

SPACE DEBRIS SYMPOSIUM (A6)  
Space Debris Removal Concepts (6)

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REMOVEDEBRIS: AN EU LOW COST DEMONSTRATION MISSION TO TEST ADR  
TECHNOLOGIES**Abstract**

RemoveDEBRIS is aimed at performing key Active Debris Removal (ADR) technology demonstrations

(e.g capture, deorbiting) representative of an operational scenario during a low-cost mission using novel key technologies for ADR. The project is based on and aimed at contributing to global/European ADR roadmaps. A microsatellite called here RemoveSAT, will release, capture and deorbit two space debris targets, called DebrisATS, in sequence using various rendezvous, capture and deorbiting technologies thus demonstrating in orbit, key ADR technologies for future missions in what promises to be the first ADR technology mission internationally.

The debris objects themselves in this case will be released by the main satellite with subsequent recapture. Although this is not a fully-fledged ADR mission, the project is an important step towards a fully operational ADR mission. The ultimate goal of this activity is to protect space assets from space debris and to minimize the collision risk of current and future space missions as the FP7 call for space calls for. The mission proposed in this project and the subsequent technology developments, is a vital prerequisite to achieve this ultimate goal of a cleaner Earth orbital environment.

The mission proposed by the RemoveDEBRIS project will be such a demonstration mission – the world’s first, and perhaps the most important demonstration of ADR to date – and the technologies that will be developed under the project have been strategically selected for their importance in future ADR activities.