## ENVISAT CoM study (CNES/LCA orbits)

- Over 70 days ( $20 \times 3.5$ day arcs) in March/April 2008
- Cross-track $=\mathbf{X}$, Along-track $=-\mathbf{Y}$, Radial $=\mathbf{Z}$
- CoP-CoM figures at epoch 2008/03/01:

|  | $\mathbf{X}$ | $\mathbf{Y}$ | $\mathbf{Z}$ |
| :---: | :---: | :---: | :---: |
| DORIS | $.31683550000000 \mathrm{E}+01$ | $.10760000000000 \mathrm{E}+01$ | $.17280000000000 \mathrm{E}+01$ |
| LASER | $.10363550000000 \mathrm{E}+01$ | $-.13590000000000 \mathrm{E}+01$ | $.11830000000000 \mathrm{E}+01$ |

Remark: for the $\mathbf{X}$ drift of the CoM, we use a linear law instead of discrete steps but the difference between both approaches is always below $\mathbf{.} \mathbf{~ m m}$.
Solving for Radial and Cross-track CoM, independently for the Doris-only and Laser-only orbits:

- Radial offset of CoM DORIS: - $\mathbf{1 8 . 9} \mathbf{~ m m}$; from Laser: $\mathbf{- 1 8 . 5 ~ m m}$
- Cross-track offset of CoM DORIS: $\mathbf{1 5 . 5} \mathbf{~ m m}$; from Laser: $\mathbf{1 5 . 4} \mathbf{~ m m}$
- The mean of the "DORIS troposphere zenithal biases" remains below 2 mm
- The mean of the "Laser station range biases" remains below 1 mm
- The mean of the geocenter solutions remains below 4 mm in $X, 8 \mathrm{~mm}$ in $Y$ but reaches $\mathbf{3 2} \mathbf{~ m m}$ in $\mathbf{Z}$ for DORIS (only $\mathbf{- 3} \mathbf{~ m m}$ in $\mathbf{Z}$ for Laser)

