

AVISO: what's new on the reference portal in satellite altimetry?



The products

Ocean surface topography

• Sea Surface Height

DUACS multi-mission products (multiscale update 2024)

Along-track L2P (continuous updates)

X-TRACK coastal (v2.2, 2025)

GDR-F Jason-2 (2025)

ALTICAP (New 2024)

Polar Oceans SLA L3/L4

SWOT products (major evolutions):

- KaRIn Level-2 Low Rate (Baseline D)

- Level-3 LR SSH (v1 → v2.0.1 → v3.0)

- Multimission L4 maps (MIOST)

(v1 → v3, 2024–2026)

• Climate Change Indicators

Mean Sea Level (GMSL) (vDT2024)

ENSO index & maps (vDT2024, 2025–2026)

Barystatic & manometric sea level (v5, 2026)

Ocean Heat Content (4DAtlantic) (v3.0, 2025)

APACHE (New 2026)

• Mean Sea Surface

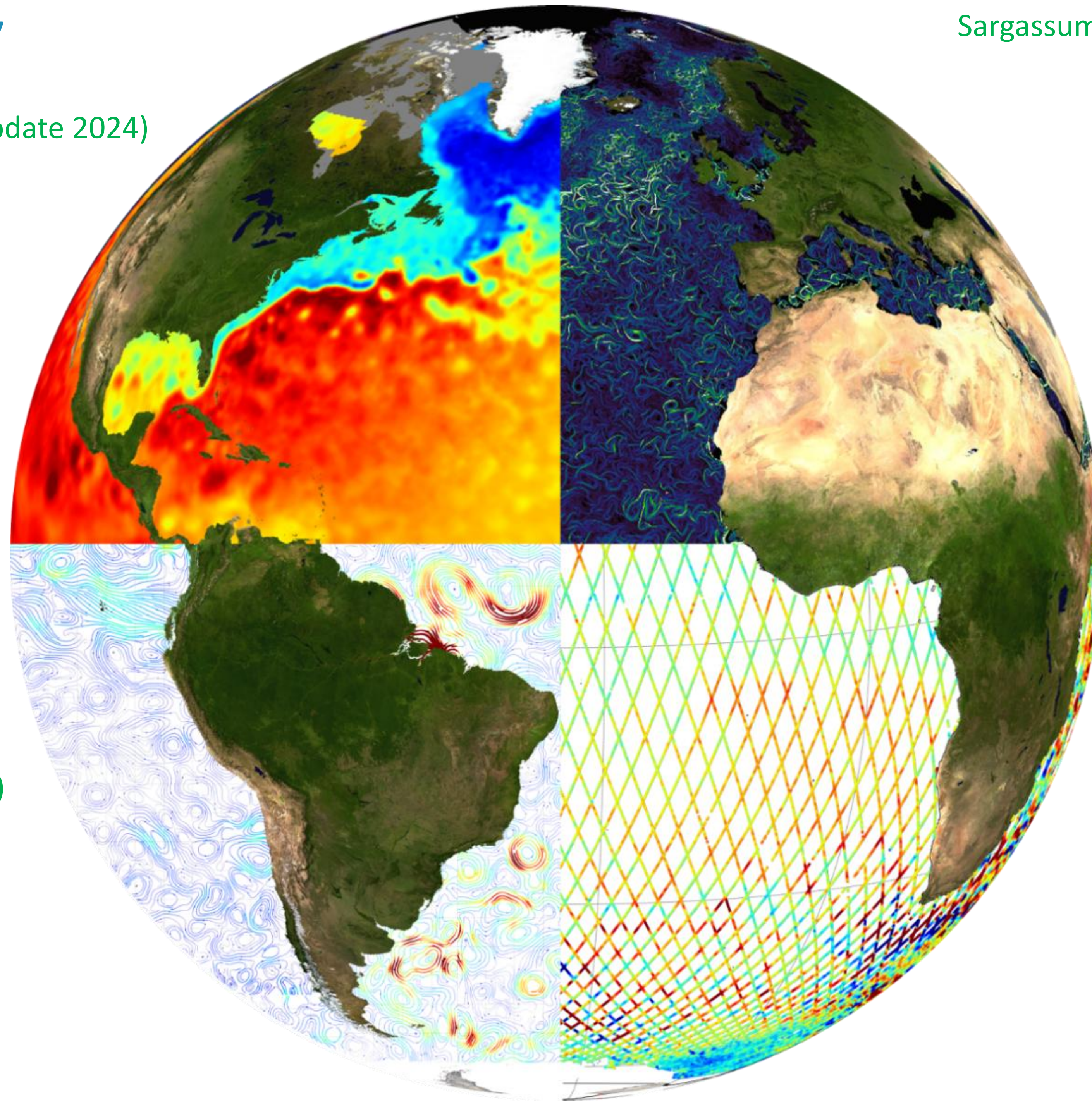
MSS CNES-CLS25 (New 2026)

