DMIs use of NPP-VIIRS SST data from ASCPO

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Scope

- Talk will focus upon Level 4 SST products:
  - North Sea-Baltic Sea
  - Global
- And show the inclusion of the VIIRS_NPP product

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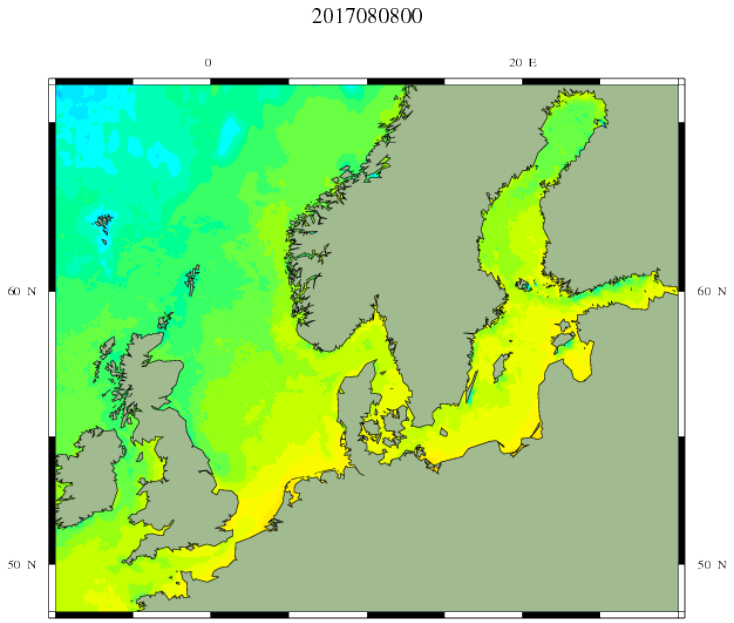
DMI_OI for the North Sea and Baltic Sea

- Part of the Copernicus Marine Environmental Monitoring Service (CMEMS) OSI-TAC project
- Daily operational rproduct
- Spatial resolution of 0.02 degrees
- Uses North Sea-Baltic Sea area
- Ingests NPP-VIIRS data in 0.02 degrees
- Used operationally in the DMI ocean and atmosphere models for the Danish Seas
- Available at:
  - CMEMS web site (*marine.copernicus.eu/*)
  - PoDAAC (podaac.jpl.nasa.gov/)



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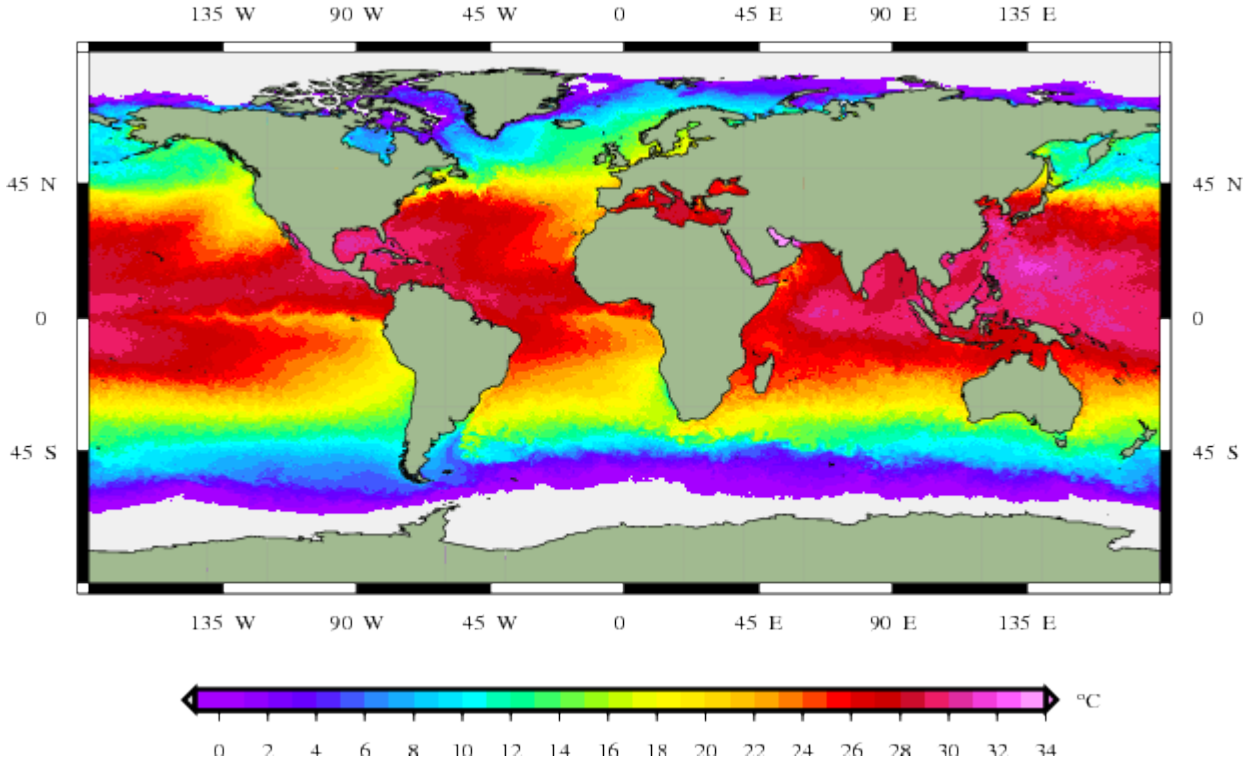
Global DMI_OI product

