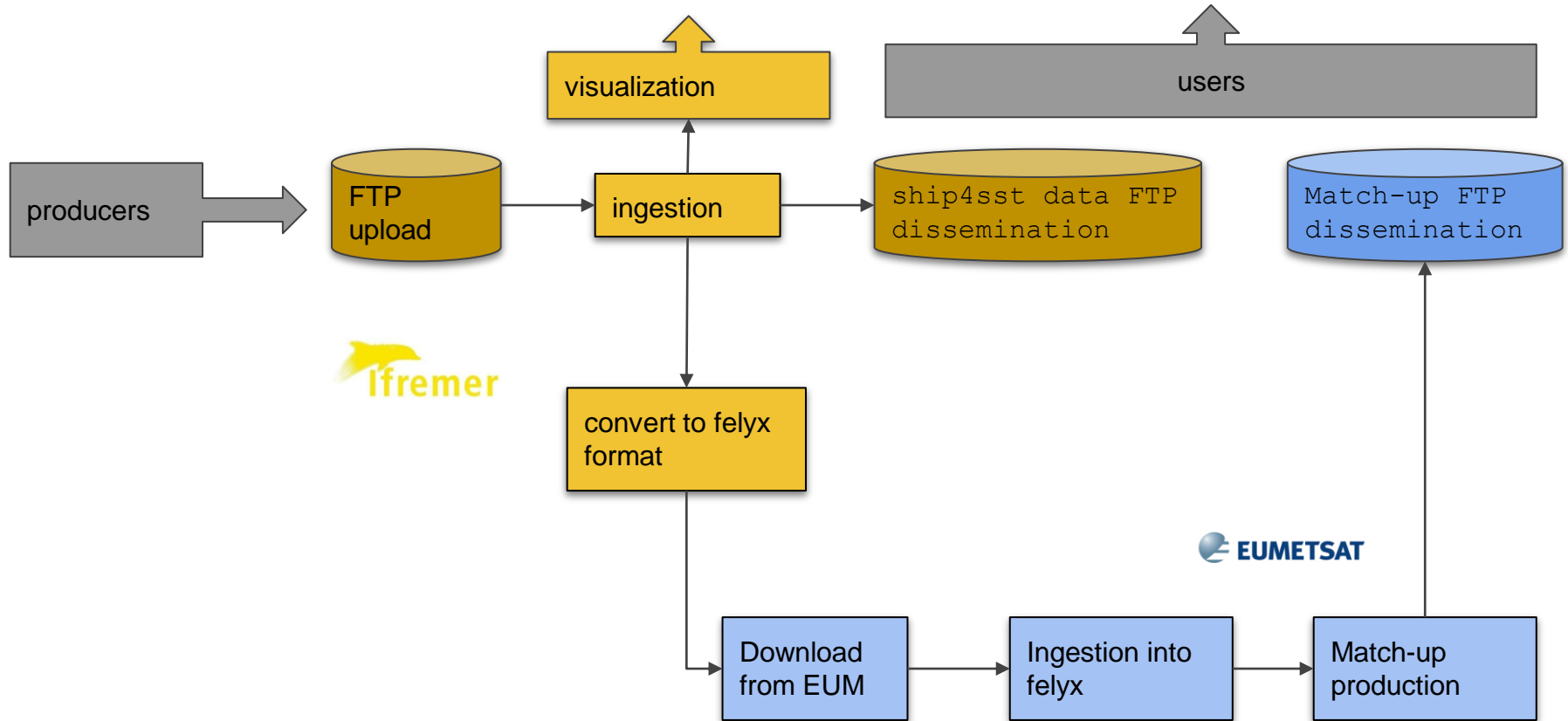


# Processing of ships4sst data

From acquisition to match-ups

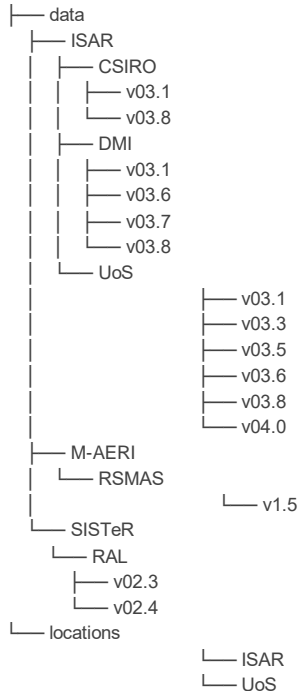
Jean-François Piollé (Ifremer), Werenfrid Wimmer (NOC), Igor Tomazic  
(Eumetsat)