MSS Hybrid CNES-CLS (updated)

• Mean Dynamic Topography

MDT CNES-CLS22

MDT-HYBRID-CNES-CLS22-CMEMS2020



Value added products

Sargassum detection (new multi-sensor, 2024–2025)

Sargassum forecast (operational 2025)

Sargassum Venus (New 2026)

FSLE (DT2024 + extension)

ACC fronts (v2.0, 2026)

ODATIS Ocean Color (New 2025)

META4 (v2026)

Ocean: wind & waves

Gridded (L4) NRT wind/wave products

L2P wind/wave (S3, S6)

CFOSAT SWIM (v7 → v7.1)

SWOT wave products (new)

Stokes drift (New 2025)

Auxiliary products

DAC (ERA5) (New 2025)

Wet Troposphere Correction (v2.0)

FES2022 / FES NS (updates 2024–2026)

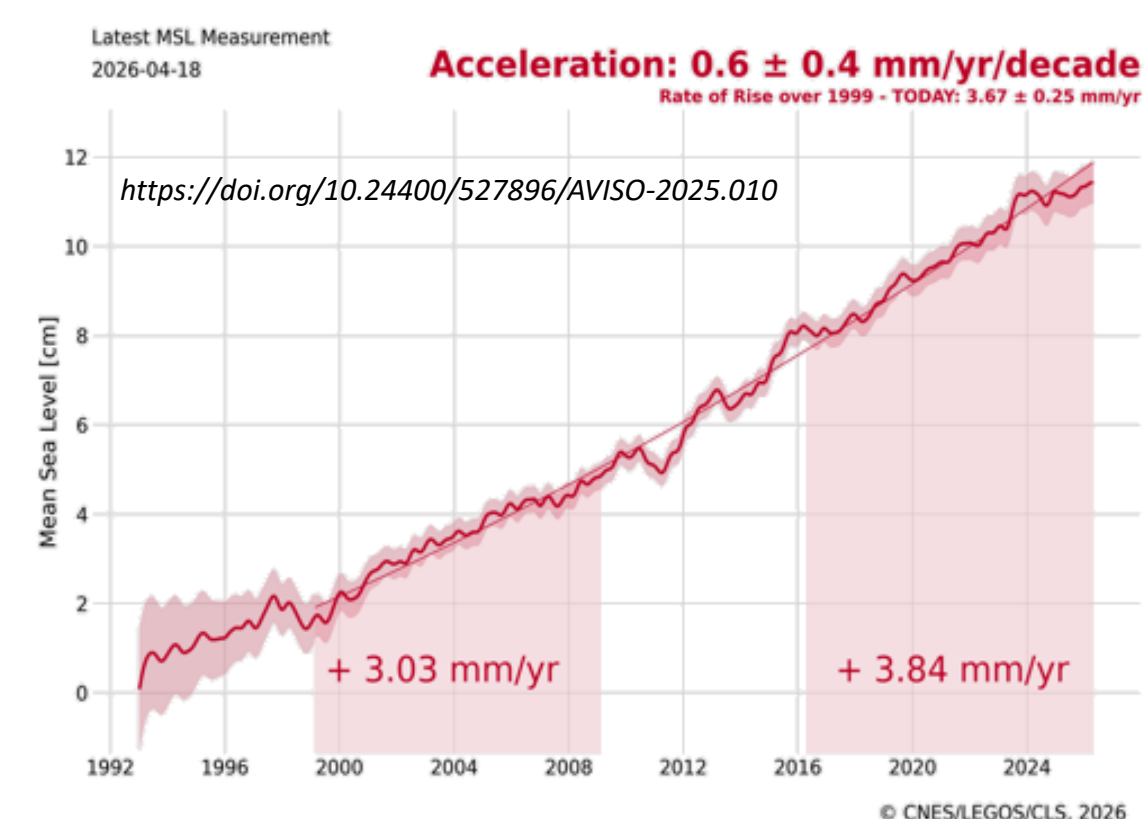
S6-MF slope correction (New 2025)

