



Program for the Adjustment of GPS EphemerideS (PAGES)

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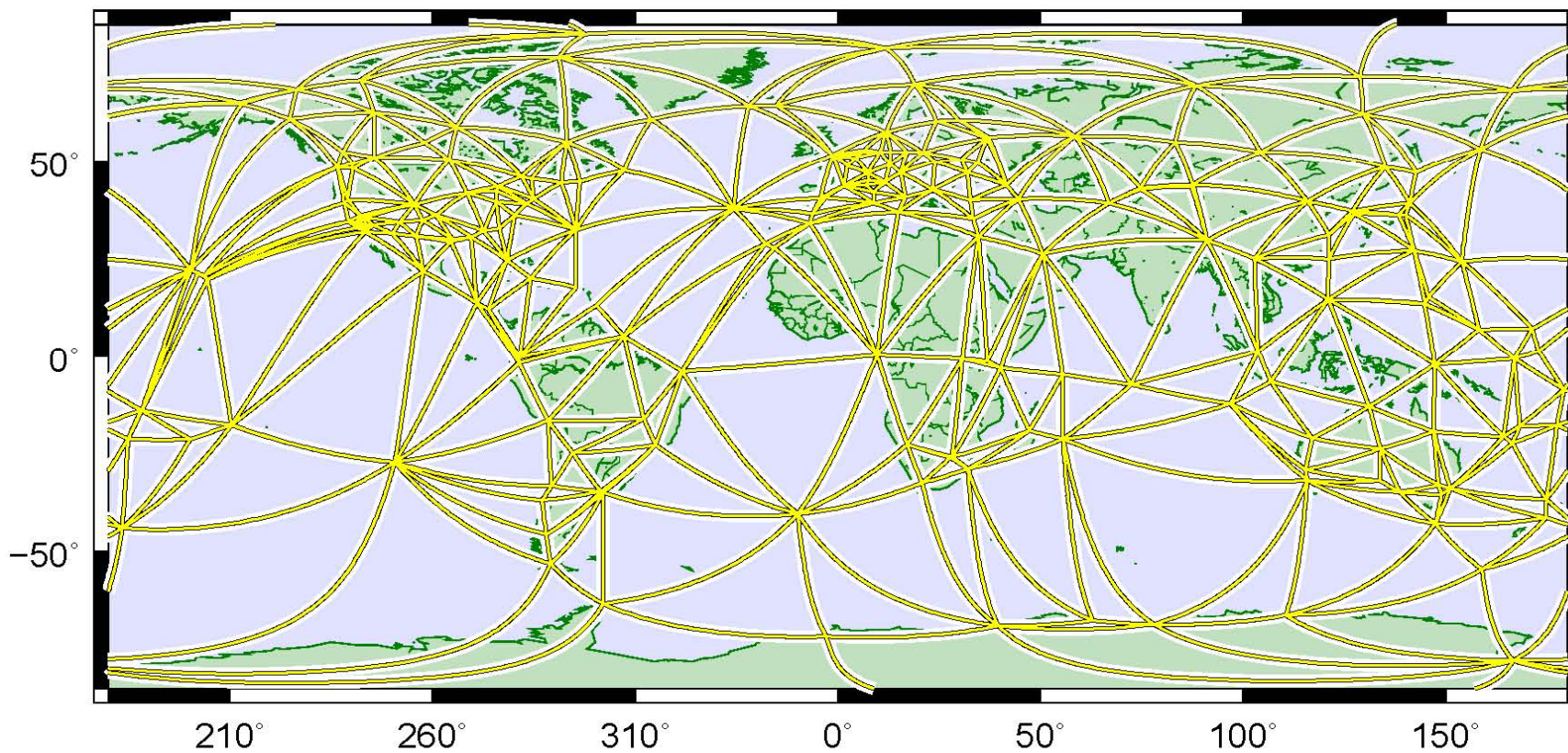
Daily Solution Procedure

Form a global network:

- IGS05 reference frame sites + others to fill out geometry
- 11 Geoscience Australian sites to densify South Pacific
- ~28 CORS sites to densify North America for backbone of Multiyear CORS network
- Select baselines using Delaunay triangulation
- ~195 sites total

Daily Solution Procedure (cont.)

Global Network



Daily Solution Procedure (cont.)

Clean up observation files and check quality using 'teqc'

Create a priori orbit file using MIT's 'arc' (currently using 'orb')

Reduce data on a 'regional' basis:

- Each site is the hub of a 'region' consisting of two or more baselines
- Resolve integer ambiguities iteratively for individual baselines using the actual 'pages' program
- Reduce data for each 'region' individually again using 'pages'

Combine 'regional' normal equations to form the daily global solution which is minimally constrained (no net rotation) to IGS05

Weekly Solutions

Daily normal equations are combined to form weekly solutions:

- tropospheric parameters are dropped before this combination
- orbits and EOPs are back solved
- solutions are minimally constrained (no net rotation) to IGS05

Results

PAGES does not successfully iterate orbit solutions . . . so far. As a result NGS fixes integers to a priori orbits, and NGS orbits differ greatly from the IGS combined repro 1 orbits prior to January 1, 1997.

WRMS of AC Orbits w.r.t. IG1

