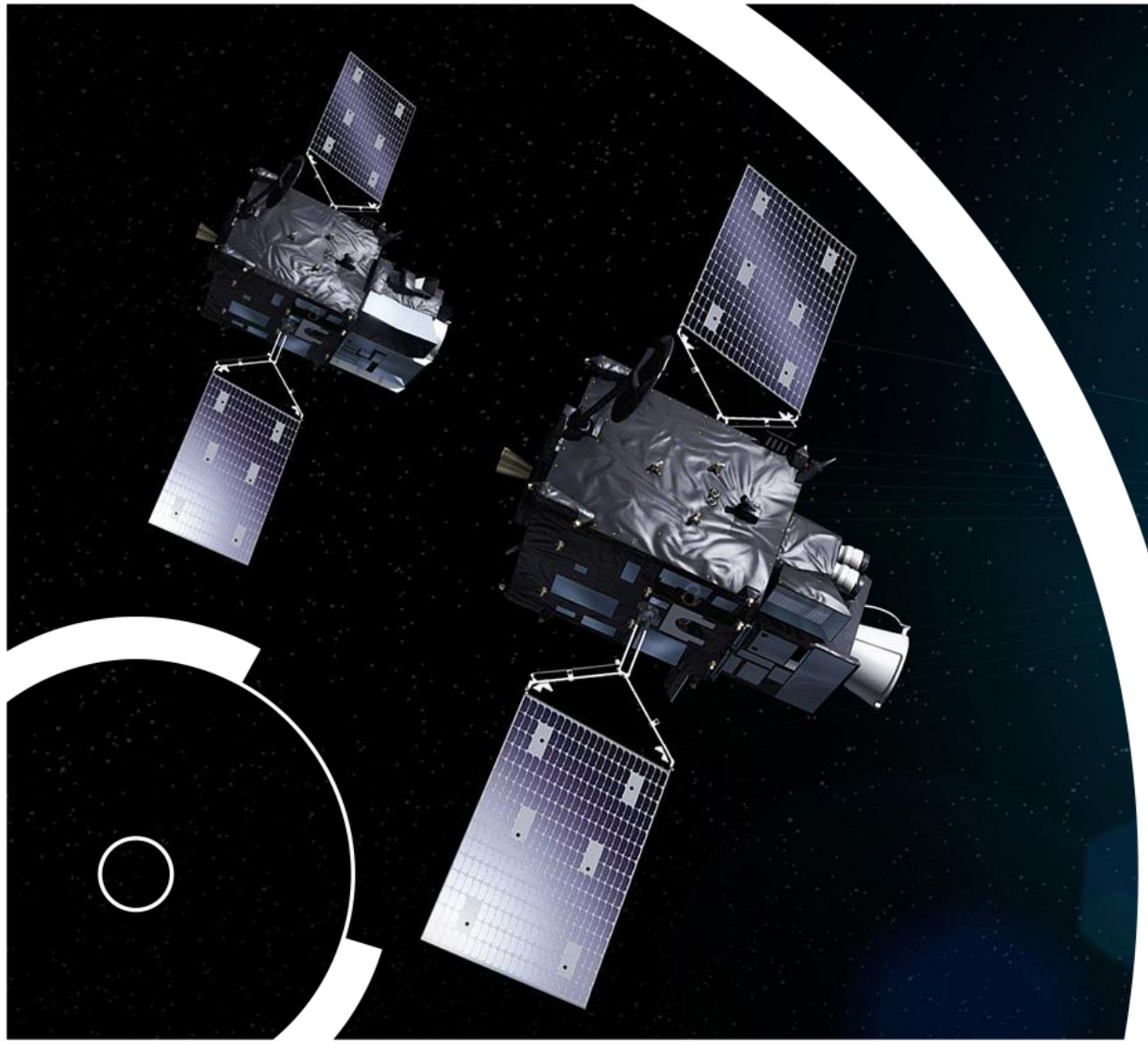
EUMETSAT



The spectrally representative FCI L1c 24h Test Dataset

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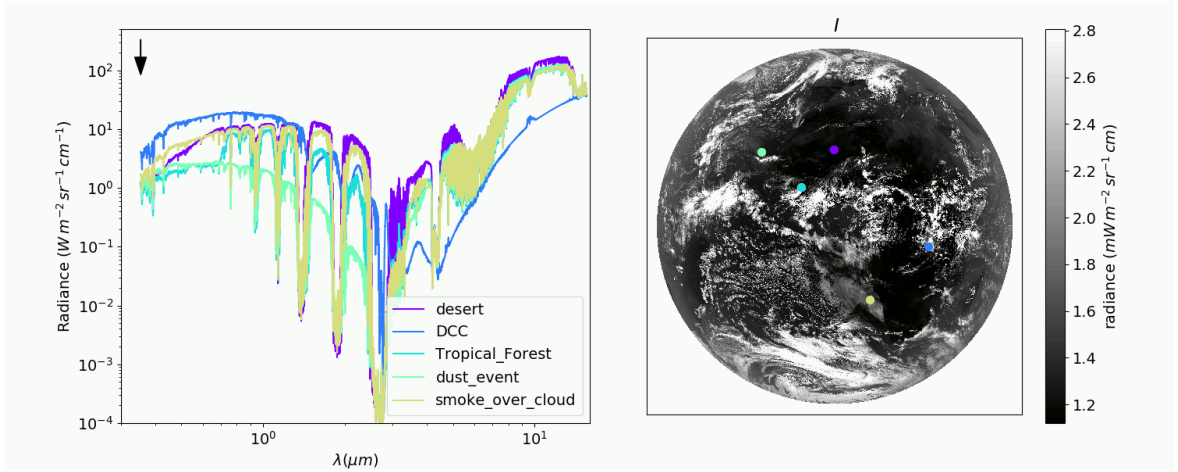
FCI MAG Meeting June 2022

Generation of input data

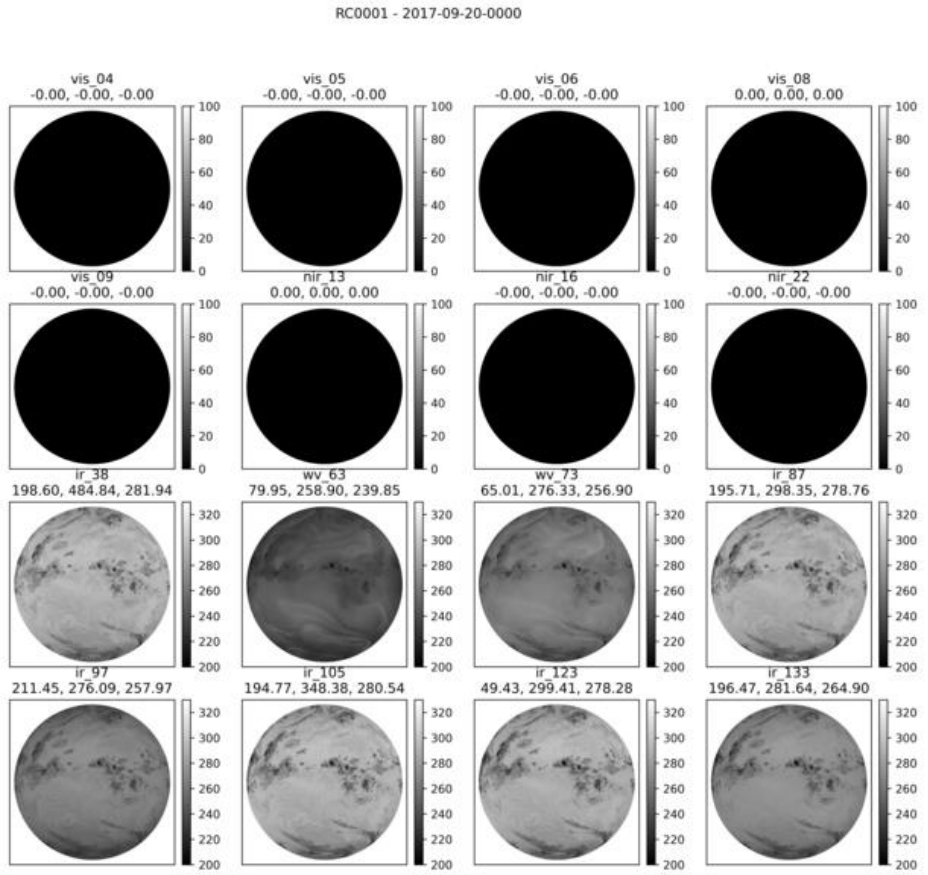
- Output of optional phase of „datacube“ study already presented at MAG Meeting 2021
  - www.eumetsat.int/HSR-Geo-simulations
  - Spectral coverage: [0.354,15.503] µm.
  - Simulation: SW-NIR: ARTDECO, IR: RTTOV
  - Spectral resolution: 0.5-1.0-2.0 nm in SW-NIR, IASI in IR
  - Freely available for research purposes on the European Weather Cloud (www.europeanweather.cloud), ~2Tb of data



