Geophysical Research Abstracts, Vol. 8, 08436, 2006
SRef-ID: 1607-7962/gra/EGU06-A-08436

The Geocenter in Global GNSS Solutions

U. Hugentobler (1), **R. Dach** (1), S. Schaer (2), C. Urschl (1), G. Beutler (1)

(1) Astronomical Institute, University of Bern, Bern, Switzerland (urs.hugentobler@aiub.unibe.ch), (2) Swiss Federal Office of Topography, Wabern, Switzerland

The coordinates of the Earth's apparent center of mass are not reliably determined with global GNSS analysis solutions. A major reason for that is the high correlation of satellite radiation pressure parameters with the geocenter coordinates. It may, therefore, be reasonable to constrain the apparent geocenter to the ITRF origin. By analyzing Satellite Laser Ranging (SLR) residuals for GPS/GLONASS satellites tracked by the ILRS, it should be possible to decide which one of the two solutions, geocenter coordinates estimated or constrained to the ITRF origin, better represents the real situation. We illustrate related problems and presents results on the basis of SLR residuals.