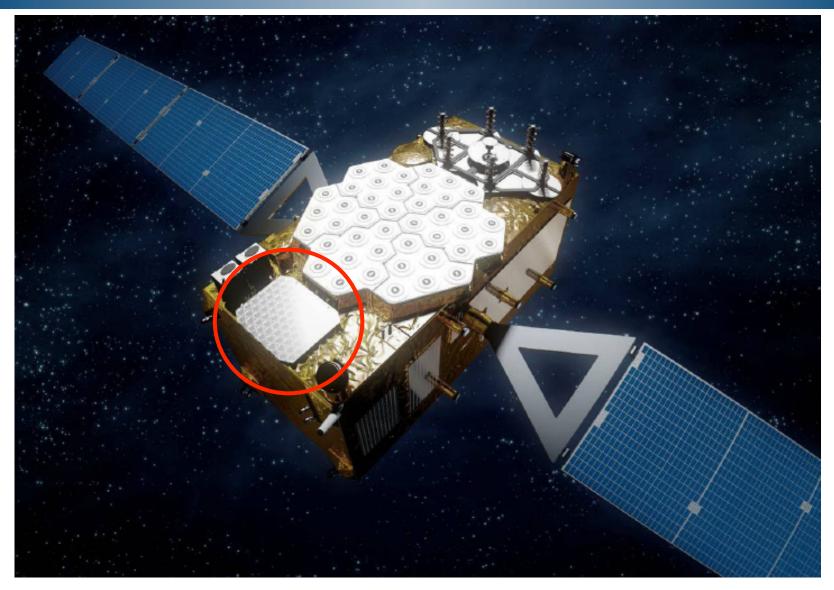


Galileo IOV LRA









Preliminary orbital elements



IOV Orbital configuration

- Galileo 101 Plane B slot 9
- Galileo 102 Plane B slot 1
- Galileo 103 Plane A slot 1
- ➤ Galileo 104 Plane A slot 2
- Semi-major axis 29600 km
- ➤ Inclination 56 +/- 2 deg (to account for Sun/Moon)

First IOV launch

- Current official launch date is 15 November
 - ✓ RAAN = 138 deg (Plane A), 258 deg (Plane B), 18 deg (Plane C)
 - RAAN precession about -10 deg/year
 - ✓ Current analysis target Plane B

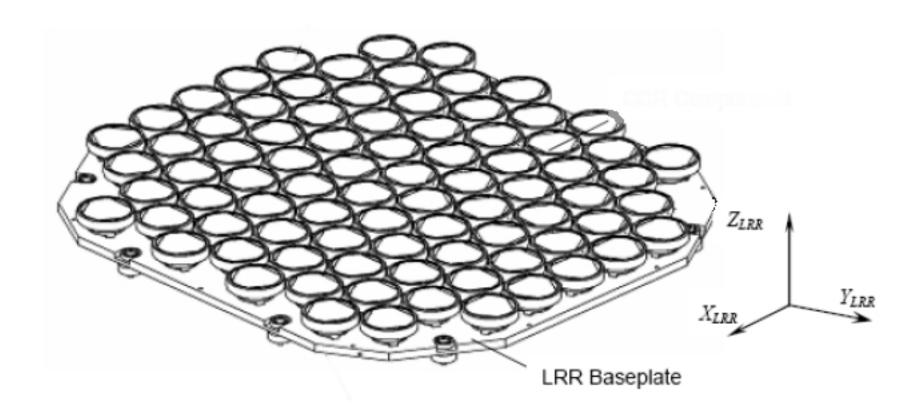
Second IOV launch

- > First half of 2011
 - ✓ Current analysis target Plane A









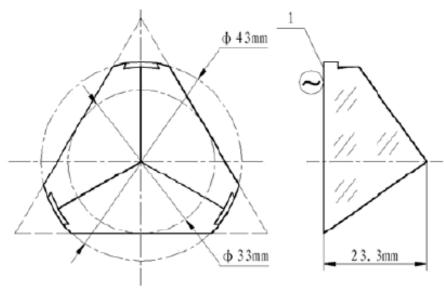




Conner Cube Reflectors



- 84 Corner Cube Reflectors (CCR)
 - doped fused silica (Suprasil 311) glass tetrahedron
 - no metallic coating on reflective surfaces
 - front surface coated with ITO
 - aperture face is included in a circle of 43 mm diameter
 - Minimum aperture 33 mm diameter
 - height of the tetrahedron is 23.3 mm
 - Iso-static mounting to plate
 - \triangleright N = 1.46, critical angle16.9 deg
 - √ which covers the entire LRR operating range (Earth radius of 12.44°)
 - ✓ no coating, total reflection is obtained without any loss
 - Velocity aberration compensation 0.8 arcsec
 - CCR are randomly oriented
 - ➤ LRA Centre of Phase TBD after Qualification
 - This information will be published in an update to "Specification of Galileo and GIOVE Space Segment Properties Relevant for Satellite Laser Ranging" (ESA-EUING-TN-10206) and in the "Mission Support Request Form"





SLR-relevant Data Flow



