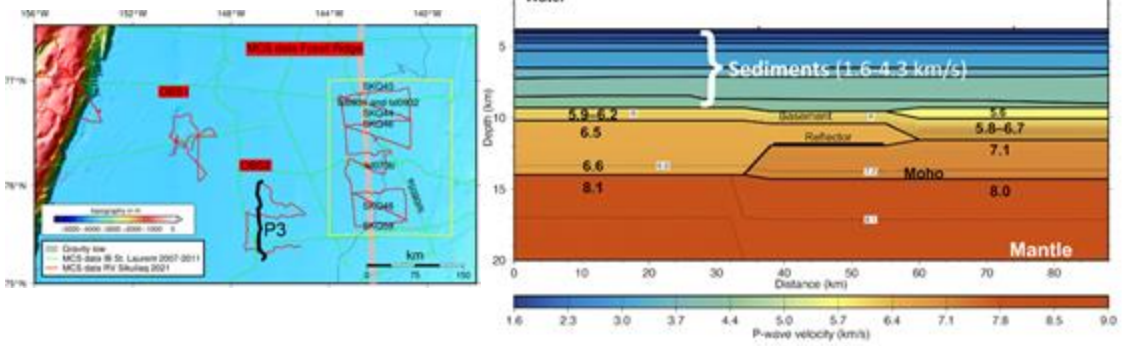


Seismic profile SKQ line 12 Interpreted section of the seismic profile revealing acoustic basement, major faults, seismic sequenced.

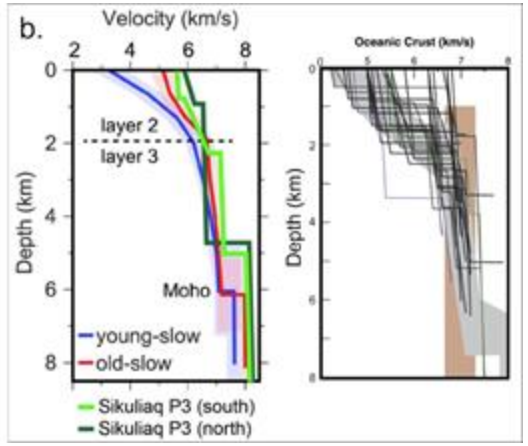


Seismic profile across fossil spreading ridge in the Canada Basin from west to east shows geometry of axial fossil ridge. (a) Line SKQ43. (b) Line SKQ59.

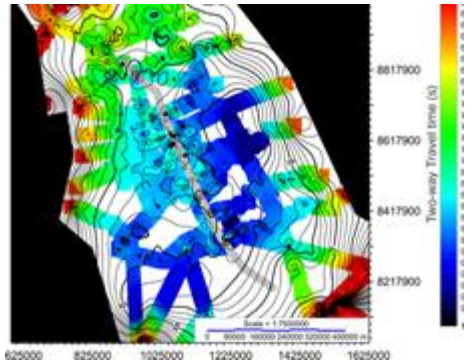




Velocity model line P3 from forward-modelling of travel times using ray-tracing



left side: average velocity models for oceanic crust (Christensen et al. 2019) compared to line P3; right side: velocity models obtained from sonobuoys in the oceanic domain of Canada Basin (Chian et al. 2016)



Basement surface map (two-way travel time) based on all MCS data available across Canada Basin shows a linear feature of fossil ridge from south to north

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