

Measures to control the proliferation of modern-day 'killer satellites'

Background

There are theoretically two kinds of killer satellites. The first ones are Anti satellite weapons (ASATs), which are, as the name suggests, to be used against other satellites. The second kind, which is currently a bit more hypothetical but is getting closer to becoming a reality every day, are weaponised earth targeting satellites.

ASATs are the more important topic, they will be the main focus of this synopsis. ASATs are already in use since the cold war, but have recently seen massive technological development, spreading from pretty much exclusive to the USA and Russia to also being in the arsenals of China, India and Israel. While these weapons can be ground based, space based variants are becoming more used as they are much more likely to hit their targets. Their use is potentially dangerous as they can create space debris, which can collide with other satellites, eventually causing earth to suffer from the Kessler Syndrome. This is what is referred to most of the time under the term „killer satellites“.

The other kind, which is space to earth weaponry, is luckily not prevalent. There are no known operating orbital weapons and none have been attempted since the signing of the Outer Space Treaty and SALT II. The USA, USSR and Japan have all tested such weapons, but none of them are operational as of 2023 mostly thanks to their limitation by functioning international treaties.

Questions to consider

Is my country capable of creating and fielding ASATs?

Does my country have ASAT wielding allies?

Is my country strongly reliant on its satellite system for its economy or government?

How much of a problem is a potential increase in space debris?

Resources

<https://aquarid.physics.uwo.ca/kessler/iwp5.html>

<https://euobserver.com/world/156370>