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Sommario/riassunto

Since the beginning of space flight, the collision hazard in Earth orbit has increased as the number of artificial objects orbiting the Earth has grown. Spacecraft performing communications, navigation, scientific, and other missions now share Earth orbit with spent rocket bodies, nonfunctional spacecraft, fragments from spacecraft breakups, and other debris created as a byproduct of space operations. Orbital Debris examines the methods we can use to characterize orbital debris, estimates the magnitude of the debris population, and assesses the hazard that this population poses to spacecraft. Potential methods to protect spacecraft are explored. The report also takes a close look at the projected future growth in the debris population and evaluates approaches to reducing that growth. Orbital Debris offers clear recommendations for targeted research on the debris population, for methods to improve the protection of spacecraft, on methods to reduce

the creation of debris in the future, and much more.