

# SIMULATION OF GOME-2 OBSERVATIONS OVER LIBYA-4 WITH 3 DIFFERENT RTMs

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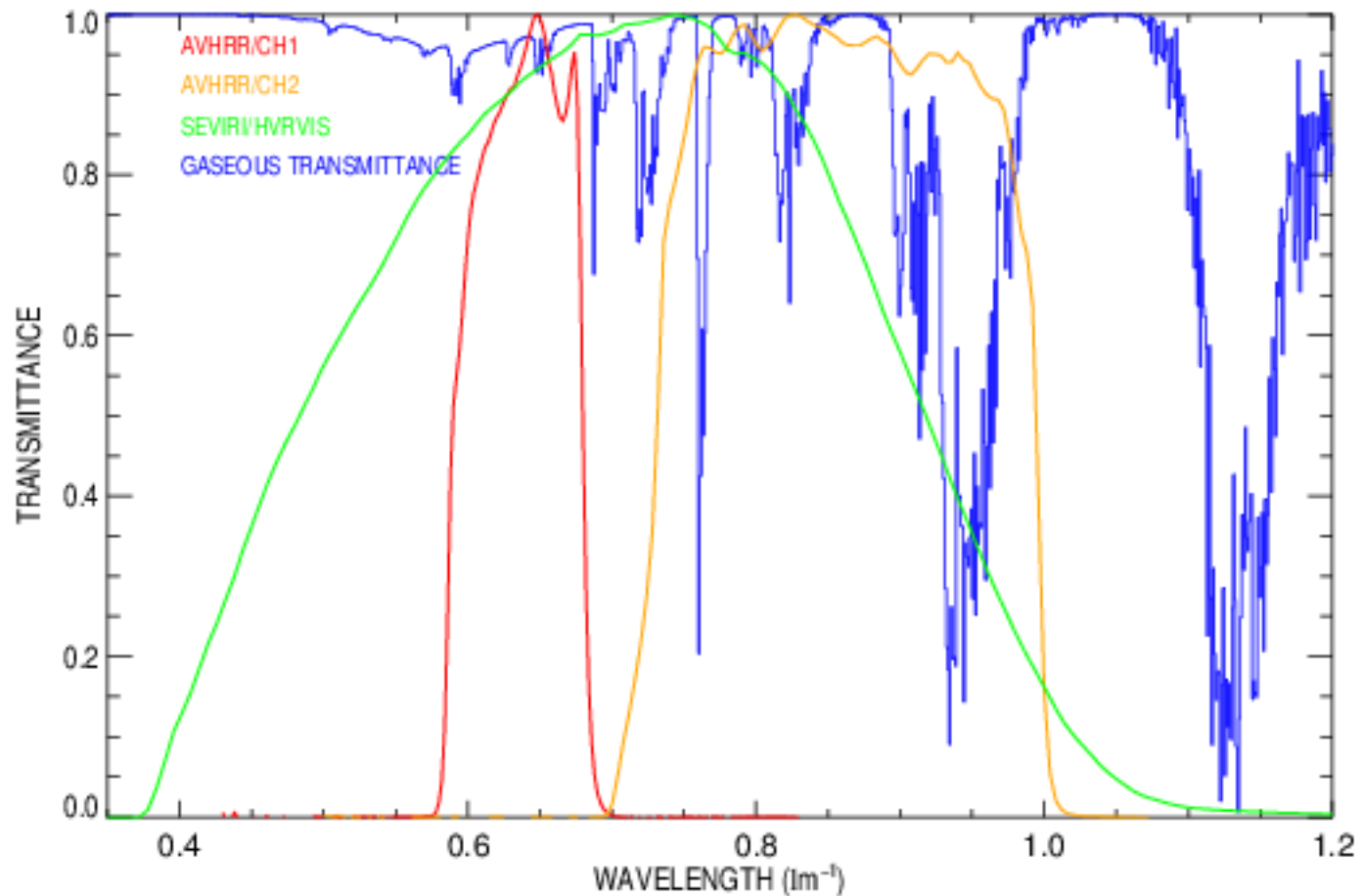
Rayference

GSICS Hyperspectral\_Vis inter-calibration workshop

16 December 2014

# OVERVIEW

- The activity has been performed in the context of the **QA4ECV** FP7 EU project whose central interest is quality-assured satellite data for ECV generation ([www.qa4ecv.eu](http://www.qa4ecv.eu));
- Generation of 3 land and 3 atmosphere ECV as demonstration;
- For the land ECVs, Meteosat VIS band and AVHRR channel-1 & -2 are used to cover the '80s and '90s;
- Libya-4 is used to verify their calibration consistency.



