

Recent NPL activities of interest to CEOS WGCV 31

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Summary

- Development of EO specific transfer standards and techniques (new direction toward OC)
- “ of “best practise guidance
- Support for sensor calibration,
 - EarthCare, SLSTR, GERB
- Consultancy based advice
- IVOS
- Comparisons
- QA4EO!!!!

WMO Community defined standard for solar irradiance “World Radiometric Reference”(WRR)

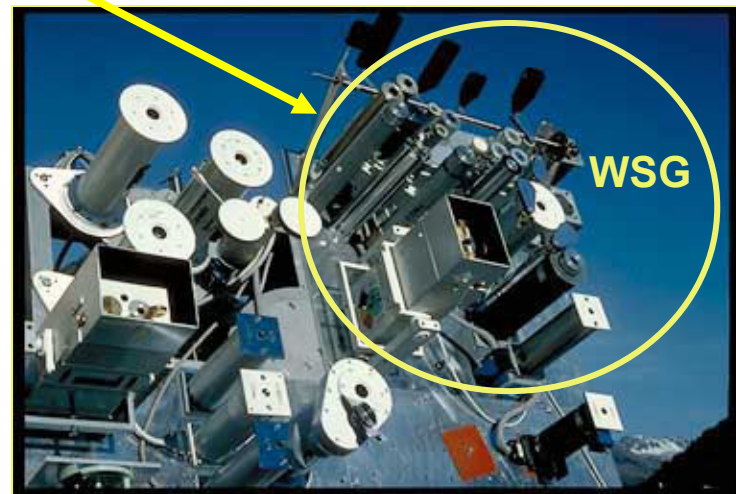
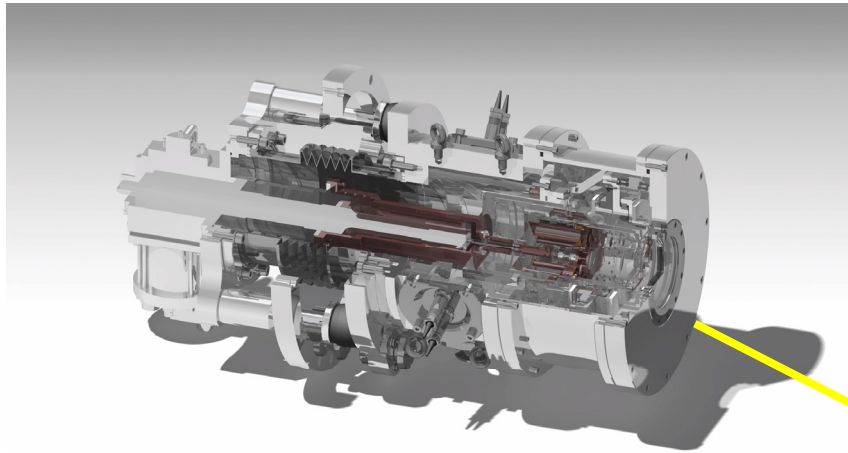
WMO define criteria for a primary lab:
- **World Radiation Centre**

Define World Radiometric Reference (WRR)
and how to use it.

