Ongoing monitoring of absolute bias from the Australian In-Situ Calibration Sites: Bass Strait and Storm Bay.

Christopher Watson¹, Neil White², John Church², Jack Beardsley¹, Matt King¹, Richard Coleman³

1. School of Geography and Environmental Studies, University of Tasmania, Hobart, Australia.
2. Centre for Australian Weather and Climate Research, A Partnership Between CSIRO and the Australian Bureau of Meteorology, Hobart, Australia.
3. The Institute for Marine and Antarctic Studies, University of Tasmania, Hobart, Australia.

The Australian absolute calibration site located in Bass Strait (40° 39’S, 145° 36’ E) continues to provide cycle-by-cycles estimates of absolute bias for Jason-class precision altimetry. This continues a time series now over two decades in duration, with successful monitoring of TOPEX/Poseidon, Jason-1 and OSTM/Jason-2 missions from this location. With support from the Australian Integrated Marine Observing System (IMOS), the Bass Strait facility has been augmented with a secondary site in Storm Bay, located within 350 km on the same descending pass (pass 088), but subject to significantly different ocean conditions. The Storm Bay site has on average twice the significant wave height as Bass Strait, allowing investigation of sea state effects on absolute bias.

In this contribution we present updated results from our single-pass multi-site approach. Our strategy at each site remains centred on the use of repeat deployments of oceanographic moorings (including high accuracy pressure gauges and associated instrumentation) combined with episodic GPS buoy deployments, and utilisation of coastal tide gauge data and land based GPS reference stations.