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PRELIMINARY CONSIDERATIONS ON THE EUROPEAN PREPARATORY PROGRAMME ON
SPACE SITUATIONAL AWARENESS

Abstract

In current space affairs, a priority of the international space community is the protection of assets in outer space, which requires increasing the general knowledge and expertise of the space weather and of the situations and risks in outer space. Mankind has increased its dependence on space assets over the last decades. Access as well as utilization of space plays a vital role in social relations, economic development and political power. The coming years will reinforce this trend thanks to an increasing use of outer space application programmes close to people interests, for telecommunication, for navigation and positioning, for global environment monitoring and for security. Improving collective security in space has now become a pre-requisite for encouraging the expansion of public and private activities. So far, only a few States have developed facilities for a complete monitoring of near earth space and evaluation of orbital events. These facilities were initially developed for defence purposes. Space agencies and private operators now need to protect their assets with information systems to increase "Space Awareness". So the term Space Situational Awareness (SSA) refers to desired knowledge to fill the gap between space risks and information. In Europe, space surveillance and monitoring activities have been conducted for several years in these domains. Initial concept studies have already shown that a first operational "Space Situational Awareness" (SSA) capability would be within the reach of Europe before the end of this decade. In the European institutional landscape, the ESA Director General's in 2008 has made a proposal addressed to the Member States to set up a development programme on Space Situational Awareness. On this basis, ESA has established a Preparatory programme on SSA to carry out an assessment of a domains such as Space Debris, Space Weather and Near Earth Objects, along with technical and governance options to be addressed in detail during the first period of the programme from 2009 to 2011. A more detailed architectural view of the system with its main components will be generated from the SSA Programme to formulate proposals to European institutional decision makers so to provide Europe with an operational capability on SSA.