Report from GDAC -Coriolis

Coriolis Global Data Assembly Centre
November 2022

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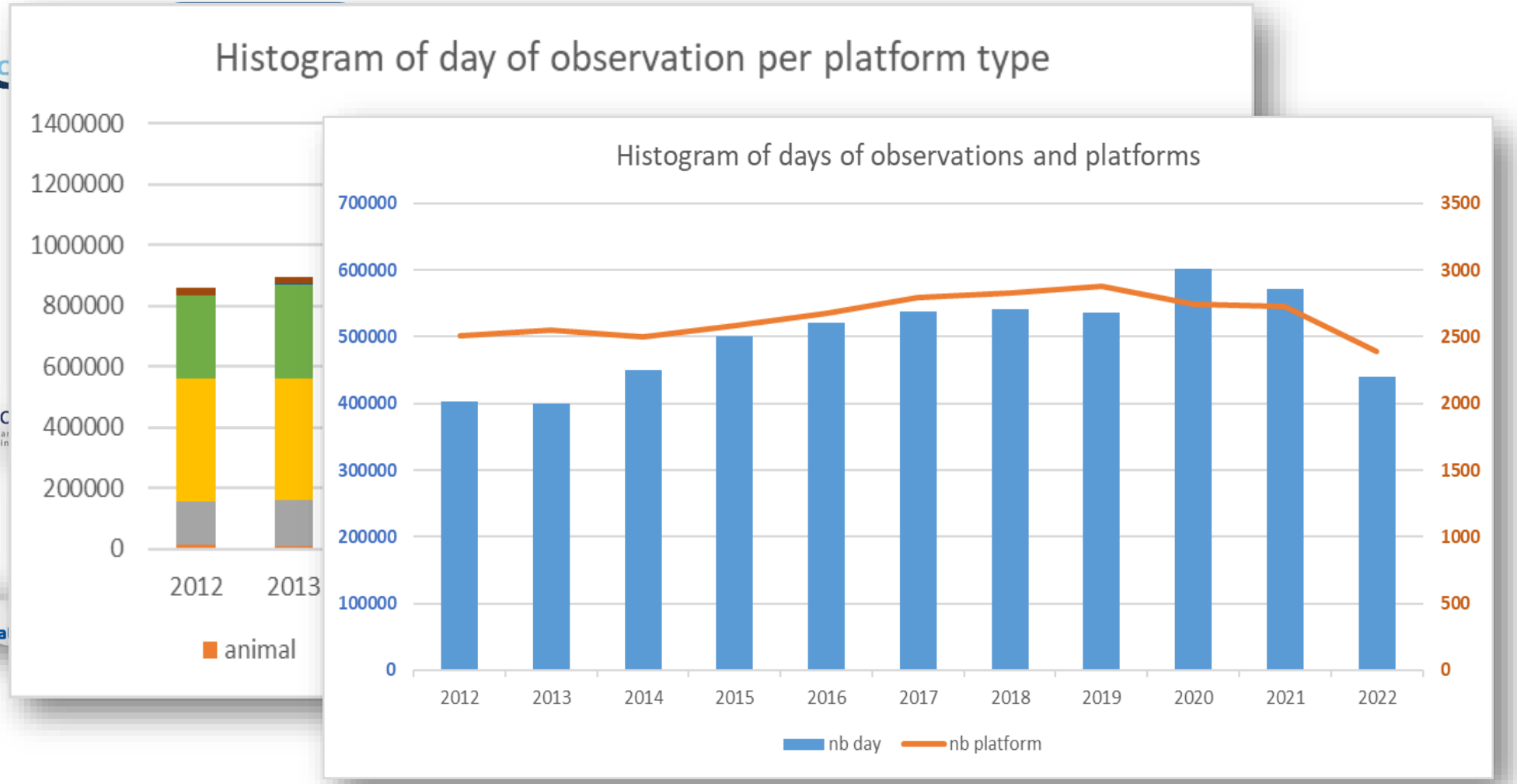
Coriolis GDAC data collation activity

