MDIS 2019

ForM@Ter, solid Earth data and services center

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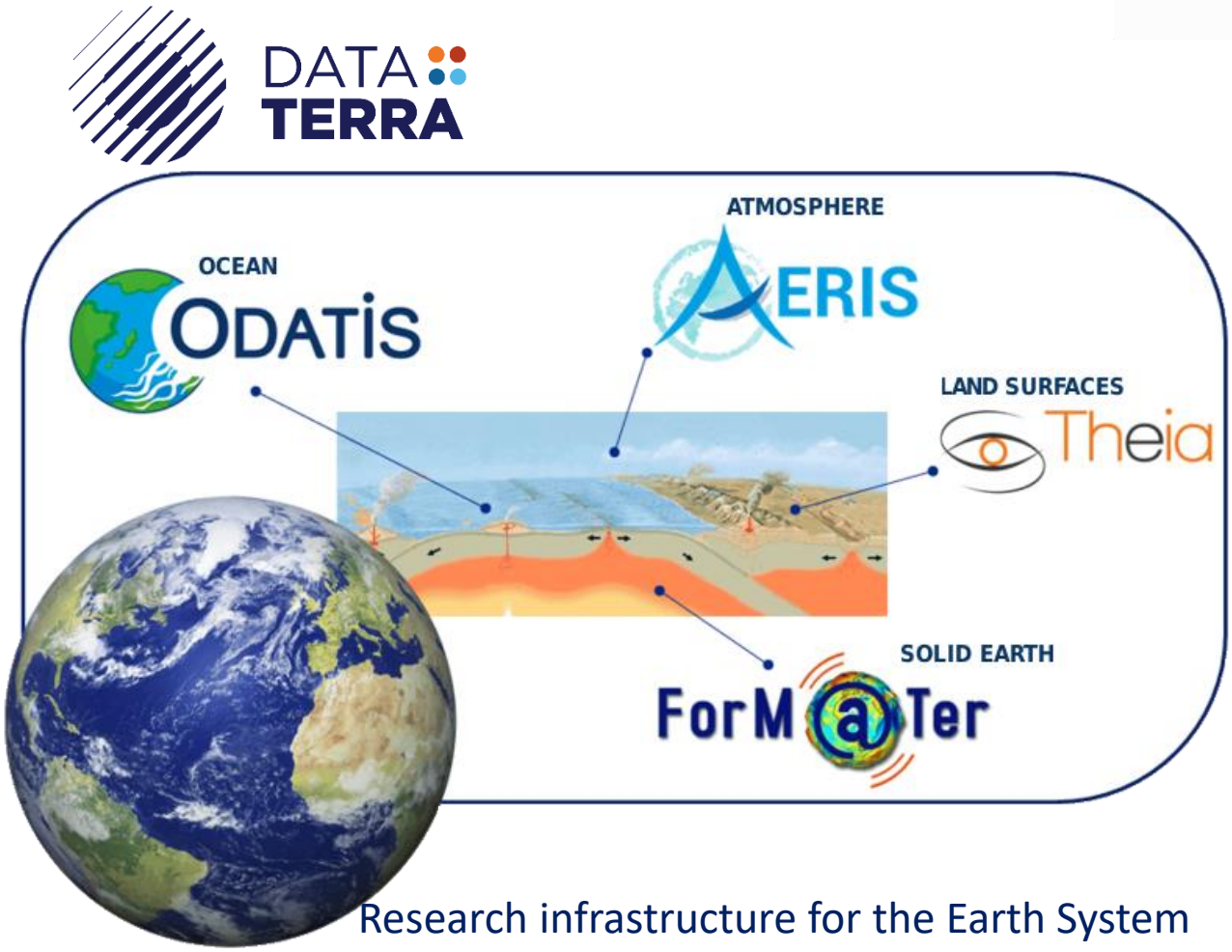
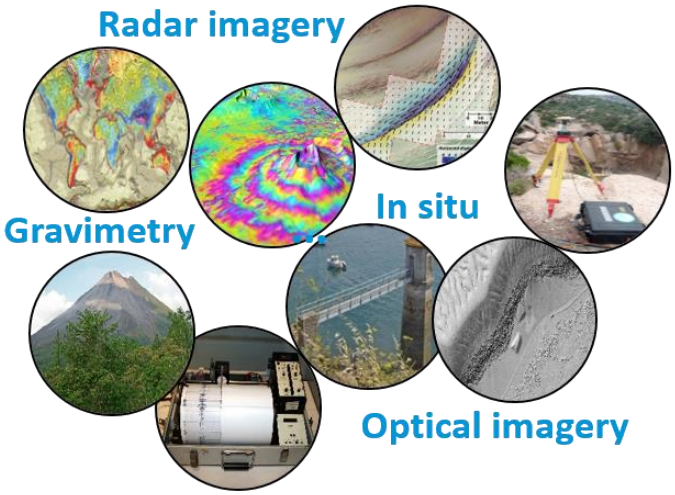
ForM@Ter, the solid Earth data and services center of the Research Infrastructure Data Terra

