
Campus and Center CCERES at Paris Observatory, PSL Université Paris

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Résumé

CubeSat technology enables new concepts for real science. At Paris Observatory, with a network of 9 space research laboratories, we created a new facility and a new process to prepare the space instruments for the future. Researchers submit their CubeSat concepts to a scientific committee in the fields of planetology, exoplanetology or space weather and receive a little money to start studying their concept. They can get support to produce a mission profile with DOCKS tool and the PROMESS room. DOCKS is our free software suite of tools for quick prototyping of a mission profile, it has been developed for 3 years and its first public release occurred in July 2018. It can address mission needs in Earth vicinity or to deep space. The PROMESS room is a concurrent engineering facility to be used by a project team during a campaign of 5 to 10 sessions animated by a system engineer. The main result is a shared vision of the forecast mission with a digital reference (e.g. trajectories, attitudes and payload handling, power, links to ground). We are also gathering some specialized CubeSat tooling (TestPod, optical devices and bench, on-board software testing among others) and created a new clean room dedicated to nanosat activities and a radio ground station. CCERES facility had its grand opening in June 2018 and will also be offered as a European facility for the planetology community.

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