- Buoys data (level 1) are continuously collated, quality controlled, archived from WMO-GTS, US NDBC and LDL ERDDAP, Ocean Canada, AU IMOS, EU Coriolis-Copernicus, …
  - Drifting buoys data
    November 2022 : 25 000 drifting buoys (1 500 active)
  - Fixed buoy data having ocean EOVs
    November 2022 : 23 000 fixed buoys (1 400 active)

Coriolis GDAC data collation activity



GDAC data distribution activity

- The buoys L1 data are distributed on:
  - Coriolis data portal https://dataselection.coriolis.eu.org
  - Copernicus Marine In Situ product https://doi.org/10.48670/moi-00036
  - Copernicus Marine ERDDAP server https://nrt.cmems-du.eu/erddap
- The buoys metadata are available on:
  - OceanOPS https://www.ocean-ops.org/board
  - Coriolis drifting buoys dashboard https://drifter-dashboard.ifremer.fr/dashboard

GDAC data distribution activity

nrt.cmems-du.eu/erddap/tabledap/copernicus_GLO_insitu_nrt_DB.graph

ERDDAP
Easier access to scientific data

Brought to you by CMEMS

ERDDAP > tabledap > Make A Graph

Dataset Title: **Copernicus insitu multiparameter NRT INSITU_GLO_NRT_OBSERVATIONS_013_030 : drifting buoys**

Institution: CMEMS In Situ Dissemination Unit (Dataset ID: copernicus_GLO_insitu_nrt_DB)
Range: longitude = -179.9998 to 180.0°E, latitude = -72.54341 to 89.99495°N, time = 2022-10-01T00:00:00Z to 2022-11-01T18:15:00Z
Information: Summary | License | FGDC | ISO 19115 | Metadata | Background | Subset | Data Access Form

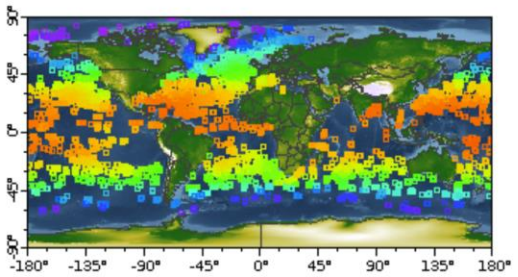
Graph Type: markers
X Axis: longitude
Y Axis: latitude
Color: TEMP

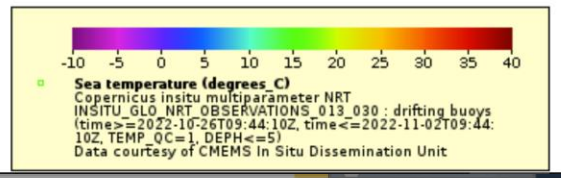
Constraints	Optional Constraint #1		Optional Constraint #2	
time	>=	2022-10-26T09:44:10Z	<=	2022-11-02T09:44:10Z
TEMP_QC	=	1	<=	
DEPH	>=		<=	5
	>=		<=	
	>=		<=	

