

## Axial 2020 Expedition to Axial Seamount (R/V Thompson TN383)

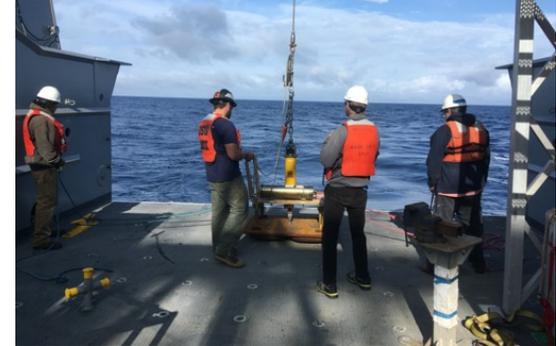
Bill Chadwick, Oregon State University, bill.chadwick@oregonstate.edu



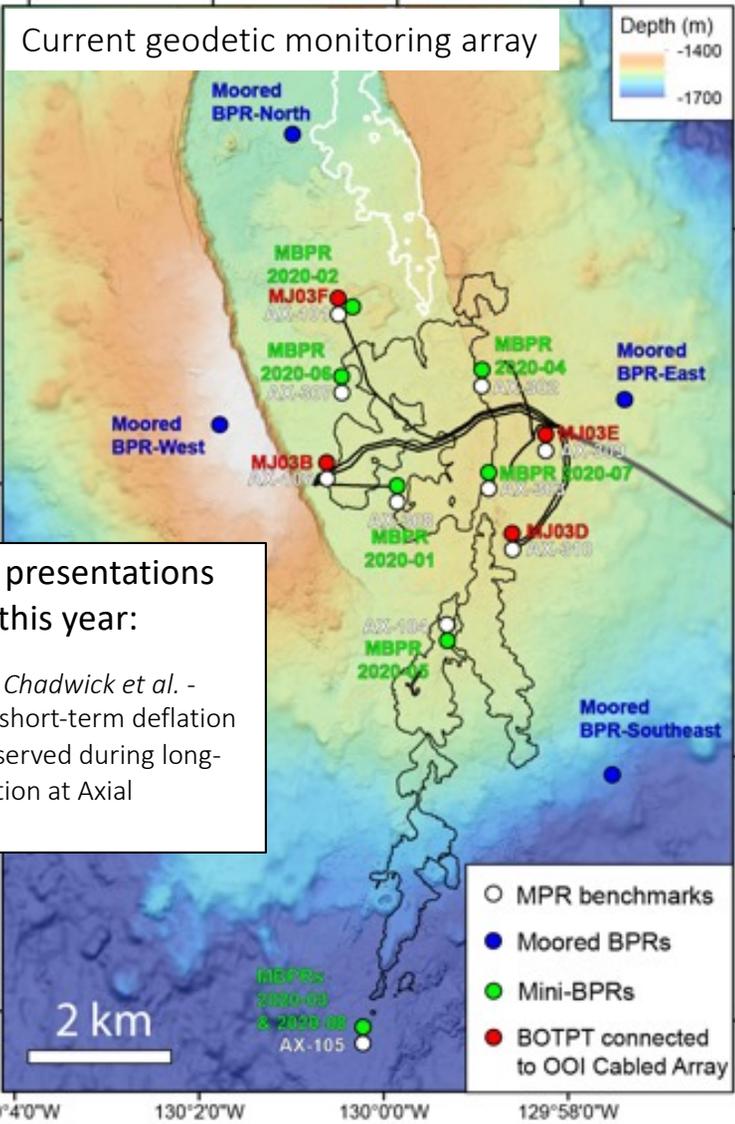
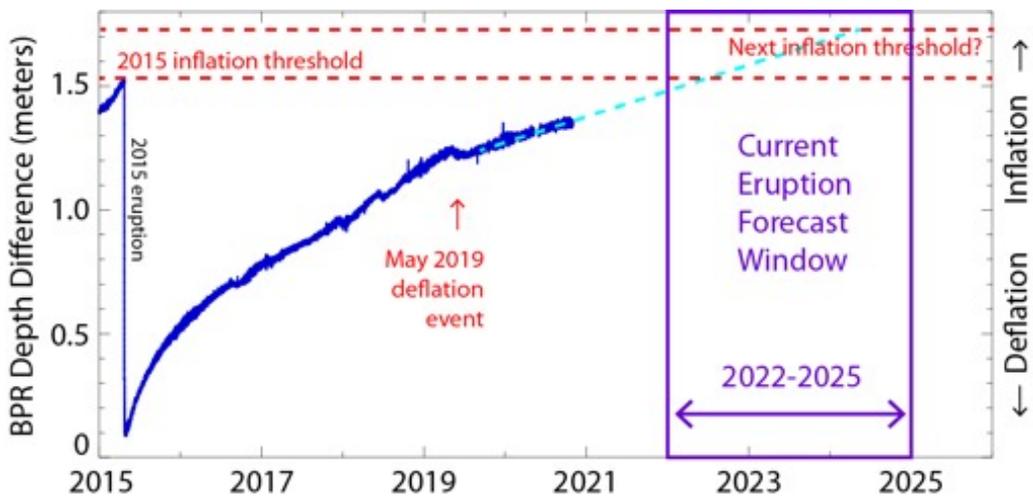
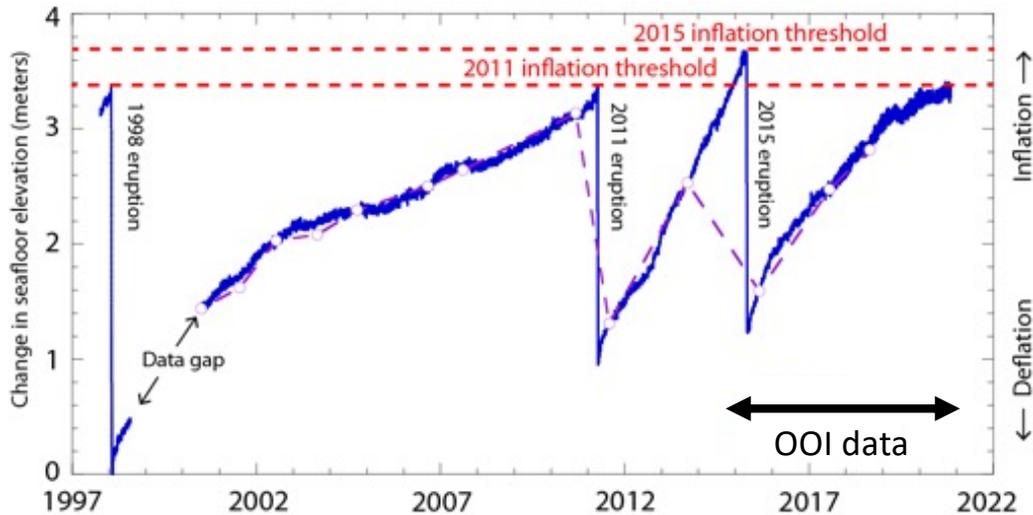
*R/V Thompson* – Sept 1-20, 2020  
Newport, OR – Newport, OR

### Main goals using ROV *Jason* & AUV *Sentry*:

- Repeat pressure measurements for volcano inflation/deflation time-series monitoring
- Repeat AUV bathymetric mapping to measure inflation/deflation inside & outside caldera (Nooner/Chadwick/Caress; NSF-funded)
- Deploy & recover Crustal Compliance instruments (Spahr Webb; NSF-funded)
- Time-series sampling of hydrothermal fluid chemistry & e-DNA pilot study (Butterfield/Bauberger/McAllister. NOAA, OSU, UW)
- 5 *ROV Jason* dives, 7 *AUV Sentry* dives
- 9 CTD casts, 5 instrument mooring turn-arounds, multibeam bathymetric surveys



