

MAAP: a next generation exploitation platform for the hyperspectral Earth Explorer, FLEX

Mario Benincasa, Marin Tudoroiu

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The FLEX mission

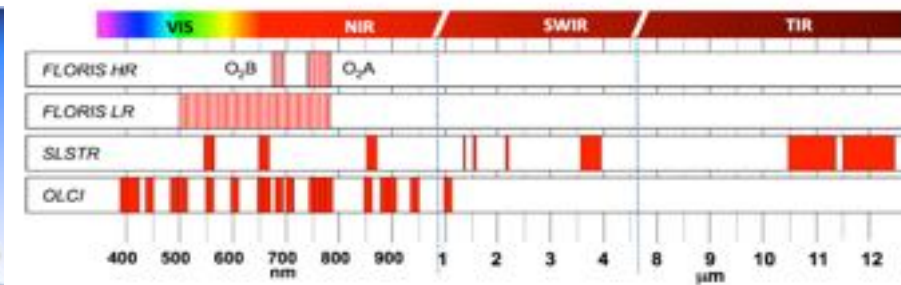
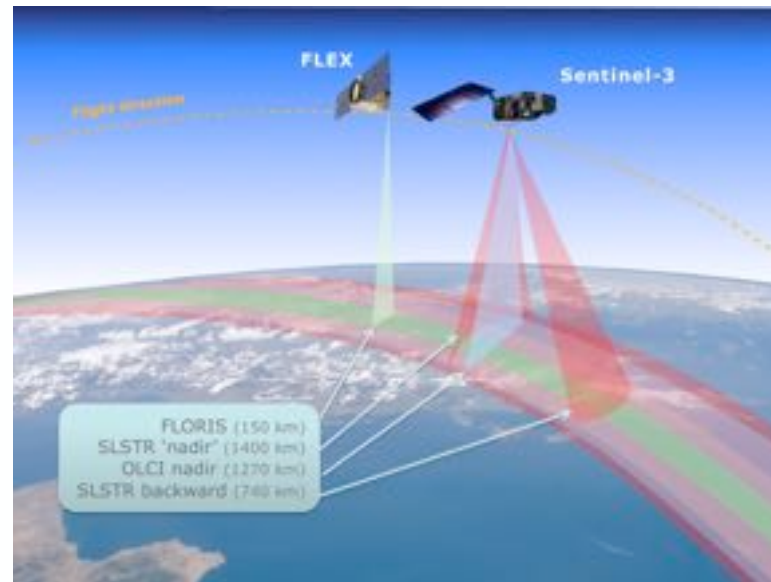
FLEX - ESA's photosynthesis mission will provide global measurements of vegetation fluorescence that will help to:

- quantify photosynthetic activity and plant stress by mapping vegetation fluorescence;
- advance our understanding of the photosynthetic machinery functioning and thus on the actual health and performance of terrestrial vegetation.

FLEX will **generate** monthly global maps with an on-ground **spatial resolution of $300 \times 300 \text{ m}^2$** and a **swath width of 150 km**.

Tandem mission with Sentinel 3

The tandem flight with Sentinel-3 provides auxiliary measurements from OLCI and SLSTR on the atmospheric state and land-surface characterization, necessary for the fluorescence retrieval.



EO data user's point of view

"Am I using the latest version of the dataset?"

"My computation takes too much time!"

"I don't like the official dataset but I have a good idea for improving it."

"I cannot do all what I want with the tool box."



"I don't have enough space to store all my TB data."

