

Updating the Conventions (2010)

- Update models as needed
 - Maintenance and update of various “utility routines” (e.g. GPT2)...
 - Diurnal and semidiurnal EOP variations (needed since some time)
 - Formation of a discussion group on the evolution of the conventional geopotential model, notably its time-varying part (low degree coefficients, seasonal variations).
 - Also considers conventional models for the geocenter motion in the ITRF and the IERS mean pole
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- Expand existing sections
 - Models for the displacement of reference points of instruments (from Technique centers)
 - E.g. gravitational sag; thermal expansion of monuments / bedrock; SLR biases; etc...
 - Section on « ranging techniques »
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- New topics, following the evolution in the geodetic community
 - Non-tidal loading
 - SINEX format for modelling
 - Parametrization of ITRF coordinates
 - ...



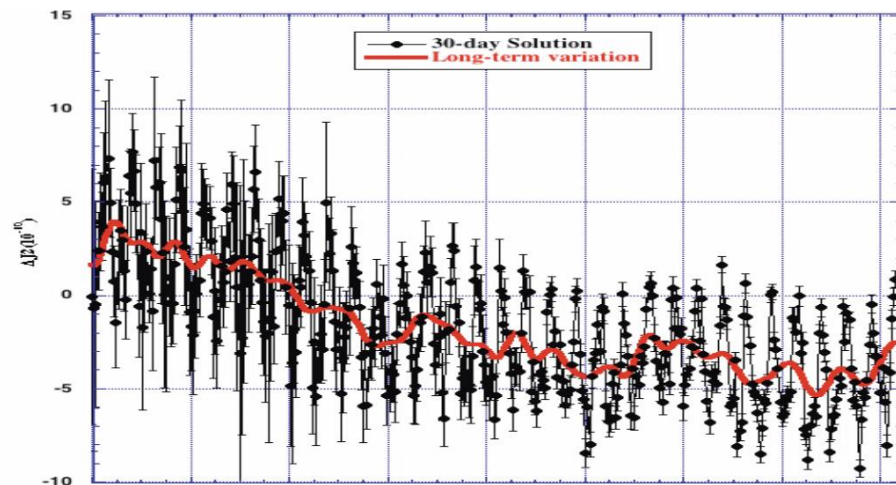
Low degree geopotential model

- Conventions (2010)

Table 6.2: Low-degree coefficients of the conventional geopotential model

Coefficient	Value at 2000.0	Reference	Rate / yr^{-1}	Reference
$\bar{C}_{20}$ (zero-tide)	$-0.48416948 \times 10^{-3}$	Cheng <i>et al.</i> , 2010	11.6×10^{-12}	Nerem <i>et al.</i> , 1993
C_{30}	0.9571612×10^{-6}	EGM2008	4.9×10^{-12}	Cheng <i>et al.</i> , 1997
C_{40}	0.5399659×10^{-6}	EGM2008	4.7×10^{-12}	Cheng <i>et al.</i> , 1997

