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Poster
COMPIRA (Coastal and Ocean Measurement mission with Precise and Innovative Radar Altimeter) is a new Japanese altimetry mission by the Japan Aerospace Exploration Agency (JAXA). COMPIRA will carry a wide-swath altimeter named SHIOSAI (SAR Height Imaging Oceanic Sensor with Advanced Interferometry), X-band interferometric SAR having 80 km swath in both left and right sides, with resolution of 5 km. There are three fields which consist of the COMPIRA mission. The first one is ocean currents forecast; to aim to improve the ocean currents forecast, expecting to help various human activities over the ocean, for example, for efficiency of marine navigation through operational oceanography. The second field is fishery, to aim to observe the ocean surface topography linked to estimate fishing places related to sea surface height and ocean salinity/temperature. The third field is science; to aim to improve TSUNAMI forecast model using inversion method with the observation of TSUNAMI waves. We have been discussing specification of the mission through a user team called “COMPIRA team”. Also, we recently constructed two additional user teams, “Science team” and “Coastal forecast core team”. Especially, other than TSUNAMI forecast, COMPIRA is expected to obtain various useful data applied to various scientific fields over the ocean. Therefore, the “Science team” began to discuss about maximization of scientific outcome using COMPIRA data by Japanese scientists. Three new scientific outcomes are being intensively discussed; sea-level rise phenomena, mesoscale and submesoscale phenomena, and processing, outputs and applications of ocean currents forecast. The other team, “Coastal forecast core team”, is aimed to develop coastal forecast system through pre-launch activities toward COMPIRA. In parallel, we are now working on a conceptual design of the satellite system and payloads, and experiments. We conducted aircraft experiments of the sea surface height measurement with an airborne interferometric SAR along Jason-2 orbit over the Kuroshio current during Dec 2012-Jan 2013. In the paper, we will present current status of COMPIRA-related mission studies, activities including discussion of scientific outcomes, and some experimental results.
OSTS session
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