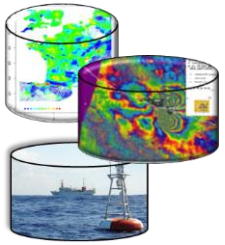


Research infrastructure for the Earth System

Shape, movements and deformation of the Earth



Facilitate data access



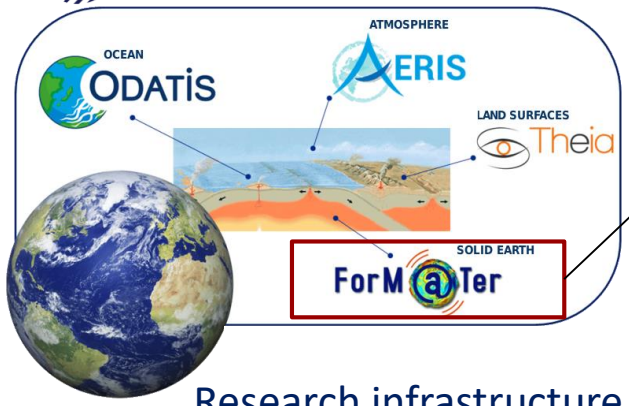
Distribute tools and software

Facilitate exchanges between the various solid Earth fields

Positioning in the European RI environment

Structure

DATA TERRA



Research infrastructure for the Earth System

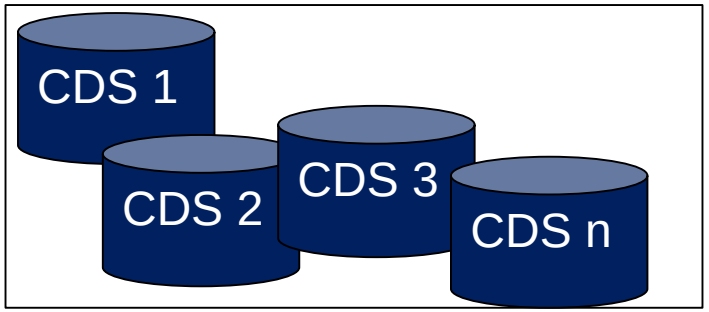
ForM@Ter

CCD

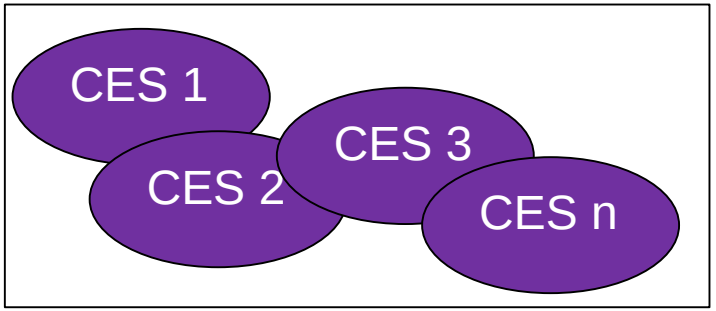
Coordination center

IPGP

Université de Paris



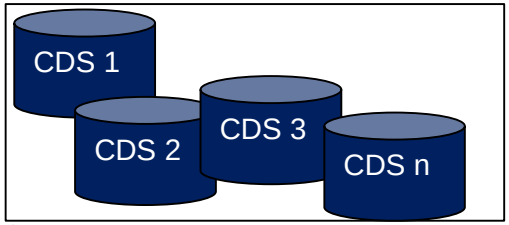
Data and Services centers



Scientific Expertise Centers

Structure

Data and Services centers



Géodésie
Géologie
Géomagnétisme
Géophysique Marine
Géothermie
Gravimétrie
Sismologie
Volcanologie
...