- Same framework used to compute 24h of data (15 min repeat cycle), in the wavelength ranges covered by FCI, SEVIRI and MetImage
- Latest instrument SRFs used to extract final channel arrays

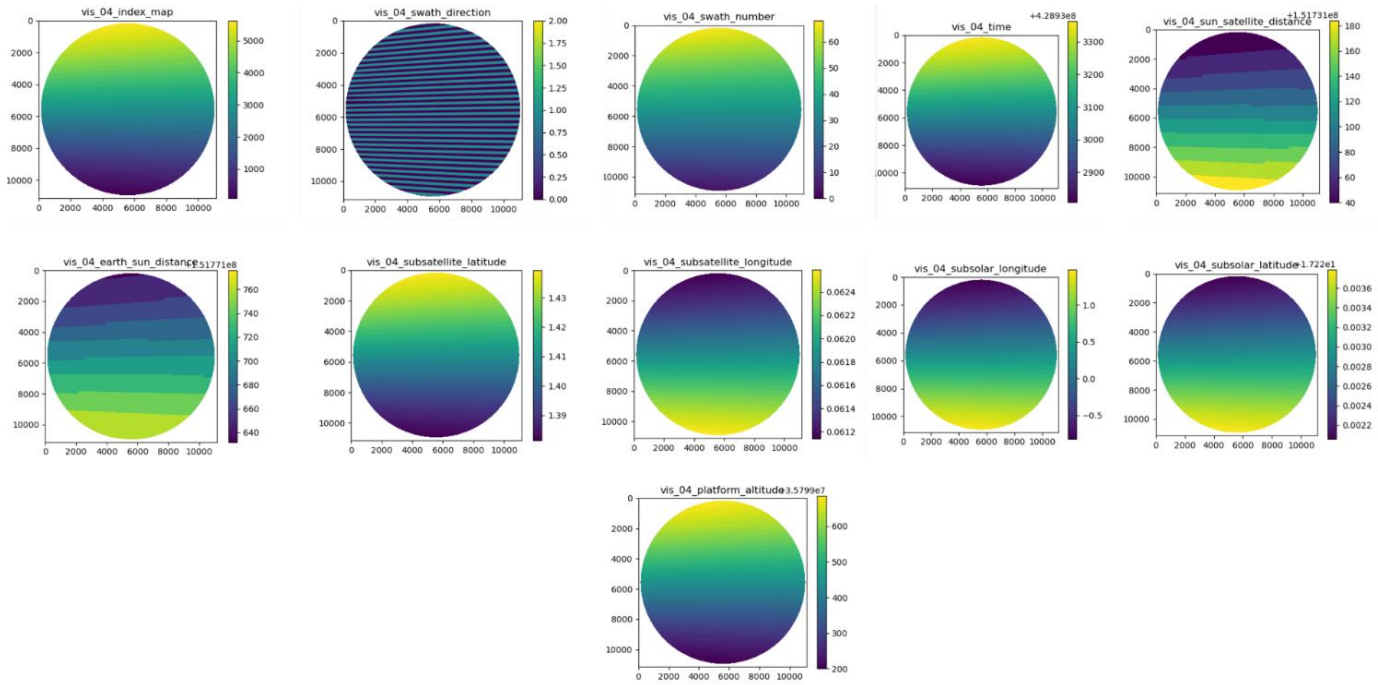
Formatting to FCI L1c

- The input data for the FCI channels has been formatted to the L1c format
  - Version v4c, expected to be (very close to) the final dissemination format
  - Nearest-neighbour upsampling to
    - FDHSI grids: 1km (VISNIR), 2km (IR) SSP resolution
    - 10-min repeat cycles (144 in total)