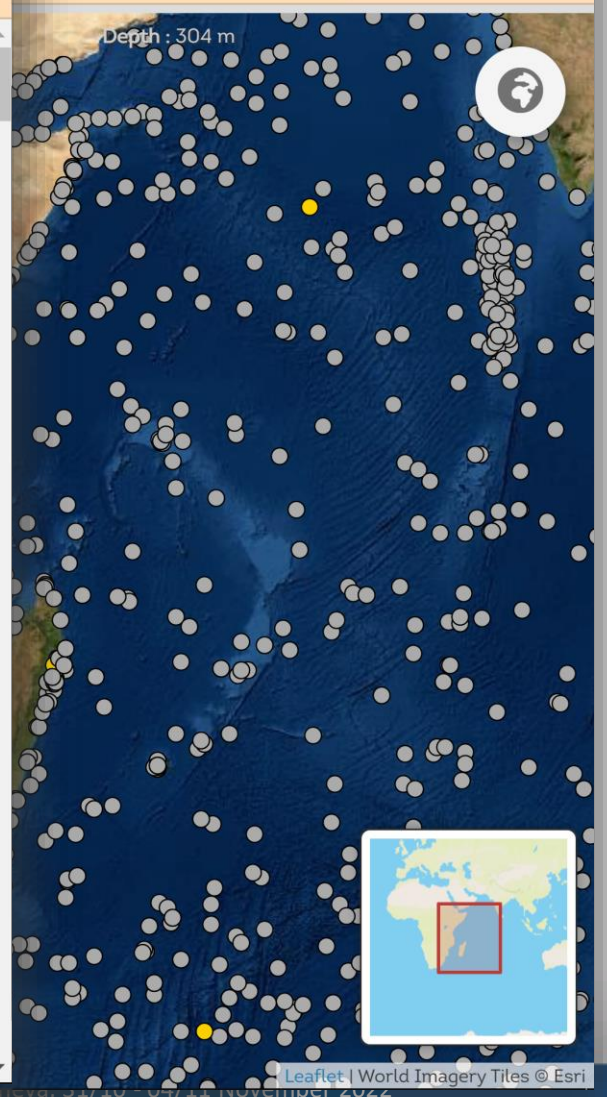
Server-side Functions
distinct()

Graph Settings
Marker Type: Square Size: 3

Click on the map to specify a new center point.
Zoom: Out 8x | Out 2x | Out | Data | In | In 2x | In 8x
Time range: 7 day(s)