# Data and execution flow



# Data access

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**eftp.ifremer.fr** (get login/password from project)

Organized by instrument type / provider / version

Data automatically updated from ingestion area (where providers push their data)

Some cruises may exist in different versions (for now full archive is preserved)

Locations intended for NRT positions (and MDB production)

# Data visualization

<https://syntool-ship4sst.ifremer.fr>

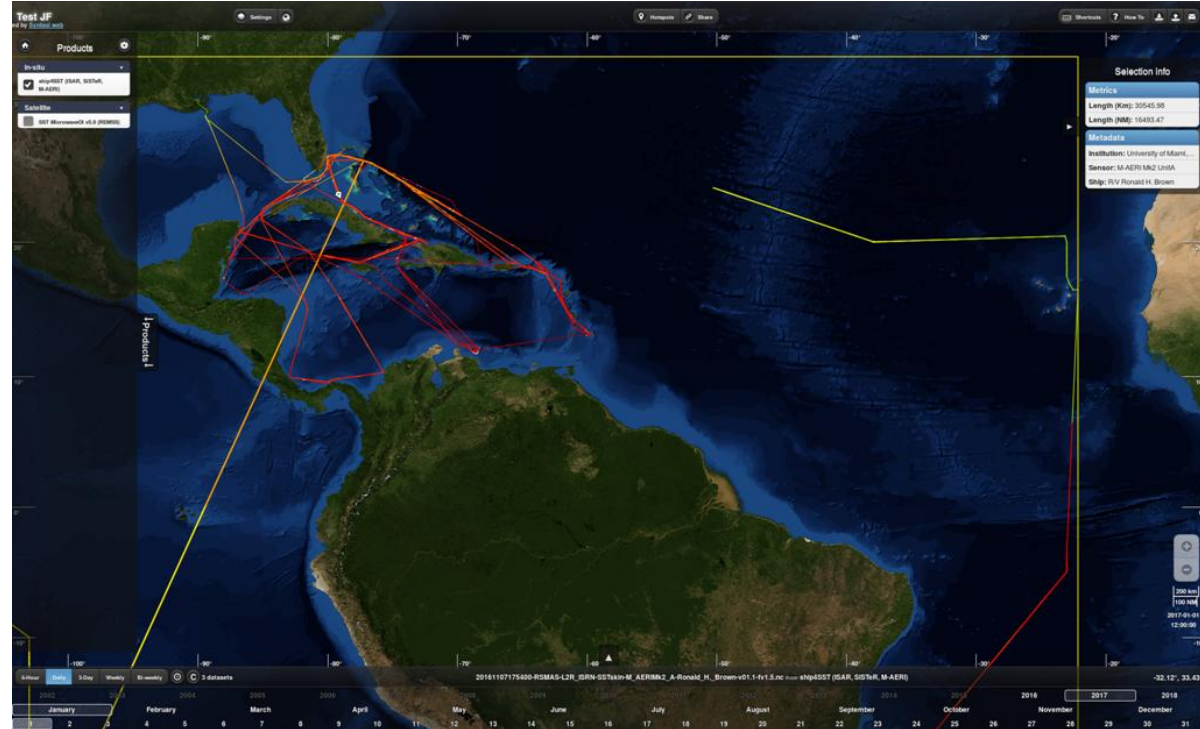
Cruise location, identification searchable  
day by day

SST display (other parameters can be  
added)

Background SST map (AMSR)