S6-MF L2P Skewness (New 2025)

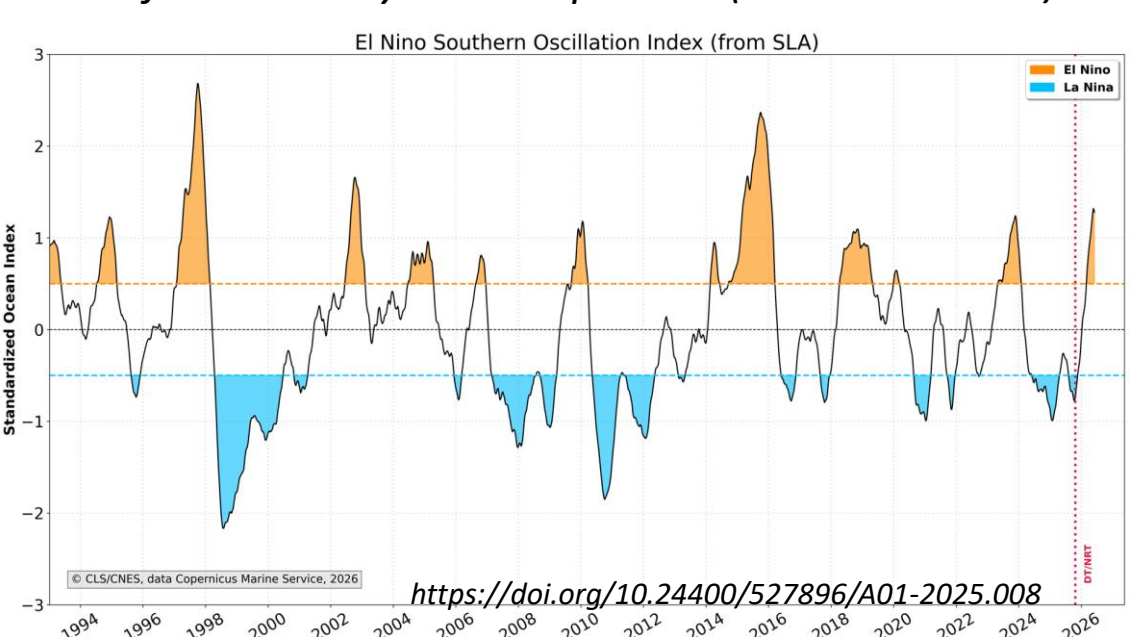
Tide Gauges

Senetosa Tide Gauge v2.0 (2025)