- Daily operational product
- Spatial resolution: 0.05 degrees lat and lon
- Part of the new GMPE product
- Included in Squam
- Used for DMIs Arctic Ocean and Atmosphere models.
- Available at:
  - PoDAAC (podaac.jpl.nasa.gov/)



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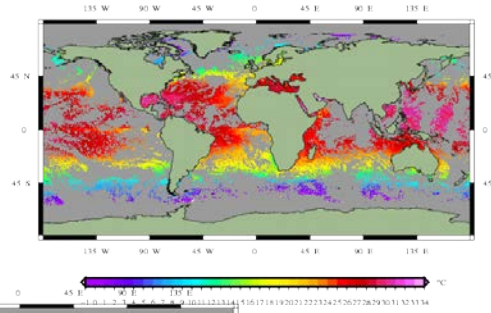
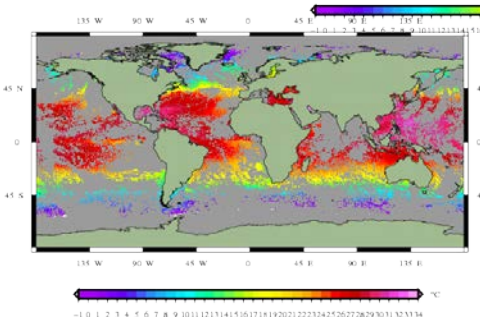
Satellite data included in the DMI_OI

Level 2 and 3 operational SST products included in the DMI_OI

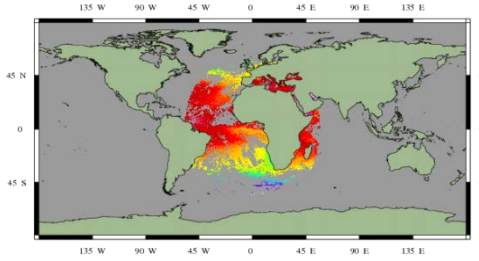
- From PODAAC:
  - VIIRS_NPP-OSPO-L3U-v2.4
  - AVHRR19_G-NAVO-L2P-v1.0
  - AVHRR19_L-NAVO-L2P-v1.0
- From OSI-SAF:
  - OSI-203 Operational AVHRR, NOAA/AVHRR L3
  - OSI-204-b Operational Metop-B/AVHRR L2P
  - OSI-206 Operational MSG/SEVIRI L3C
  - OSI-207 Operational GOES-E/IMAGER L3C
  - **Sea Ice:** OSI-401-b Operational DMSP/SSMIS L3
- From Jaxa:
  - Jaxa AMSR2 SST