Better filtering of wrong location and day  
separation TBD

Automation TBD



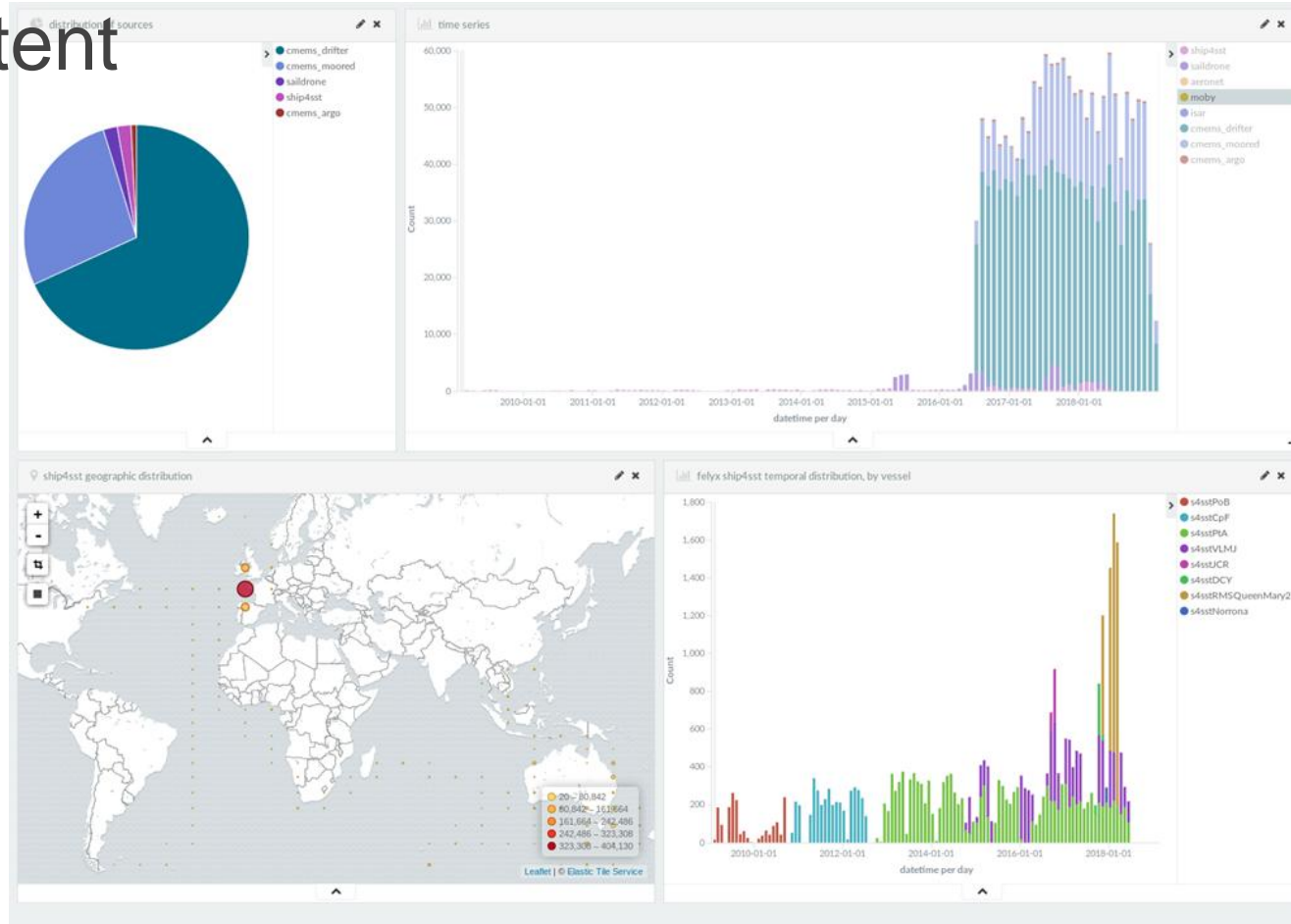
# Database content

From felyx ES

Span over almost 10 years

Up to 1700 measurements per month

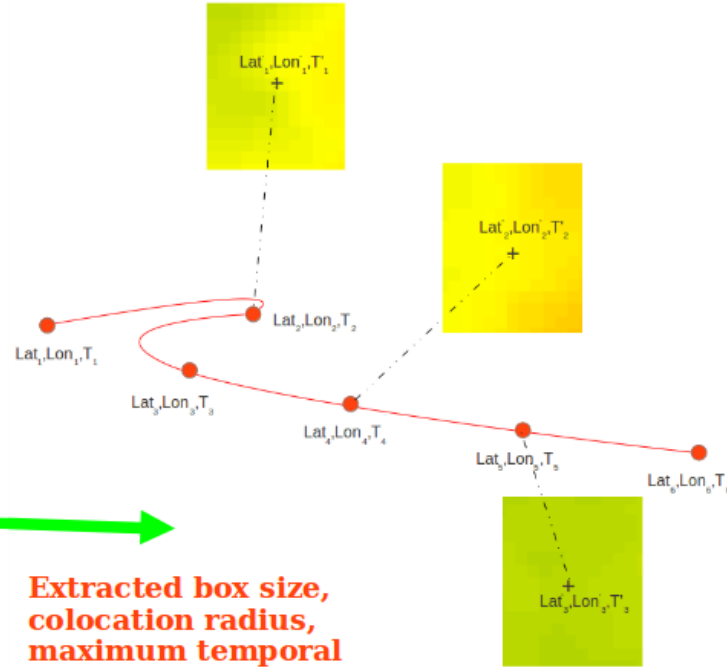
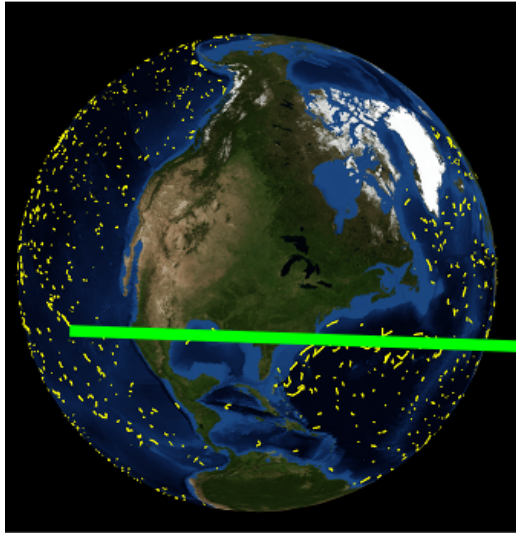
Missing latest M-AERI delivery



# Felyx principle for match-up production

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trajectory files ingested through  
