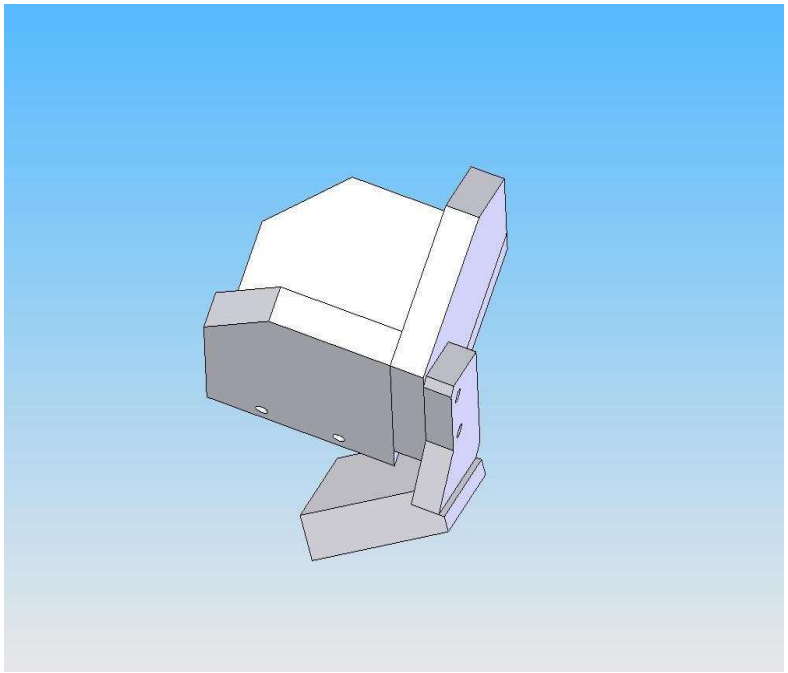
Retroreflector Standard for GNSS Satellites

- **GGOS endorses the following minimum standard for satellite laser ranging retroreflectors for the GNSS satellites as determined by the International Satellite Laser Ranging Service:**

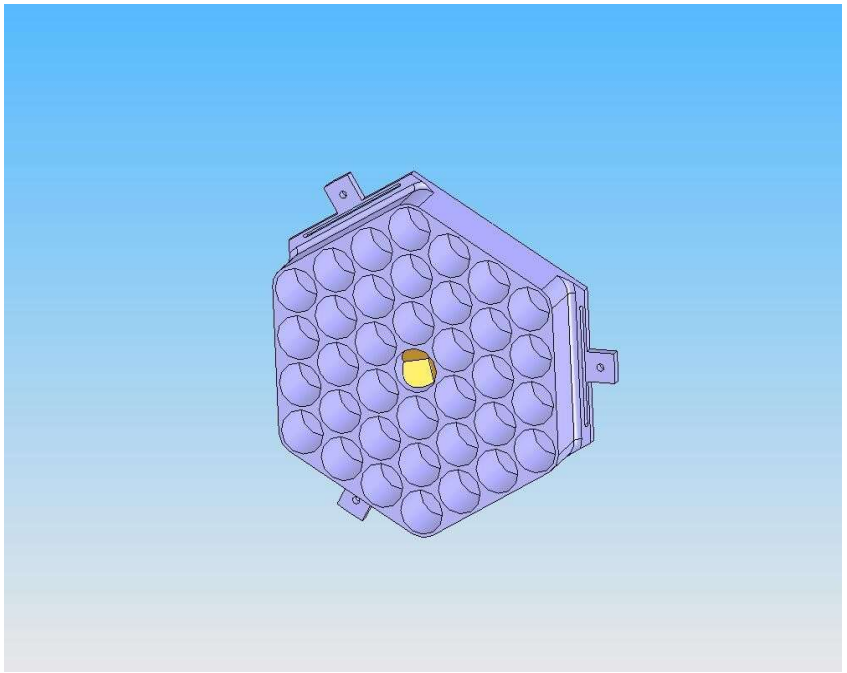
  - Retroreflector payloads for GPS, GLONASS, and COMPASS satellites should have an “effective cross-section” of 100 million sq. meters (5 times that of GPS-35 and -36) for GNSS satellites;
  - Retroreflector payloads for satellites such as Galileo in higher orbits should scale the “effective cross-section” to compensate for the R**4 reduction in signal strength;
  - The parameters necessary for the precise definition of the vectors between the effective reflection plane, the radiometric antenna phase center and the center of mass of the spacecraft be specified and maintained with an accuracy sufficient to support GGOS objectives;

  - Increased “effective cross-sections” per unit weight and area can be achieved with uncoated cubes, hollow cubes and other future options, and should be strongly considered for this application.

Hollow Cube Array



Single hollow cube



Hollow cube array configuration