

Inter-Agency Space Debris Coordination Committee



Annual Report 2023

Anil Kumar (ISRO) on behalf of the IADC

61st Session of the UNCOPUOS STSC

29 Jan. – 8 Feb. 2024

Overview of IADC

- IADC is an international forum of national and international Space Agencies for the worldwide technical/scientific coordination of activities related to the issues of space debris in Earth orbit and provides technical recommendations
- The 13 IADC member agencies are: – ASI (Agenzia Spaziale Italiana) – CNES (Centre National d'Etudes Spatiales) – CNSA (China National Space Administration) – CSA (Canadian Space Agency) – DLR (German Aerospace Center) – ESA (European Space Agency) – ISRO (Indian Space Research Organisation) – JAXA (Japan Aerospace Exploration Agency) – KARI (Korea Aerospace Research Institute) – NASA (National Aeronautics and Space Administration) – ROSCOSMOS (Russian Federal Space Agency) – SSAU (State Space Agency of Ukraine) – UK Space Agency (United Kingdom Space Agency)
- IADC consists of a Steering Group and four specified Working Groups (WGs) covering measurements (WG1), environment and database (WG2), protection (WG3), and mitigation (WG4).
- The primary purposes of the IADC are
 - to exchange information on space debris research activities between member space agencies.
 - to facilitate opportunities for cooperation in space debris research.
 - to review the progress of ongoing cooperative activities.
 - to identify debris mitigation options
- IADC provides technical recommendations to the international space community. IADC is not a regulatory organization

(IADC public documents see <http://www.iadc-home.org>)

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Membership

- IADC members are national or international space and state organizations **that carry out space activities**, through planning, designing, launching, or operating space objects.
- IADC members **should actively undertake space debris research** activities and contribute to an increased understanding of space debris issues for the preservation of the orbital environment

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Annual Meetings

- More than 100 technical experts from member agencies participate in the annual meetings to advance on the IADC action items
 - ESA hosted the meeting in 2023 at ESOC/ESA, Darmstadt, Germany
 - **ISRO will host the next meeting in Bangalore, India, in April 2024**

40th IADC, 2022 Jeju Island, Korea



41st IADC, 2023 Darmstadt, Germany

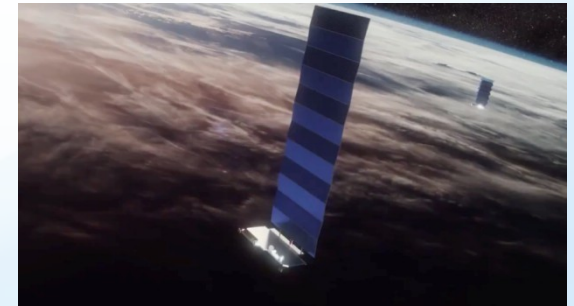
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Re-entry Prediction Campaigns

To prepare for and respond to high risk re-entry events, the IADC members conduct annual object re-entry prediction campaigns for data sharing exercises and improvement of the prediction techniques.

- 29 campaigns have been conducted since 1998, including:
 - 2023-01 Starlink-106 satellite (2019-074BK, #44770), entered 04-April-2023 19:55 UTC
 - 2023-02 Aeolus satellite (2018-066A, #43600), July-2023 18:40 UTC



Artistic representation of a Starlink satellite (Credit: SpaceX)



Image of Aeolus (Credit: ESA)