import web service (CSV file)



Extracted box size,  
colocation radius,  
maximum temporal  
difference can be  
adjusted for each  
dataset

Systematic data subset extraction  
over predefined sites.

Dynamic sites are used here  
(varying lat/lon with time).

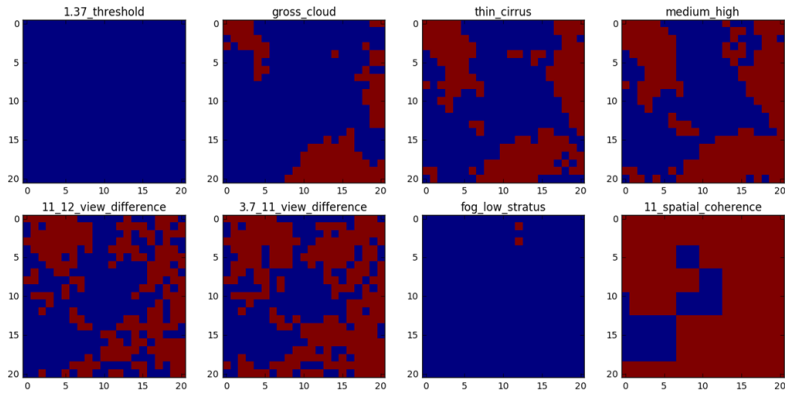
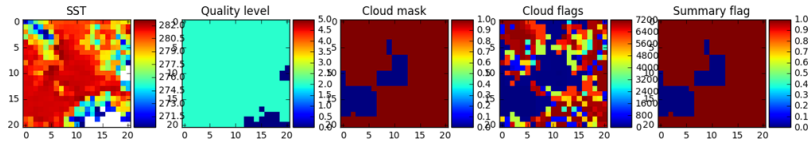
sites may be trajectories (buoys,  
cruise, hurricane)