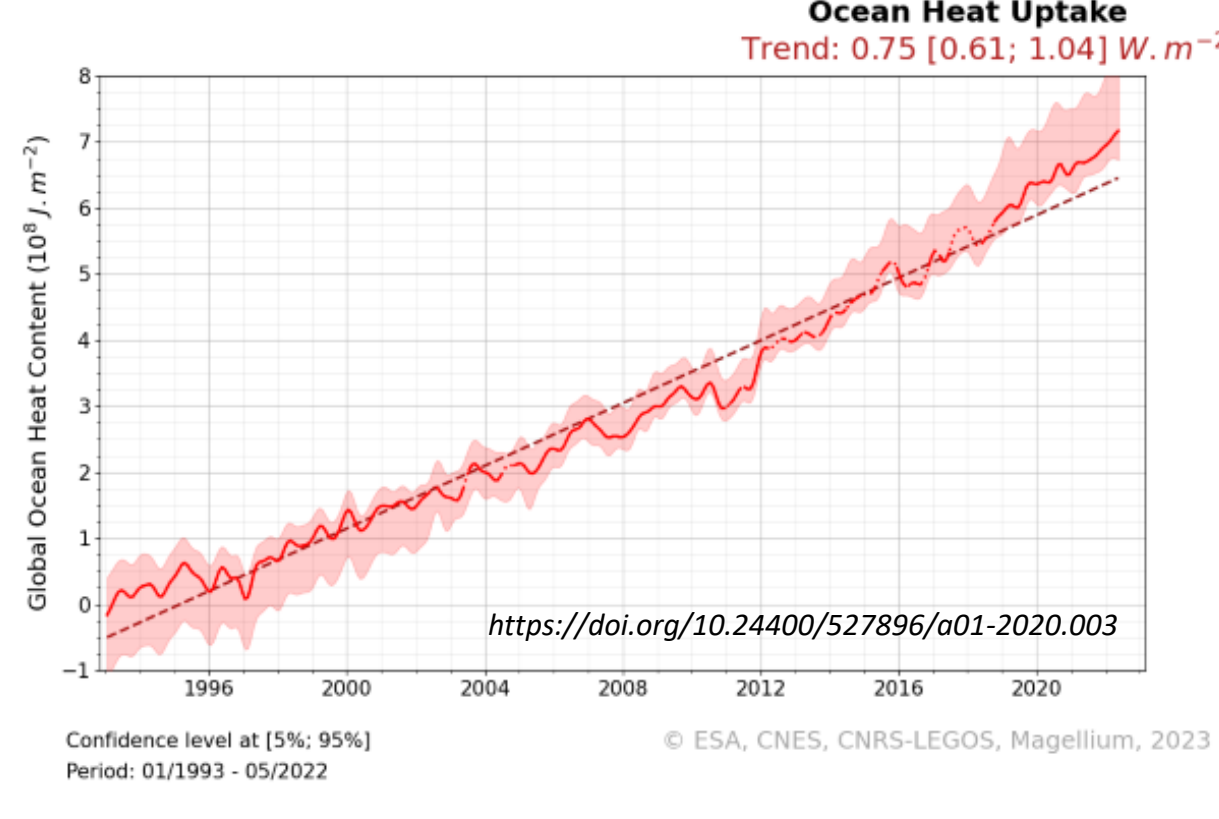
AVISO Climate Change Indicators:



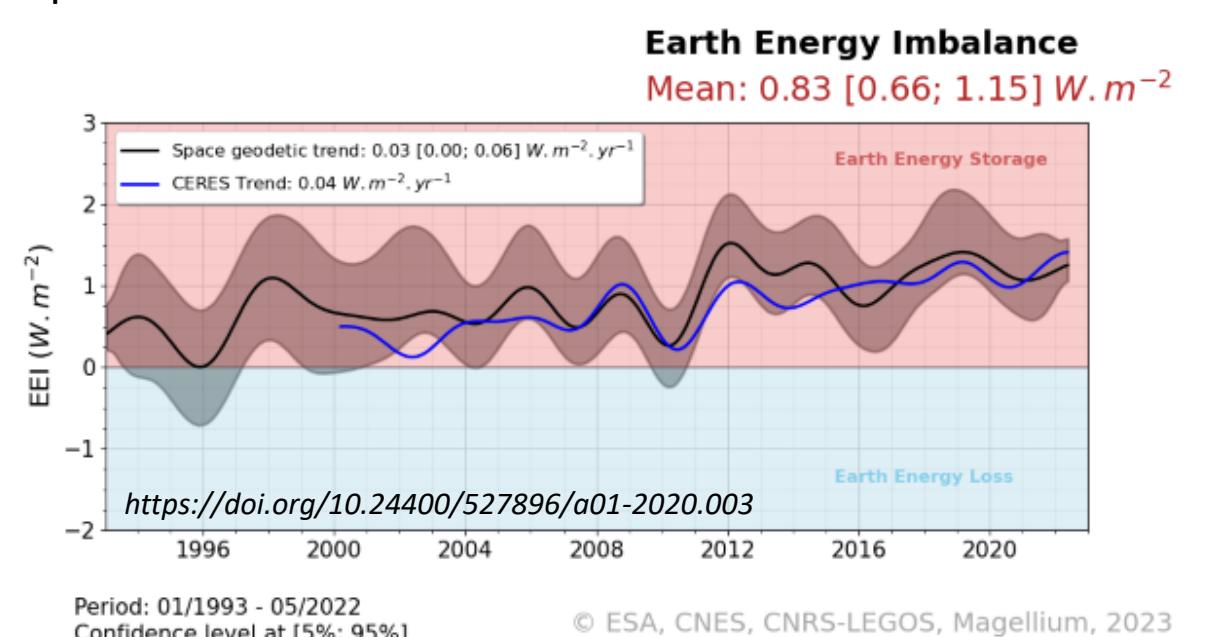
The AVISO Global Mean Sea Level (GMSL) based on Level-2P data from TopEx/Poseidon, Jason-1/2/3 and Sentinel-6MF missions from January 1993 to present (DT2024 version).



