

# RV *Falkor* surveys in Australia 2020-2021

Hydrospatial Conference, Cairns Australia

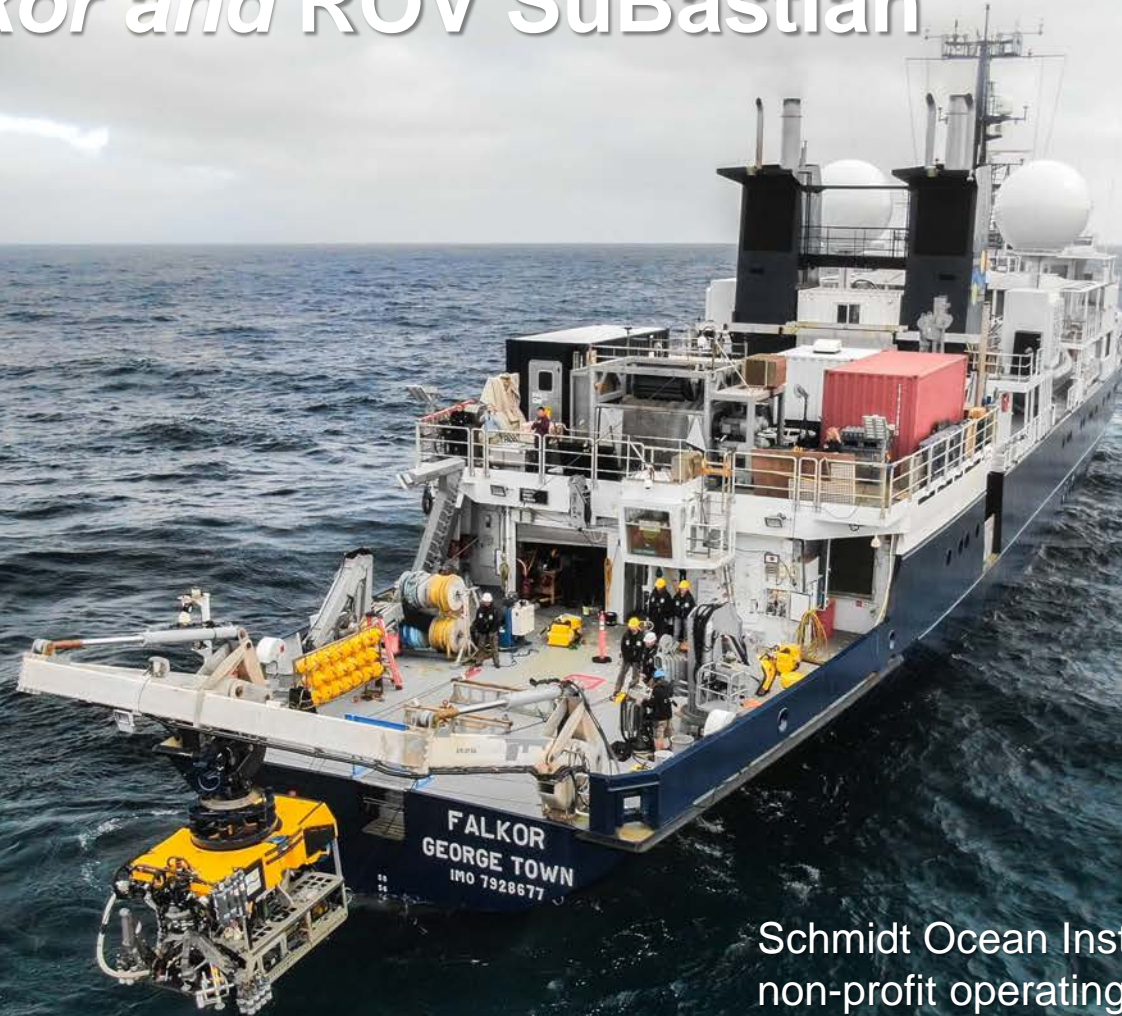
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<sup>1</sup>James Cook University <sup>2</sup>Geoscience Australia <sup>3</sup>Schmidt Ocean Institute

17 February 2022



# RV *Falkor* and ROV SuBastian



Schmidt Ocean Institute is a private, non-profit operating foundation established to advance oceanographic research, discovery, and knowledge, and catalyze sharing of information about the oceans.