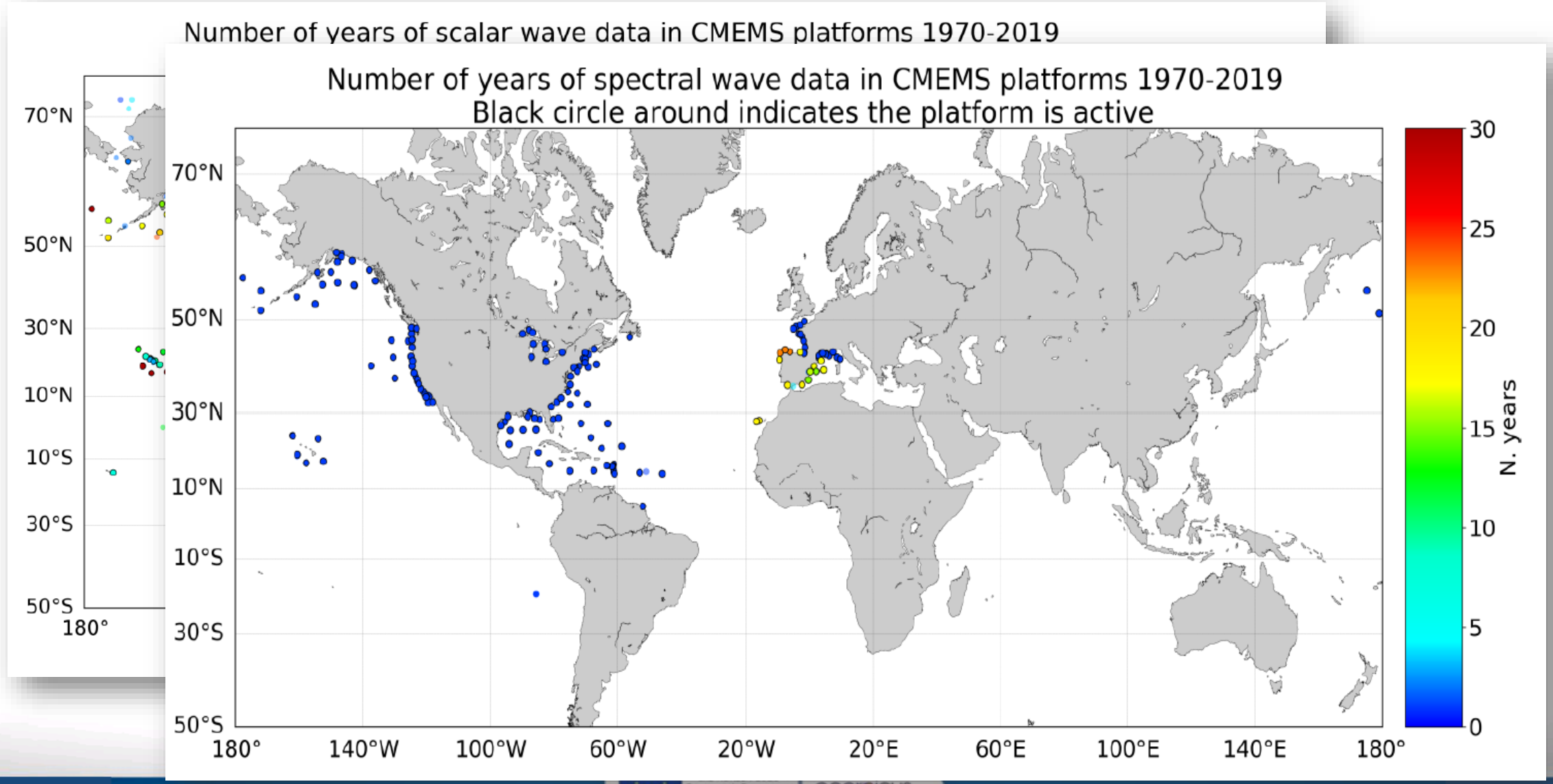




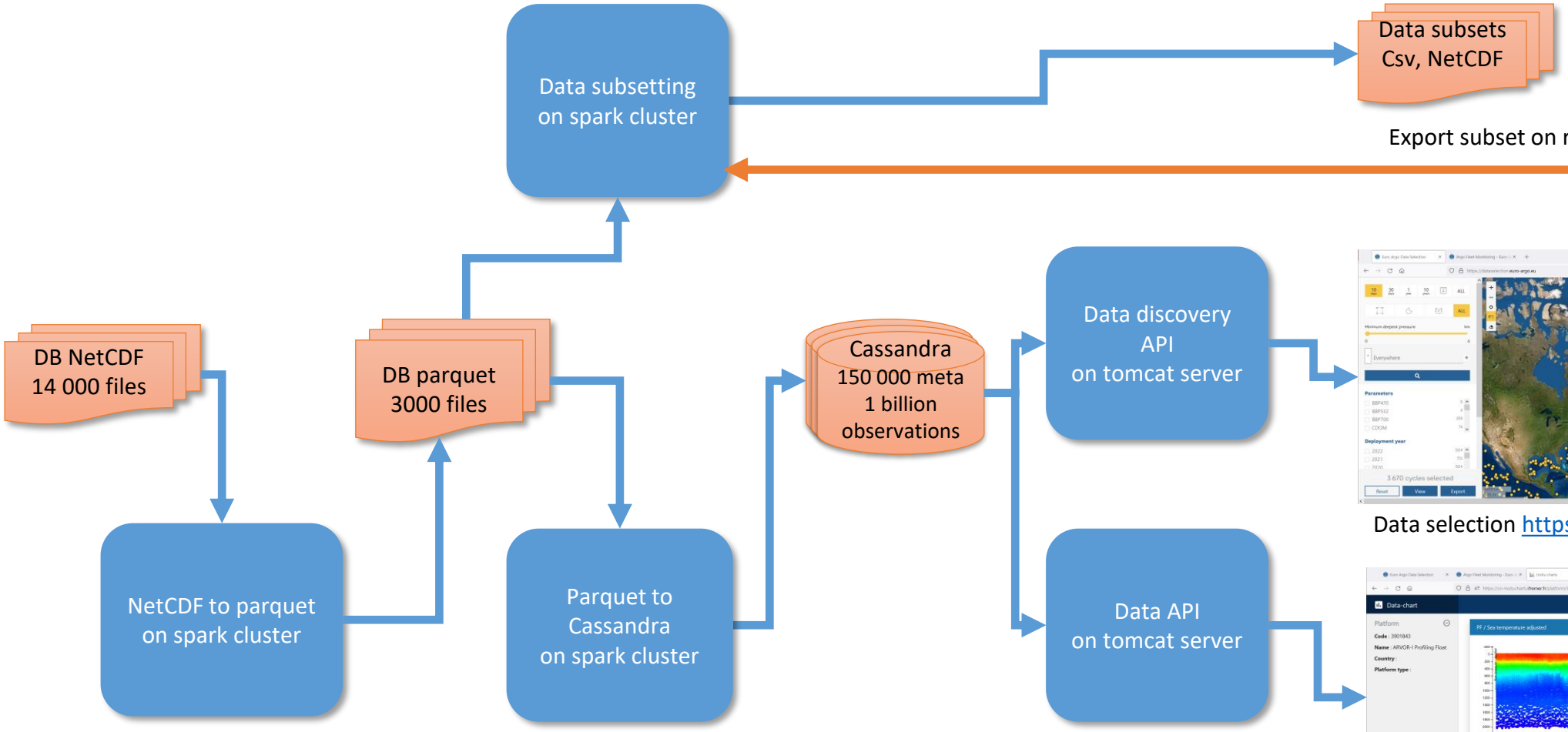
Copernicus Marine buoys products

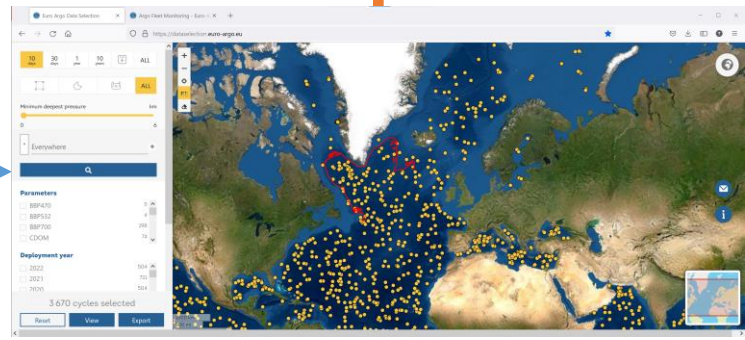
- Wave data
  - Real-time and delayed mode wave data are collated from EU Coriolis DAC, US NDBC, IOOS and LDL ERDDAP, Australia IMOS, Oceans Canada, … https://doi.org/10.48670/moi-00036
  - Twice a year all data are scientifically quality controled and published on Copernicus Marine In Situ https://doi.org/10.17882/70345

