

IROWG and key issues related to CGMS

Presented to CGMS-45, Plenary

Co-Chairs: Ulrich Foelsche (University of Graz),
Sean Healy (ECMWF)

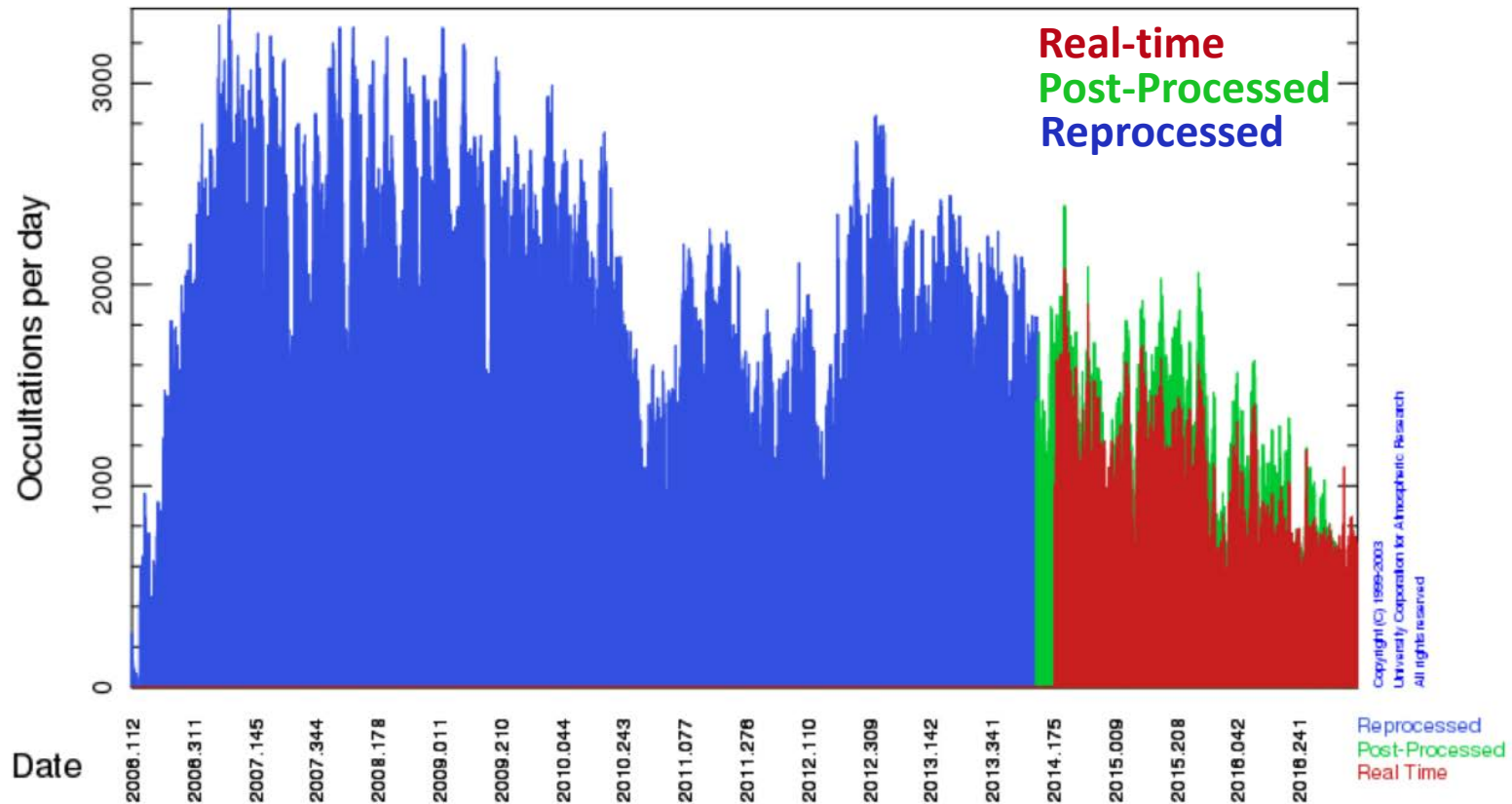
Rapporteur: Tony Mannucci (NASA/JPL)

