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CNES and CLS project teams and Contributions from SARAL/AltiKa PI’s, CNE
Keynote
The SARAL-AltiKa satellite mission is an India-France ISRO-CNES joint project. The satellite has been put into orbit by a PSLV vehicle supplied by ISRO, and launched from Sriharikota, the main ISRO launch base, on Feb. 25, 2013.
The SARAL (Satellite for ARgos and ALtika) payload consists of an ARGOS instrument, and an altimetry payload including the AltiKa radiometer-altimeter. SARAL/AltiKa is intended to be a gap filler mission between the RA-2 on-board ENVISAT and Sentinel-3. As such, SARAL/AltiKa is flying on the same orbit as ENVISAT. The special feature of SARAL/AltiKa is that it is based on a wideband Ka-band altimeter (35.75 GHz, 500 MHz), which will be the first satellite altimeter dedicated to oceanography to operate at such a high frequency. The AltiKa instrument consists in a Ka-band altimeter based on already developed subsystems inherited from Siral (CRYOSAT) and Poseidon-3 (JASON-2) in particular, and an embedded dual frequency radiometer. The altimeter and the radiometer share the same antenna. Due to the single frequency Ka-band altimeter, the enhanced bandwidth leads to a better vertical resolution. The spatial resolution is also improved, thanks to the Ka-band smaller footprint and the increased PRF.
This talk will present the main characteristics of the mission and the first outcome on the data availability and the performances of the AltiKa products. In particular, SARAL/AltiKa already proved to be satisfying the expected performances or better and compare well to Jason-2 data. Also, the quality of SARAL/AltiKa data in terms of accuracy, data latency and availability has allowed to rapidly make the data available, leading especially to an efficient integration in several operational systems. First results show a lesser data loss/degradation than expected due to Ka-band sensitivity to rainy and cloudy conditions. Preliminary SARAL/AltiKa insights on mesoscale variability, coastal oceanography, inland waters and ice sheets monitoring will be shown.
OSTS session
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