BCMT

BSS brgm

cdsp

SHOM L'océan en référence

IGETS

BGI

IGS INTERNATIONAL GNSS SERVICE

ITRF

IPGP CENTRE DE DONNÉES

SIIG ISGI

OPGC

RESIF RENAG

RESIF

RGP IGN

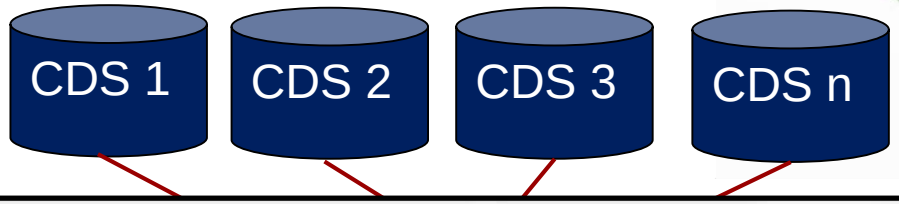
SONEL

Current projects with CDS

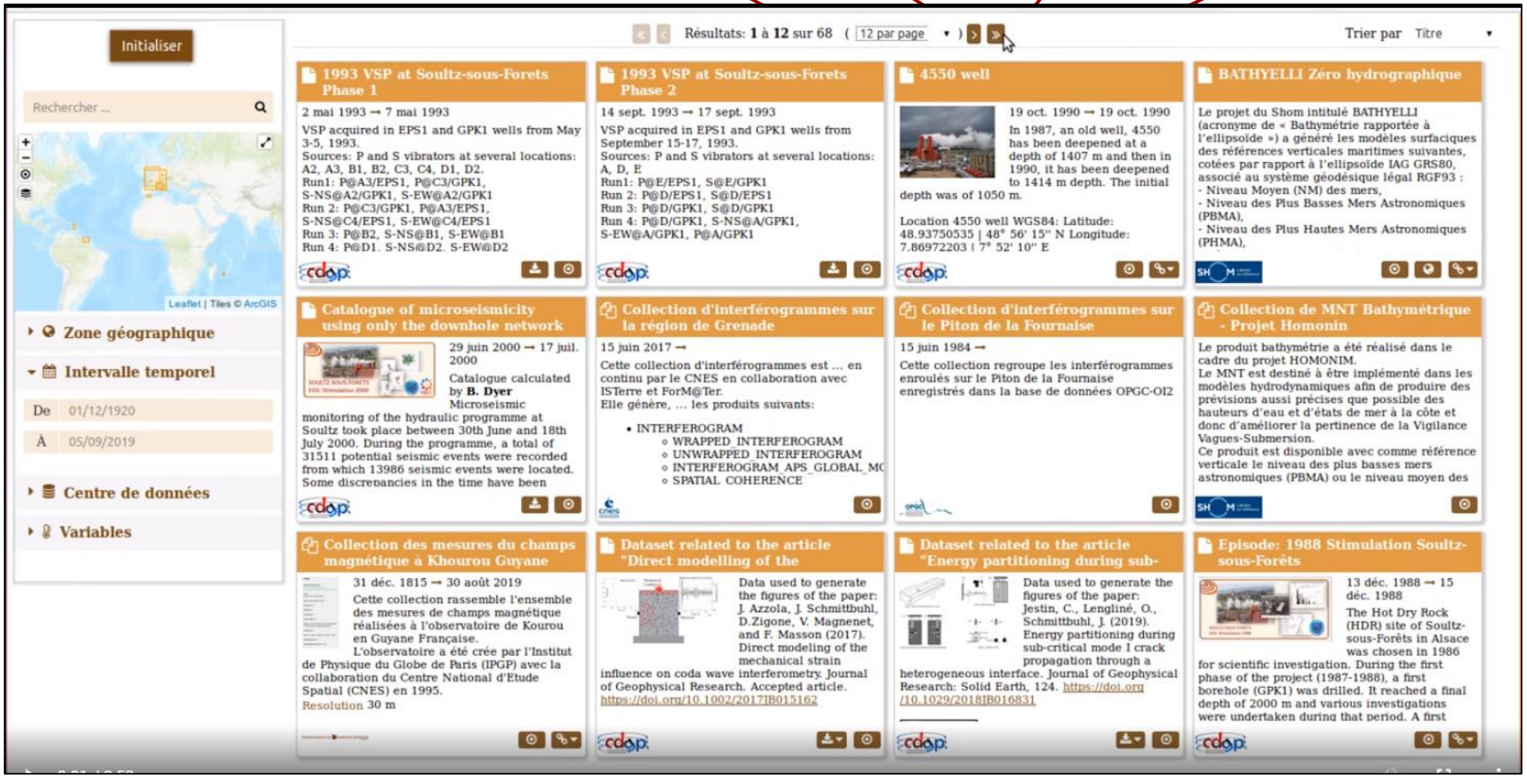
➔ **CEDRE** – *"towards **C**ertification of solid **E**arth **D**ata **RE**positories in France"*

➢ Project to promote good practices of data management in a sustainable way in a « FAIR » approach to the scientific and technical communities

Current projects with CDS



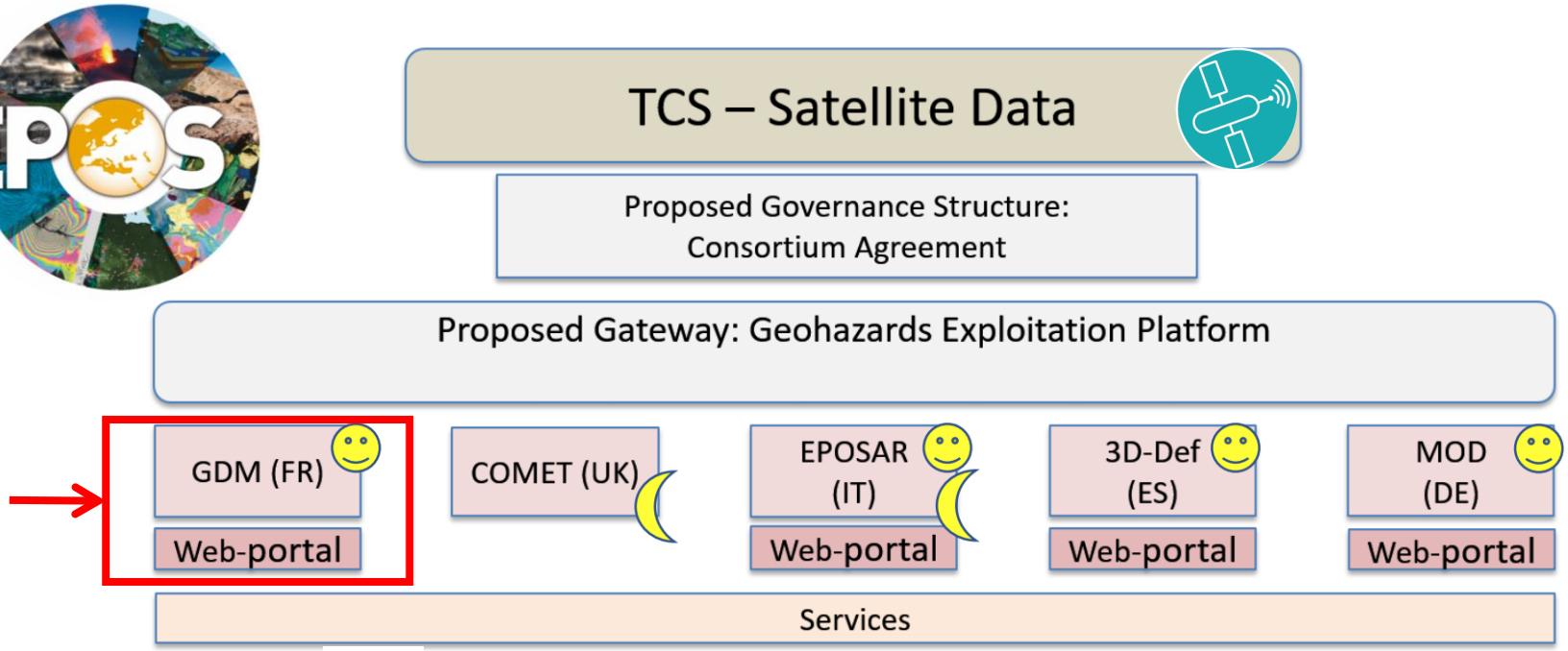
➔ **METACATALOG**



Projects concerning ground deformation from radar data

➔ On demand processing service GDM (Ground Deformation Monitoring)