subsets are centred on the  
closest in time trajectory locations

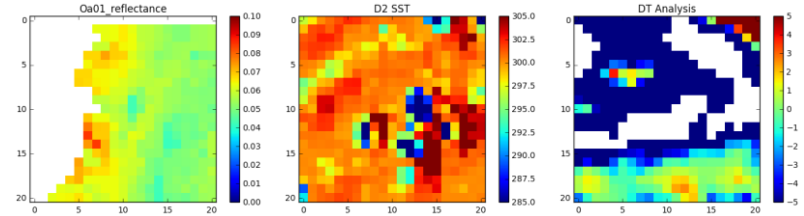
Subset is a 400x400 (pixel size)  
box

# Match-up content

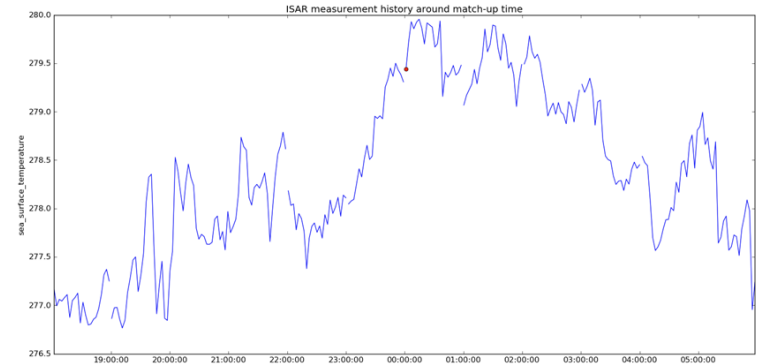
All fields from source products (ex: WST, full extracted subset)



Additional fields from cross\_overs (ex: Metop), external products and newly computed fields from MDB content)



12-hour in situ buoy history centered on match-up



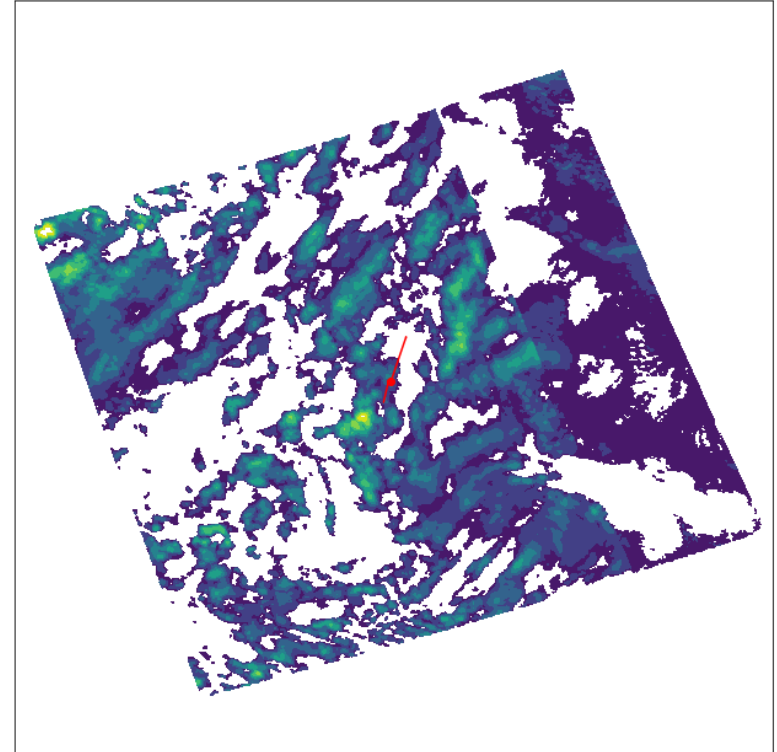
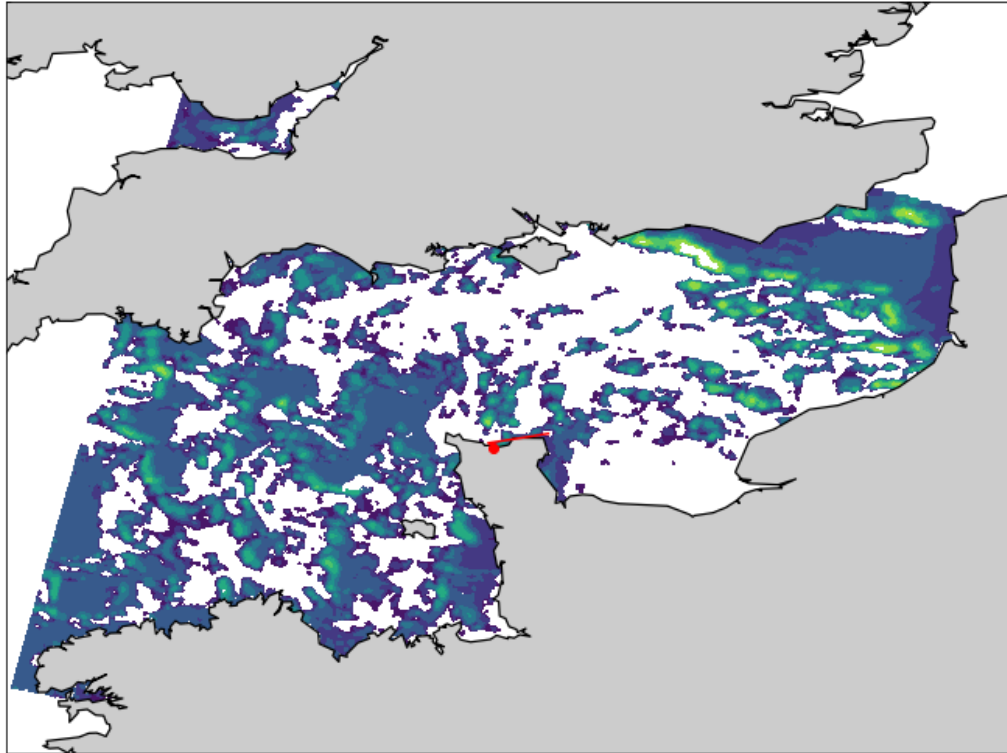
# SLSTR-ship4sst match-up production