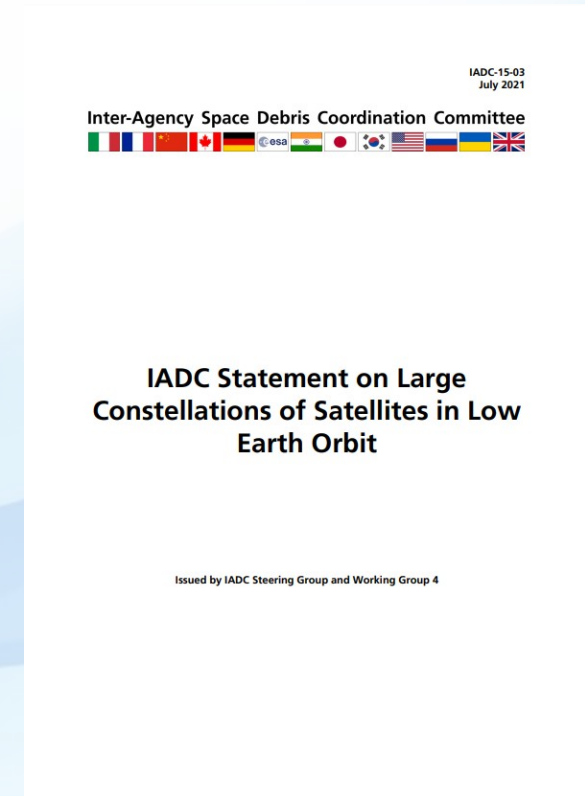
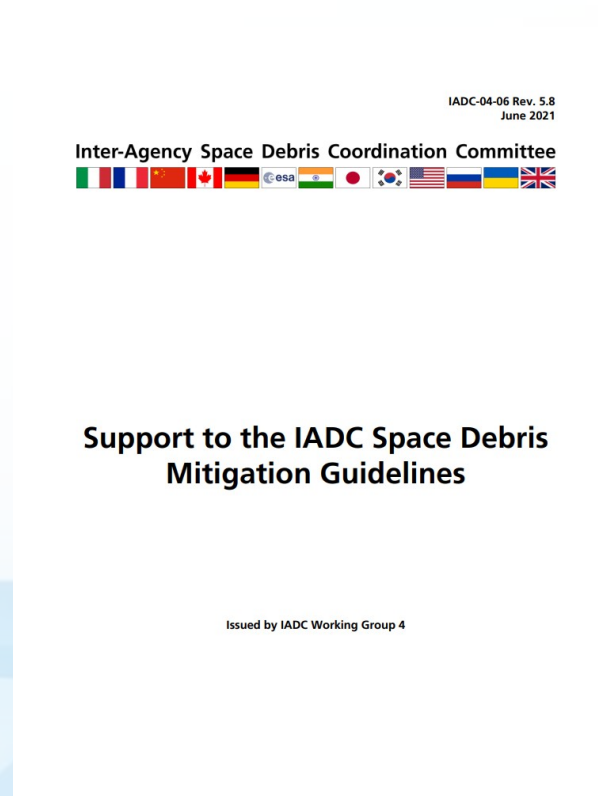
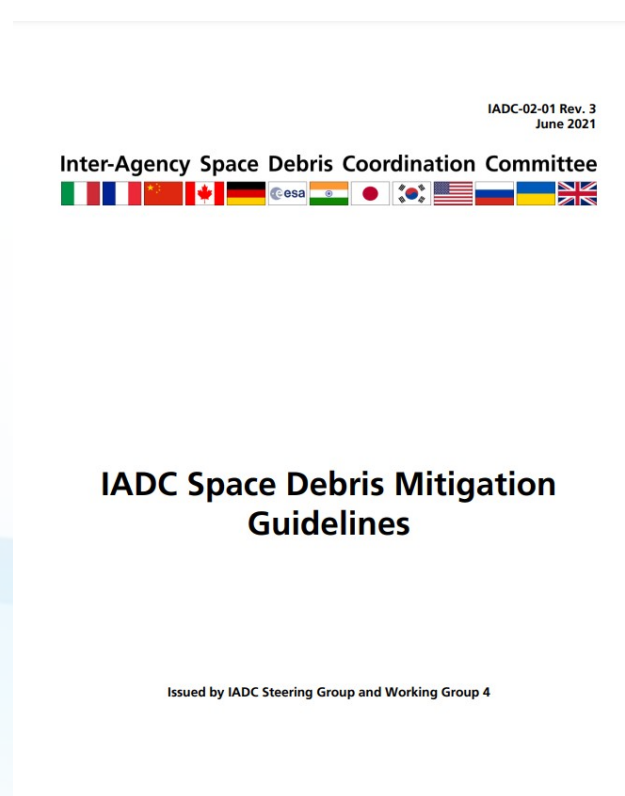
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IADC Core Products

(IADC public documents see <http://www.iadc-home.org>)