EPOS TCS Satellite Data - Services
https://www.epos-ip.org/thematic-core-service/478/services



Systematic and periodic processing on defined areas

On demand, from a web interface

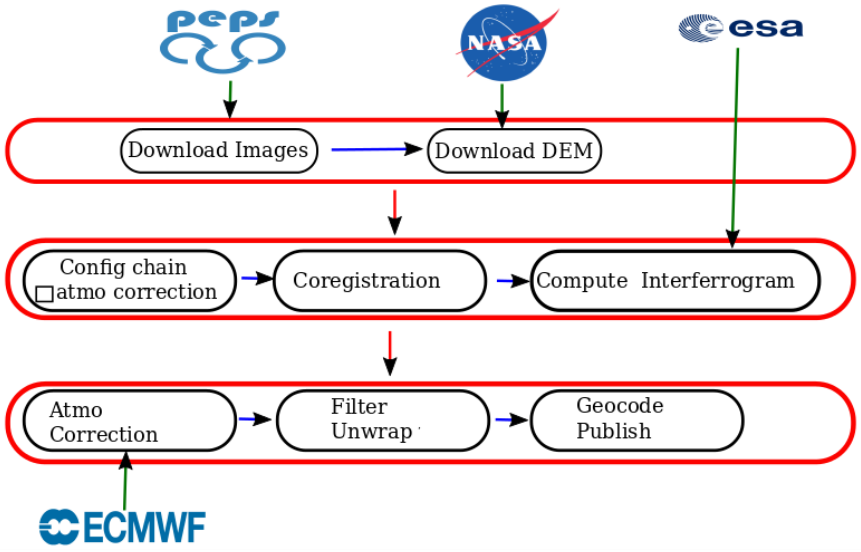
Projects concerning ground deformation from radar data

➢ Processing: NSBAS chain

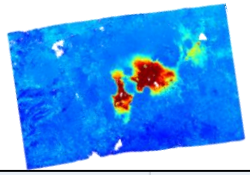
New Small temporal and spatial BASelines

(*NSBAS, M.-P. Marie-Pierre Doin, F.Lodge, S. Guillaso, R. Jolivet, C. Lasserre, G. Ducret, and R. Grandin (2011)*

Grandin, R. (2015). Interferometric processing of SLC Sentinel-1 TOPS data, Proc. of the 2015 ESA Fringe Workshop, ESA Special Publication, Vol. 731).



