

22nd IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND
DEVELOPMENT (D3)

Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies
(2B)

Author: Mrs. Stéphanie BEHAR-LAFENETRE

Thales Alenia Space France, 100 Boulevard du Midi, 06150 Cannes la Bocca, France, France

RENDEZVOUS AND ROBOTICS IN SPACE : STATUS AND APPLICATIONS OF THE EROSS
PROJECT

Abstract

The series of EC-funded projects EROSS (European Robotic Orbital Support Services) aims at developing and bringing to space European technologies enabling innovative operations in space, like autonomous robotics and rendezvous. The project is coordinated by Thales Alenia Space in France, in a core team with GMV in Spain and DLR in Germany, and gathering in total 18 Partners from 9 European countries. It aims at leveraging on past developments and defining a mission that will exploit those technologies to propose a first European pioneering operational system. The presentation will provide an overview of the technical progress status on all fields under development, from Guidance, Navigation and Control to Robotics and Autonomy. It will then present the typical concepts of operations that will be enabled by such capabilities (typically Inspection, station keeping, AOCS takeover, Refueling, Upgrade, In-Orbit Manufacturing and Assembly, Repair, etc...) and open up towards servicing and logistics applications.