# SOI - RV *Falkor* voyages 2020-2021

FK200308: Biodiversity  
of Ningaloo Canyons

FK210409: Mesophotic  
coral examination

FK200126: Deep-sea corals  
and canyon adventure

FK200930: Northern  
depths of the GBR

FK200802: Seamounts,  
canyons, reefs of Coral Sea

FK200429: Visioning  
the Coral Sea

FK210206: Seafloor to  
Seabirds of Coral Sea

FK201122: Ice Age  
geology of the GBR

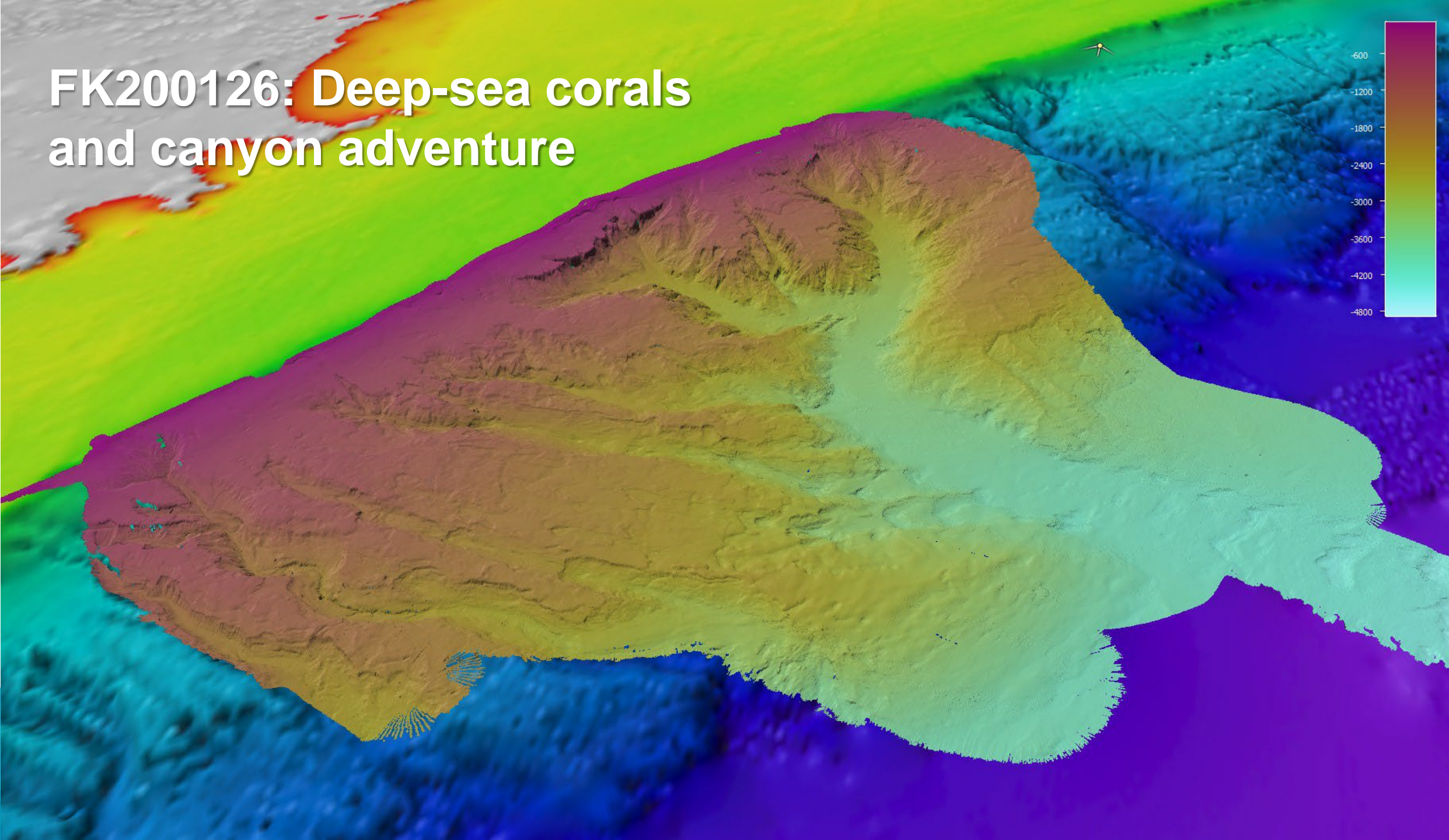
FK201228: Pinging  
in the New Year

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus

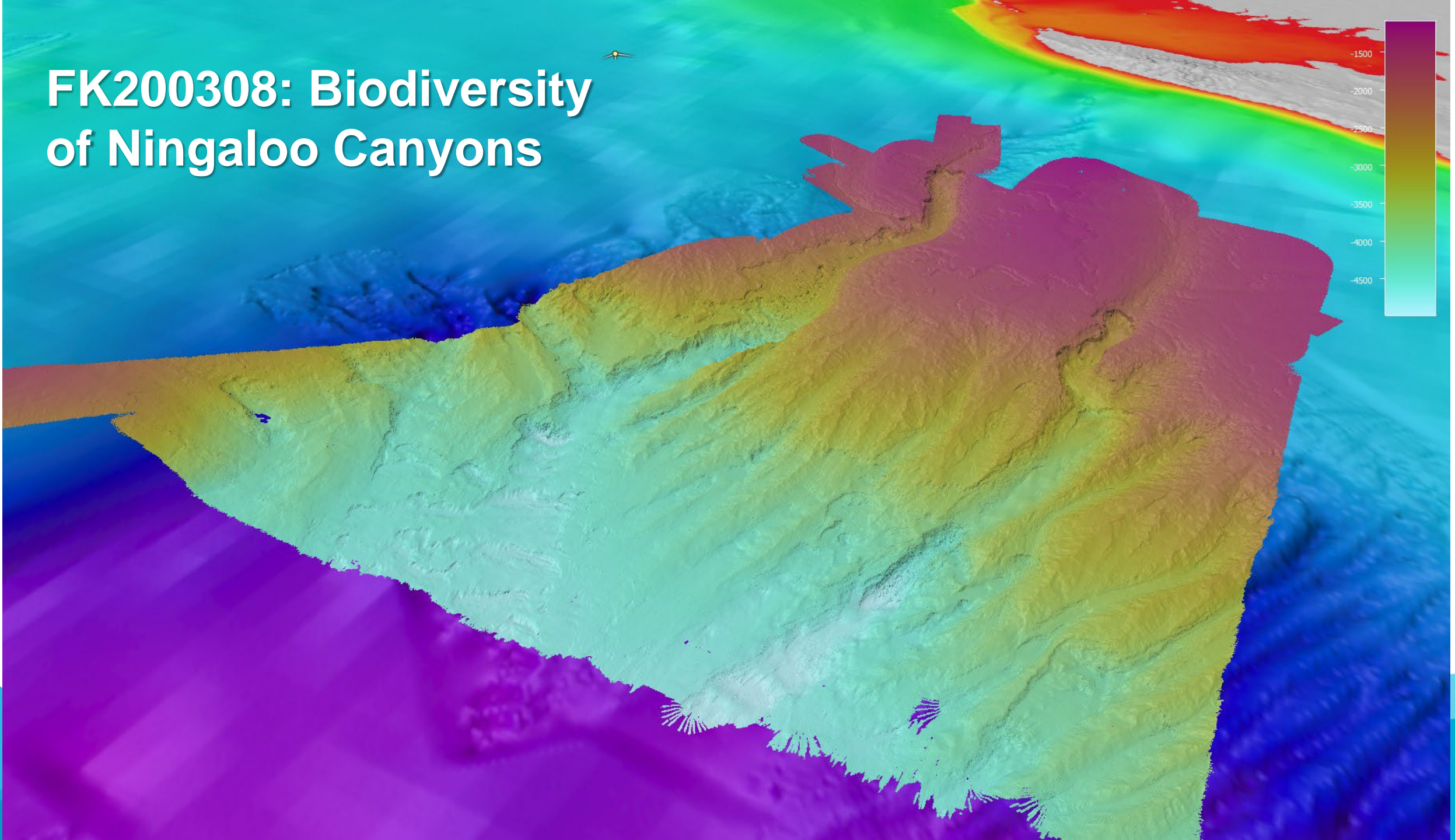
Google Earth

lat -11.454804° lon 118.756887° elev -6368 m eye alt 5072.59 km

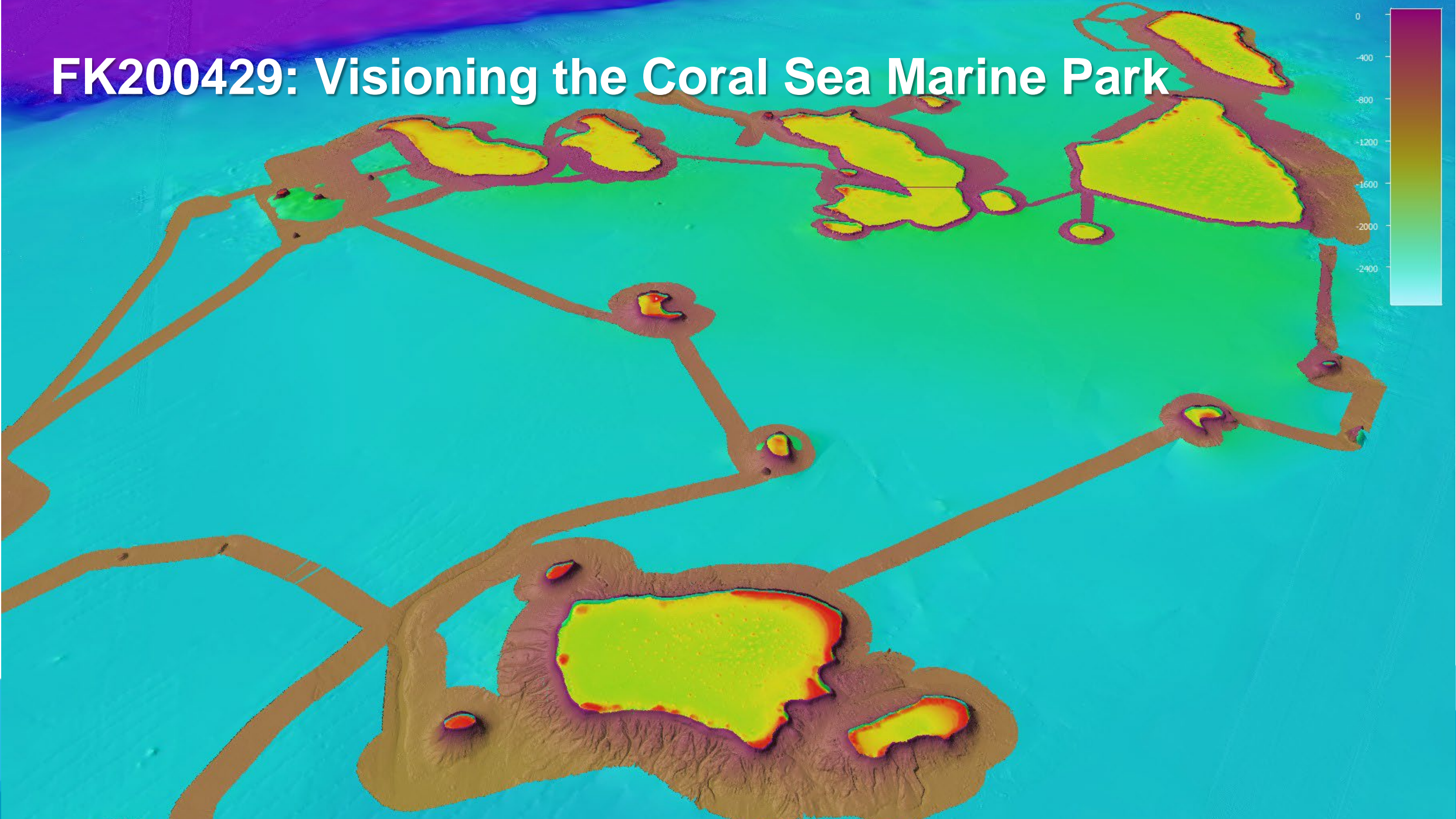
# FK200126: Deep-sea corals and canyon adventure