Distributed products

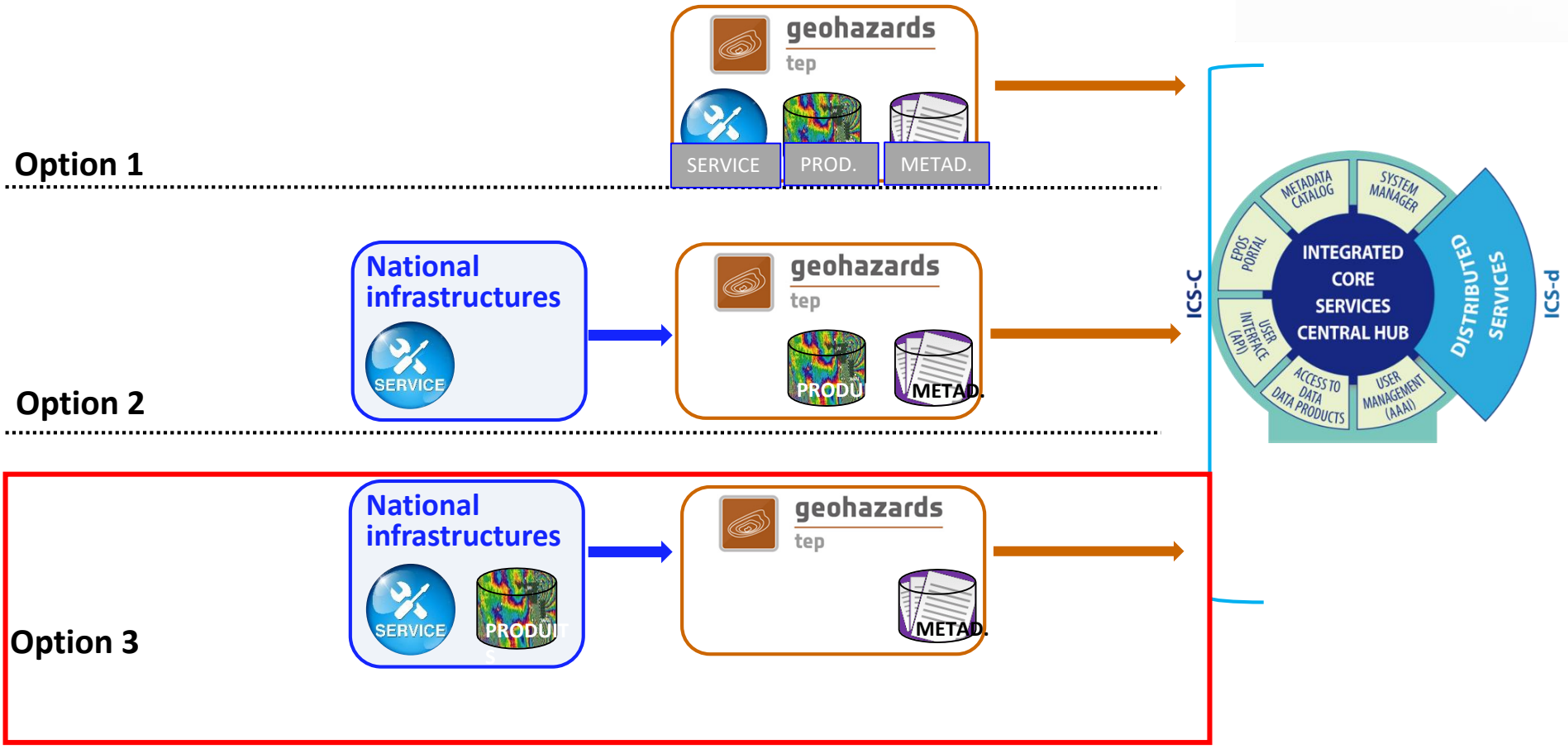


Name	DDSS
WRAPPED_INTERFEROGRAM	1
SPATIAL_COHERENCE	2
UNWRAPPED_INTERFEROGRAM	3
MAP_OF_LOS_VECTOR	4
ATMOSPHERIC_PHASE_SCREEN	5
DEM	6
LOOKUP_TABLE_RADAR2GROUND_COORDINATES	7
LOS_DISPLACEMENT_TIMESERIES	8
TEMPORAL_COHERENCE	9
NETWORK_MISCLOSURE	10
MEAN_LOC_VELOCITY	12
STACK_INTERFEROGRAMS	13

+ Auxiliary files

Projects concerning ground deformation from radar data

- Platform



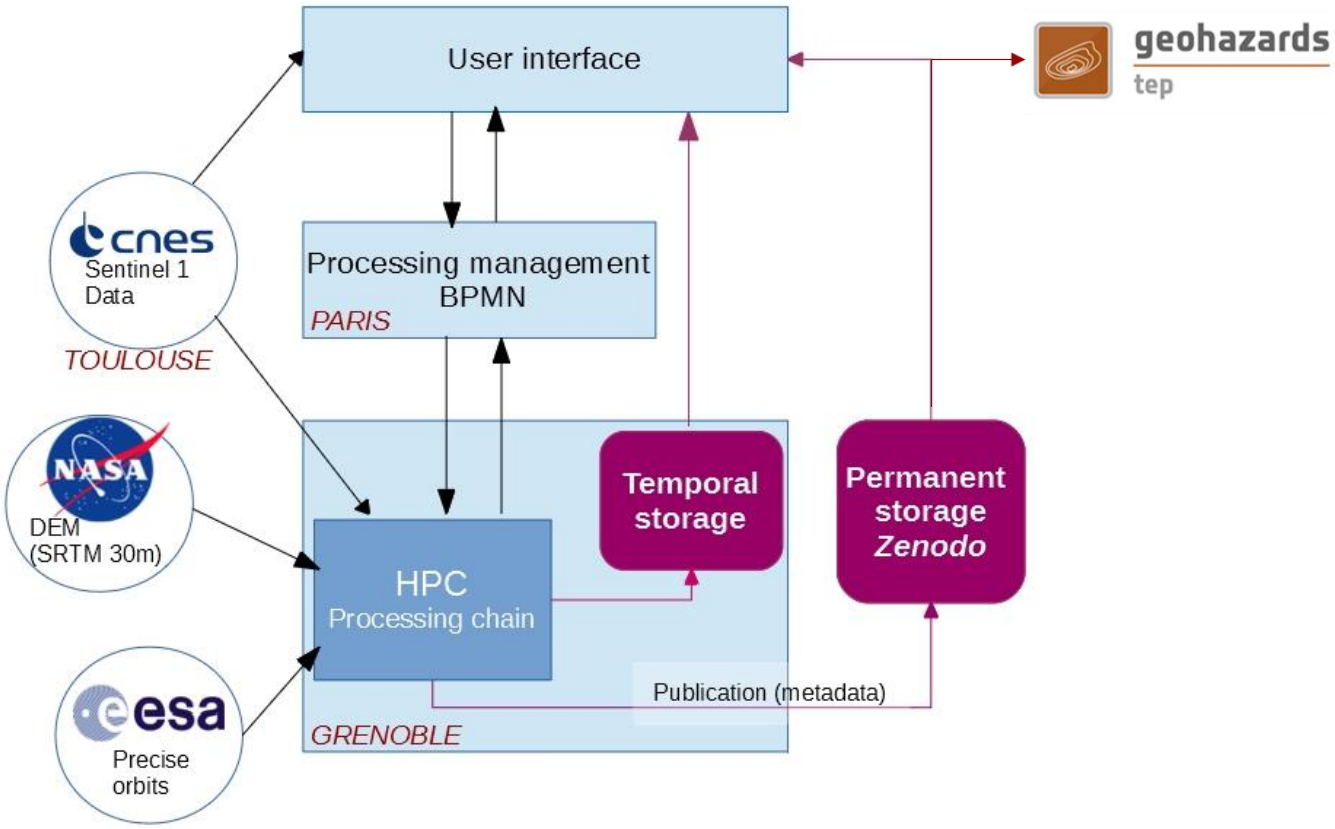
Projects concerning ground deformation from radar data