**Coordination Group for
Meteorological Satellites**



Processed data for cosmic: 2006.111-2017.064

Total atmospheric occultations: 6,629,368



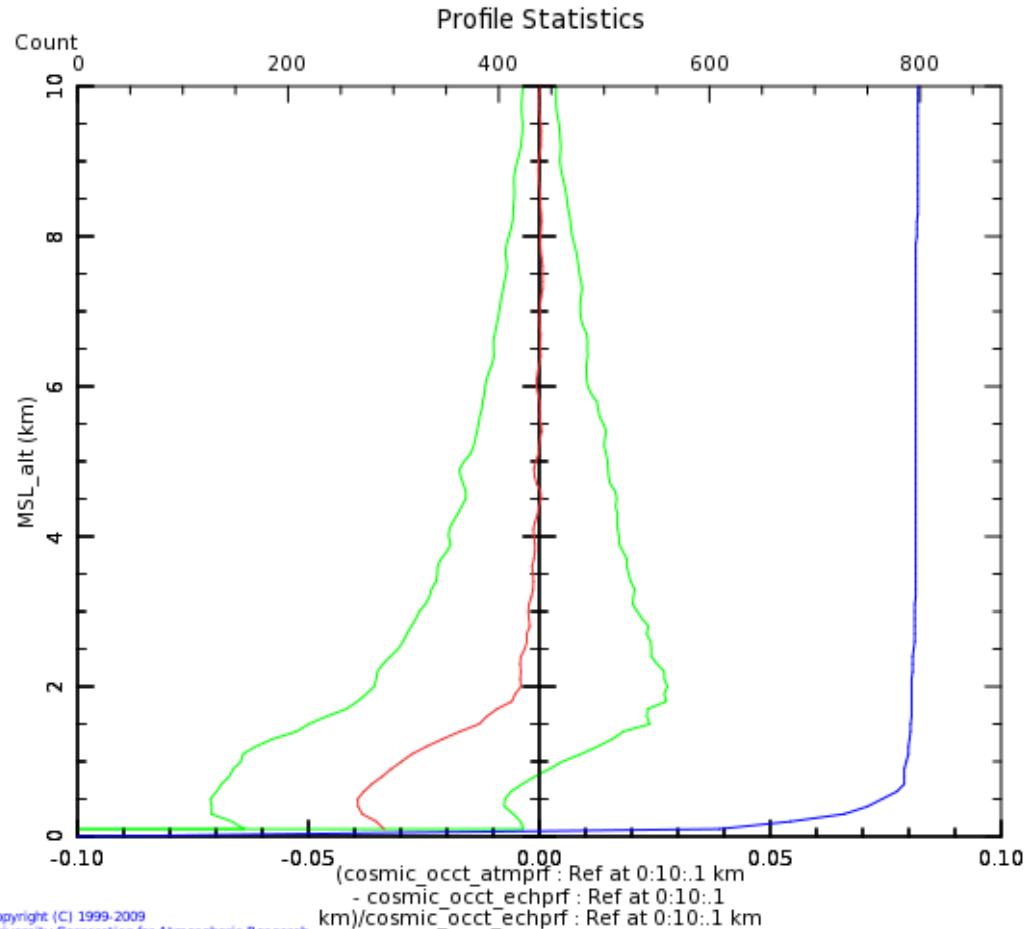
The number of COSMIC profiles is now strongly decreasing

Quality of COSMIC-1

COSMIC has delivered high quality RO observations for operational applications for over 10 years.

One important aspect is the coverage of the lower troposphere.

