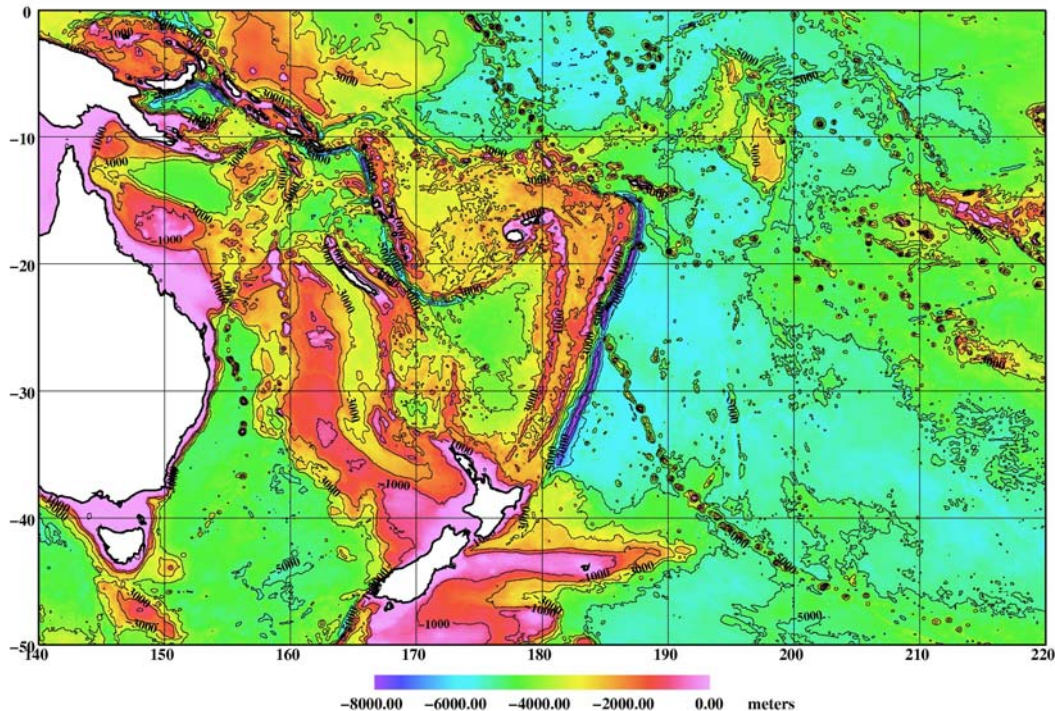


Ocean depth



Ocean depth mapped from satellite.

The map shows ocean depths in the Tasmanian Sea between Australia in the West and New Zealand in the East and the Solomon Islands in the North. The ocean depths mirror the plate tectonic conditions in the area where the Pacific Plate collides with the Indo-Australian Plate and forms a destructive plate border at the more than 10,000 m deep Tonga Trench.

Technical information:

The ocean depths are determined from the observations from satellite. The satellites observe the gravity of the Earth and from this there is a link between the changes in the gravity field and the changes of the ocean floor bathymetry. Through the satellite observations from the latest 10 years it has been possible to determine the ocean depths with much greater accuracy than previously done from ship- and submarine observations. A rule of thumb says that at a 1 m change of the ocean bathymetry, the change in the ocean surface gravity is around 0.1 milli-Gal (and the normal gravity is around 978 gals = 9.78 m/s²)

Read more about the topic at Satellite Eye for Galathea 3 project 'Gravity of the Earth and Earthquakes'

http://galathea3.emu.dk/satelliteeye/projekter/tyngde/index_uk.html



Read here about the Danish scientists involved in the state-of-the-art research
http://www.geus.dk/viden_om/ddj/ddj.pdf