  - A compressed version has been generated using the CharLS algorithm (as for the data disseminated through EumetCast)



Formatting to FCI L1c

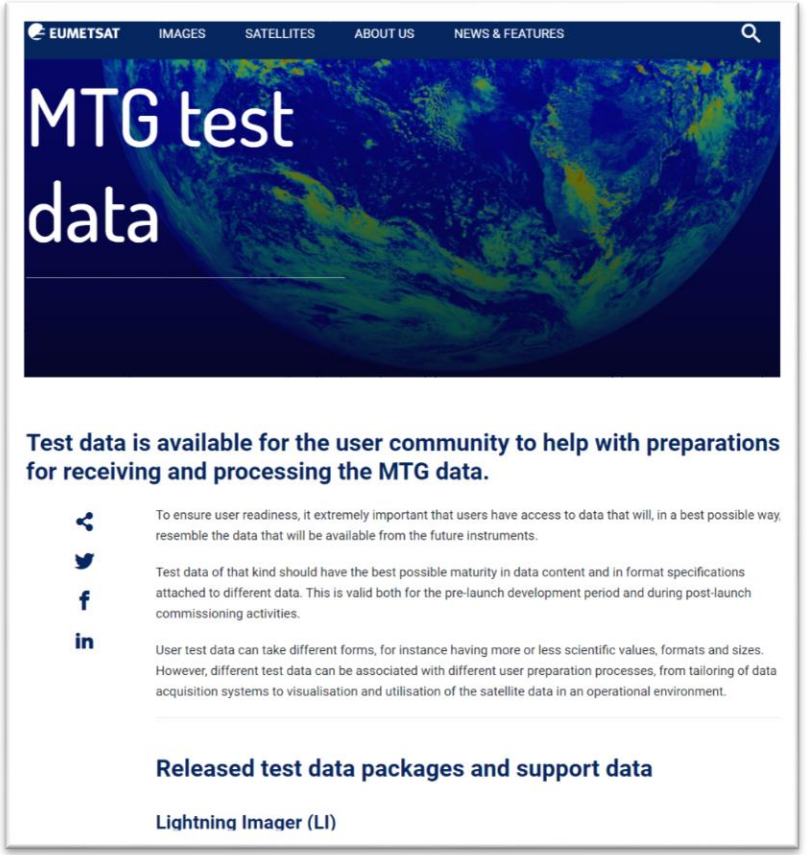
- Further main features:
  - Simulation of the acquisition geometry including the population of the 2-d index map and related geometric parameters
  - Simulation of the pixel quality arrays
  - Simulated hotspots that populate the 3.8µm channel extended fire range
  - Radiometric coefficients computed using the latest FCI SRFs (recently released)



