



Simulating Aquarius Ocean Measurements by Resampling SMOS

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This study is a collaboration between the SMOS and Aquarius teams to retrieve brightness temperature from SMOS/MIRAS interferometric measurements that are resampled to the ground resolution achieved by the three real-aperture beams of the Aquarius radiometer. The purpose is to investigate the brightness temperature response at the three Aquarius incidence angles, particularly in response to wind speed, sea surface temperature and other external variables, and comparison to the dielectric model. The second objective is to provide a basis for direct inter-comparison and inter-calibration of ocean data once the two missions are in orbit together. Here we will provide preliminary analyses for a SMOS orbit swath across the Pacific, showing the h-pol and v-pol brightness temperature reconstructions at incidence angles 28.7, 37.8 and 45.6 degrees