— — —

- Has been produced over the latest reprocessed S3A SLSTR archive : Aug 2016 to March 2018
  - Part of full MDB reprocessing (incl. Drifters, argo, moored buoys and saildrone exp. data)
  - WST (GHR SST L2P) product, WCT info added offline in complementary match-up file
  - 400x400 box, 12h radiometer data centered on closest pixel in time
  - Will be completed with full L2 and L1
- 
- Some new ship4sst data have been received since (RSMAS)
  - Selective processing of SLSTR granules over cruise areas possible to extend the MDB dataset while minimizing the reprocessing cost
- 
- Daily matchup files available on Eumetsat FTP (to S3VT team members)



# Match-up / cruise cross-section



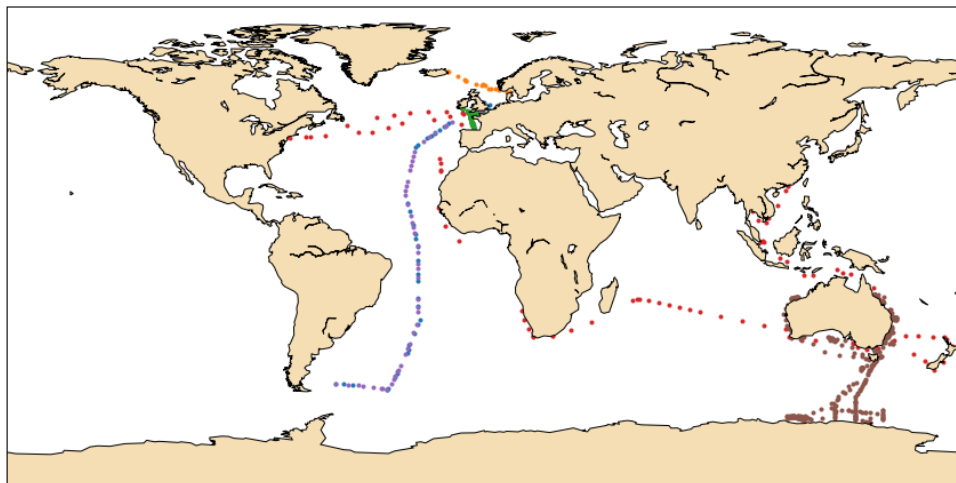
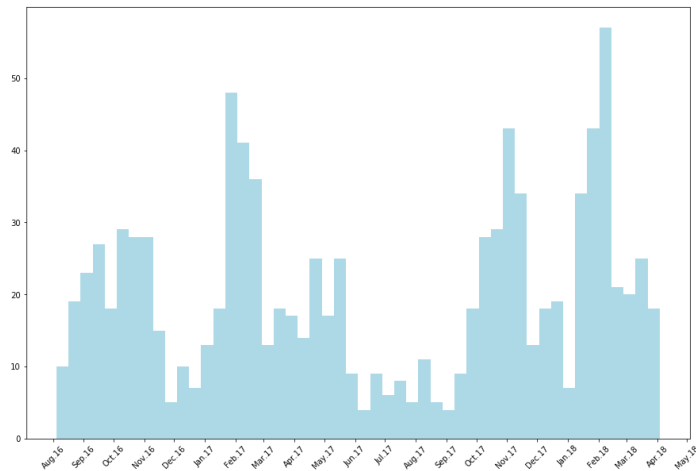
# Current ship4sst match-up distribution

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About 6 callsigns registered in felyx

About **~1000** matchups in total

Additional cruises have been received  
since - reprocessing using these new  
cruises is TBD.