VIIRS_NPP

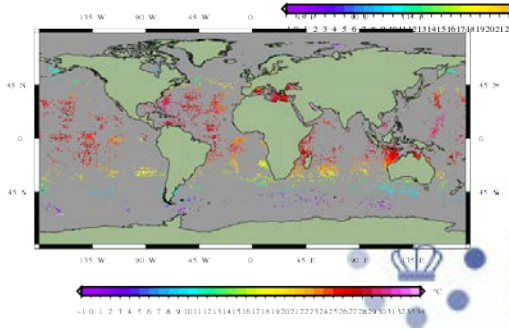




Metop-B



MSG



AVHRR GAC

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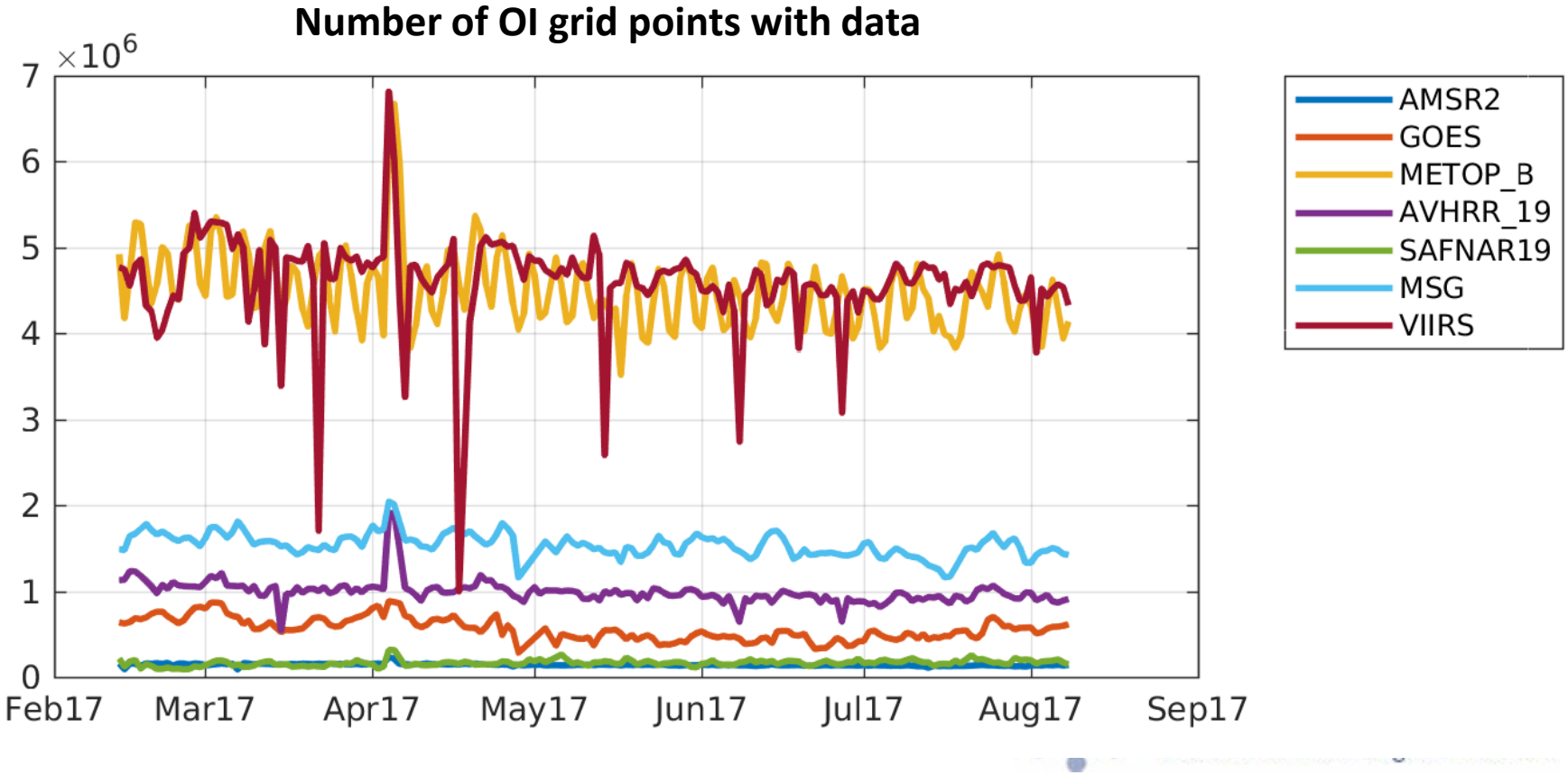
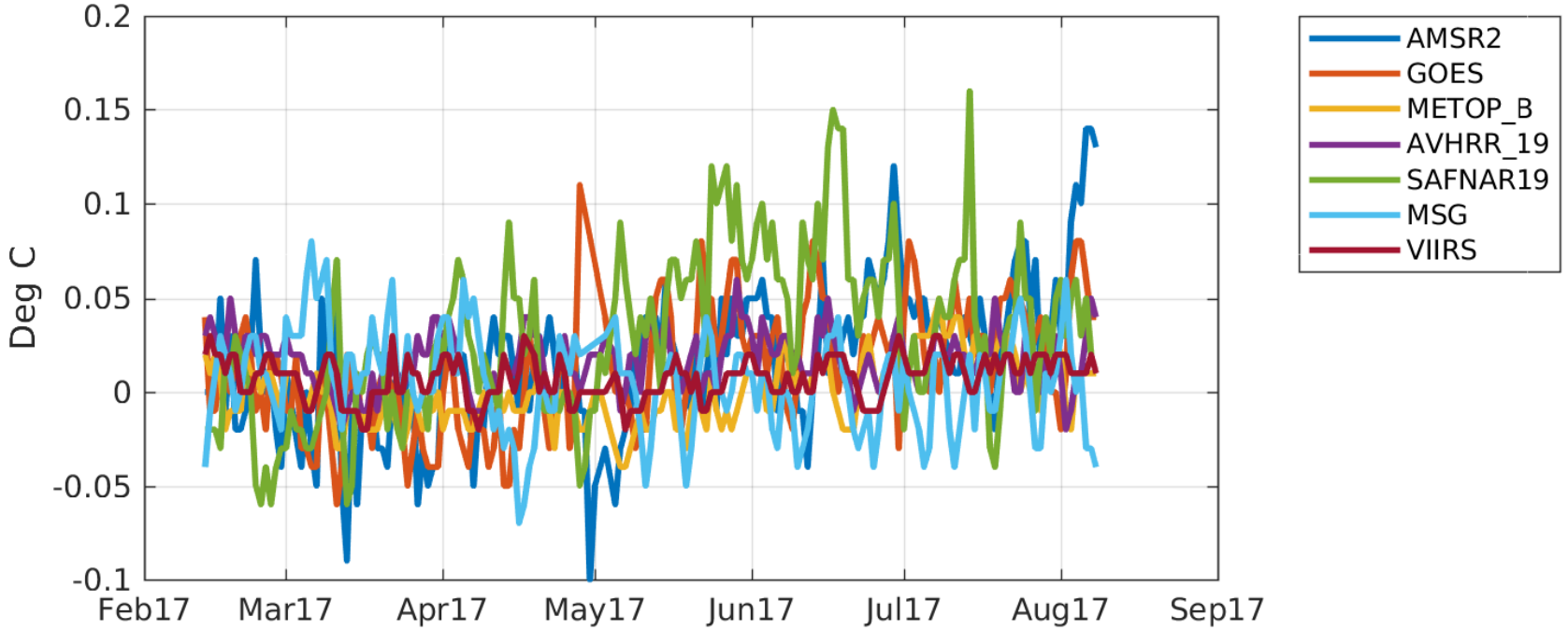
L2 SST aggregation, number of data

- Temporal window of +-24 hours from analysis
- VIIRS_NPP product with largest data amount



Mean difference to first guess

- Global statistics of aggregated L3 products against first guess field (previous day analysis)
- Mean VIIRS_NPP difference with respect first guess field is small.



