Jason2 phase correction maps

F. Mercier, L. Cerri, P. Perrachon
2.5 deg. Mesh, 30 s sampling
CODE orbits and clocks
Extended antex data

Global estimation of
- one ambiguity per pass
- one clock per epoch
- one map value
  for each reference point

No constraints on the map values

Compared with JPL map, same patterns

F. Mercier – L. Cerri
Method:

Identification of a correction $C(Sit, Azi)$ on the phase residuals with the following parameterisation:

$$R_i(t) = C(Sit, Azi) + h(t) + A_i$$
Comparison with JPL map

JPL map

Differences
Estimations of maps for cycles 0-12

Standard POD residuals (300s)
JPL orbits and clocks

One map for each cycle (5 degrees)

All maps are very close, construction of an average map

- sigma comparison
- translations
- beta
2 mm rms in radial direction

Improvement of the residuals from 7 mm to 5 mm

Beta angle
Jason2 GPS Antenna Phase Correction Maps
F. Mercier, L. Cerri, P. Perrin (Centre National d’Études Spatiales, Toulouse)

See the poster for more details.