



# INTERNATIONAL SSA DATA PROVIDERS AND SATELLITE OWNER/OPERATORS WORKSHOP KEY FINDINGS

September 17, 2025, AMOS Conference

**International Space Situational Awareness (SSA) Data Providers and Satellite  
Owner/Operators Workshop  
September 17, 2025  
Key Findings**

## EXECUTIVE SUMMARY

The 2025 workshop's overarching goal was to gather operator perspectives regarding the status and plans for TraCSS, EU SST Spaceflight Safety and SSA, and other commercial and international initiatives that have potential to support responsible actions for a sustainable space economy. Another key goal was to discuss critical stakeholders to bring into the conversation, why they matter, and how to develop opportunities and mechanisms to engage with them, including China. The workshop purposefully included more participants from the commercial space industry than in past years.

As reflected in the agenda below, the first session began with a presentation of a graphic which showed that in 2025, for the first time, the number of active satellites tracked exceeded the number of tracked space debris objects. The group reflected on how the graphic provides two significant insights, 1) that responsible launch practices, active space object population management, debris mitigation policies and other collective efforts are having a positive impact on the space environment, and 2) encouraging progress in data sharing for collision avoidance and other measures is more urgent than ever because even one major collision would undo this progress. Remarks by two distinguished invited speakers; and a joint presentation by experts from the U.S. Department of Commerce (DOC) and the European Union Space Surveillance and Tracking (EU SST) followed.

The second session began with a panel discussion among former and current U.S., NATO, and European officials, and commercial satellite owner/operators. The panel's goals were to highlight challenges for satellite operators if China and others remain on the outside of the discussion, identify opportunities and potential models for bringing China and others into the discussion, and to discuss NATO's emergence as a key SSA stakeholder. A round-table discussion followed which provided an opportunity for representative from each U.S. governmental agency and each participating country to provide brief country updates.

## DESIRED OUTCOMES

Desired outcomes were to 1) discuss the status and plans for TraCSS, EU SST Spaceflight Safety and SSA, and other commercial and international initiatives that have potential to support responsible actions for a sustainable space economy; 2) discuss critical stakeholders to bring into the conversation, why they matter, and how to develop opportunities and mechanisms to engage with them, including China; 3) Promote transparency among space operators and government entities providing spaceflight safety services; 4) build and reinforce relationships. Ultimately, the workshop's goal was to provide insights to policymakers on operator perspectives.

## KEY FINDINGS

- Communicating with China remains a major challenge, but current methods for communicating with China may be beginning to break through. Participants reported some increases in interactions.
  - Commercial satellite owner/operator interlocutors reported interactions – at a personal level – with individuals in China for coordinating collision avoidance actions. While China's launch and debris mitigation practices remain a significant concern, Chinese

commercial space companies have shown interest in communicating at the operator level for collision avoidance purposes.

- On governmental communication channels with China, some more timely communication and information sharing on close approach and maneuver mitigation plans occurred, but not frequently or consistently enough.
  - A U.S. commercial satellite operator best practices document for engagement through official Chinese government channels has helped. But there is still significant room for improvement as China's government continues to be difficult to coordinate with – but it's more important than ever to keep trying.
  - Current methods to communicate and share information with China are very labor intensive and therefore not sustainable as constellations grow.
  - China still does not share ephemerides or maneuver plans but there is hope they will share these for China's large LEO constellations (Guowang and Qianfang) as they are deployed.
  - Anticipating China action at the UN-level on the topic of SSA and collision avoidance.
- The U.S. TraCSS system completed testing and is rolling out to pilot users in advance of expected production release January 2026. TraCSS provides significant improvements in accessibility and timeliness of US SSA products.
  - DOC/OSC is exploring concepts for making TraCSS financially self-sufficient.
  - DOC/OSC is exploring a personnel exchange of TraCSS and EUSST operators. Proposed to put TraCSS operators (with TraCSS system access) at EUSST for a period. When high risk events occur, both systems can assess the event and operators can coordinate quickly.
- The EU SST Partnership continues strong growth in capability, in the use of commercial SSA data, in the number of partner countries, and in investing in new technologies including space-based space surveillance (SBSS) technologies. There is growing political awareness in Europe on the importance of SSA.
  - The proposed EU Space Act and the proposed EU 2028- 2034 budget create some uncertainty in Europe about the future role and structure of the EU SST partnership.
- Inexperienced and non-expert owner/operators (O/O's) are an increasing challenge for the community. There is a lack of awareness among such operators of the availability of conjunction analysis and Collision Avoidance services provided by EU SST, TraCSS and other services. Lack of contact information and coordination with inexperienced and new O/O's is a growing concern .
- But inexperienced O/O's are not the only problem. Communication, lack of coordination, and shared points of contact between all O/O's is drastically insufficient. For example, in 2025, an O/O found 1600 spacecraft payloads in their operating sphere of which they did not have contact information for approximately 50%. They sent emails to the roughly 60 O/O's for which they had contact information in order to establish communication for maneuver coordination. Only 8 responded.

