

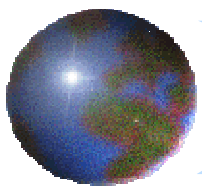
Status of the ASI/CGS contribution to the COL WG



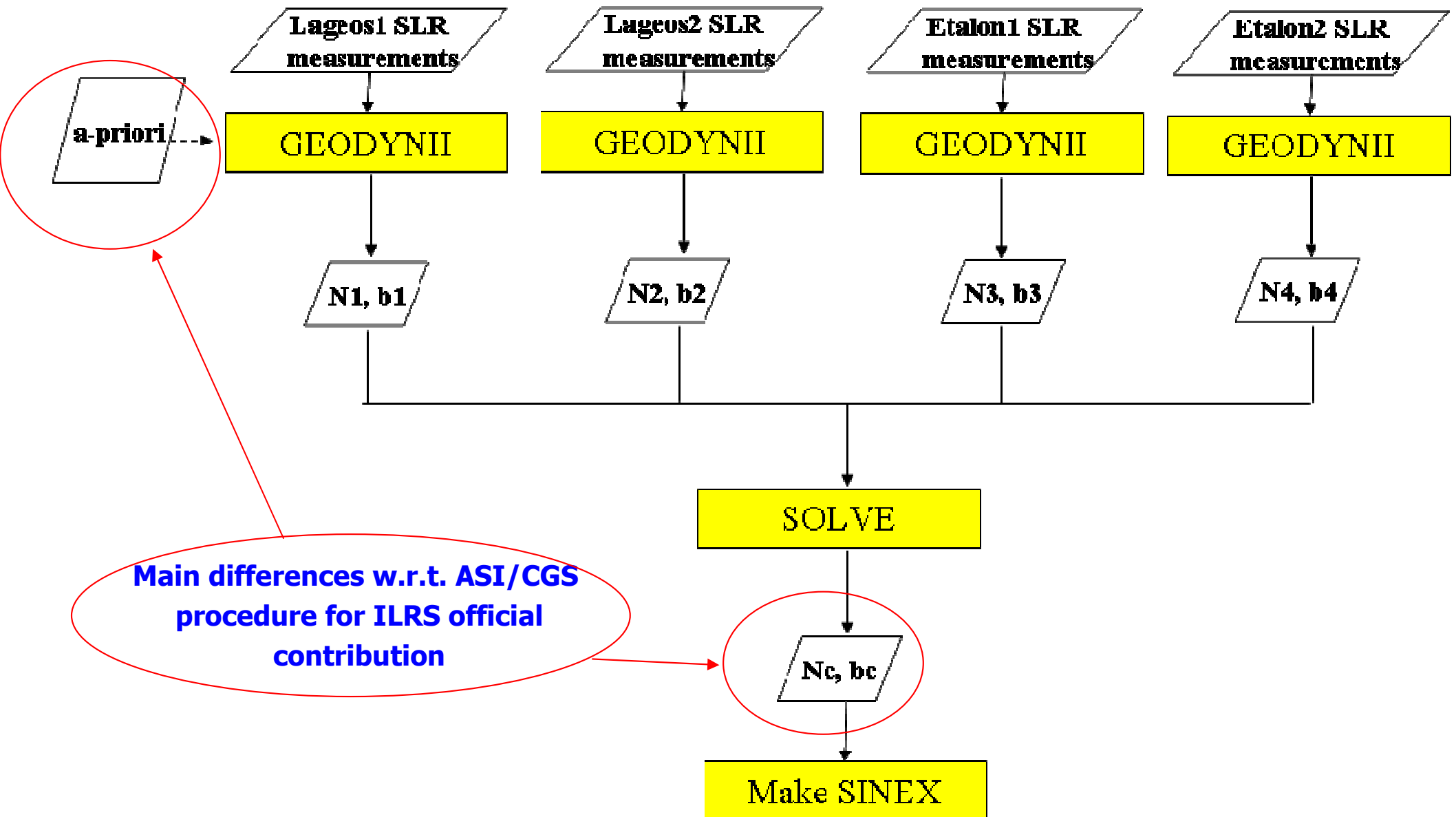
C. Sciarretta, V. Luceri
eGEOS S.p.A., CGS – Matera