## Gaseous Transmittance

Meteosat VIS : 0.92

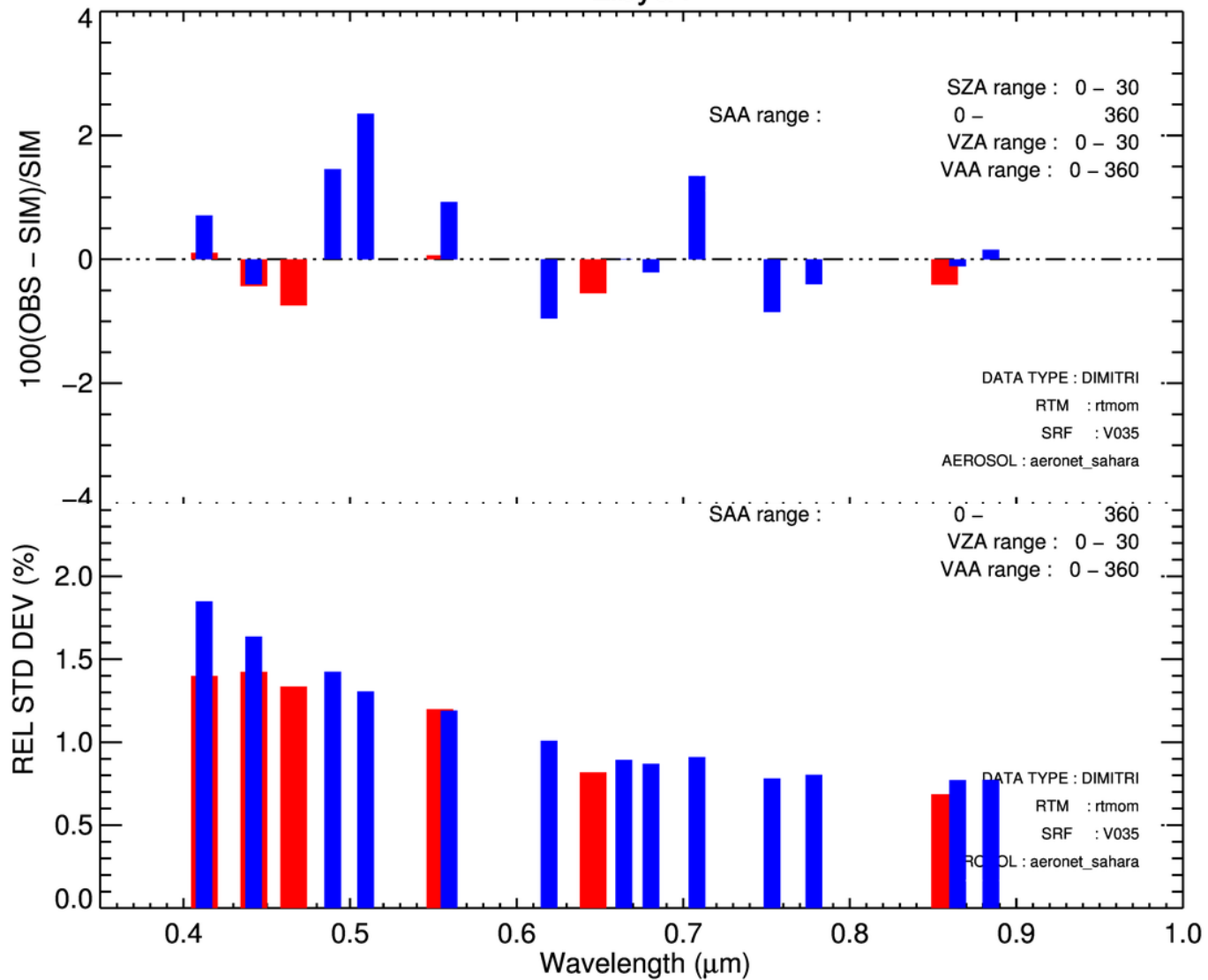
AVHRR Ch 1 : 0.96

AVHRR Ch 2 : 0.82

# Libya-4

- Comparison of 3 RTMs in the VIS spectral range over Libya-4 wrt MODIS, MERIS, GOME-2 data;
- **6SV**: RTE -> Successive Order of scattering. Widely used in the “land” community for atmospheric correction (HITRAN96)
- **RTMOM**: RTE -> MOM (HITRAN96)
- **LibRadTranV2beta**: RTE -> MC (REPTRAN, HITRAN 2004)

