CleanSpace One

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UN-COPUOS Vienna, June 8, 2012
Background & Purpose

• The EPFL Space Center created in 2003
  - to federate needs, resources, opportunities and purposes
  - to strengthen the position of its partners in the Space domain, from an institutional, academic and industrial point of view.

• Support of Swiss Space policy:
  
  • Development and utilisation of space applications to serve citizens’ quality of life.

  • Permanence of its commitment to space exploration for the benefit of innovation and knowledge.

  • Input of significant scientific, technology and industrial contribution, making Switzerland a competitive, reliable and necessary partner.
Mission

The Swiss Space Center shall support institutions, academia and industry to access space missions and related applications and promote interaction between these stakeholders.

Role

- To network Swiss research institutions and industries on national and international levels in order to establish focused areas of excellence internationally recognized for both space R&D and applications.
- To facilitate access to and implementation of space projects for Swiss research institutions and industries.
- To provide education and training.
- To promote public awareness of space.
SwissCube

- ~ 15 laboratories
- 3 universities, 5 engineering schools
- 3.5 years of development
- More than 200 students involved
- High visibility
CleanSpace One - Mission

- Initial Orbit placement and determination
- Location of the satellite and RDV
- Approach
- Grabbing
CleanSpace One - Spacecraft
CleanSpace One - Challenges

- Orbit Insertion
- Attitude Control - Propulsion
- Identification
- Communication
- Grappling
- Stabilization
- Controled de-orbiting
CleanSpace One - Collaboration
CleanSpace One - Objective

- Demonstrate Debris removal
- Heighten Public Awareness
- Strong student involvement - Educational
- Collaboration with labs and Industry
- Duration 3-5 years
- Estimated costs 10 MCHF
Thank you for your attention