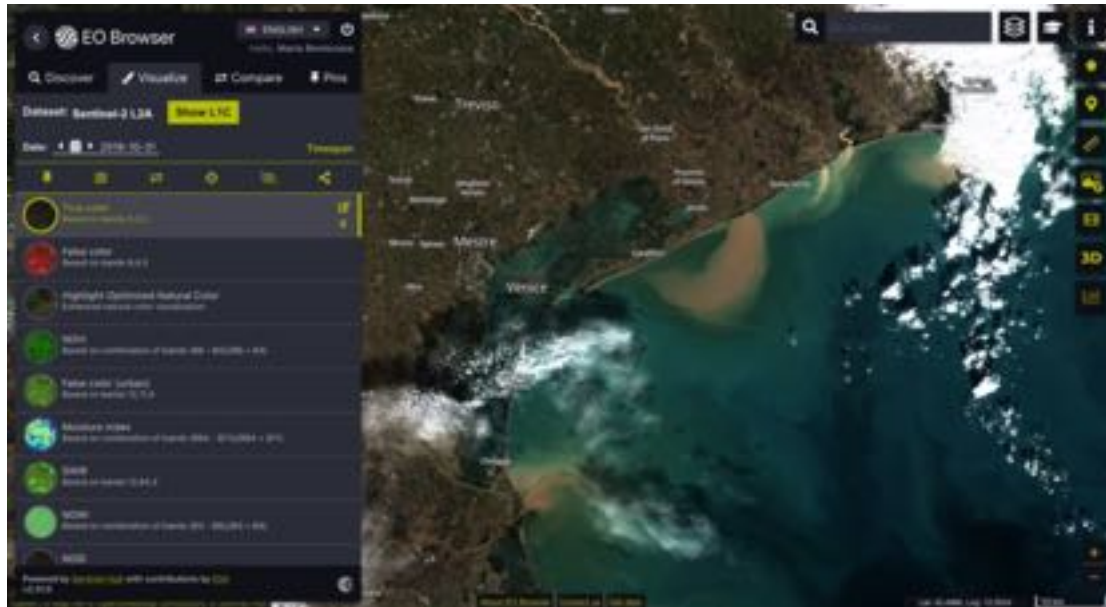
"How to share my results (few GB of data) with my peers?"

"Where do I find in-situ data to validate my results?"

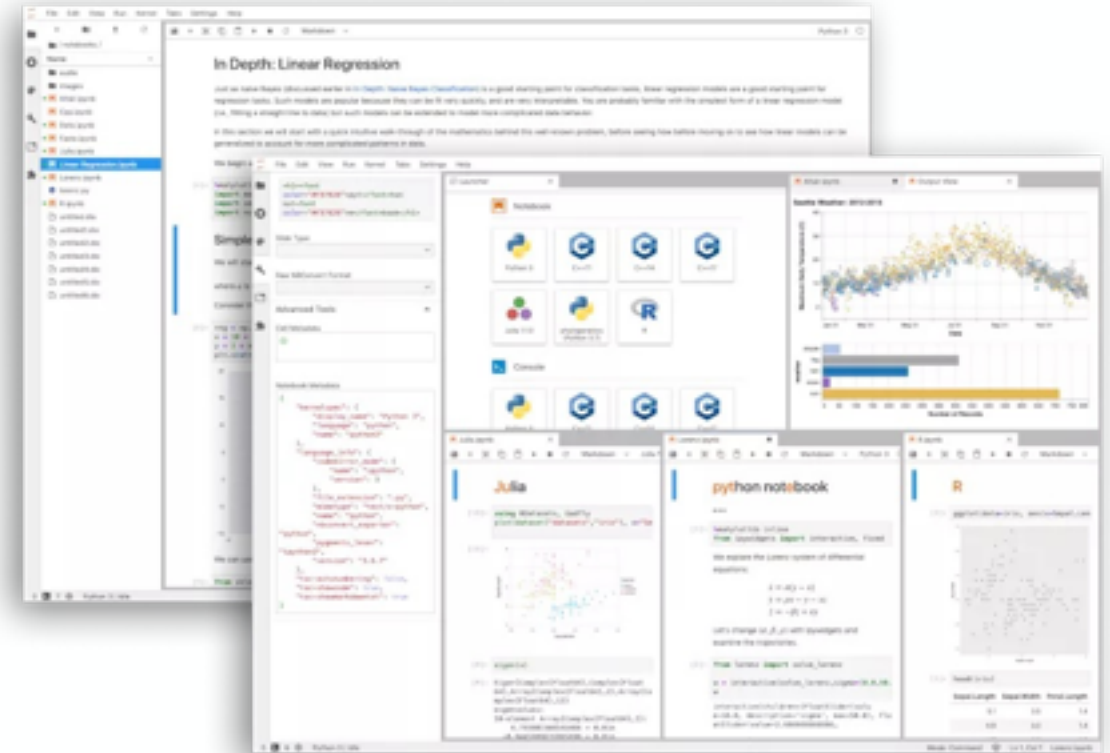
Collaborative Platforms (aka MAAP, MEP, ...) as next generation PDGS user interface



