

IUGG/IAG 2007 General Assembly

IAG RESOLUTION #2

Placing Laser Retro-reflectors on Satellites of the Global Navigation Satellite System

The International Association of Geodesy,

noting

- (i) the extensive and accelerating use over the past 15 years of the Global Navigation Satellite System, GNSS, (i.e., United States' Global Positioning System (GPS) and the Russian GLONASS) and the anticipated future use of new GNSS (i.e., European Galileo and China's COMPASS);
- (ii) the societal benefits increasingly derived from the integration of the space-geodetic observations within the Global Geodetic Observing System (GGOS), including GNSS, Satellite Laser Ranging (SLR), Very Long Baseline Interferometry (VLBI), Doppler Orbitography Radiopositioning Integration by Satellite (DORIS); and
- (iii) the essential contribution of the integration of the techniques to the multidisciplinary scientific advances, including the establishment and maintenance of an accurate and stable terrestrial reference frame,

recognizes

- (i) the improved inter-technique calibrations and validation needed for the demanding geodetic accuracy to achieve a high-accuracy reference frame to support positioning, navigation, and timing; and
- (ii) the resulting improvement in our understanding of the Earth system dynamics, including geo-hazards, ice and ocean mass transport, atmospheric processes, and sea-level variations; and

recommends

- (i) that all future GNSS satellites carry precision laser retro-reflector arrays; and
- (ii) that a careful pre-launch ground calibration/measurement of the center of mass offset of the array be provided.