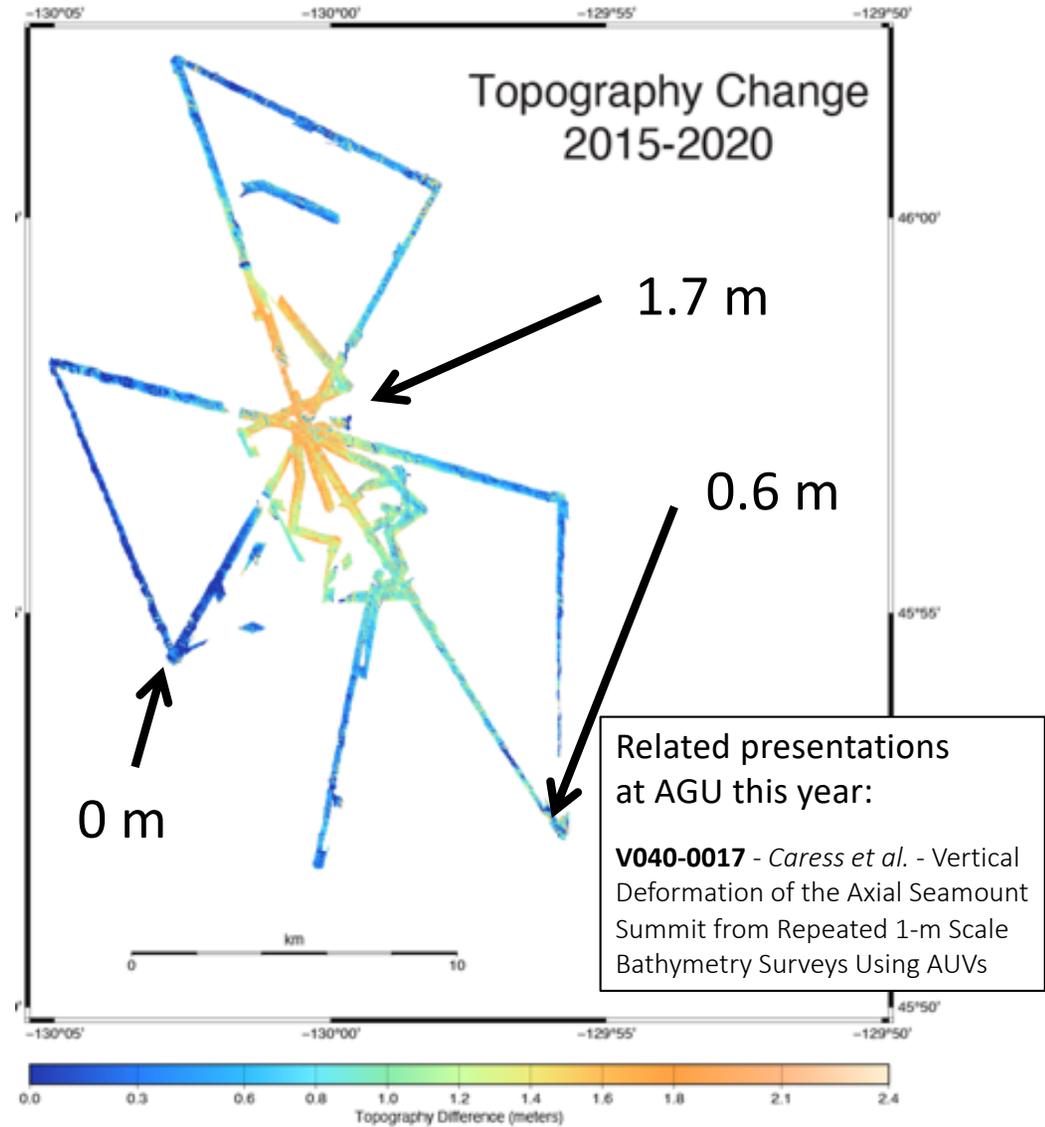
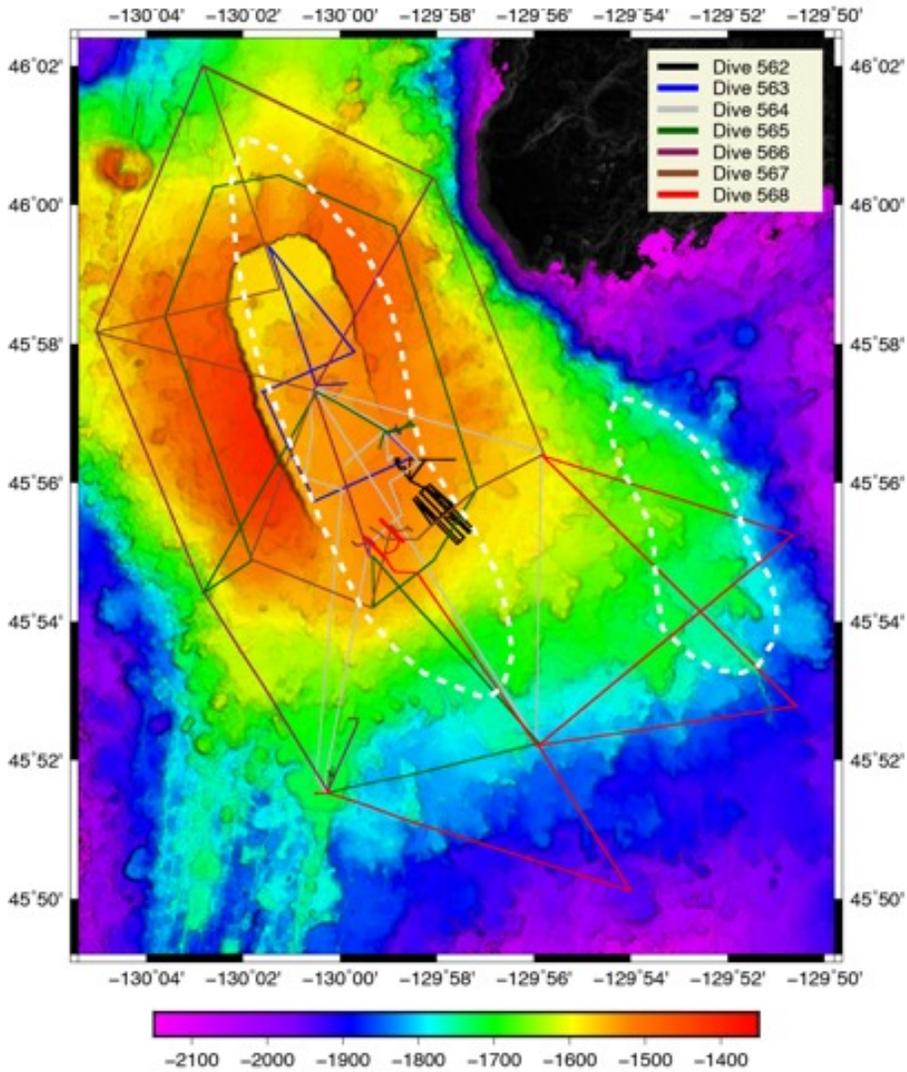
Pressure measurements to monitor volcanic inflation and deflation