Data Access
Catalogues
Products Download



Advanced visualization capabilities

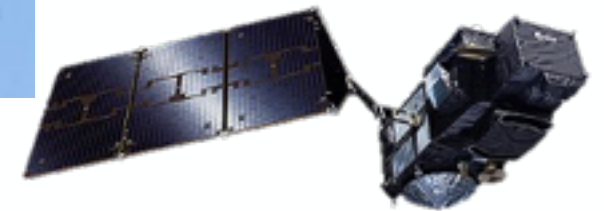
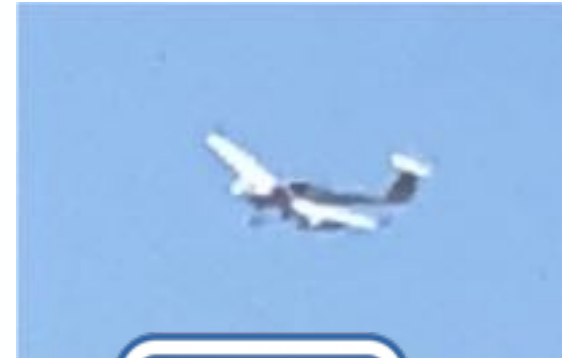


WEB-based development and execution environments



User mgmt

- FLEX L1B, L1C and L2 data - (obviously)
- Ground data – radcalnet, aeronet, FLOXBOX network, ...
- Airborne data
- Other satellites data (S2, S3, ...)
- Models

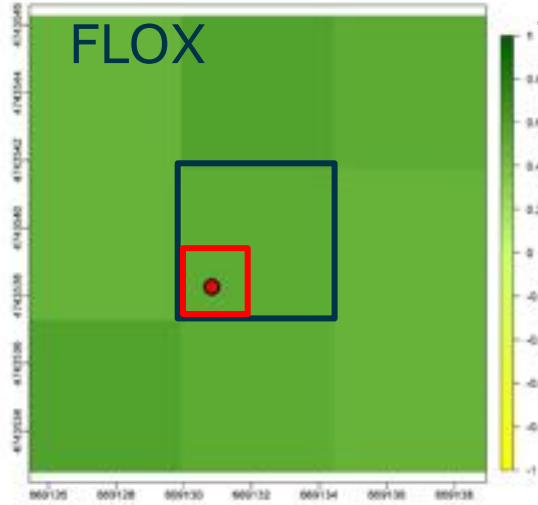


-> file system emulation

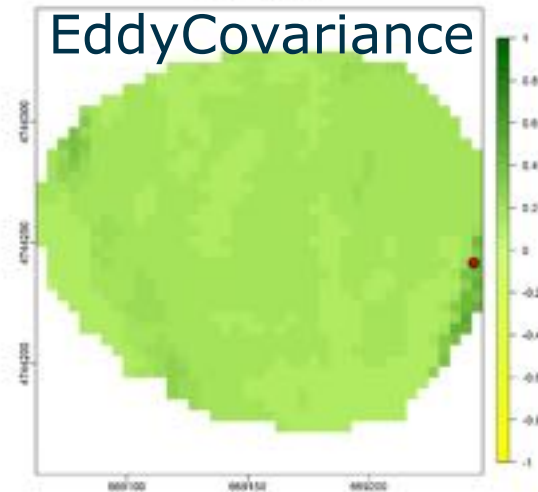
Examples of data

GROUND (FLOX&Weather)

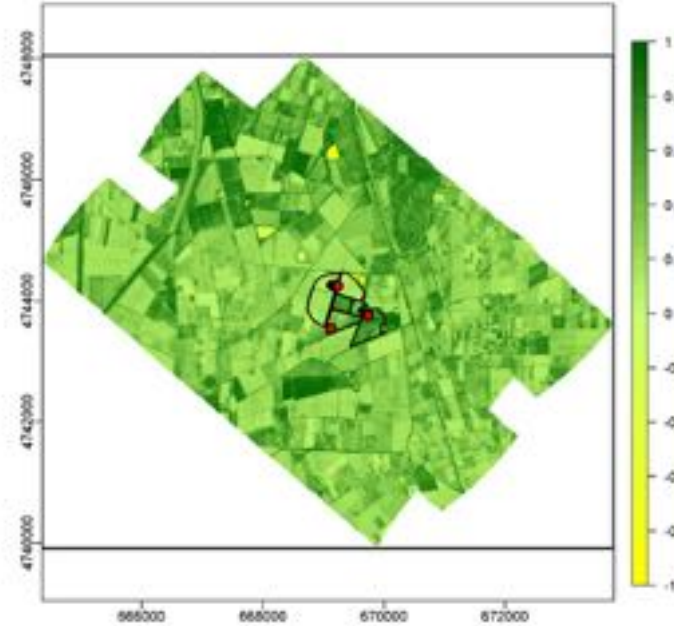
1.5x1.5 m



4x4m



Airborne hyperspectral and fluxes (CO₂, H₂O, ...)

