

Proposal from India for new LTS Guideline

Background:

The orbital region in the neighbourhood of 400 km altitude is most suitable for the conduct of human space missions as it offers several advantages like less radiation hazards to astronauts, lower background micrometeoroid and sparse orbital debris population and ease of quick safe return trips to the Earth. Hence, there is a need for a new guideline to preserve this orbital region for human spaceflight missions by making additional provisions for the safety of spaceflight while operating in the vicinity of inhabited orbital region.

The proposed draft text of the guideline is as follows:

Make special provisions for human spaceflight missions

1. States should preserve the orbital altitude band of 370 to 430 km for human spaceflight missions and avoid injection of non-crewed spacecrafts within this band. Satellites that need to be placed in lower altitudes like experimental satellites, study satellites, academic/student satellites and amateur satellites, and satellites of large constellations that require to be placed in lower altitudes satellites on their first injections, should be placed in orbits well below 370 km. The operational satellites should have the orbital band above 430 km to avoid transit through the inhabited orbital regime during the operational life.
2. States should adopt measures to de-orbit all the objects placed in the low earth orbits above 370km at their end of mission to an orbit well below the inhabited orbital regime through preferably controlled re-entries impacting in safe ocean zones, or through controlled de-orbiting for minimum left over orbital life time at the End Of Life.
3. States should take adequate measures to avoid close approaches of their space objects with existing inhabited space stations and space objects , by performing adequate analysis with additional safety margins.
4. States should ensure that a newly launched human spaceflight mission module in this orbital band is placed with sufficiently large spatial separations with the existing inhabited space stations and space objects by appropriate orbital parameter selection.