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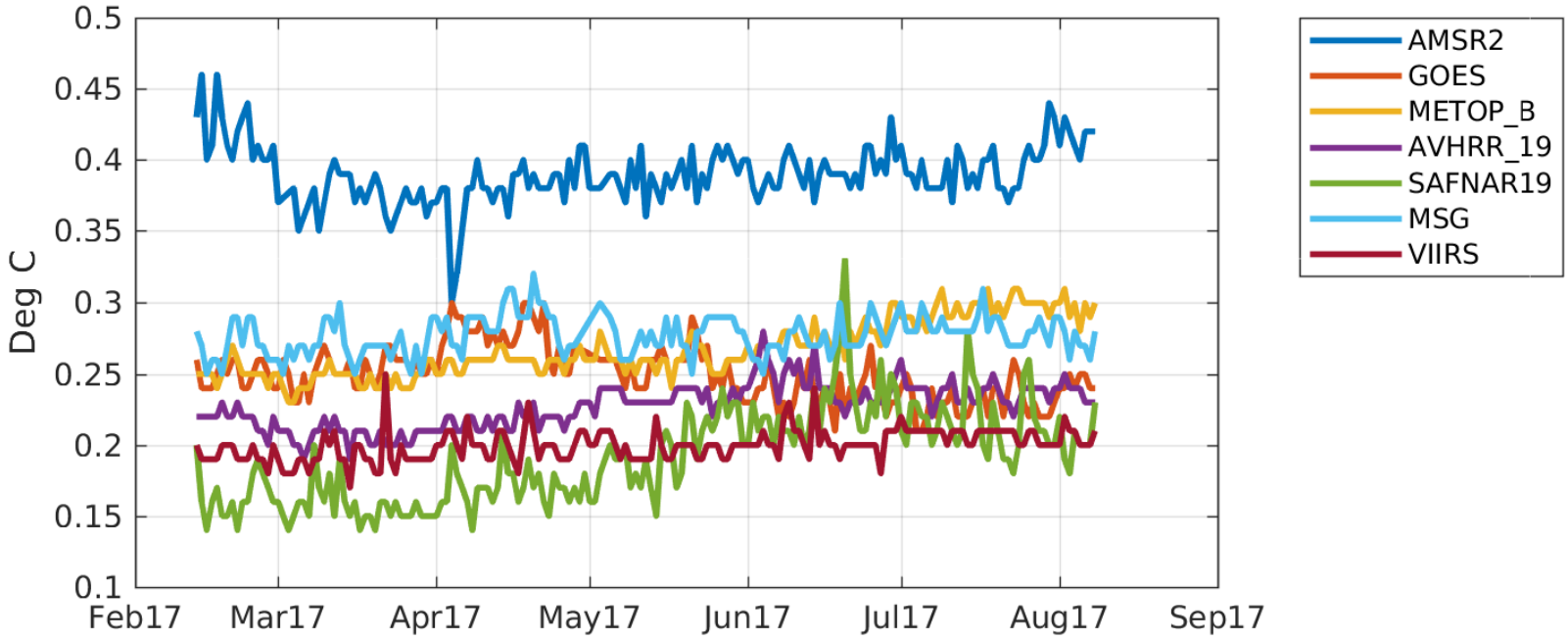
Std dev of anomalies wrt first guess

- Same as previous slide, but with stddev
- VIIRS_NPP among the products with low stddev and stable performance



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Conclusion

- We are very happy with the timeliness and accuracy of the S-NPP VIIRS product
- Data coverage of Viirs data is very high
- Compared with first guess fields, the VIIRS_NPP show good accuracy and stable performance
- VIIRS-NPP product very important for the global performance of the level 4 DMI_OI

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Thanks and keep up the good work !

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