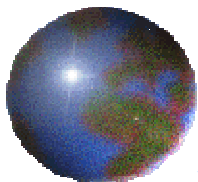


G. Bianco
Agenzia Spaziale Italiana, CGS - Matera



ASI/CGS SLR solution main processing steps





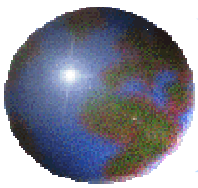
ASI/CGS SLR solution main features

Software	
Name and version	NASA GeodynII/Solve
Satellite	
satellites included in weekly SINEX	Lageos-1/2; Etalon-1/2
Arc cut	
Arc lengths	7 days
Handle of Data lacks	use stations with min. 10 obs (Lageos1/2)
Reference System	
Polar motion and UT1 a priori	IERS 08 C04
Polar motion and UT1 approach	x, y, ut1-utc, xrate, yrate, LOD (OD at 12:00)
Station coordinates and velocities	ITRF2008
Displacement of reference points	
Earth tides	Love model
Atmospheric loading	no
Ocean loading	Modeled from GOT4.7
Pole tides	IERS conventions (2003)

Gravity	
Gravity field (static)	COL standard: GSM-2_2008223-2008243_0021_GRGS_STAB_0003 (2008/08/16 – 2008/08/26) EIGEN-GRGS.RL02bisMF
Earth tides	Wahr model
Ocean tides	Ray GOT4.7
Surface forces and empiricals	
Empirical forces	Lageos: const/opr A, opr C Etalon: const/opr A
Measurements	
Troposphere correction	Mendes-Pavlis
Relativity	point mass acc., Lense-Thirring effects, Coriolis force
Elevation angle cutoff	20deg
vector from center of mass to center of phase	acc. ILRS table

To be updated

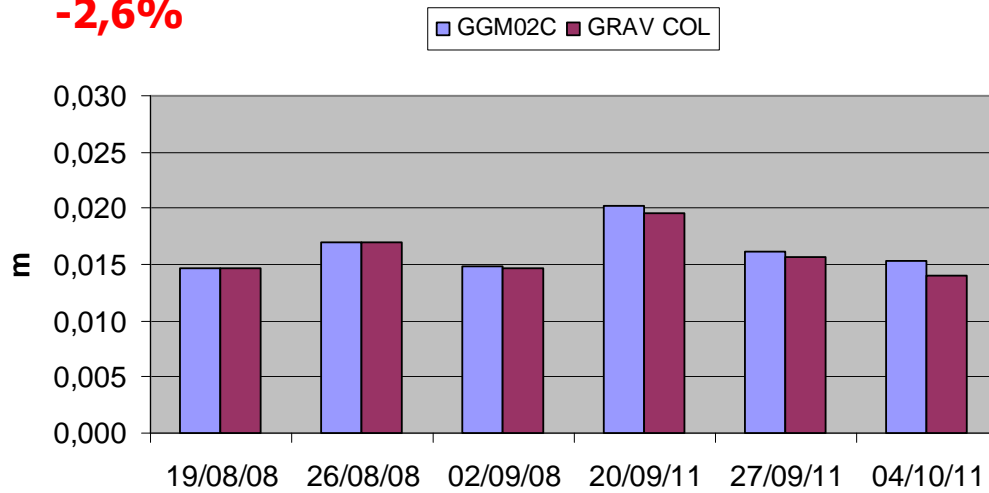
GGM02C used for ILRS official contribution



Arc reduction data residuals

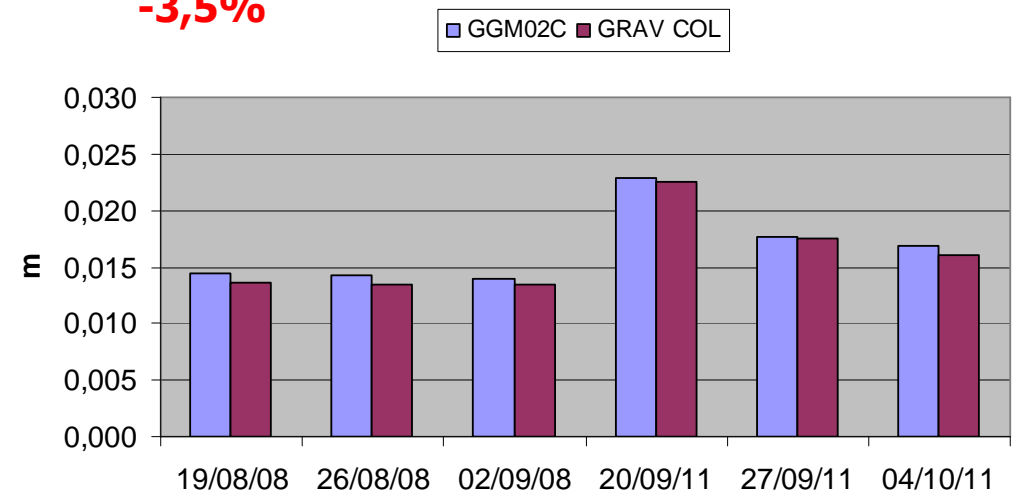
Lageos 1 - wrms(O-C)

