CENTRE NATIONAL D'ÉTUDES SPATIALES

Jason2 phase correction maps

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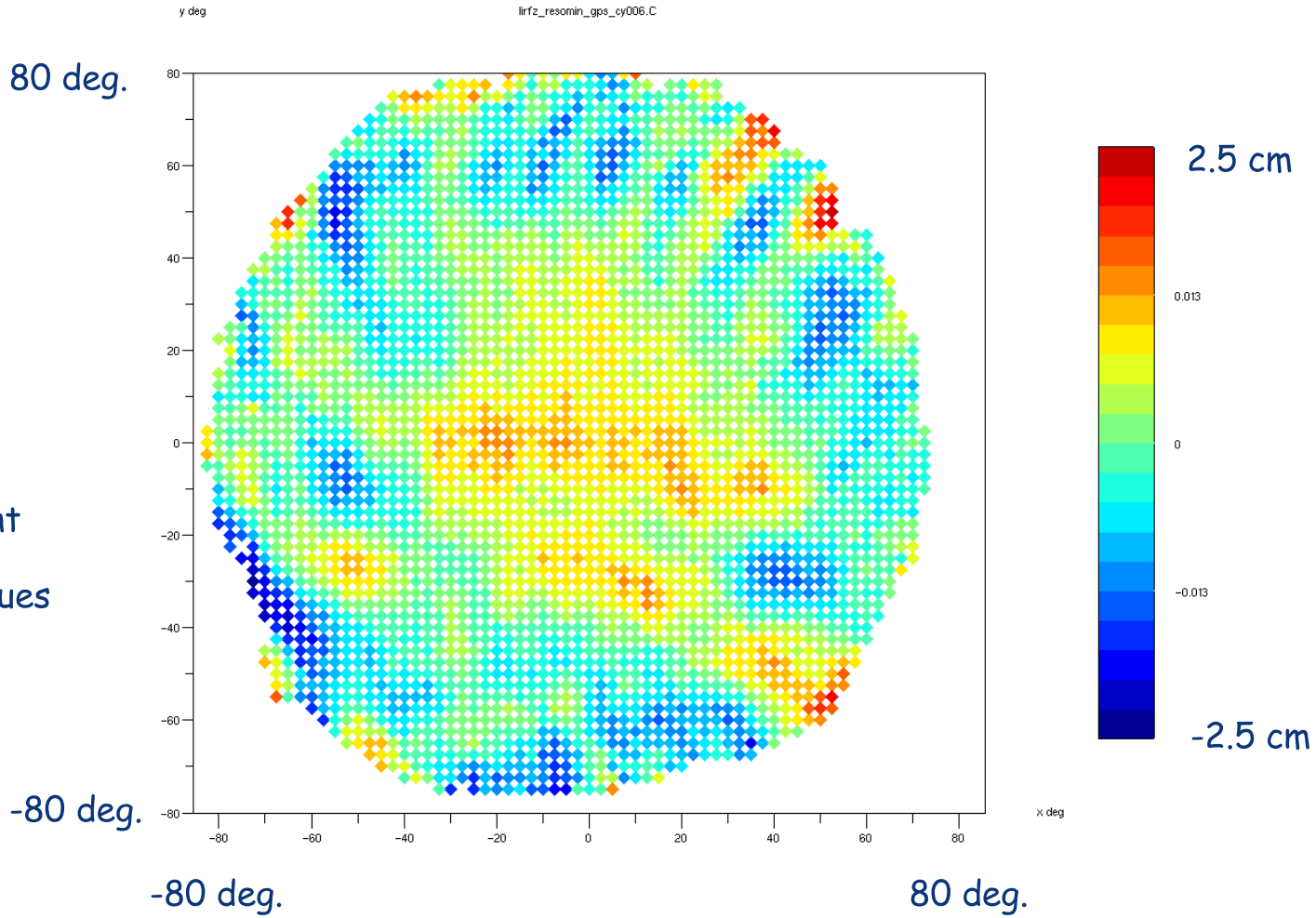
CNES estimated map on cycle 006

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



Method

Method :