# FK200308: Biodiversity of Ningaloo Canyons



# FK200429: Visioning the Coral Sea Marine Park





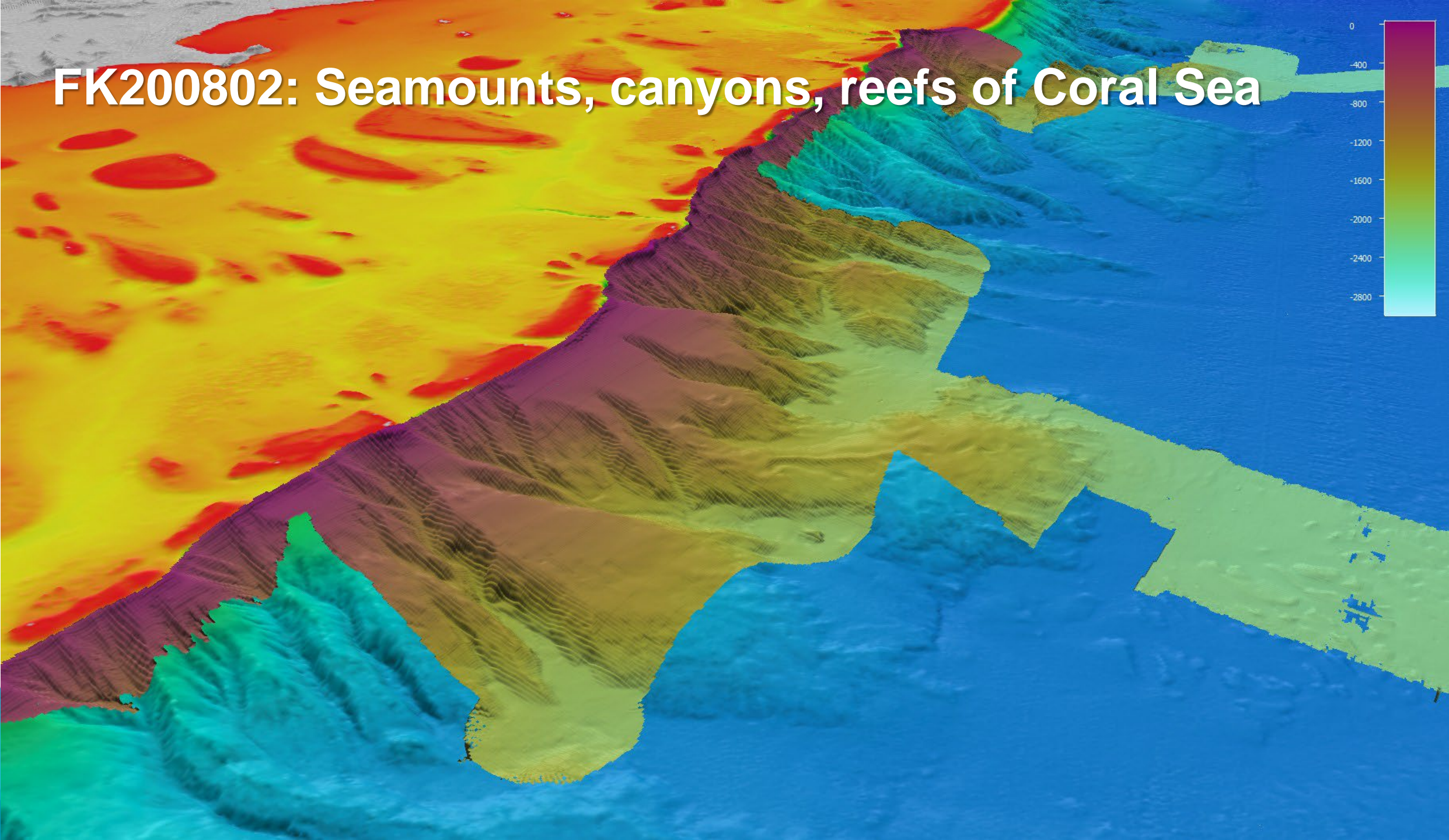
# VISIONING THE CORAL SEA MARINE PARK

[#VisioningCoralSea](#)

YouTube video (1min 22sec):

[https://www.youtube.com/watch?v=j6s0S7-Zj\\_0](https://www.youtube.com/watch?v=j6s0S7-Zj_0)