➔ **ETALAB**

Prototype of services

Distributed architecture

User interfaces



Projects concerning ground deformation from radar data

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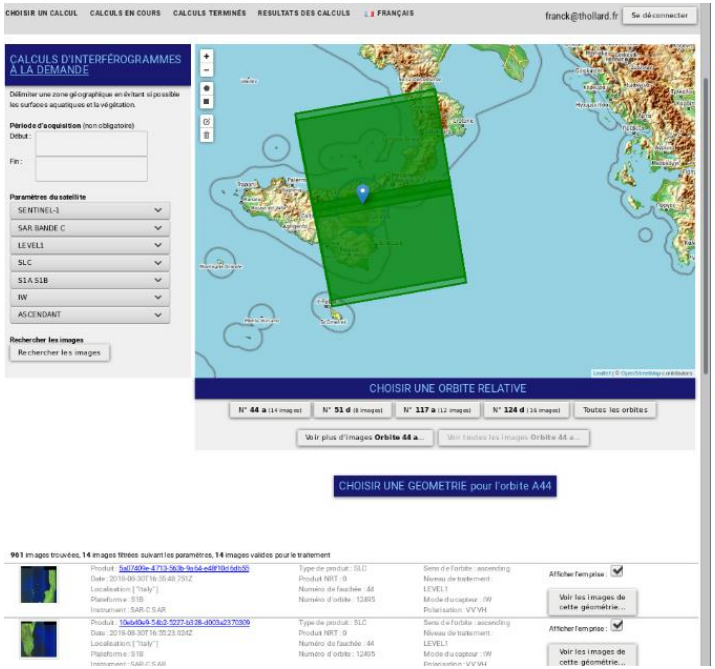

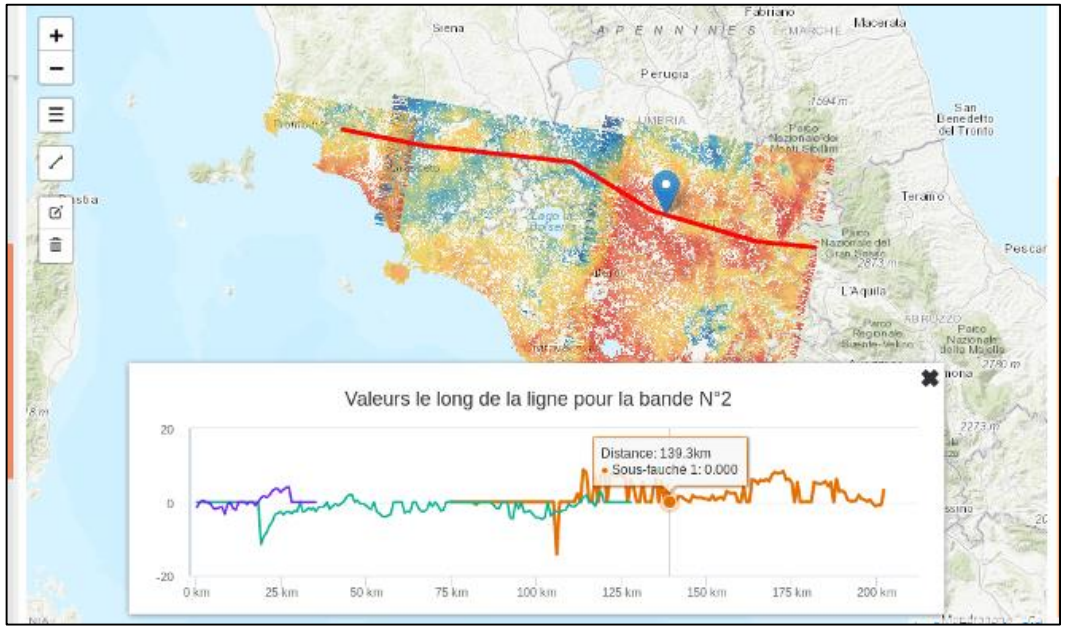

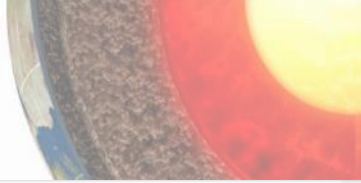

ForM@Ter

THE DEFORMATIONS OF THE EARTH SEEN FROM THE SKY

Please login before you start.

