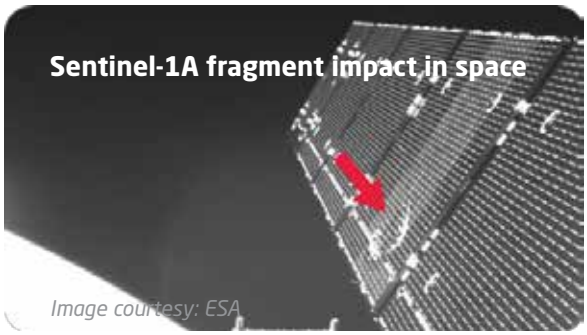
jenaoptronik

Terminology: SST, SSA and SDA

Space-based Sensor Suite for Space Situational Awareness (SSA) and Space Domain Awareness (SDA) applications:

The importance and relevance of space for civil and military purposes has increased significantly in recent years.



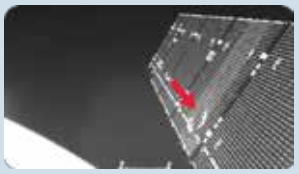
Jena-Optronik is using its long heritage of sensors to perform SSA and SDA tasks in space.

The combination of sensors helps to generate new data products and hence information. The latest developments include an innovative sensor suite, which combines space-proven components in a flexible manner to obtain one data set that covers the satellite surrounding volume and identifies incoming threats.

"SDA and SSA can be considered as two sides of the same coin; the former is mainly focused on military and operational aspects, the latter on civil/dual uses."
Captain Alessio Di Mare, Italian Airforce

SST - Space Surveillance and Tracking

- Detect, Track, Catalogue
- Follows the interest of the general public
- EU activities joint within https://www.eusst.eu/



SSA - Space Situational Awareness

- Perform SST and analyse SST data to identify risks and hazards associated for space operations
- Obtain object data: Recognize object types, missions, etc. > Identification
- SSA covers domain congestion to enable safe and effective space operations
- Follows the interest of the general public and satellite providers / launch providers

SDA - Space Domain Awareness

- Term originates back to a Memo from John Shaw from USSF from 4th of Oct. 2019*
- Shaw defines SDA as identification, characterization and understanding of any factor, passive or active, associated with the space domain that could affect space operations and thereby impact the security, safety, economy or environment of our nation.
  - SDA focusses on own assets and their security
- SDA requires the integration of legacy SSA-based metric observations and intelligence needed to identify, locate and track potential threats to on-orbit space systems
- SDA must be predictive and current. This requires the integration of intelligence, metric observations and environmental monitoring to execute space battle management in support of military plans and operations.
- SDA derives quality information supporting governmental decision making processes
- Follows security aspects and is followed by governmental agencies and military forces

* *https://spacenews.com/air-force-ssa-is-no-more-its-space-domain-awareness/*