

The JPL SCIGN-3.0.0 analysis - automation and results

Hurst, K J

kenneth.hurst@jpl.nasa.gov

Jet Propulsion Laboratory, 4800 Oak Grove Dr, Pasadena, Ca 91109 United States

A new analysis of the SCIGN data designated SCIGN-3.0.0 spanning over 5.6 years starting January 1996 is available at <http://milhouse.jpl.nasa.gov/scign/analysis> This analysis used fixed precise GPS orbits and clocks in a precise point positioning mode, followed by double difference ambiguity resolution, followed by transformation into a regional definition of the IGS97. This last step, transformation into a regional definition of IGS97, allows recovery of the inherent internal precision of the network into the station coordinates. Geodetic GPS has strong information about the relative positions of the stations - the shape of the network - but relatively weak information about the location and orientation of the network as a whole. Resolution of the doubly differenced carrier phase ambiguities provides even stronger constraints on the baselines between stations, but still does little to improve the position and orientation of the whole network. We are in the process of automating this transformation process with the aim of providing regular, frequent, and timely updates to station positions.

Submitted to AGU Fall 2001 meeting.