Enter your email | Log in

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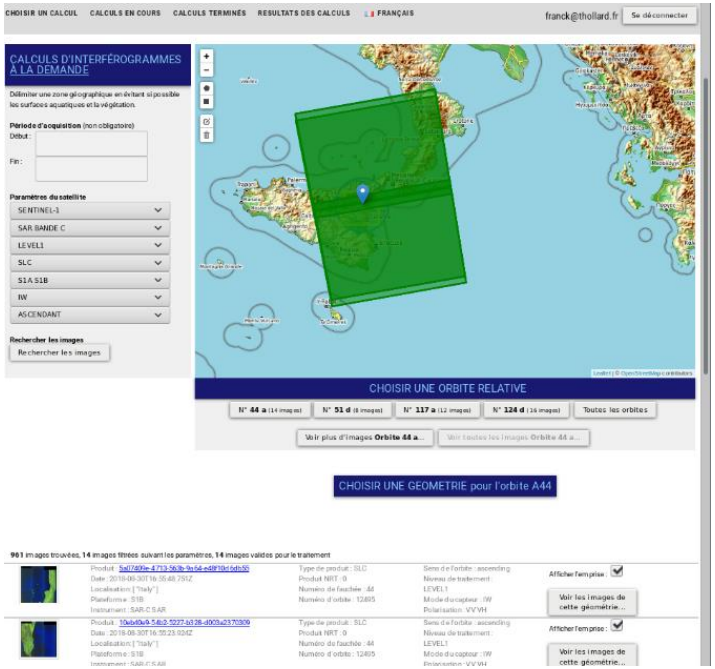
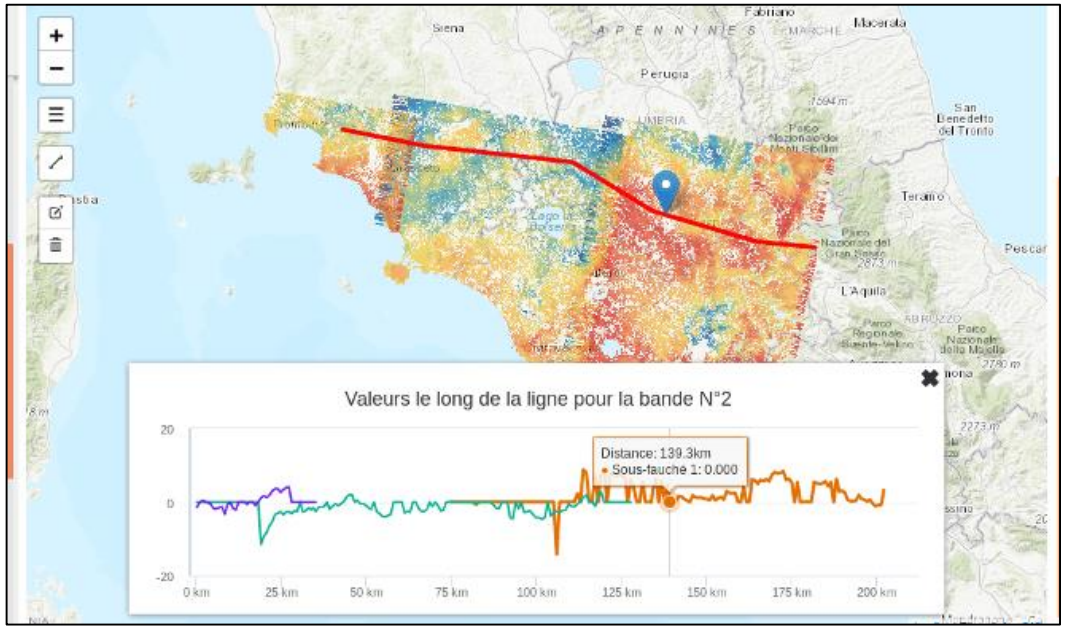
Projects concerning ground deformation from radar data

➔ ETALAB

Demonstration: https://www.poleterresolide.fr/services/interferogrammes-a-la-demande-demo/