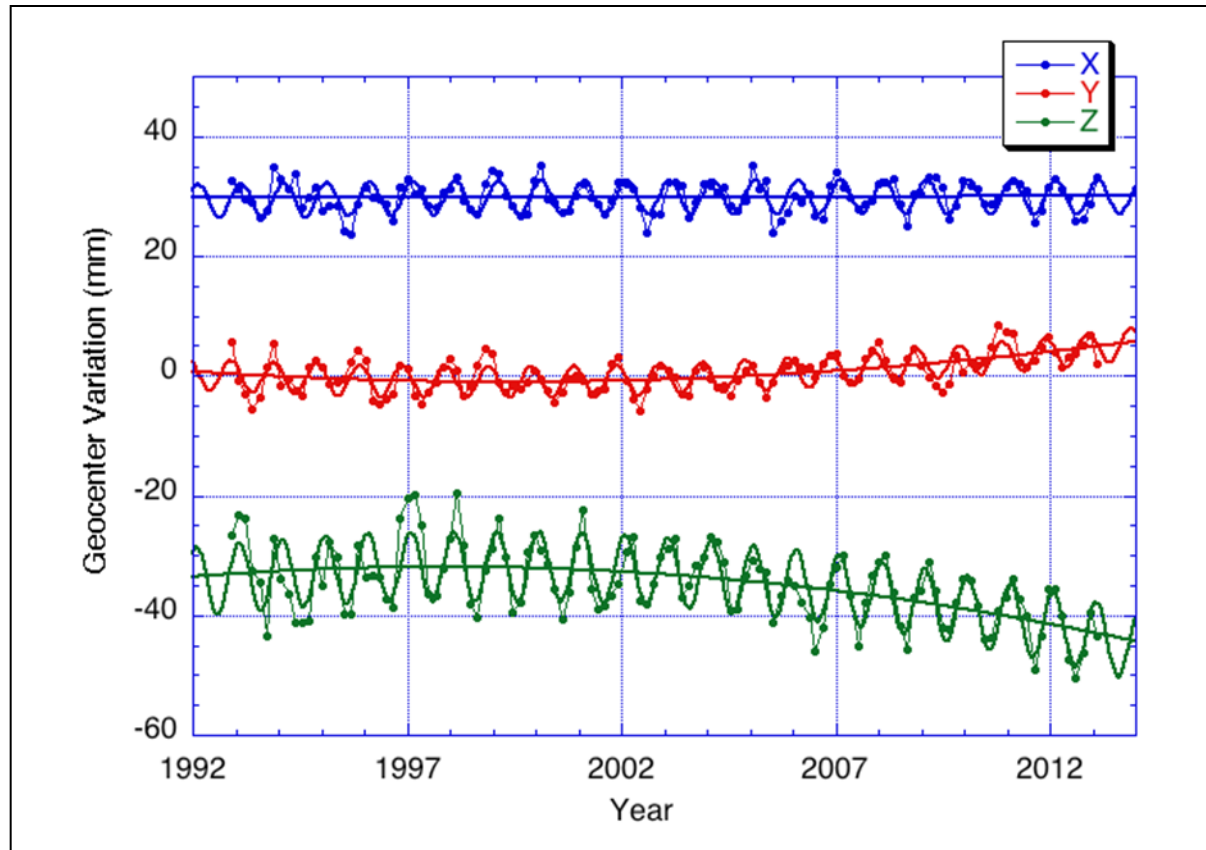
- C20 linear variation known to be inadequate (Cheng et al. papers)



- Variations in other low degree (C22, S22) also significant

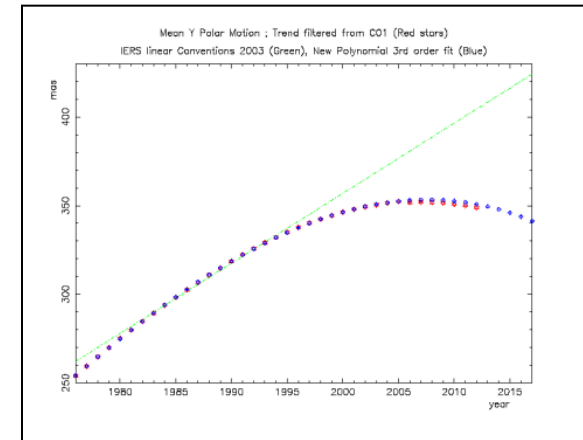
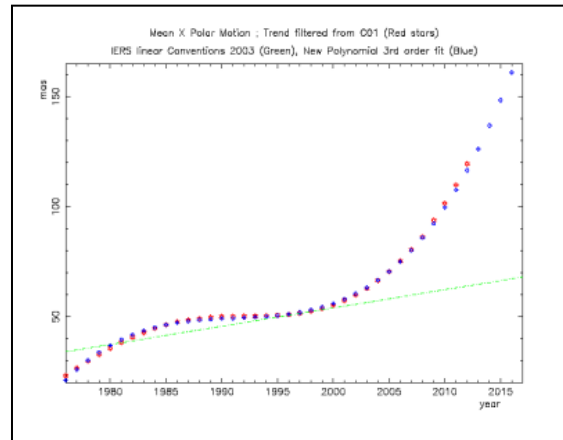
Geocenter motion

