



EUMETSAT

NWC SAF

SUPPORT TO NOWCASTING AND
VERY SHORT RANGE FORECASTING

A Short Introduction to the NWC SAF GEO-LI Software Package

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Short introduction to NWC SAF

Objective and software packages

MTG-I Sensors

New GEO-LI software package



NWC SAF concept

- ✓ To ensure the optimum use of meteorological satellite data in Nowcasting and Very Short Range Forecasting
- ✓ The NWC SAF develops and maintains software Packages (for GEOstationary and POLAR Satellites) freely distributed to registered users to generate satellite derived products with a direct application in Nowcasting
- ✓ User support
- ✓ Training

Geostationary satellites

NWC SAF GEO-I v2025.2

Imager sensors in

- MSG 0 degree/primary Service
- MSG Rapid Scan Service
- MSG IODC
- **MTG-I**
- Himawari 8/9
- GOES-16, GOES-17, GOES-18, GOES-19

NWC SAF GEO-LI in development

- **MTG-I LI**

NWC SAF GEO-S in development

- **MTG-S IRS**

Polar satellites

NWC SAF PPS v2021.7

Imager sensors in

- **Metop**
- NOAA
- NPP
- JPSS
- EOS
- FY-3D
- Sentinel-3

Next version will support **EPS SG A**

NWC SAF PPS-MW in development

- **EPS SG A and B** (Microwave sensors)



FCI (Flexible Combined Imager)

- **Continuity** of SEVIRI in MSG
- More channels
 - **8 solar** spectral channels (0.4 μm to 2.2 μm)
 - **8 thermal infrared** channels (3.8 μm to 13.3 μm)
- Better spatial and temporal resolution:
 - Normal resolution: **1 km** for solar channels and **2 km** for thermal infrared channels
 - **10 minutes** in Full disk Scanning Service (FDSS), **2.5 minutes** in Rapid Scan Service (RSS)

LI (Lightning Imager)

- **Totally new** instrument, detecting lightning activity
- Operates at a narrow bandwidth of 777.4 nm with a 1 ms integration time with spatial resolution 4.5 km at the sub-satellite point
- EUMETSAT distributes **Level 2** products with frequencies **10 and 30 seconds**

GEO-LI:

Software package that includes NWC SAF products from MTG-I LI data

- LI data have different frequency than FCI and are a different kind of data →
- Different Task Manager is needed →
- Better to release LI products in **a different software package**

NWC SAF GEO-LI



Important to note:

GEO-LI

- Makes use of functions of the NWCLIB in GEO-I package (e.g. some functions for reading input data and writing output data)

GEO-I

- Can read and make use of MTG-I LI L2 data (e.g. RDT, CRR and CRRPh can benefit from MTG-I LI L2 data)

First version of NWC SAF GEO-LI software Package **in development**

- **Requirements have been defined.**
- Two products will be distributed: **LiStack and LiJump**
- **Prototypes** of these two products are ready and will be presented in the next presentations.
- We are **working on** the documentation: algorithms description, validation reports, user manuals and output format description among others.
- The software package will be named **NWC SAF GEO-LI v2027** when it is released



Thank you for your attention

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