# FK200802: Seamounts, canyons, reefs of Coral Sea



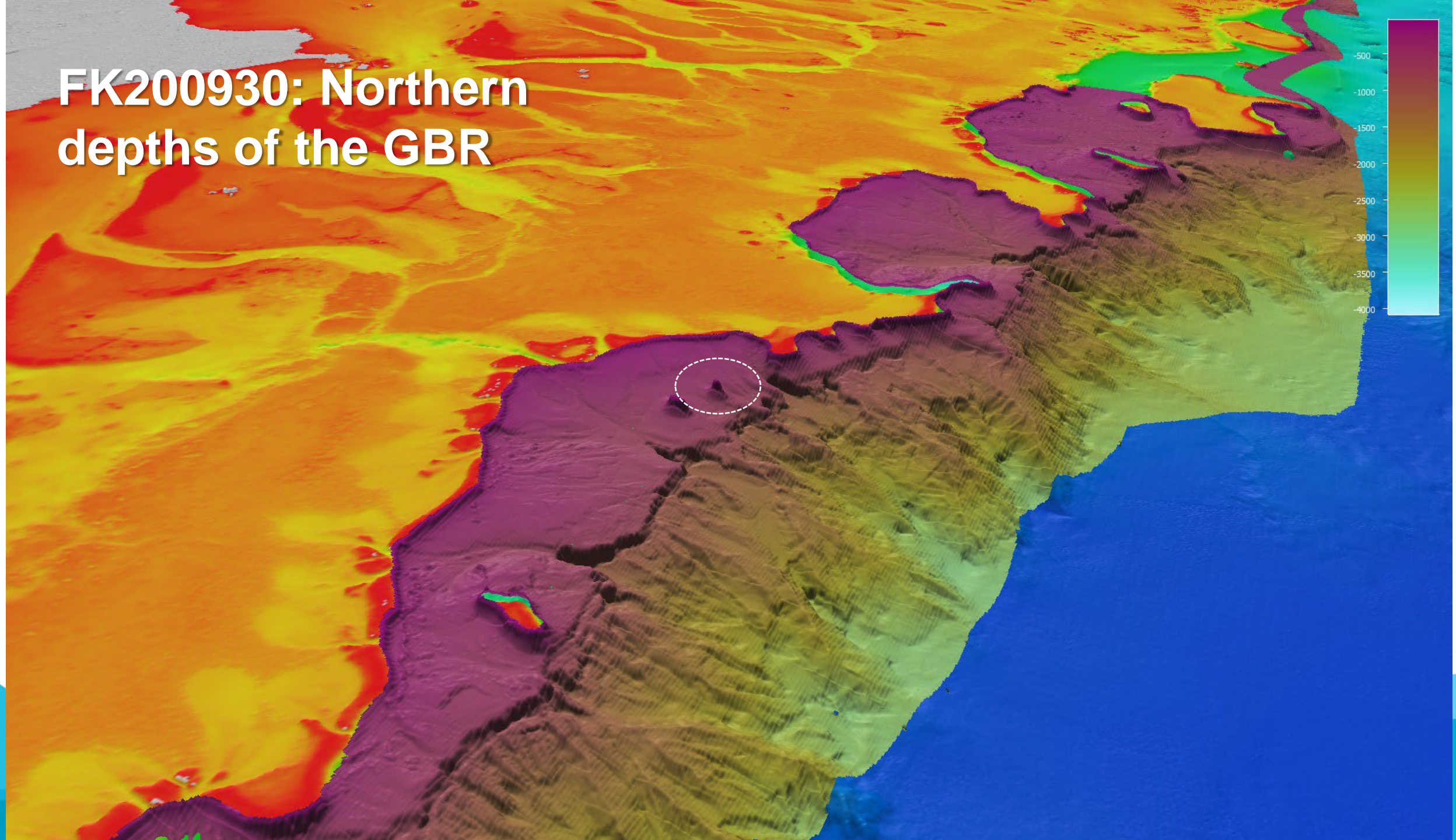