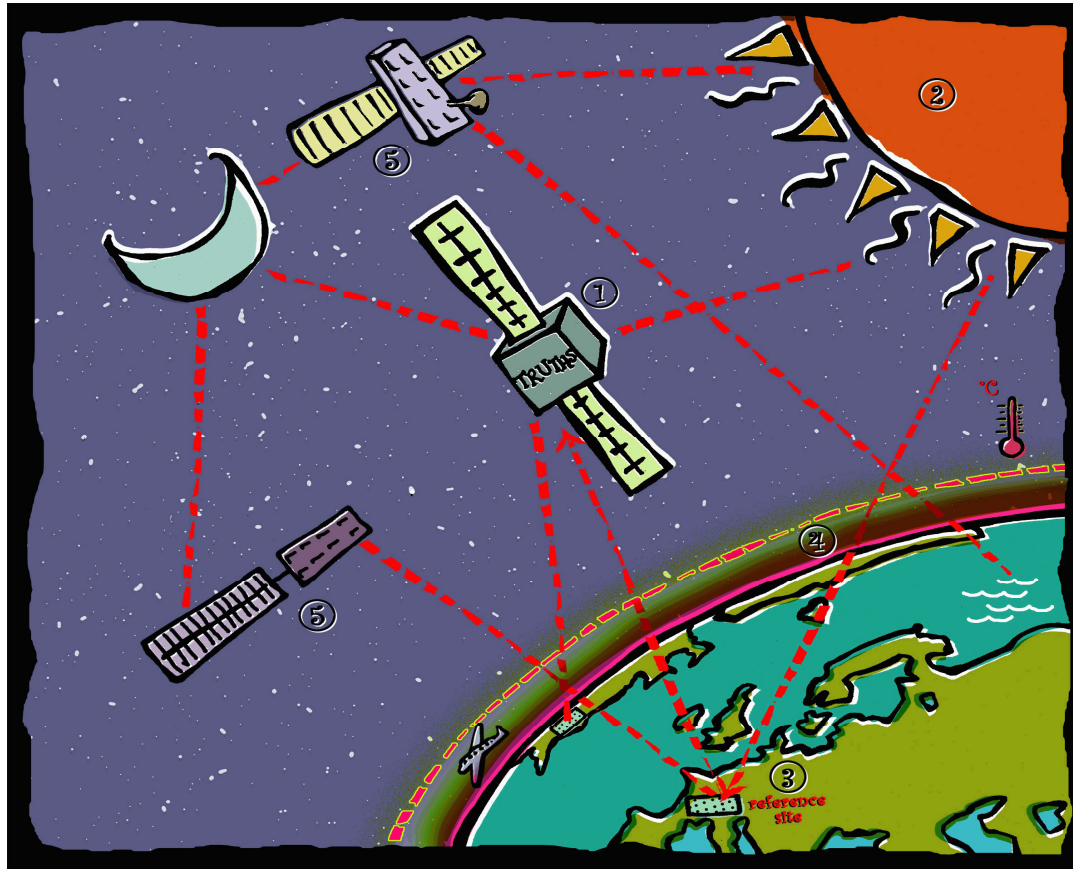
- **Mean of World Standard Group (WSG)**

Link all other WMO institutes (solar
radiometers)

Cryogenic Solar Absolute Radiometer (CSAR) (NPL/PMOD/Metas) to it by 5 yrly comparisons (calibrations)



TRUTHS: Traceable Radiometry Underpinning Terrestrial- and Helio- Studies: (to be resubmitted to ESA)



Satellite based mission to:

- make SI traceable high accuracy measurements of solar radiation incident on, and reflected from, the Earth
- transfer its unprecedented calibration accuracy to other satellite-based EO instruments through the calibration of reference targets such as the Sun, Moon and the Earth's deserts
- Supporting measurements of land processes, ocean colour, Earth radiation budget, atmospheric chemistry and aerosol distribution

- Wide spectrum (380 to 2500 nm)
 - Spatial resolution ~ 25 m (multi-angle)
 - Spectral radiance uncertainty <0.5% (using novel in-flight calibration system)
- baseline

New activities

- Studentship with J-P Mueller (MSSL) to look at BRDF forest albedo also processing Dome-C data sets.
- UK QA4EO workshop
- EU major opportunity
 - Funding for NMIs in Europe only (50%) proj size of \$7M 3yrs
 - some grants for academics
 - Project likely to be on EO satellite traceability
 - European virtual centre (NPL, PTB, PMOD, JRC +)
 - include pre-flight, post-launch
 - Land, Ocean, atmosphere
 - (all sensor domains in principle)
 - Ideas from community as to priorities (Mar 28)
 - <http://www.emrponline.eu>