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

$$R_i(t) = C(Sit, Azi) + h(t) + A_i$$

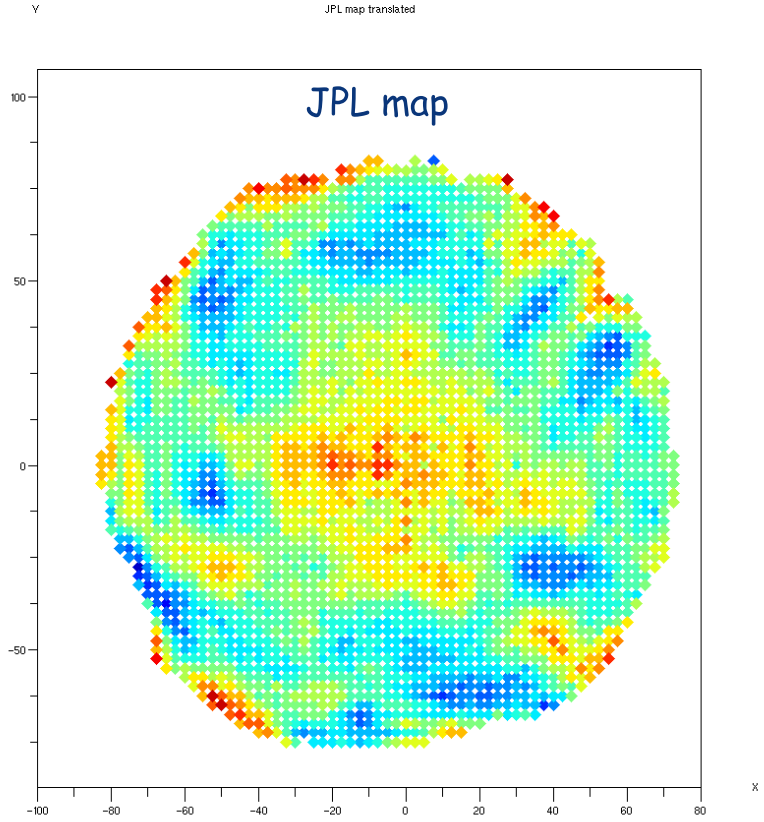
Phase residual
Pass i
Epoch t

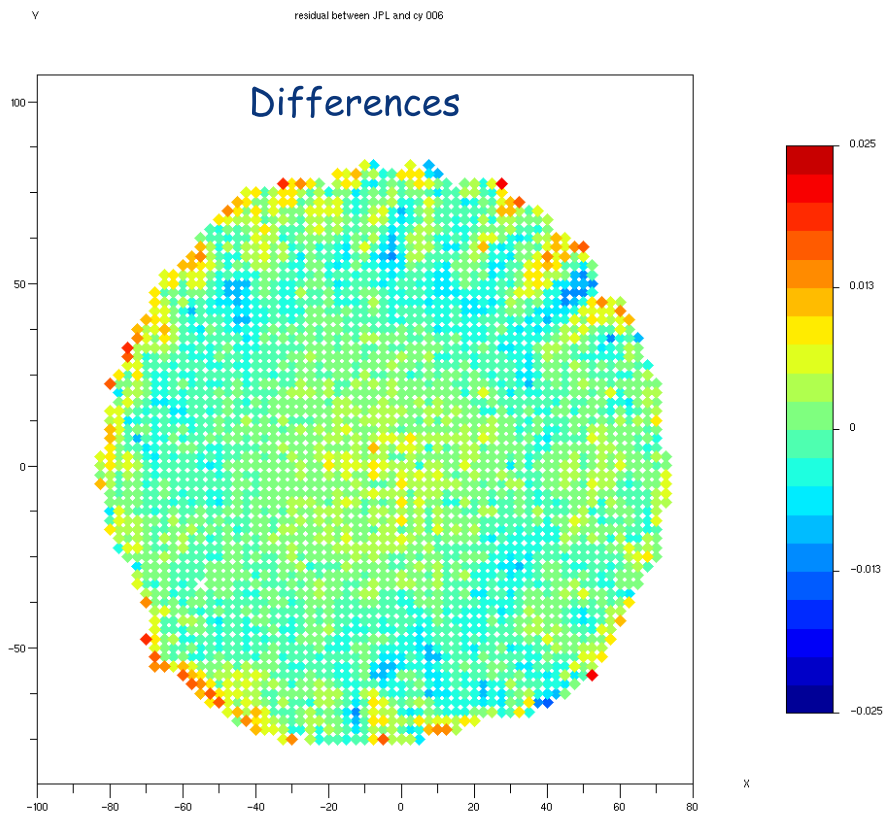
Map

Jason2 clock correction

Ambiguity (pass i)