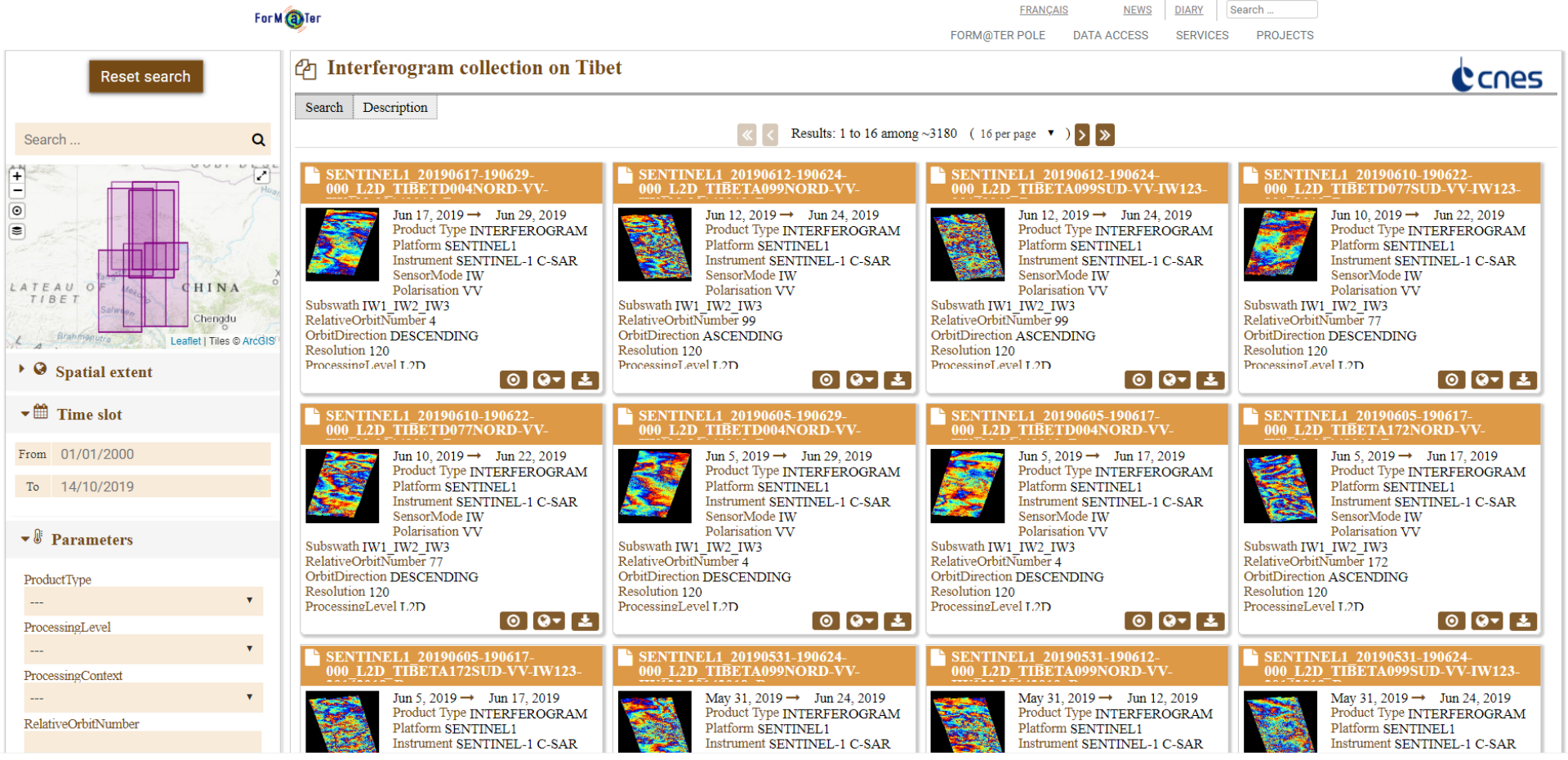




Projects concerning ground deformation from radar data

➔ FLATSIM

the web interface to access the products is operational but will be open after validation of the products and discussion on data access policy



Projects concerning ground deformation from radar data

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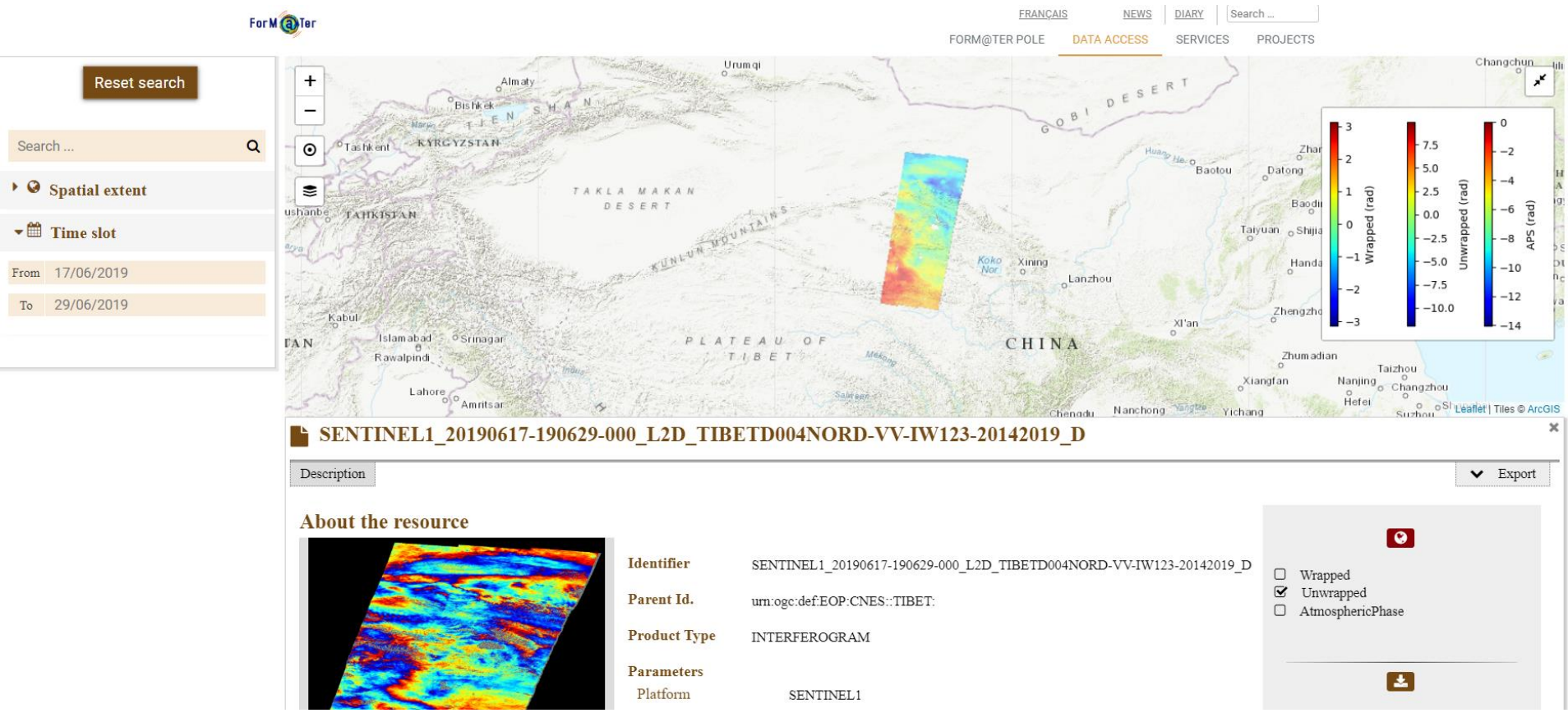

Conclusion & perspectives

- **Metacatalog** under construction, **will be open soon**

- Ground deformation from **radar data projects**

Etalab: a successful prototype, not open

GDM-SAR : products are available from GEP catalog in EPOS framework

Solutions are discussed to make the on demand processing service sustainable and operational

Flatsim: products **will be available from the ForM@Ter website** after validation and data access policy discussion

- Ground deformation from **otpical data**

Under discussion, a workshop is planned on the 21/10 to identify the needs

www.poleterresolide.fr

Thank you

Demo. Etalab prototype

https://en.poleterresolide.fr/services/interferogrammes-on-demand-demo/?noredirect=en_US#/