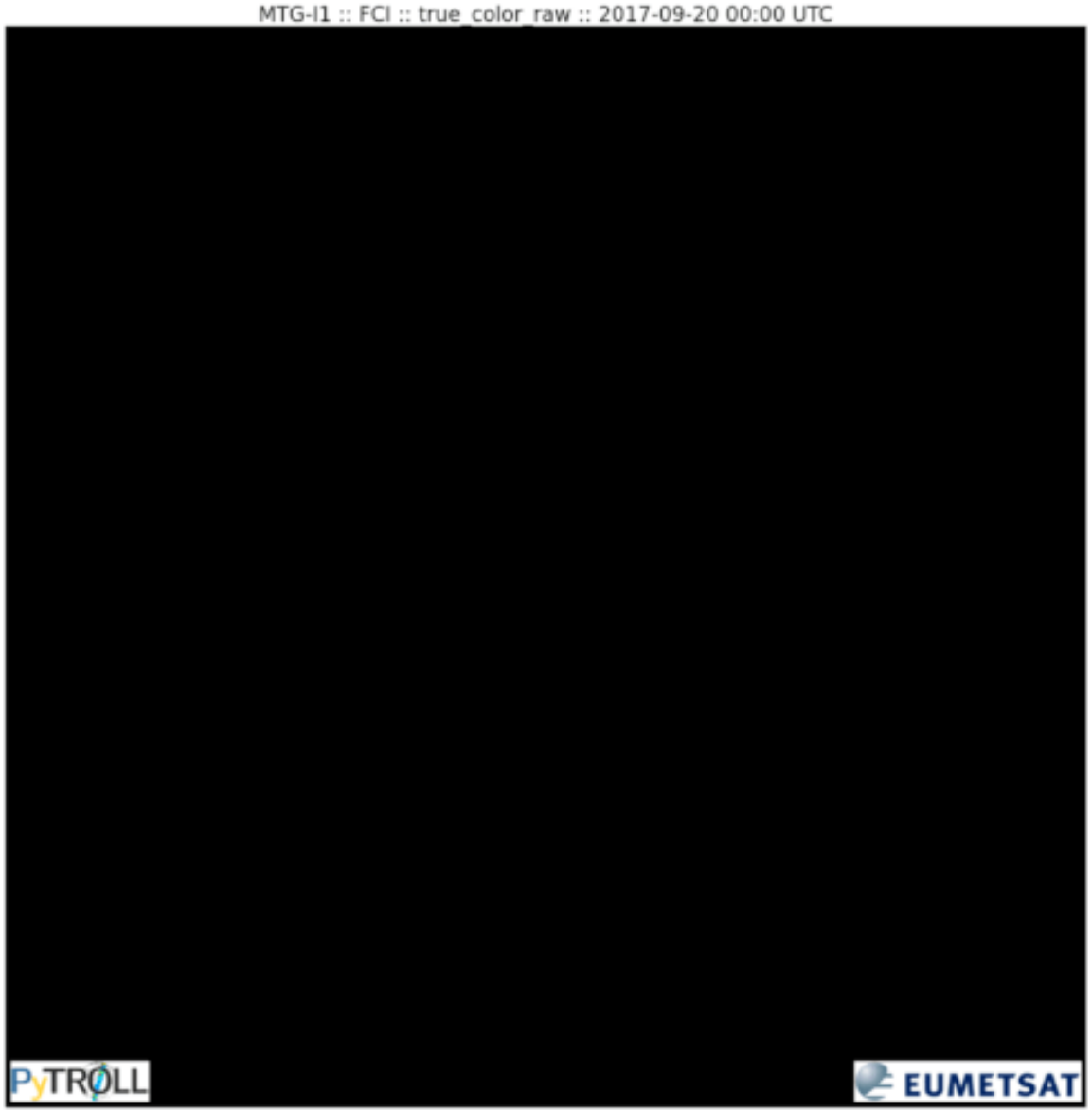
Release

- The dataset has been publicly released in May 2022 (MTG-TD360)
- https://www.eumetsat.int/mtg-test-data
  - With links to FCI L1 Product User Guide (FCIL1PUG)
  - Link to Test Data Package Descriptions and SFTP download addresses
  - Link to decompression software package