- NATO is becoming a major stakeholder in SSA. NATO Ops Center is in development along with a NATO implementation plan, and a NATO Front Door to enable NATO commercial integration.
- Participants expressed the importance of this annual workshop and its associate event at the Space Symposium. It is crucial for key stakeholders to reconnect twice a year given the fast-changing environment in space and in global SSA/STM collaboration.

## WAY AHEAD

- Increase efforts to bring into the fold inexperienced and non-expert O/O's.
  - Purposefully invest in efforts to raise awareness among such operators of the availability of conjunction analysis and Collision Avoidance services, and of their responsibilities for space safety and sustainability.
  - Purposefully invest in efforts to incentivize voluntary contact information sharing and maneuver coordination. Assess approaches for making contact info sharing mandatory.
- Continue efforts to increase interactions with China's commercial operators. Consider innovative approaches and persist in efforts to improve communication via China governmental channels. For example, explore widening and deepening communication via the Inter-Agency Space Debris Coordination Committee (IADC) channels.
- Continue efforts to educate senior policymakers about international SSA/STM data sharing issue to prevent the emergence of non-compatible, non-aligned regional SSA/STM centers.

## BACKGROUND

The Maui Economic Development Board (MEDB) and The Aerospace Corporation led the annual International SSA Data Providers and Satellite Owner/Operators Workshop on 17 September 2025. This was the latest in a series of invitation-only workshops held in conjunction with the Advanced Maui Optical and Space Surveillance Technologies (AMOS) Conference. The workshop included government representatives from the EU, France, Germany, Italy, NATO, Poland, Spain, Thailand, the United Kingdom, and U.S. government (Department of Commerce, Department of Defense, NASA, and U.S. Space Force). The discussion also included participants from non-governmental organizations and industrial associations.

The enduring goal of the International SSA Data Operator Exchange Workshop is to provide an opportunity to develop and advance relationships and share insights among key international SSA data stakeholders including military, academic, civil, and commercial entities. To accomplish this, workshop organizers choose timely topics relevant to the global SSA community and encourage open discussion from all participants in a small to medium sized group setting. This year's session was cohosted by the Space Agency of the Deutsches Zentrum für Luft- und Raumfahrt (DLR), the Centre National d'Etudes Spatiales (CNES), and the EU SST partnership.

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## International SSA Data Operator Exchange Workshop Program on September 17, 2025

The emergence of multiple national and regional SSA/STM providers around the world increases the urgency for progress to be made in understanding how each generates their products and standards for sharing data and products between them.

Purpose: The international SSA operator community informs and shapes international SSA/STM policy priorities from an operator perspective.

### Agenda

- |         |                                                                                                                                                |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1:00 pm | Welcome Remarks                                                                                                                                |
| 1:05    | Milestones since last meeting: spacecraft and debris statistics (Jordan Denamur-Paul)                                                          |
| 1:15    | Invited speaker – Dmitry Poisik, US DOC/OSC                                                                                                    |
| 1:30    | Q and A                                                                                                                                        |
| 1:40    | Invited speaker – Pascal Faucher, EU SST                                                                                                       |
| 1:55    | Q and A                                                                                                                                        |
| 2:05    | Presentation: US/EU joint study – Cristina Pérez Hernández<br>Exchange of views/feedback (all attendees).                                      |
| 2:15    | Break                                                                                                                                          |
| 2:25    | Panel Discussion<br>Topic - Moving forward: Creating new opportunities in context of increasing complexity for satellite owner/operators (O/O) |
- Panel Goals:
- Highlight Collision Avoidance (CA) challenges for O/O's if China and others remain on the outside of the discussion.
  - Identify regional, international, bilateral and commercial operational-level opportunities to bring China and others into the discussion.
  - Identify most promising models for an international SSA/STM operator and stakeholder engagement mechanisms, for example, the International Committee on Global Navigation Satellite Systems (ICG) or the International Asteroid Warning Network (IAWN) or something else.
  - Discuss NATO's emergence as a key SSA stakeholder.

Moderators: Richard Dalbello and Kevin O'Connell

Panelists:

- DOC/OSC – Mariel Borowitz - COPUOS Expert Group on SSA
- NATO - Col Whitaker – NATO perspective
- Keiper O/O - Josef Koller – O/O engagement with China
- Council on Foreign Relations report SME – Audrey Schaffer
- Iridium O/O – Ryan Shepperd – O/O engagement with China

3:30 Roundtable Discussion –

Purpose: Opportunity to provide brief organizational updates and share perspectives.