- See presentation by Tonie and material by John Ries



Conventional mean pole model

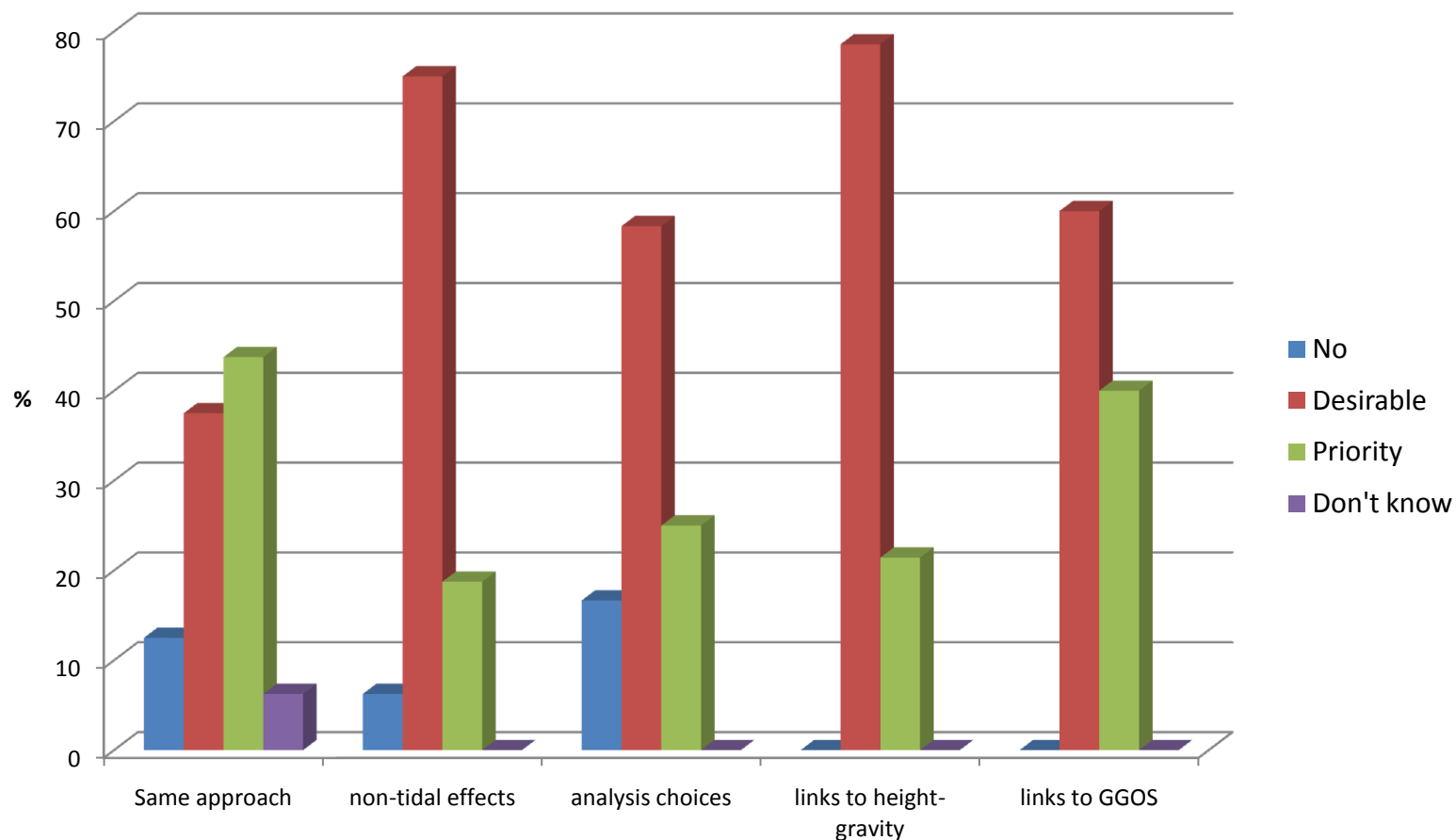
- IERS (2010) mean pole model
 - A degree 3 polynomial valid until 2010.0 and a linear extrapolation ensuring continuity and derivability at 2010.0
 - To be updated as required
- Still OK in 2012 (From D. Gambis and J. Ries)



- Match of the conventional mean pole with the C21/S21 estimates to be checked
 - last report by John Ries, 2010: S21 about OK, C21 not so much
 - Recent surface mass trends not captured by model?



Survey 2011: Future evolution



- Not clear how to interpret

Survey 2011: Procedures for future Conventions

- Procedure to gather info, evaluate proposals, validate changes
 - Similar structure: 63%
 - Smaller structure + workshop : 37%
- How to publish?
 - Similar form (infrequent reference edition + web) : 87%
 - Continuous, web only: 13%
 - Suggested periodicity of reference edition ranges from 6 months to 10 years!
 - A vast majority is for a (paper) book.