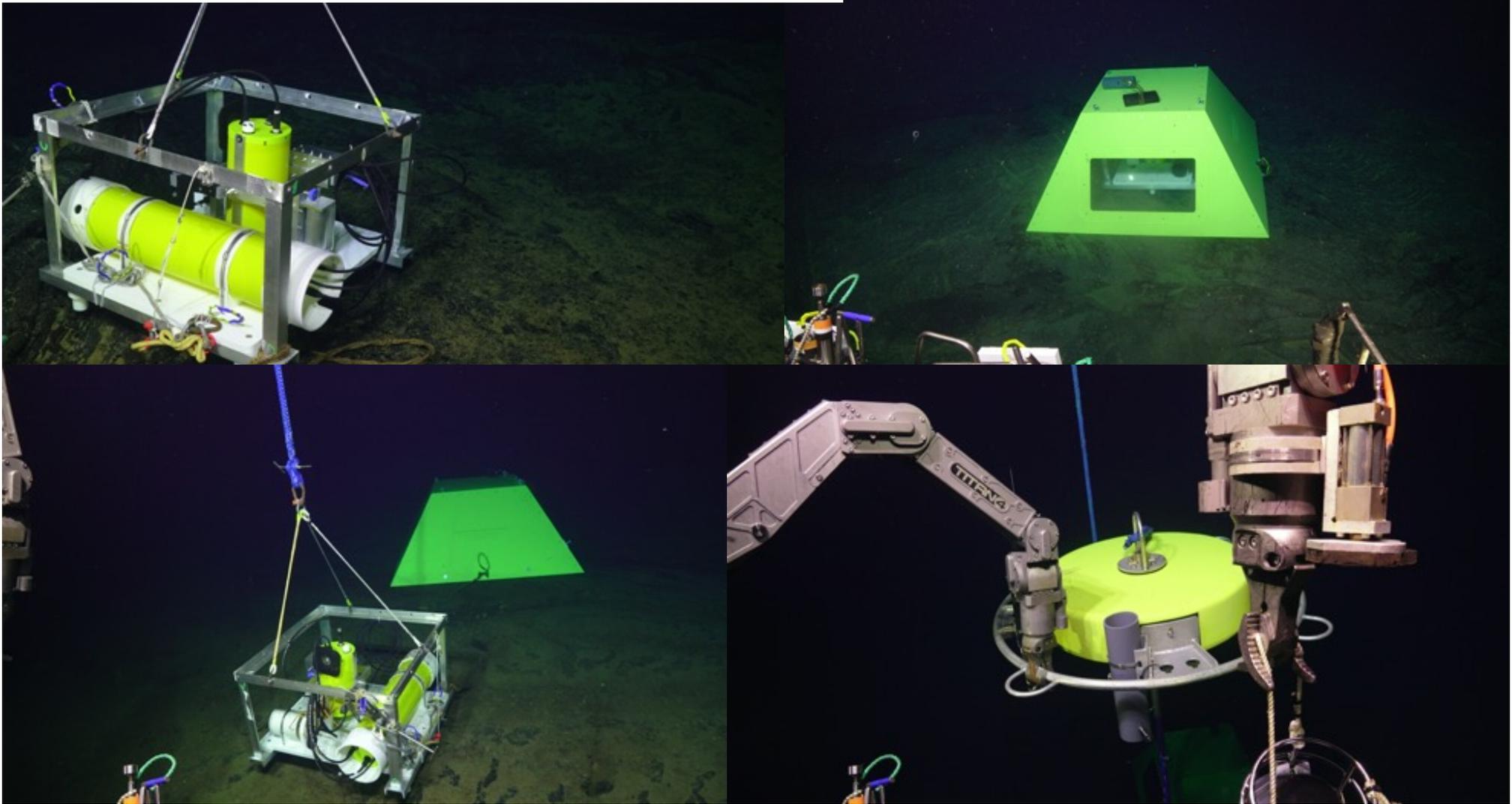
Related presentations at AGU this year:

**V043-06** - *Chadwick et al.* - Repeated short-term deflation events observed during long-term inflation at Axial Seamount

Sentry tracklines for repeat mapping in 2020



Crustal Compliance instruments deployed & recovered by Spahr Webb



Thanks to UNOLS, NSF, UW, WHOI for making it happen!