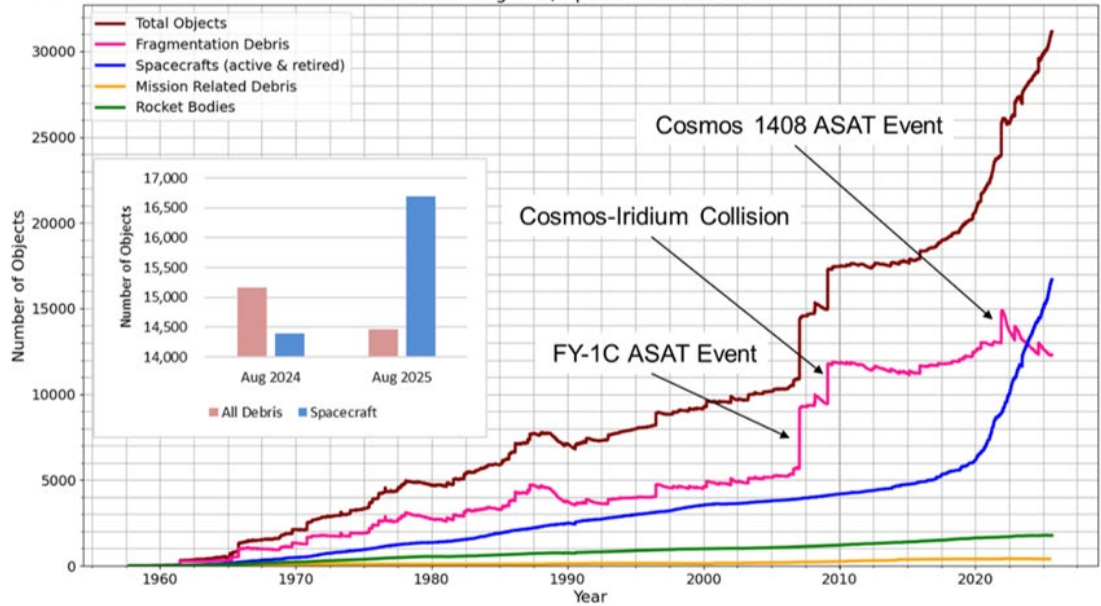
3:55 Way ahead – Jamie Morin

4:00 Closing remarks. Leslie Wilkins

The exchange included international governmental representatives from France, Germany, Italy, Poland, Spain, Thailand, the United Kingdom, NATO, the EU Agency for the Space Program, and the EU Space Surveillance & Tracking (EU SST) Partnership. U.S. government representatives attended from the Department of Commerce (NOAA), Department of Defense, NASA, and the U.S. Space Force. Non-governmental organizations and individuals attended providing perspectives from the Aerospace Corporation, Secure World Foundation, Space Safety Coalition, RAND, U.S. SSA services industry, European SSA services industry, satellite owner/operators, the Astronomical Institute University of Bern, and the Maui Economic Development Board.



All Orbit Regimes, Updated On: 2025-08-28

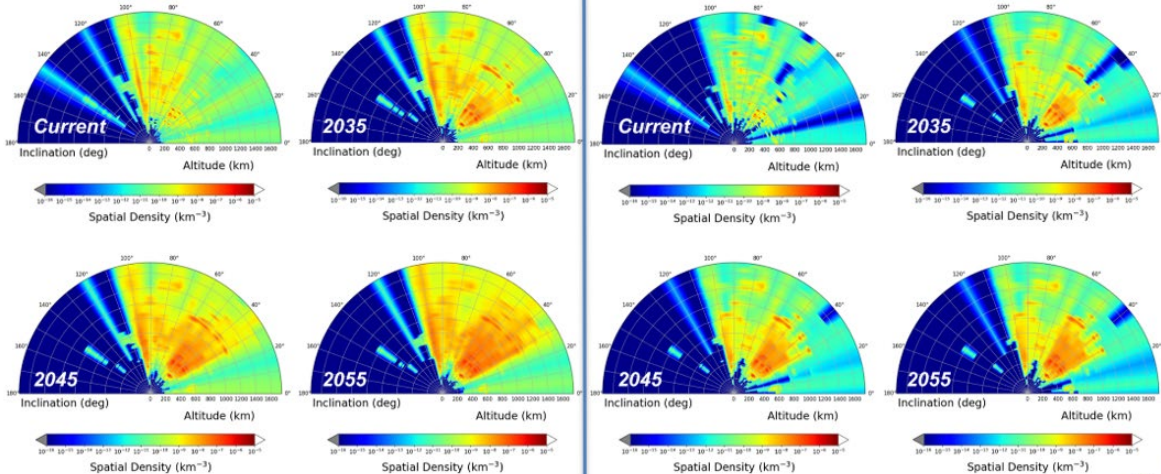


Source: Historical space object information is sourced from space-trak.org. Future satellites and debris are estimated based on analysis of ITU and FCC filings for future launches.

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**Spatial Density – All Tracked/Trackable Objects with Potential Future Traffic**

**Spatial Density – Spacecraft Only with Potential Future Traffic**



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