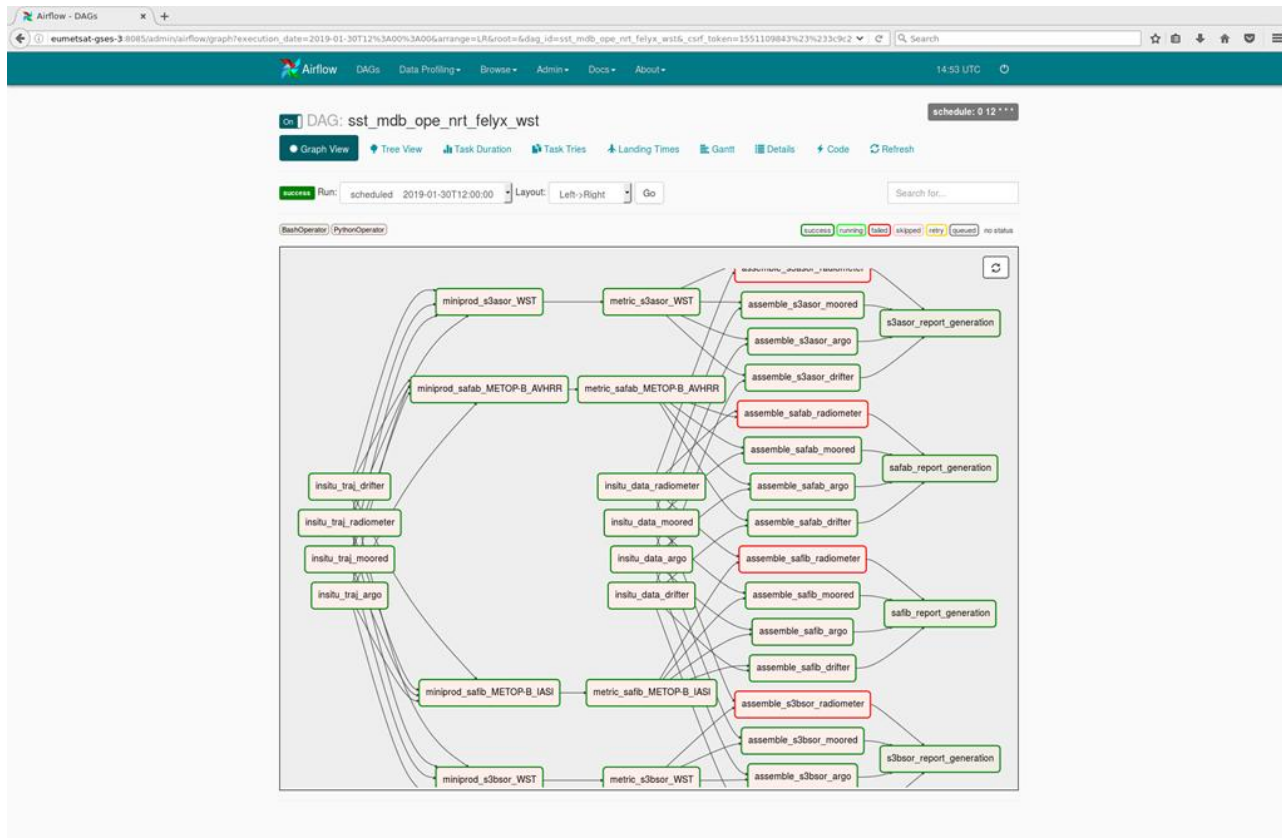


# Match-ups production workflow - plans for NRT (1)

Current workflow for S3A & S3B at Eumetsat (WST, should include back WCT & L1 RBT)

Incl. METOB AVHRR & IASI too

Matchups produced at +6 days



# Match-ups production workflow - constraints for NRT (2)

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NRT production requires timeliness

Possible mitigation is to use measurement times and locations provided in NRT and consolidated radiometer data will be added later without the need to reprocess the match-ups

Delayed mode production will still be required