# Seamounts, canyons & reefs of the Coral Sea

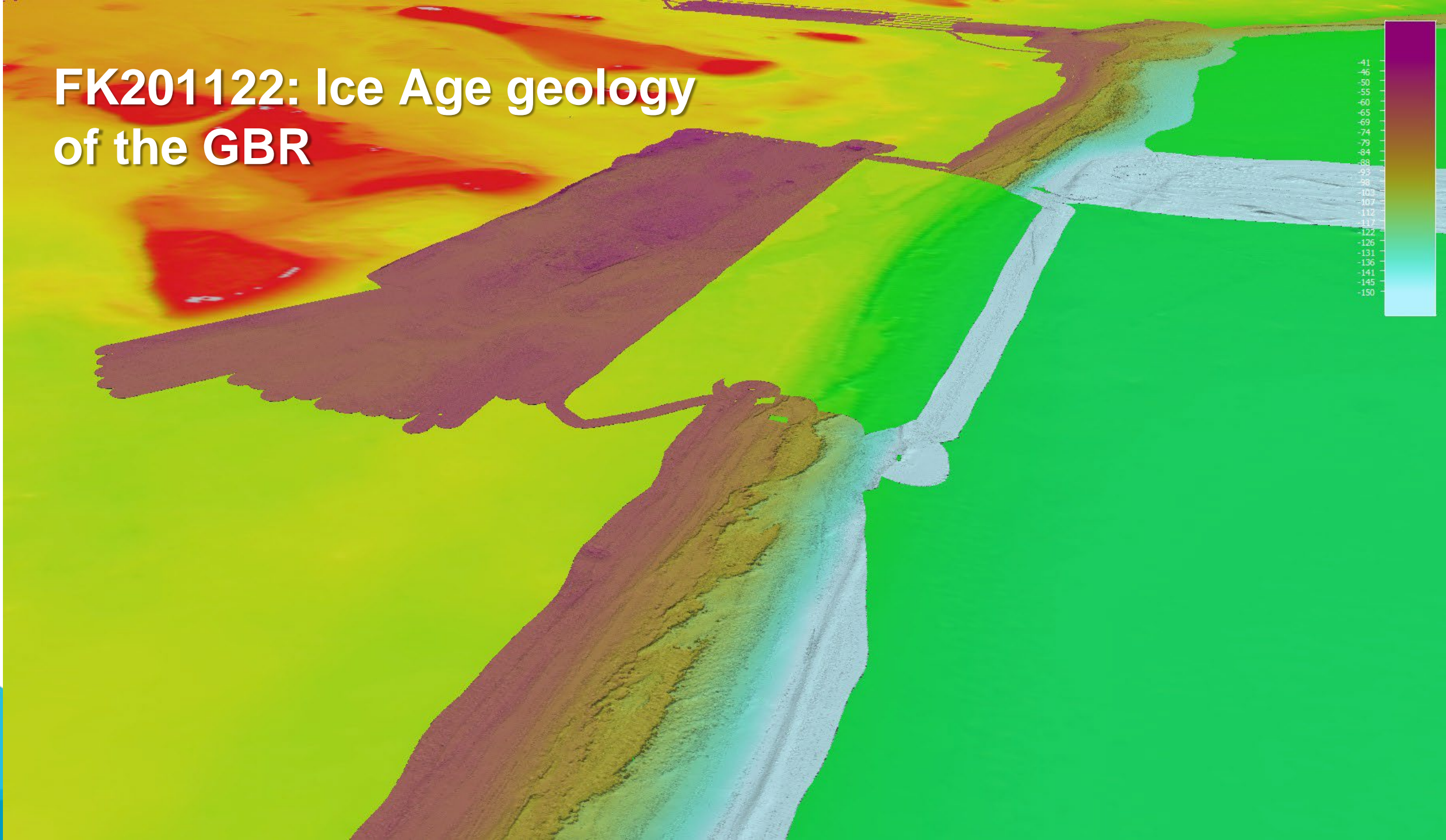
YouTube video (3min 0sec):

