Preview

Please use your browser's ***Back*** button to return to the form.
If you do not see your changes, please ***Reload/Refresh*** this page.

Integration of GPS Geocenter and Scale Estimates

Michael Heflin[1] (mbh@cobra.jpl.nasa.gov)
Donald Argus[1] (argus@cobra.jpl.nasa.gov)
David Jefferson[1] (djeff@cobra.jpl.nasa.gov)
Frank Webb[1] (fhw@cobra.jpl.nasa.gov)
James Zumberge[1] (jfz@cobra.jpl.nasa.gov)

[1]Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109, United States

Solutions from GPS, SLR, VLBI, DORIS, PRARE, and LLR are currently integrated by the ITRF to form a global terrestrial reference frame. The current global standard is ITRF2000. All techniques contribute in some way to the frame but the geocenter is currently defined by SLR alone and the scale is defined by SLR and VLBI. Independent geocenter estimates can be provided by GPS which currently achieves daily precision of 1, 1, and 1.5 cm for the X, Y, and Z components. The GPS geocenter estimates have been steadily improving as the tracking network becomes more uniform and models are continuously upgraded. Current GPS scale estimates have a daily precision of 0.3 ppb. The GPS scale is sensitive to choices for the receiver and satellite phase center models, the elevation cutoff, and the tropospheric delay model. If these effects can be properly calibrated, GPS scale estimates can be integrated into the reference frame along with the geocenter estimates.

American Geophysical Union Abstract Form

Reference # 0000

1. 2002 Spring Meeting
2. AGU-11954731
3. (a) Michael Heflin
   Jet Propulsion Laboratory,
   4800 Oak Grove Drive
   Pasadena, CA 91109
   United States
   (b)
   (c)
   (d) mbh@cobra.jpl.nasa.gov
4. G
5. (a) G01
   (b) 1247, 1294
   (c)
6. N/A
7. 30% Fall AGU
8. $50
   xxxx xxxx xxxx 1247, 1294
9. C
10. No special instructions
11. Regular author

Date received: March 11, 2002
Date formatted: March 11, 2002
Form version: 1.5