



Surface salinity and its impact in the Eastern Indian Ocean and Maritime Continent

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Low salinity surface waters are prevalent in the Eastern Indian Ocean and Maritime Continent. The fresher water severely restricts the depth of surface mixing, impacting the sea surface temperature. Here we present results from CINDY and a recent Years of the Maritime Continent cruise. The latter, which took place off the coast of Sumatra in December 2017, shows large variations in the upper ocean salinity and temperature with salinity dominating the near surface stratification for most of the time giving shallow mixed layers. SST is affected by cold rain and surface warming. Comparison will be made with SMAP satellite data. Initial analysis suggests SMAP is able to detect relatively small horizontal scale features seen in the ocean data. The SMAP data will be used to identify features, their time evolution and impact on SST. The ocean data will be used to help determine the minimum resolution needed for climate models to capture the impact of the surface salinity.