> 90 % of profiles penetrate to within 1 km of surface



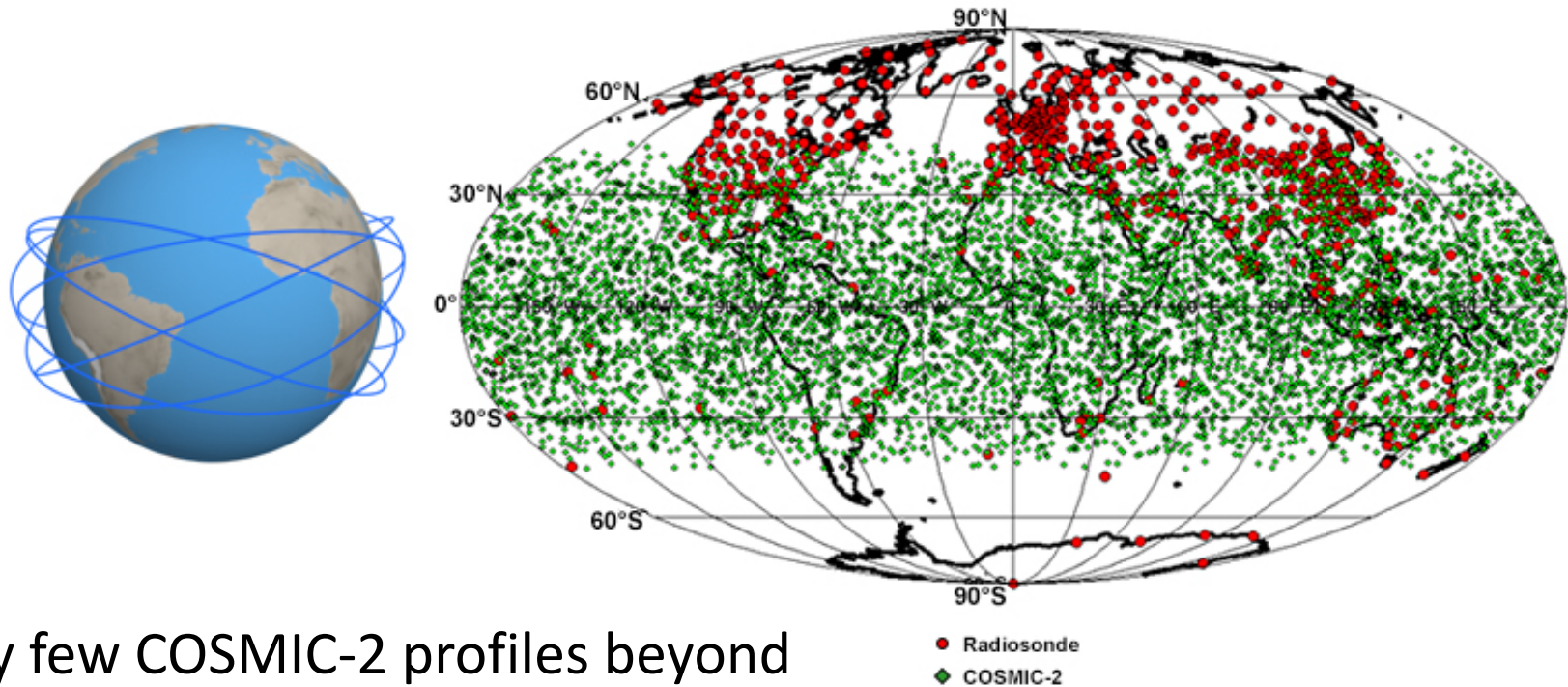
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Tropical COSMIC profiles over the Pacific, Jan 2017, retrieved at UCAR/CDAAC