-2,6%



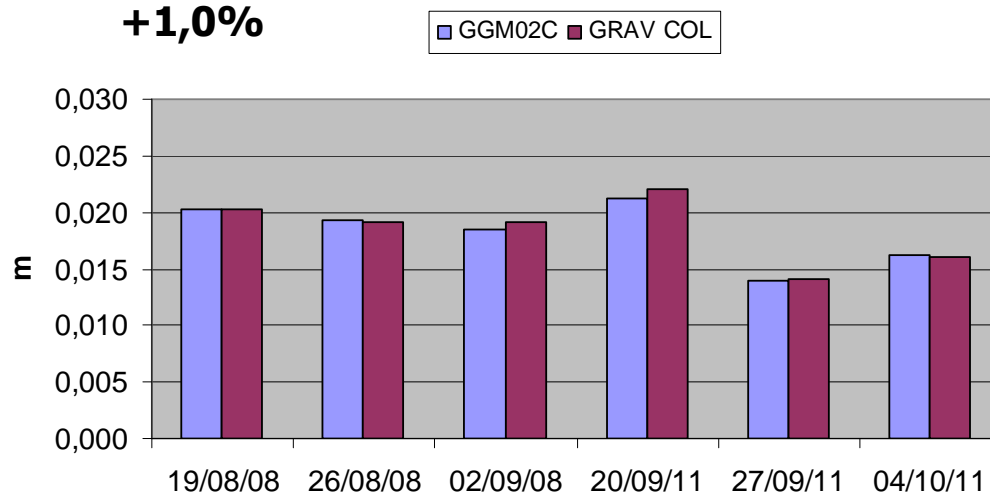
Lageos 2 - wrms(O-C)

-3,5%



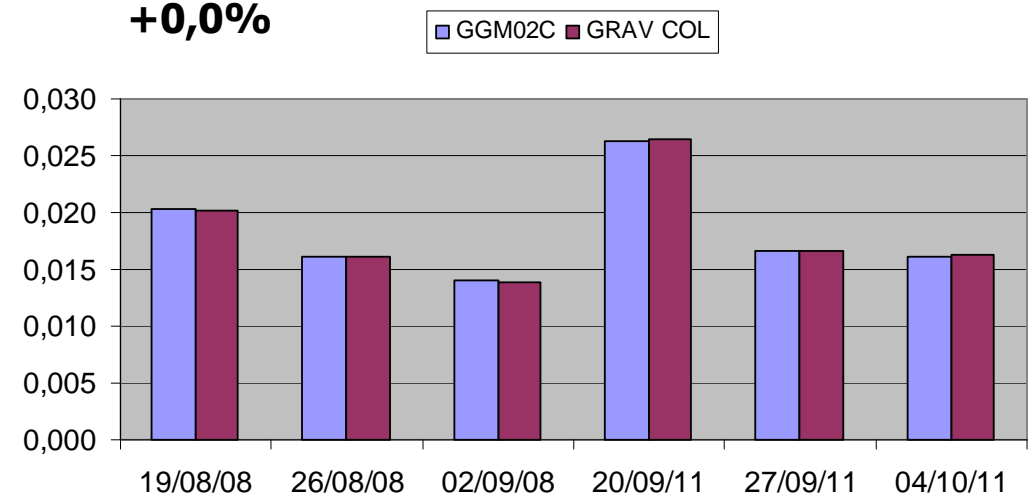
Etalon 1 - wrms(O-C)

+1,0%



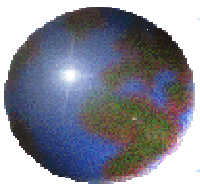
Etalon 2 - wrms(O-C)

+0,0%



• overall quality of the solution

• impact of the COL adopted gravity field



Next steps

- Updating of Ocean/Atmospheric Loading models
- Eventual further revision of analysis implementation after COL WGM
 - Etalon 1/2 ?
 - All and only sites from list?
 - Ocean Tide model?
- Completion of SINEX formalisation (Normal Equations)