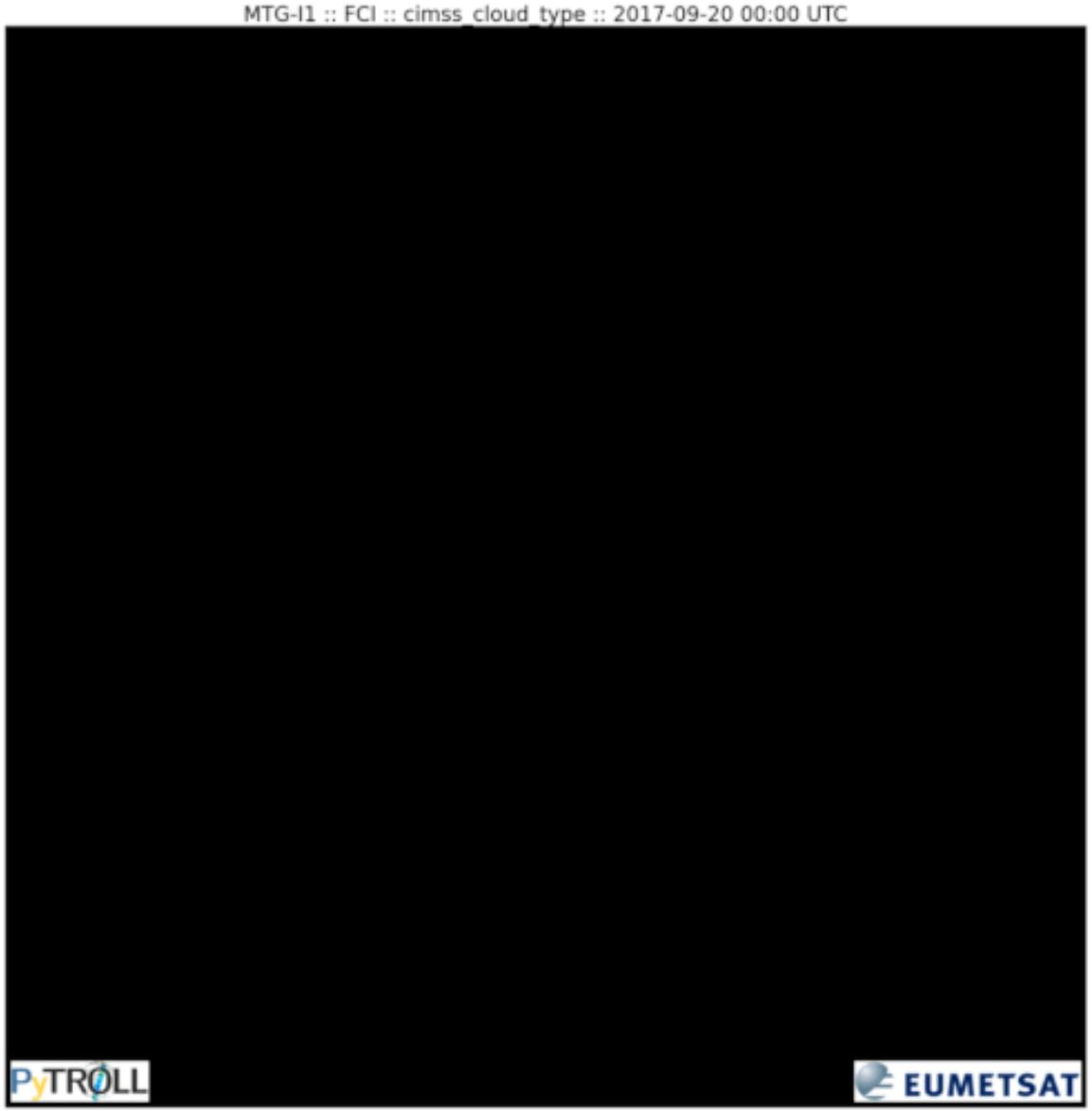
- Full description of dataset properties and limitations in the Package Description Document



