

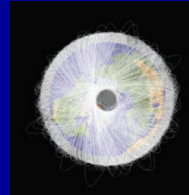
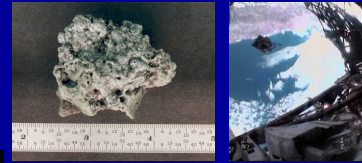
The History of Space Debris

Loretta Hall



Debris sources

Incidental
Accidental
Intentional



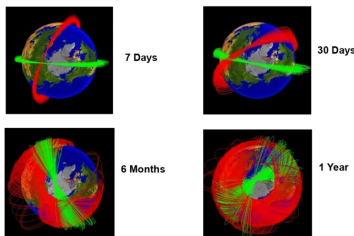
Collisions

Hubble

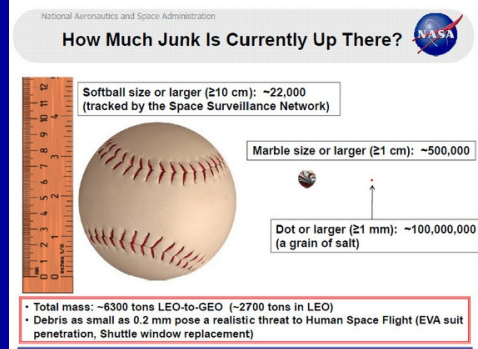


Iridium 33/Cosmos 2251

Spread of Collision Debris Orbital Planes

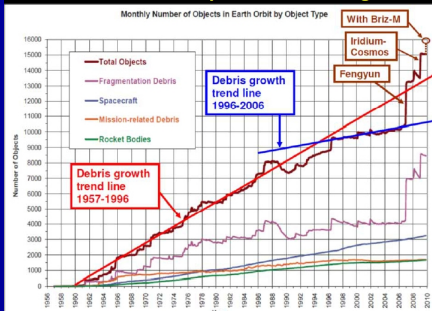


Debris stats



Debris proliferation

Historical Growth of Space Debris Through 2010



STM Implications

Launches can be delayed

Orbits can be adjusted

ISS

Maneuverable satellites

Mitigation is improving