Australia-Indonesia project: Maritime Continent observations of atmospheric convection, biogenic emissions, ocean vertical mixing, and the Indonesian Throughflow

Contact point:
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Overview:
This is a joint effort led by Australia and Indonesia to study atmospheric convection, biogenic emissions, ocean vertical mixing, and the Indonesian Throughflow, using the *R/V Investigator*. The primary intent is to make near continuous measurements of the oceanic and atmospheric environment throughout the diurnal cycle as atmospheric convection develops, or does not develop, in the vicinity of Sumatra or Java. Measurements on days where convection does not occur are equally important for the improvement of model parameterizations. The offshore propagation of organized convective systems is of particular interest. The intention is to remain within 50km of the one location for the majority of the cruise as well as spend several days making detailed ocean measurements when passing through the Indonesian straits (either outbound or inbound or both).

Objective:
Detailed study of atmospheric and oceanic processes to aid development of new and improved parameterizations of physical processes in order to reduce model biases and increase prediction skill.

Period:
58-days voyage time in October 19 - December 18, 2019.

Participants:

Australia	- Bureau of Meteorology, CSIRO, University of Melbourne, Monash University, Deakin University
Indonesia	- BPPT, BMKG
UK	- University of East Anglia
Japan	- University of Tokyo
USA	- Woods Hole Oceanographic Institution
Taiwan	- NTU
Malaysia	- Xiamen University Malaysia

Location:
Start and ending port will be at Darwin, with a possible mid-way stop at Christmas Island. The location for detailed long-term convection measurements will likely be offshore from Bengkulu, but may also be on the Christmas Island-Java line or offshore from northern Australia.

Observations:
Dual-Pol C-band Doppler weather radar, 6-hourly balloon soundings, cloud radar and lidar, Surface meteorology, Atmospheric chemistry, ADCP, CTD, LADCP, TRIAXUS; thermosalinograph, vertical microstructure profilers, drifters, and sea-gliders.