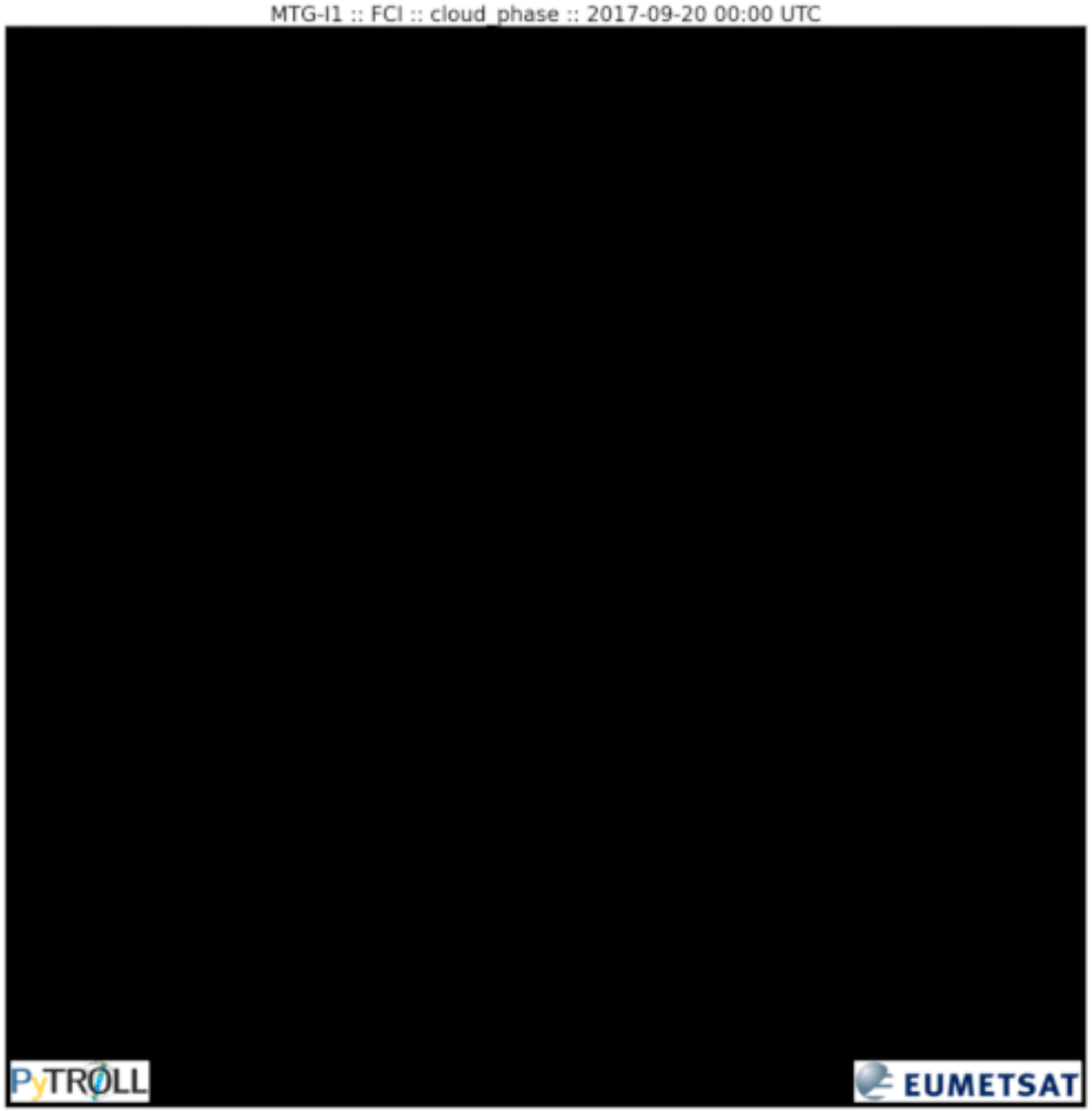
„New“ RGB Examples – True Color



„New“ RGB Examples – Cloud Type



„New“ RGB Examples – Cloud Phase



Thank you!

Questions are welcome.