

About SSA

The **Space Situational Awareness (SSA)** component of the EU Space Programme aims at providing accurate information on the space environment and helps to ensure the uninterrupted functioning of space-based services for citizens and societies on Earth. It is therefore essential for fostering the strategic autonomy of the EU and its Member States.

SSA is a **holistic approach**: it includes the comprehensive knowledge and understanding of the main space hazards, encompassing collisions between space objects, fragmentation and re-entry of space objects into the atmosphere, space weather events, and near-Earth objects.

Space Regulation

(Regulation (EU) 2021/696):

“Space Situational Awareness or ‘SSA’ means a holistic approach, including comprehensive knowledge and understanding, of the main space hazards”

Europe's eyes
on space

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Space Situational Awareness



PROGRAMME OF THE
EUROPEAN UNION

SSA subcomponents

EU SST

Space Surveillance and Tracking

a system of networked sensors to survey and track space objects together with processing capabilities to provide data, information and services on objects that orbit the Earth

surveys and tracks objects in space to make space operations safer and more secure, which is key to achieving a higher level of EU strategic autonomy and reducing the risk of collision in space and damage on Earth

SWE

Space Weather Events

capabilities to monitor naturally occurring variations in the space environment at the Sun and around the Earth potentially impacting Earth and space-based infrastructure

support the establishment of a SWE service and create ways to monitor and assess natural changes related to space weather events

NEO

Near-Earth Objects

capabilities to monitor the risk of natural objects, such as comets and asteroids (space rocks) in the solar system, which are approaching the Earth

coordinates and improves European capabilities and activities related to the monitoring of space rocks whose orbits approach or cross the Earth's orbit



Collision Avoidance provides risk assessments of potential collisions



Mitigate risk to human life



Physical characterisation of space rocks



Re-entry Analysis provides risk assessments of uncontrolled re-entry of space objects



Mitigate risk to assets on Earth and in space



Contribute to potential deflection procedures



Fragmentation Analysis provides the detection and characterisation of in-orbit fragmentations



Space weather forecasting services



Monitoring space rocks