COSMIC-2 equatorial launch: Dec 2017

24-hour occultation locations for COSMIC-2 equatorial constellation

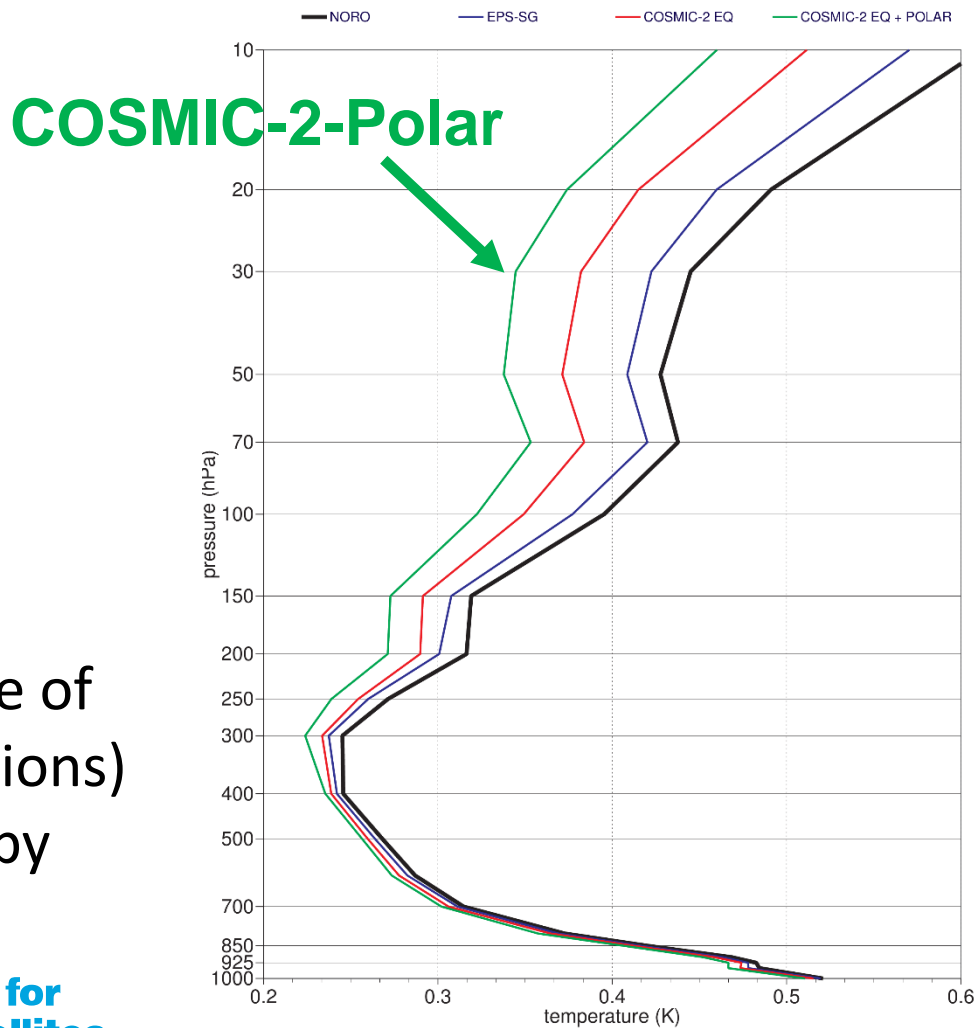


Very few COSMIC-2 profiles beyond 40° latitude (though RO profiles are expected from MetOp and FengYun)

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COSMIC-2 Polar + (EPS-SG + COS2-EQ, NH extra-tropics) – TEMPERATURE

Northern Hemisphere extra-tropics (N20-N90)



COSMIC-2-Polar

Importance of COSMIC-2 polar measurements – or data with the same high quality.

EDA (Ensemble of Data Assimilations) study funded by EUMETSAT.

IROWG – Key Points

- Our main aim is to *ensure measurement continuity and maximise the number of high quality RO observations that can be freely exchanged*.
- COSMIC-2 Polar, or a mission with the same high quality is needed to maintain the impact of RO.
- IROWG strongly supports the aims of the NOAA Commercial data pilot study: It is crucial to determine the *actual capabilities* of the various options.
- IROWG recommends that CGMS should encourage GNSS providers and agencies to make ICDs (Interface Control Documents) of GLONASS and Beidou Open Service signals available as soon as possible