

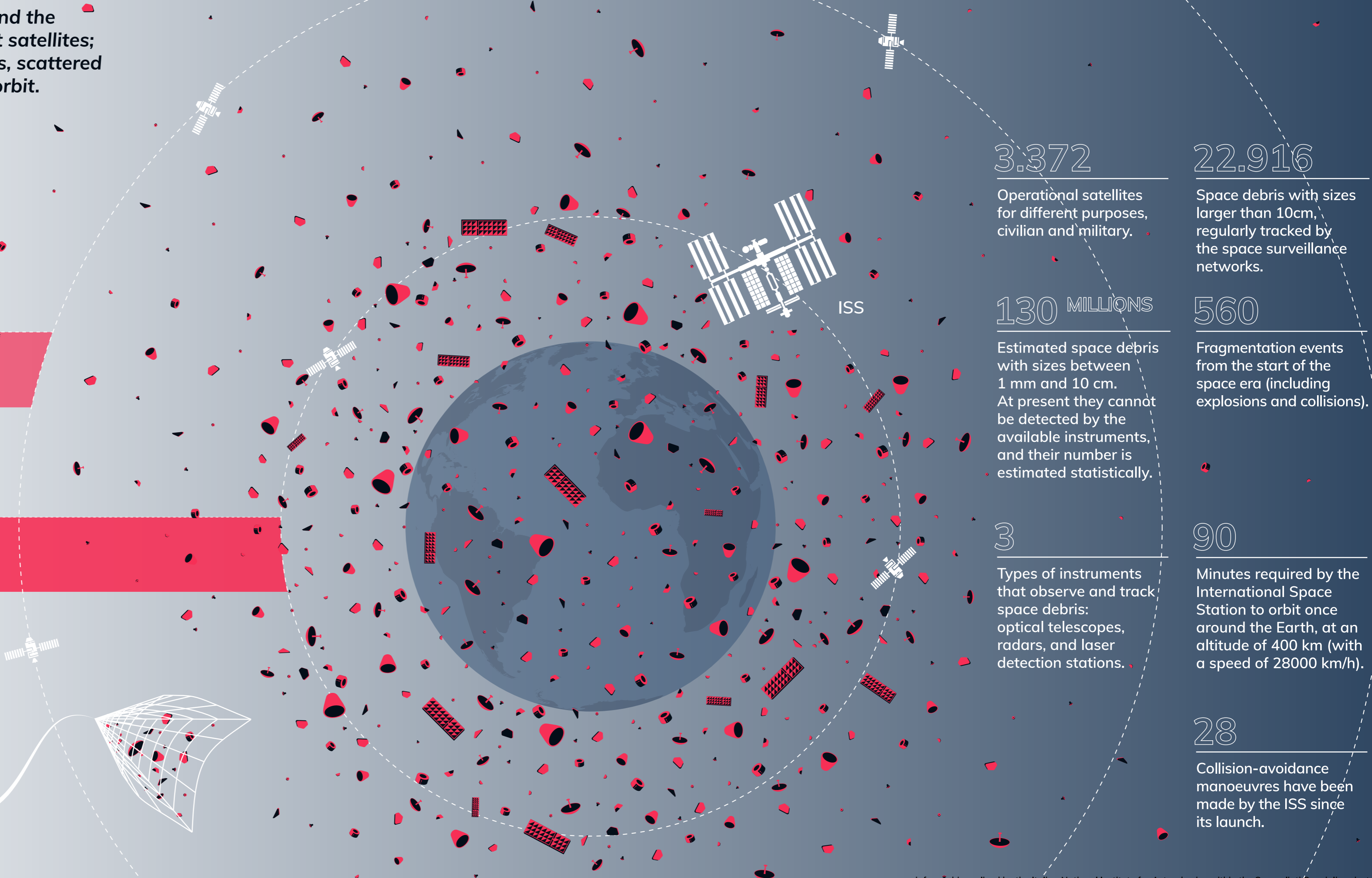
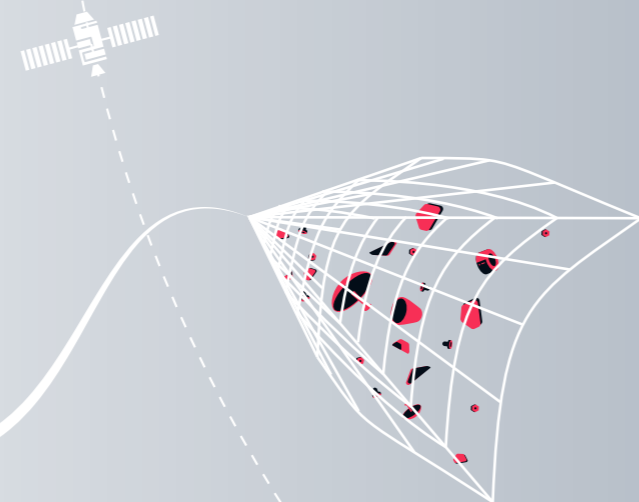
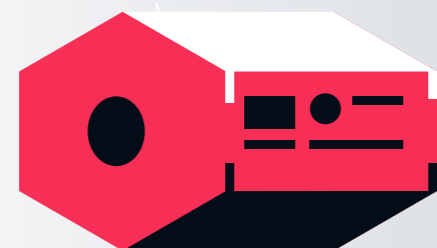
Several thousand tons of litter, called “space debris”, orbit around the Earth at speeds reaching 28 thousand km/h. They include spent satellites; rocket bodies; and parts and fragments of satellites and rockets, scattered by malfunctions, collisions or explosions that have occurred in orbit.

Altitude
35876 km

Altitudes between
2000 km and 35876 km

Altitudes between
200 km and 2000 km

In order to preserve the safety of orbital space, satellites and space debris are monitored by space surveillance networks. Several techniques are being studied to minimize the production of new space debris, and to clean up the polluted orbits: for example, “sweeper” satellites are designed to capture the largest fragments with nets.



3.372

Operational satellites for different purposes, civilian and military.

130 MILLIONS

Estimated space debris with sizes between 1 mm and 10 cm. At present they cannot be detected by the available instruments, and their number is estimated statistically.

3

Types of instruments that observe and track space debris: optical telescopes, radars, and laser detection stations.

22.916

Space debris with sizes larger than 10cm, regularly tracked by the space surveillance networks.

560

Fragmentation events from the start of the space era (including explosions and collisions).

90

Minutes required by the International Space Station to orbit once around the Earth, at an altitude of 400 km (with a speed of 28000 km/h).

28

Collision-avoidance manoeuvres have been made by the ISS since its launch.