

AGA 4: Space Security

Time: Thursday 16:00–16:45

Location: H8

Invited Talk

AGA 4.1 Thu 16:00 H8

The Space Debris Challenge and ESA's Space Safety Programme — ●HOLGER KRAG — ESA/ESOC Darmstadt

In line with EU and ESA's 'Shared vision and goals for the future of Europe in space', ESA has prepared a new programme that aims for Europe to ensure European autonomy in accessing and using space in a safe and secure environment. The primary goal of this programme is the protection of our planet, humanity and assets in space and on Earth from hazards originating in Space. The major hazards from space to be tackled by the programme have been identified as the Space Weather originating from our Sun, Planetary Defence from Asteroids and Space Debris. The talk will concentrate on the space debris-related aspects of the programme and provide details on ESA's plans to develop sen-

sor technology for debris monitoring in the area of laser, ground- and space-based optical telescopes and radar. One of the flagships of the programme will be an element entitled CREAM (Collision Risk Estimation and Automated Mitigation), which is a series of activities for the development of automated collision avoidance capabilities and alternate fast commanding option for public and private entities coping with enhanced space traffic, including a demonstration of such capabilities by 2023. The most prominent cornerstone will be the first ever active debris removal mission as an enabler of European industrial capability to conduct in-orbit servicing. The goal is to remove an ESA-owned space debris target object >100kg before the end of 2025 on orbit in a service approach, building on the industrial interest in gaining access to the rising in-orbit servicing market.