# Libya4

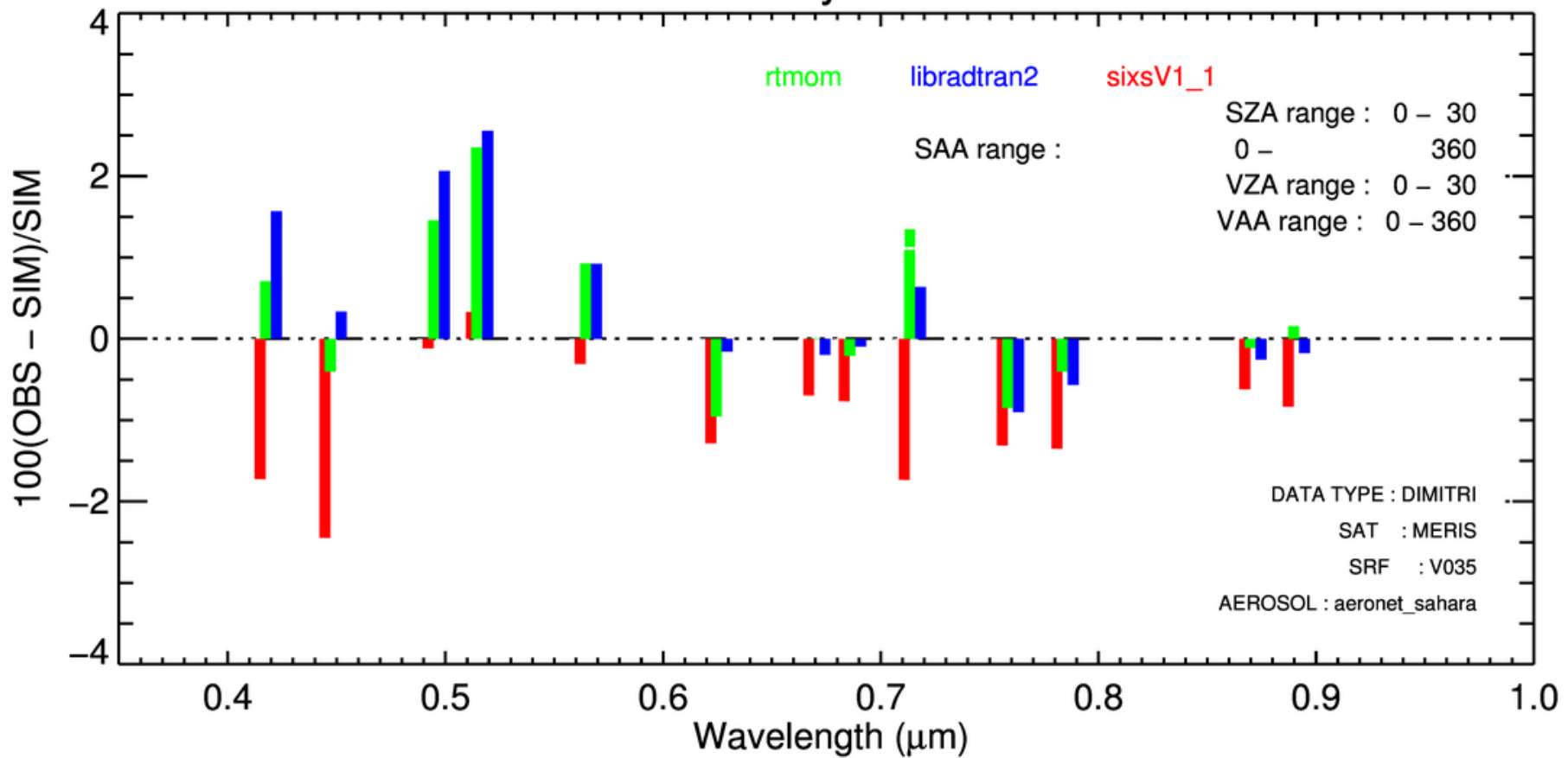


Comparison between RTM simulations and observations over Libya-4

RED: ~600 MODIS observations

BLUE : ~350 MERIS observations

# Libya4



Simulation of 350 MERIS DATA with **RTMOM**, **SIXSV** and **LibRadTranV2**

# GOME-2 DATA

- Provided by EUMETSAT
- Extraction of one “pixel” centered over Libya-4
- SZA and VZA restricted to 0-30 degrees
- ~70 observations, band-3 and -4