Copernicus Marine buoys products

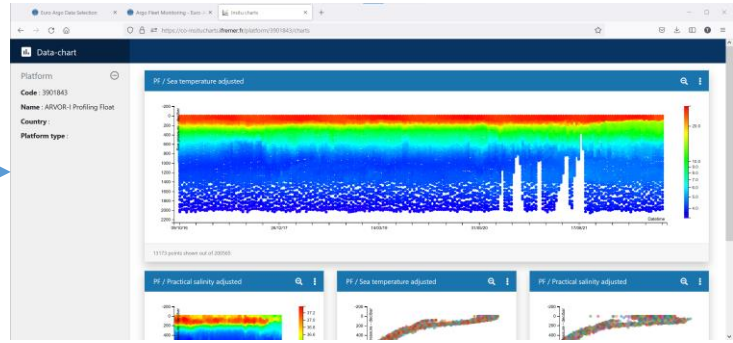


DB-GDAC and Copernicus **data** lake
A combination of NetCDF – Parquet – Cassandra - Elasticsearch





Data selection https://dataselection.coriolis.eu.org



Data charts https://co-insitucharts.ifremer.fr/platform/3901843/charts

Apache Airflow elastic cassandra Parquet Grafana

Coriolis data discovery geoviz

Promissing activity on interactive mapping on big spatial data

https://gitlab.ifremer.fr/coriolis/developpement/geoviz