ENSO (El Niño Southern Oscillation) index based on altimetry-based Sea Level Anomalies over the Niño3.4 region in the Pacific ocean (DT2024 version).

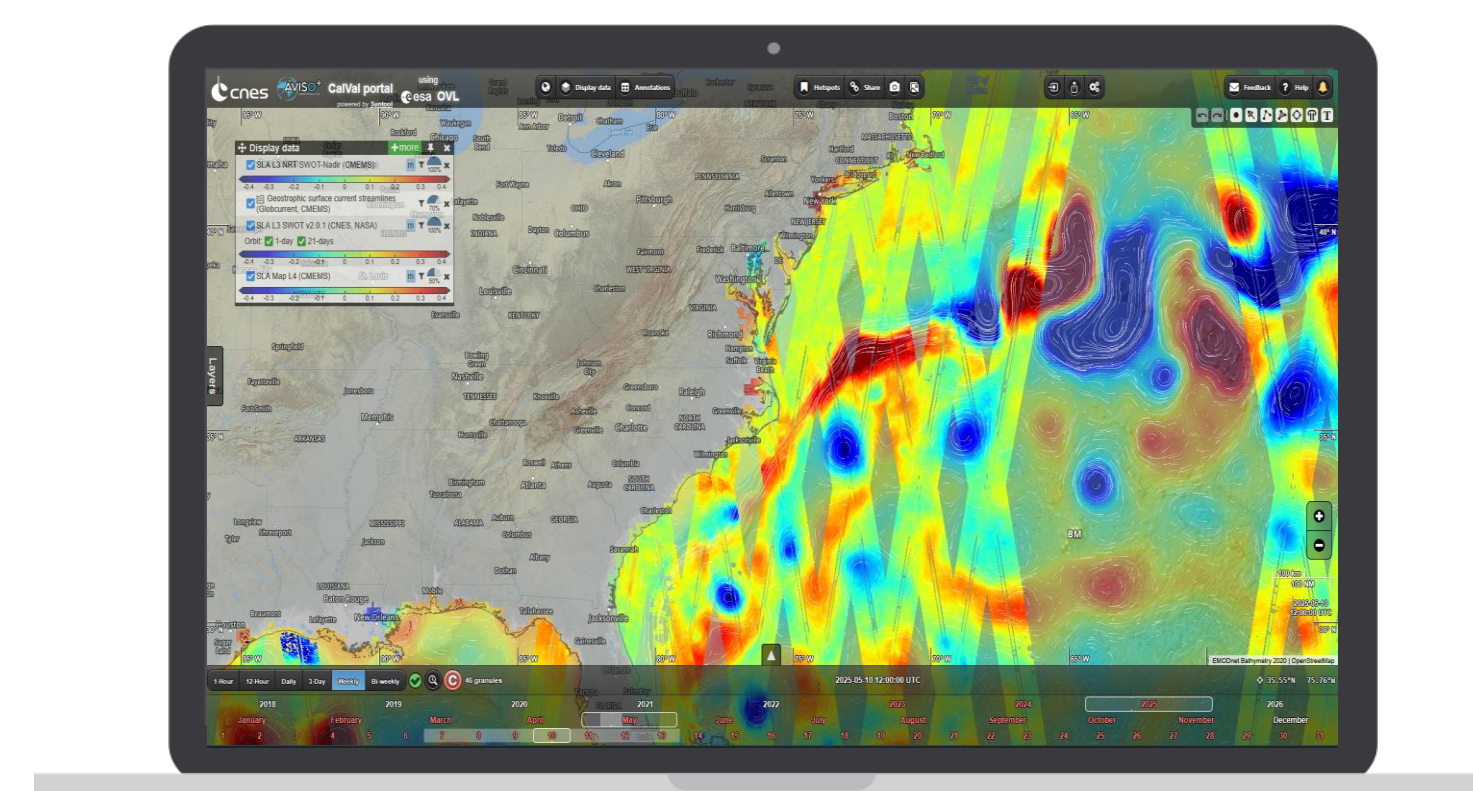


Global Ocean Heat uptake variability retrieved from the “altimetry-gravimetry” data, highlighting an increase of +0.75 W.m⁻² that corresponds to about 91% of the EEI.