Comparison with JPL map



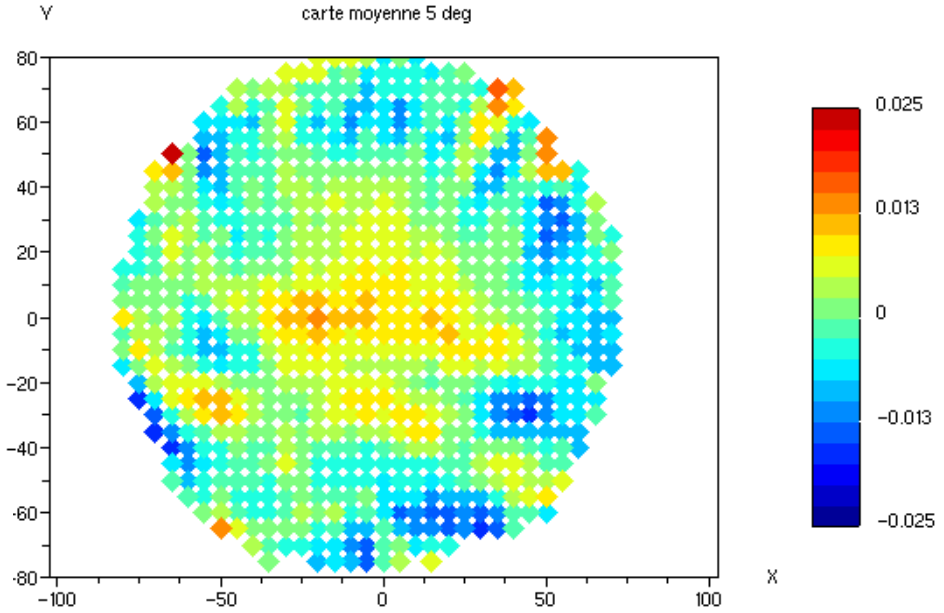


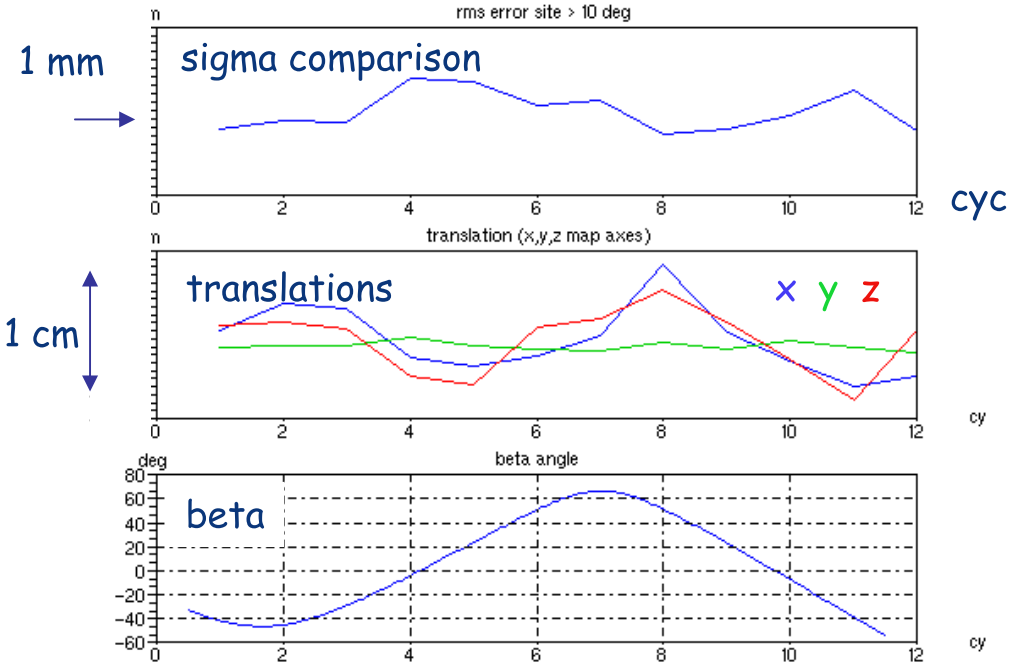
Estimations of maps for cycles 0-12

Standard POD residuals (300s)
JPL orbits and clocks

One map for each cycle (5 degrees)