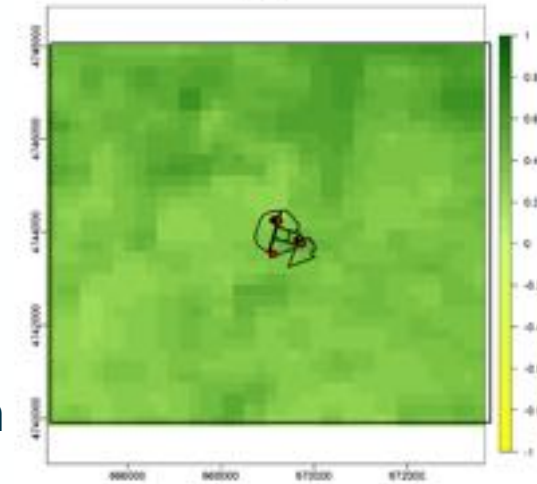


Satellite (S2 and S3)

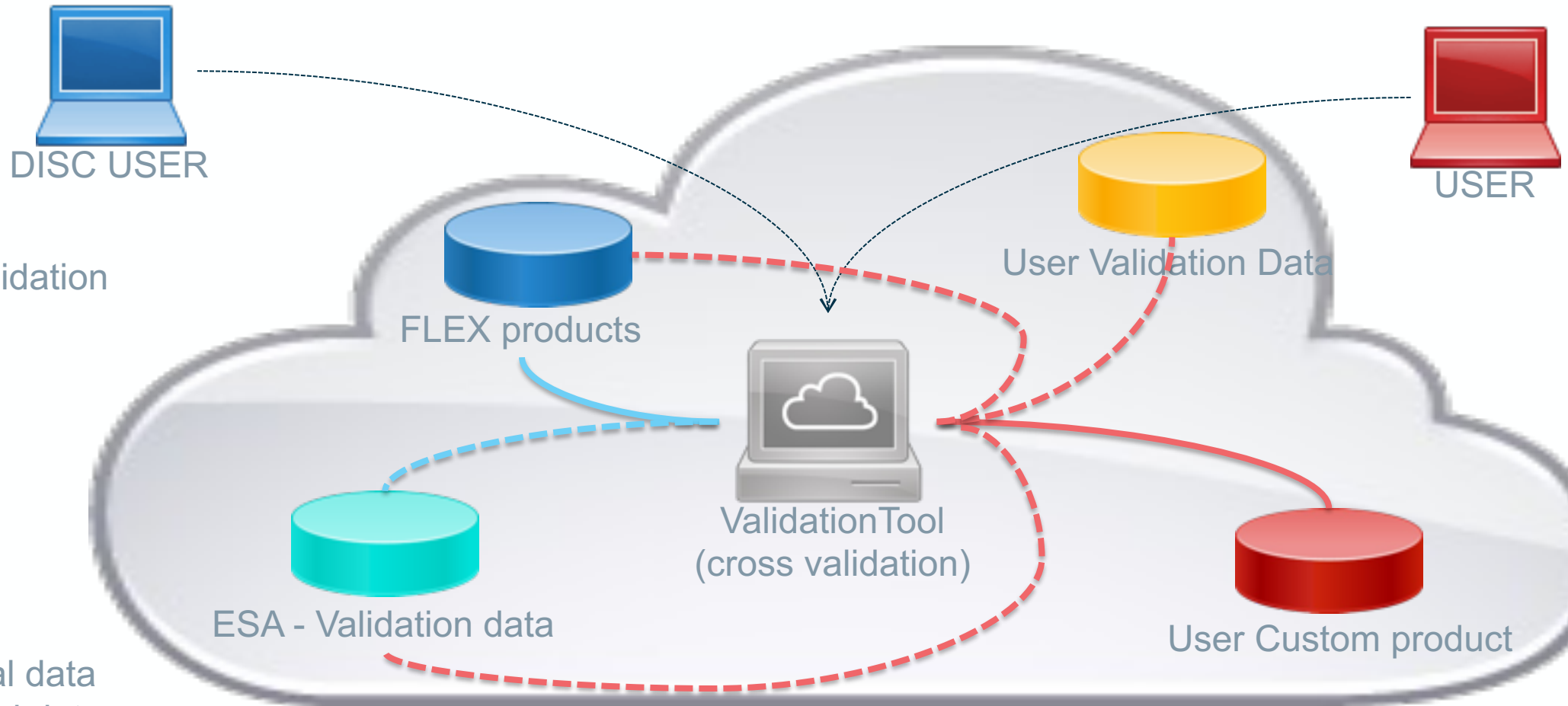
10x10m



300x300m



Cal/Val tools within the MAAP



Official Product Validation

User validation vs:

- ESA provided val data
- User provided val data
- Official FLEX products (cross validation)

Thank You
For Your Attention