Earth Energy Imbalance (EEI) indicator is approximated by the global ocean heat uptake variations, and shows that on average the Earth stores energy.

The AVISO-Calval visualization tool:



OVL web portal dedicated to CNES AVISO Level-2 and Level-3 products (including SWOT and CFOSAT products)

Some quick-look examples:

- [SWOT Karin 2km and Nadir SSH and currents](#) (Gulf Stream)

- [SWOT Karin 2km and Nadir Wind Speed](#) (Southern Ocean)

- [SWOT SSH and currents near Gibraltar:](#)

<https://odl.bzh/id7W73Tm>



SWOT CNES Cloud-like platform:

SWOT DATA ACCESS & SERVICES IN A NUTSHELL



DATA ACCESS

- SWOT KaRin and Nadir data (L2, L3 & L4 products)
- Easy access to other data sets
- Catalog requests & download tools...

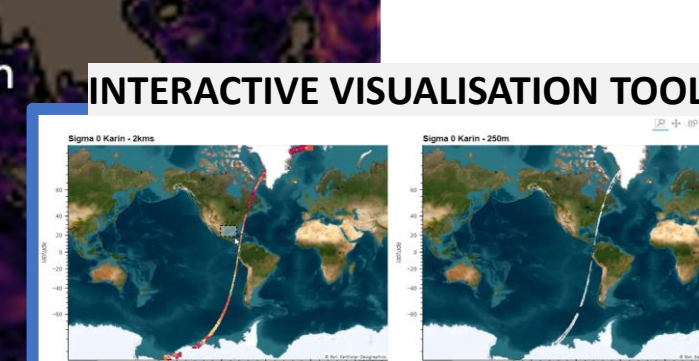
USER SUPPORT

- Use case examples (Jupyter Notebooks)
- SWOT data training
- Help for code optimization
- Helpdesk
- User guides...

ENVIRONMENT

- Research-orientated Python libraries
- SWOT community-driven toolbox (GitHub)
- Free hosting of SWOT Projects

INTERACTIVE VISUALISATION TOOL

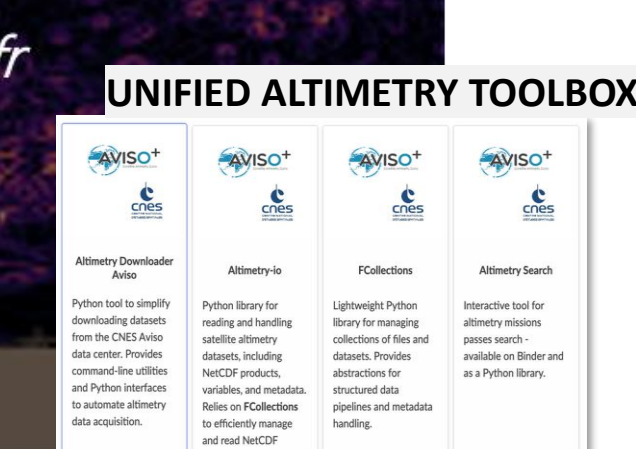


HELPPDESK & TECHNICAL SUPPORT

exp.hysope2@cnes.fr (hydrology)

aviso-swot@altimetry.fr (oceanography)

UNIFIED ALTIMETRY TOOLBOX



Upcoming AVISO products:

- New Level-4 Polar oceans products with MIOST
- New MIOST Internal Tides (DT2024 version)
- New Mean Dynamic Topography (DT2024 version)
- New L2P Sentinel-6 Delay-Doppler Altimetry retracking product
- New S6 LRM climate 5Hz
- CFOSAT SWIM L2P Derived products (v2)
- Ocean Heat Content Change product (v6)
- ALTICAP coastal SLA (L2P) product (v2)

- New SWOT Level-3 KaRIn Unsmoothed v3.0 product
- New SWOT Level-3 Karin Wind-Wave v3.0 product - see poster
- New SWOT coastal product samples