<https://www.youtube.com/watch?v=N7uZQbVSWH4>

# FK200930: Northern depths of the GBR



# FK201122: Ice Age geology of the GBR



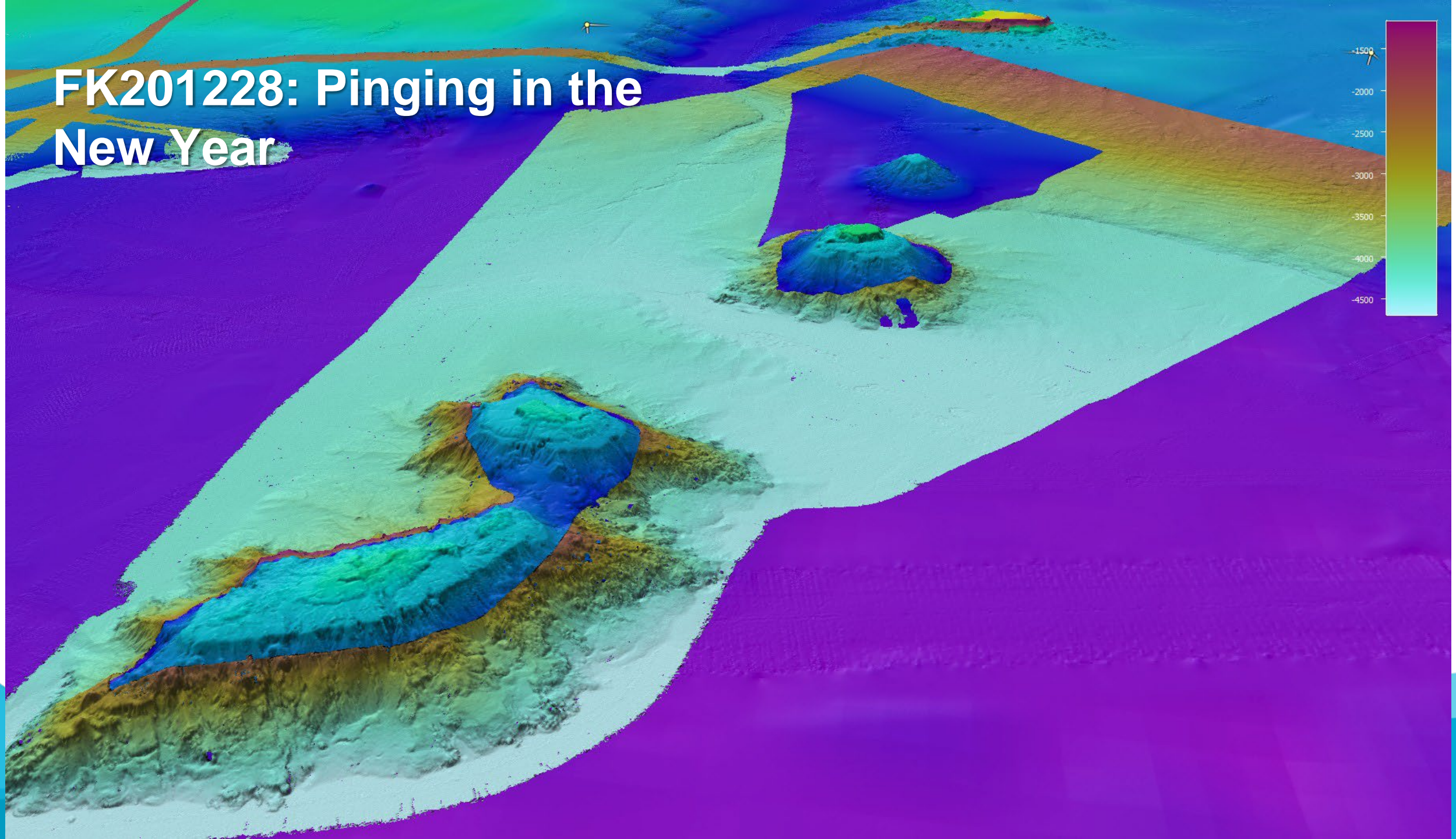


# PINGING IN THE NEW YEAR

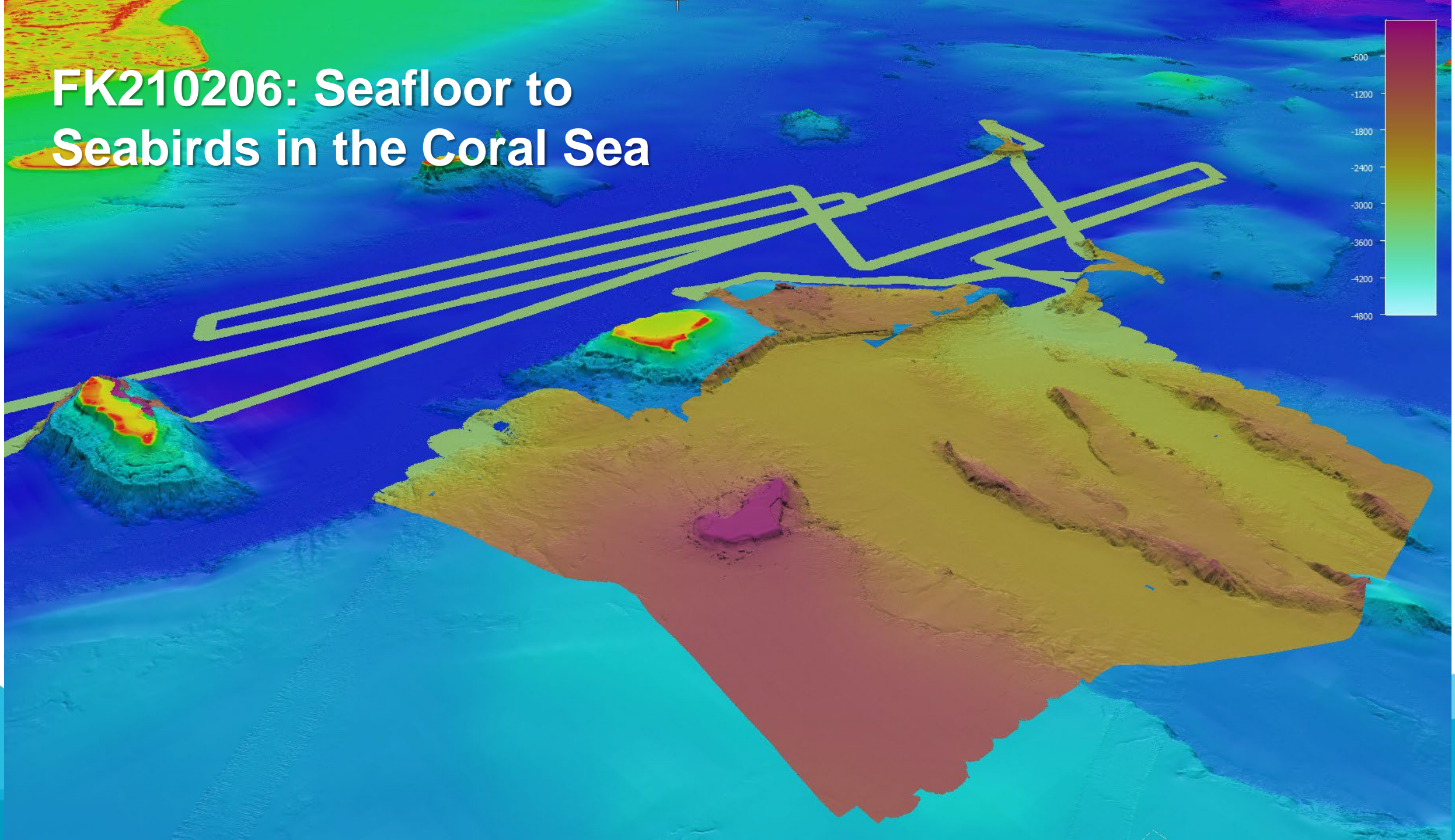
YouTube video (2min 19sec):

<https://www.youtube.com/watch?v=jl6047Vct2s>

# FK201228: Pinging in the New Year



# FK210206: Seafloor to Seabirds in the Coral Sea



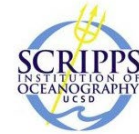


YouTube video (2min 0sec):

[https://www.youtube.com/watch?v=V\\_q9XHMnsVo](https://www.youtube.com/watch?v=V_q9XHMnsVo)

# SOI-RV *Falkor* voyages 2020-2021 statistics

- Within Australia, nine dedicated expeditions took place including seven transits to/from ports.
- Six back-to-back expeditions and two transits into and out of Queensland — eight voyages in all.
- Several transits along the entire length of the GBR to Torres Strait — a distance over 2500 km long.
- Other expeditions reached into the farthest reaches of the remote Coral Sea Marine Park.
- The *Falkor* sailed some 70 thousand-line km while in Queensland, or the equivalent of driving across Australia between Sydney and Perth about 18 times .
- The ship was at sea over 300 days during that period, and for awhile it was one of the few research vessels anywhere in the world to continue operations at sea when all others had shut down.
- The *Falkor* continuously acquired multibeam data with their Kongsberg deep-water EM302 or shallow-water EM710 systems — at times concurrently when depths allowed.
- 200 thousand square km of new map data were collected, or about  $\frac{3}{4}$  the size of the state of Victoria.
- 170 thousand square km of new multibeam data collected just in Queensland waters.
- Across the nine expeditions, 41 onboard investigators and 60 virtual investigators were involved.
- 42 students experienced life at sea, learning multibeam processing, when such opportunities were rare.
- 79 successful ROV SuBastian dives, ranging from the abyss to shallow coral reefs.
- Voyages now featured at Australian National Maritime Museum 'One ocean – Our Future' exhibition.



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