

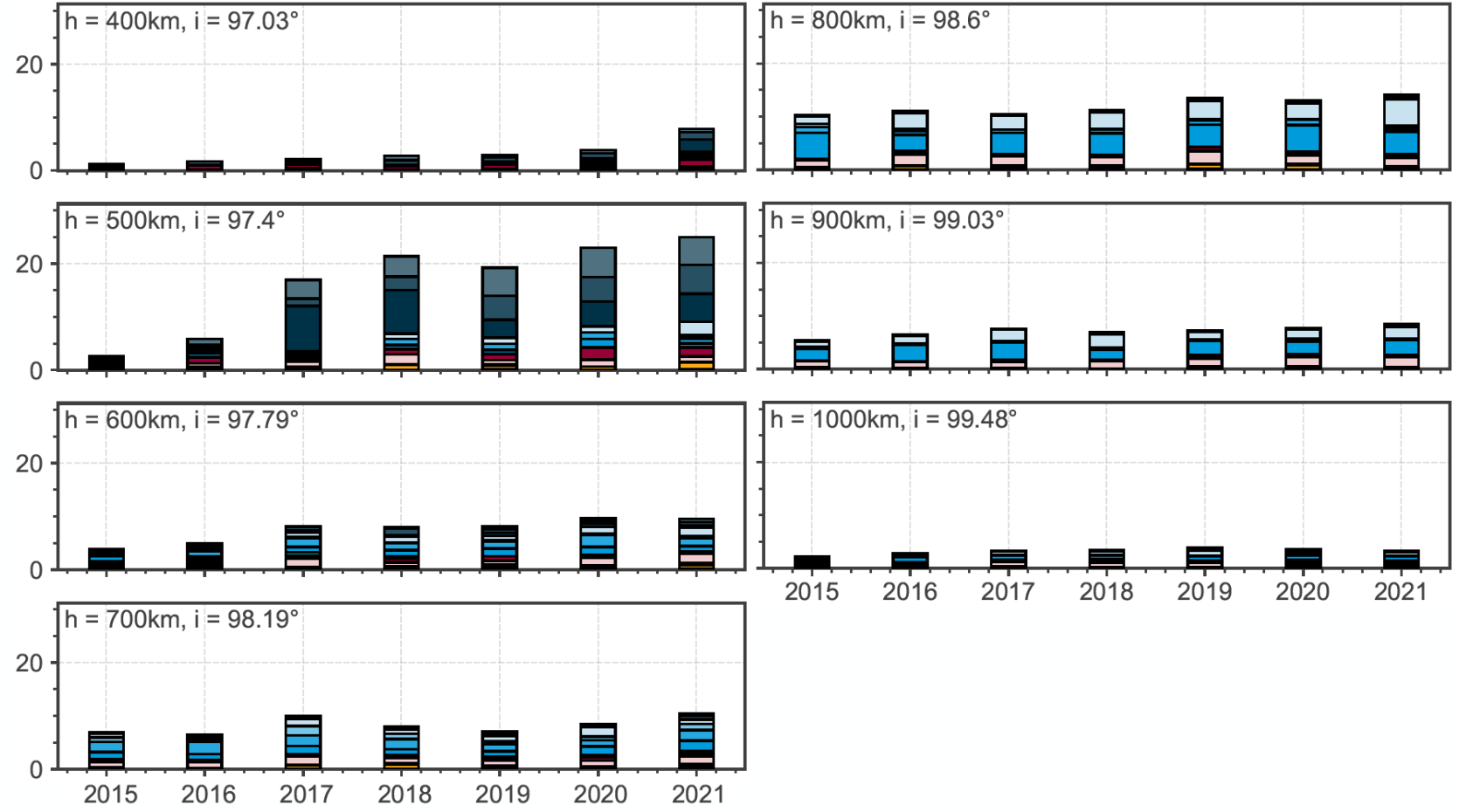
Low Earth Orbit Kinetic Space Safety Workshop

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Operational reality: Conjunction events, and chaser classification, for a set of representative targets in Sun-synchronous LEO over multiple years (2015-2021)

Conjunction events with collision probability above 10^{-6} and 3d to TCA



- Unknown
- Rocket Debris
- Rocket Mission Related Object
- HAPS Fragmentation Debris
- H8 Fragmentation Debris
- Other Rocket Fragmentation Debris
- Rocket Body
- Payload Debris
- Payload Mission Related Object
- Fengyun 1C Fragmentation Debris
- Cosmos-2251 Fragmentation Debris
- Cosmos-1408 Fragmentation Debris
- Iridium 33 Fragmentation Debris
- Other Payload Fragmentation Debris
- Constellations
- Small satellites
- Other Payload

ESA's Annual Space Environment Report. Issue 6 covering 2021, released: 22 April 2022
https://www.sdo.esoc.esa.int/environment_report/Space_Environment_Report_latest.pdf



- **Decision-taking** in a world with rapidly increasing number of diverse actors, with (soon) multiple heterogeneous and larger catalogues at disposal, comes with **practical and non-practical aspects** of operator cooperation and coordination
 - What is the most effective way to tackle **short-term risks**?
 - How far can one go when asking **transparency** from operators (of spacecraft and space surveillance systems) and can there be any formal requirements to **promote data sharing** and transparency?
- Regulators might want the use of **probabilistic and space sustainability risk thresholds**. Will we apply the current poor technology/policy coordination to cis-lunar space?
 - Space Debris Mitigation requires a level playing field to achieve **long-term stability** of the environment. How are we sure that this is reflected in (rather) static standards and licensing?
 - How can guidelines evolve to ensure a more **sustainable use of space**? Which are the priorities from an operator perspective? How can better-than-required behaviour can be reflected?