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A MICROWAVE REMOTE SENSING SMALL SATELLITE PROJECT FOR INVESTIGATION OF
OCEANIC DYNAMIC CHARACTER**Abstract**

With successfully launched a serial microwave ocean remote sensing satellite projects from 1990's, such as TOPEX/POSEIDON, NSACT, SeaWinds, Jason1 and Jason2, the technology of microwave ocean remote sensing is experiencing a rapid development never before. In these projects, the observation object is always single for each project, either the mission for Sea Surface Height or the mission for Ocean Vector Wind; and also due to the limitation of integrated level for on-board equipments and some constrains of satellite system design, it can not support multi observation objects in one project so as to acquire the relations between the different Oceanic Dynamic Characters.

This article mainly introduces a Microwave Remote Sensing Small Satellite Project, combination with microwave remote sensing and small satellite as well as higher integrated level and optimized satellite system design, which is cooperated by China and France and devoted to monitor at the global scale the wind and waves at the ocean surface and to acquire ocean dynamic character as well as to research the relations of these characters. For this purpose, the project implements on satellite two main instruments: a wave spectrometer (SWIM: Surface Waves Investigation and Monitoring) and a scatterometer (SCAT) to measure ocean winds. Both are microwave active instruments. And it also presents the design and development for this Small Satellite Project.