All maps are very close, construction af an average map



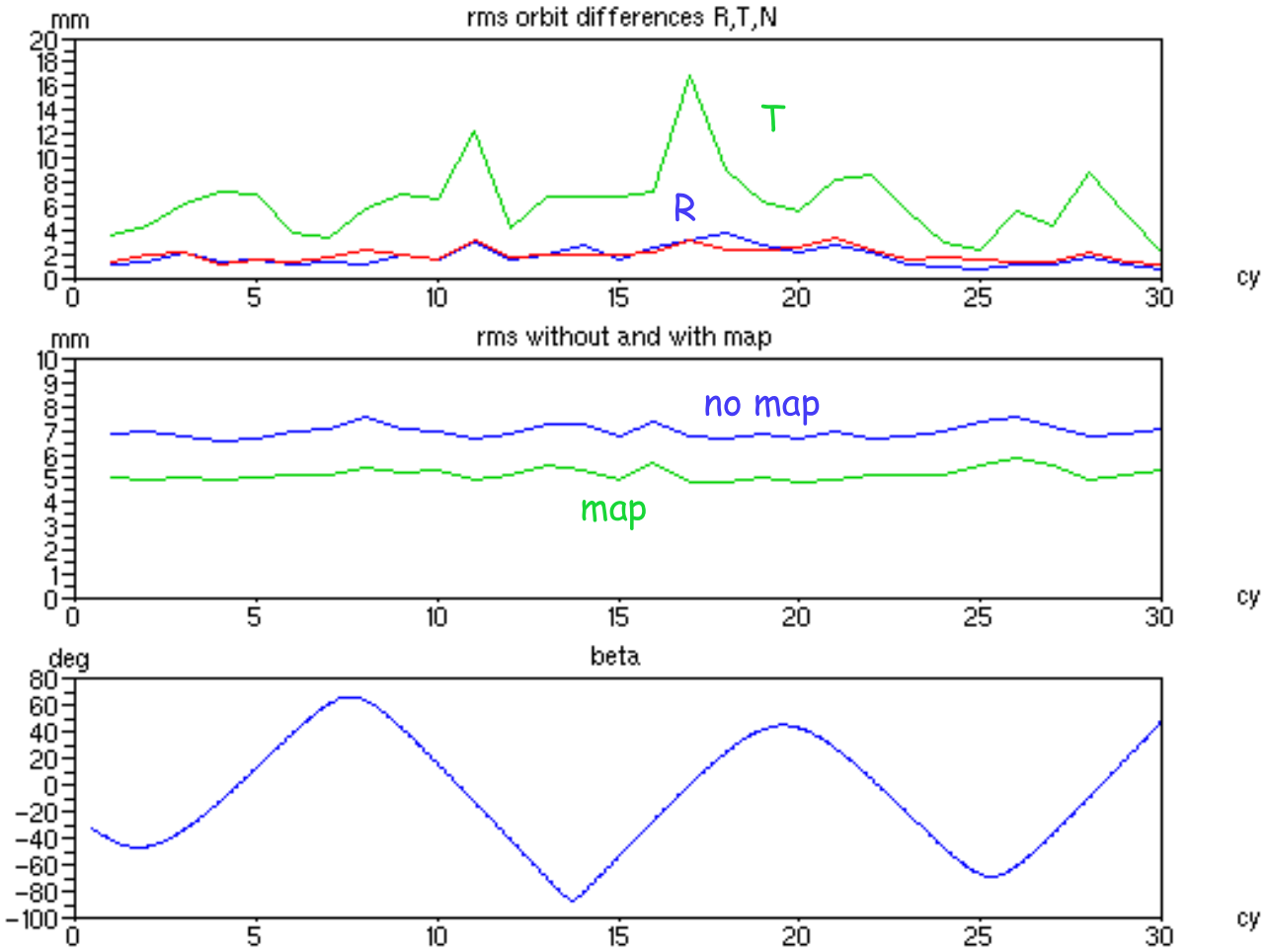


Application on cycles 1-30

2 mm rms in radial direction

Improvement of the residuals from 7 mm tà 5 mm

Beta angle



See the poster for more details