Published in 2021/2022



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IADC Products

Published in 2023

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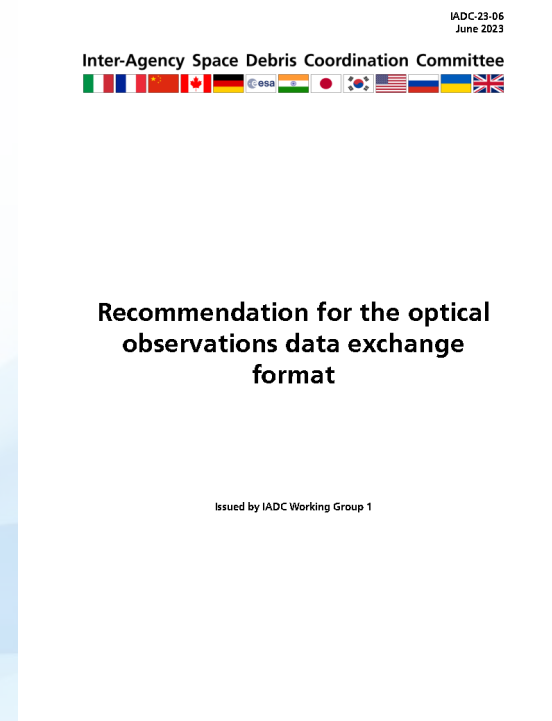
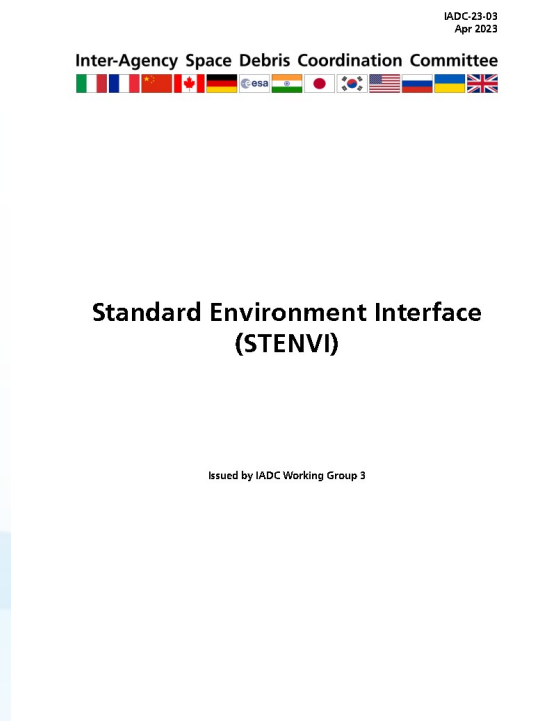
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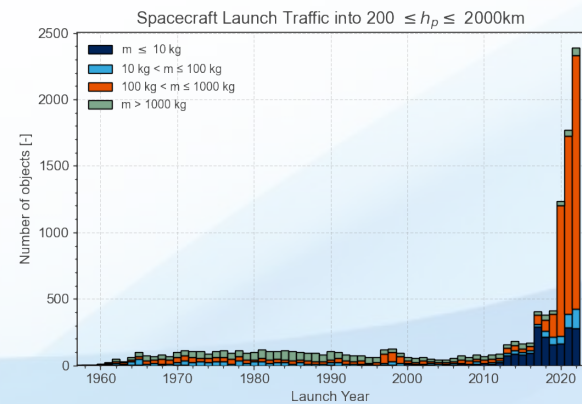
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IADC Report on the Status of the Space Debris Environment

2nd Issue of the Report

- Providing an assessment of the current status of the space debris environment and
- Evolution of the environment



IADC-23-01
Jan 2023

Inter-Agency Space Debris Coordination Committee

IADC-23-01 Issue 2
Jan 2024

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**IADC Report on the Status of the
Space Debris Environment**

Issued by IADC Working Group 2 / Steering Group
Working Group Internal Task 39.2

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Conclusions

- IADC is the internationally recognized technical authority on space debris.
- IADC participates in and contributes to the UN space debris activities via the Scientific and Technical Subcommittee (STSC) of the Committee on the Peaceful Uses of Outer Space (COPUOS).
- IADC will continue to advance the knowledge of space debris and to develop environment management strategies to preserve the near-Earth space for future generations
- IADC organises a Workshop on Space Debris Concerns and Mitigation Strategies at Vienna as a side event during STSC meeting on Jan. 30, 2024

Visit us: <http://www.iadc-home.org>

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Thank You!!