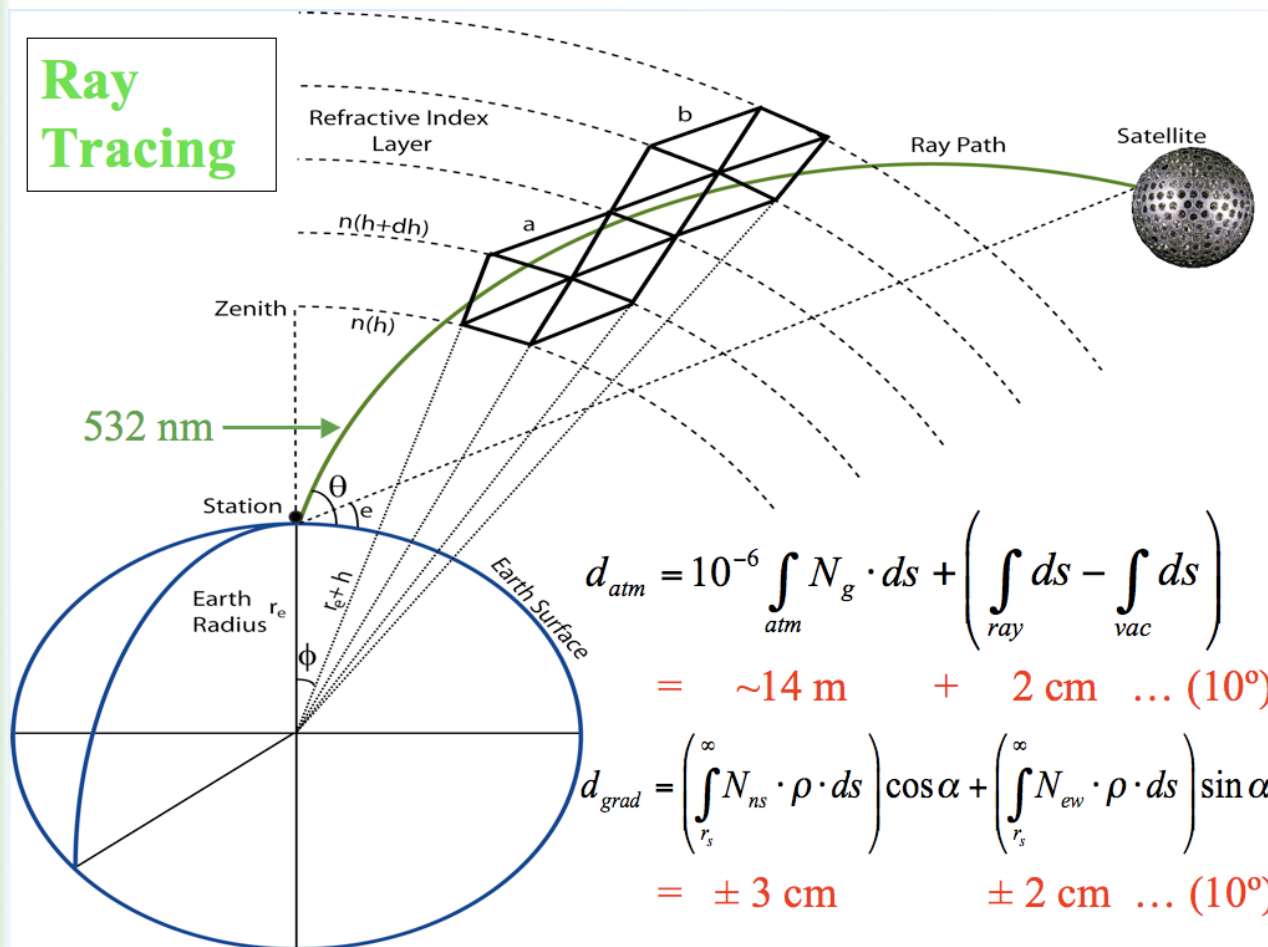


- Adopt new “Target Signature Model” to be used for the reanalysis
- Certify AC compliance with the IERS 2010 Conventions & Standards
- Harmonize the modeling standards across AWG Analysis Centers
- Improve TVG modeling based on the new GRACE RL05 products
- Adopt NT AL+AG model to be used for internal series (NOT ITRF2013)
- Reanalyze 1983 to present, starting about mid-summer 2013 (test submission by end of 2013)
- **Future additions: Extension of loading modeling beyond NT AL+AG, to include hydrology (need global grids)**
- **Upon availability of meteorological global grids, implement horizontal atmospheric gradient modeling**

3D Atmospheric Ray Tracing (ART)



Hulley, G. C. and E. C. Pavlis, (2007), A ray-tracing technique for improving Satellite Laser Ranging atmospheric delay corrections, including the effects of horizontal refractivity gradients, *J. Geophys. Res.*, 112, B06417, doi: 10.1029/2006JB004834, 2007.

Pavlis, E. C., V. Mendes and G. Hulley, (2008), Tropospheric Model: Optical Techniques, in *IERS Conventions 2010*, G. Petit and B. Luzum eds., IERS Technical 32, online version: <http://tai.bipm.org/iers/convupdt/chapter9/icc9.pdf>, Paris, France.

Based on the analysis of 2 years of LAGEOS 1 & 2 SLR data

Method	$\Delta\text{Bias (mm)}$	$\Delta\sigma^2 (\%)$
<u>AIRS</u>		
RT _{grad}	0.3 ± 0.3	14.0
RT _{3D}	0.9 ± 1.1	24.8
<u>ECMWF</u>		
RT _{grad}	0.1 ± 0.5	10.8
RT _{3D}	0.6 ± 1.2	22.5

