



Updates of the SSALTO DUACS Near Real Time system: Focus on short latency data products



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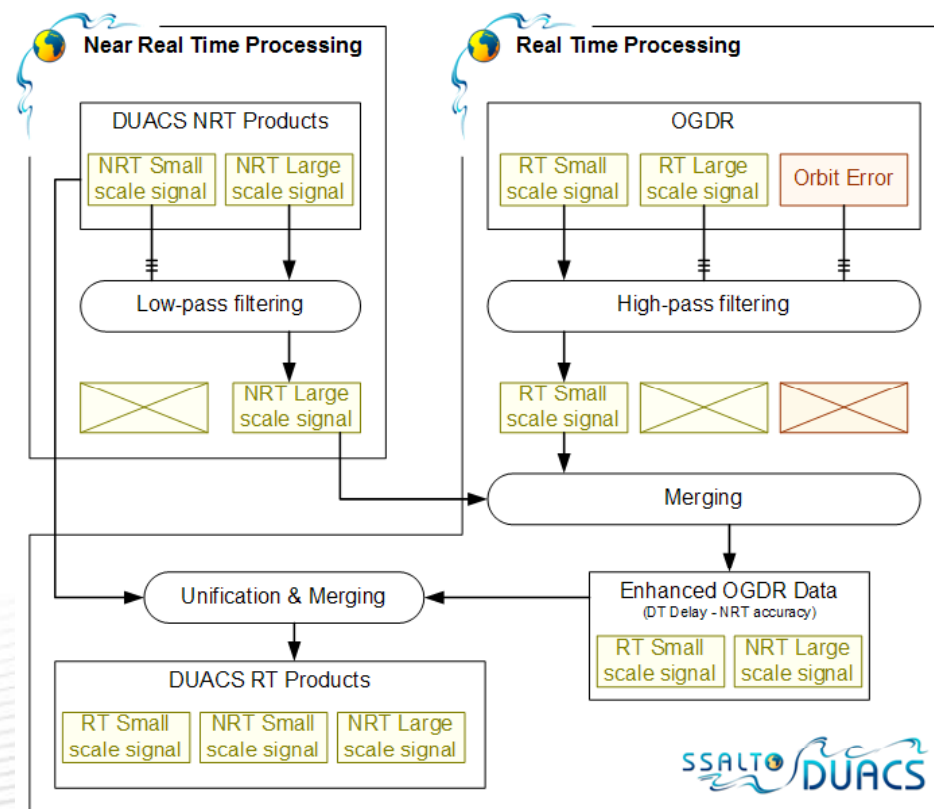


OSTST San Diego, October 2011



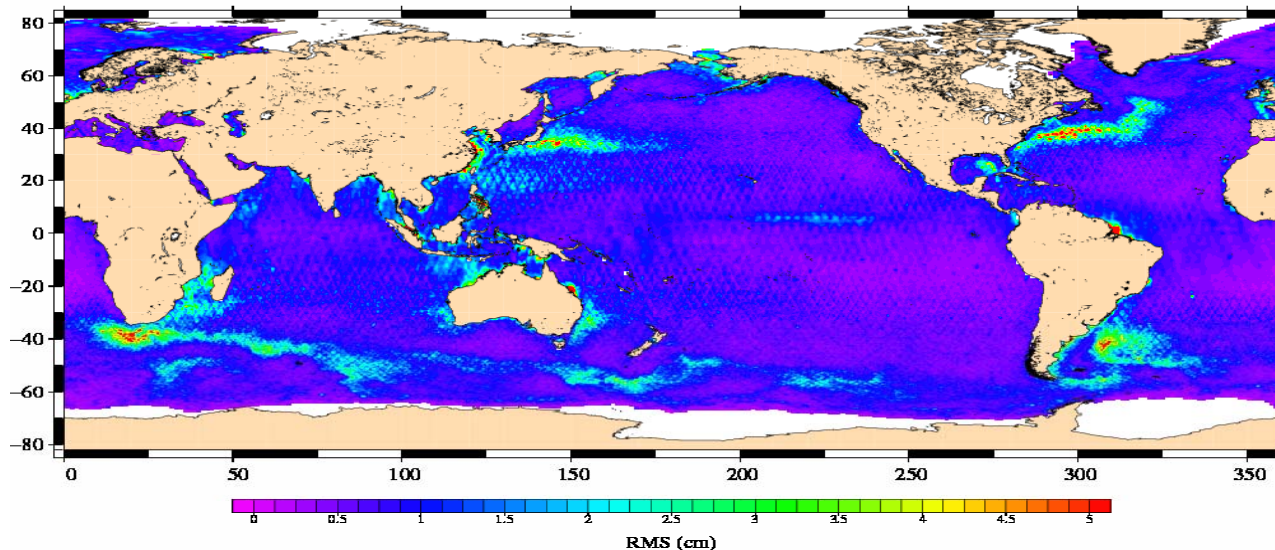
Near Real Time products in SSALTO DUACS system

- Since 1997, SSALTO DUACS system provides Level 3 **IGDR data** on a daily basis
- Since 2007, SSALTO DUACS system provides Level 3 **IGDR and OGDR data** on a daily basis
- Since Sept 2011, SSALTO DUACS system provides Level 3 **IGDR and 'on the fly' OGDR data** on a daily basis
- Near Real Time products are generated for Jason-1, Jason-2 and Envisat missions
 - Global products
 - Regional products



Improvement added by OGDR data

RMS of the differences between traditional NRT SLA (IGDR only) and combined NRT+RT SLA (IGDR+OGDR) for 2 satellites
DUACS MSLA (NRT-RT) [July 2007, July 2008]



Nb of data :	458213	St. Dev :	0.58941	Skewness :	5.98170	Minimum :	0.03240
Mean :	0.85422	Rms :	1.03783	Kurtosis :	133.24752	Maximum :	20.86196

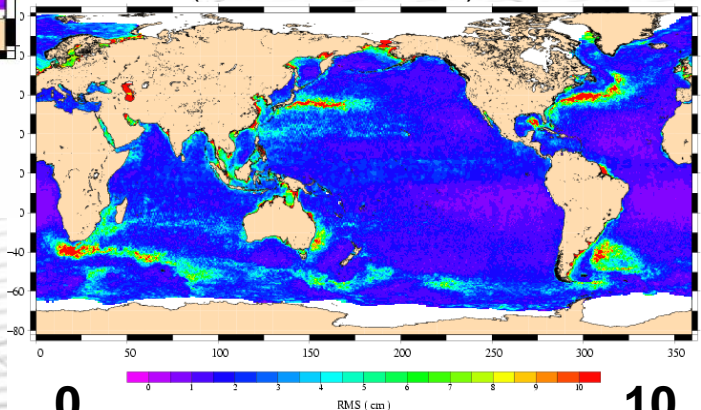
0 Restored with OGDRs 5 cm

- RMS of the differences between classical IGDR-based and experimental IGDR+OGDR-based products is equal to ~40% of the difference between offline (DT) and NRT products

- Variability “lost” in NRT is partially restored with OGDRs

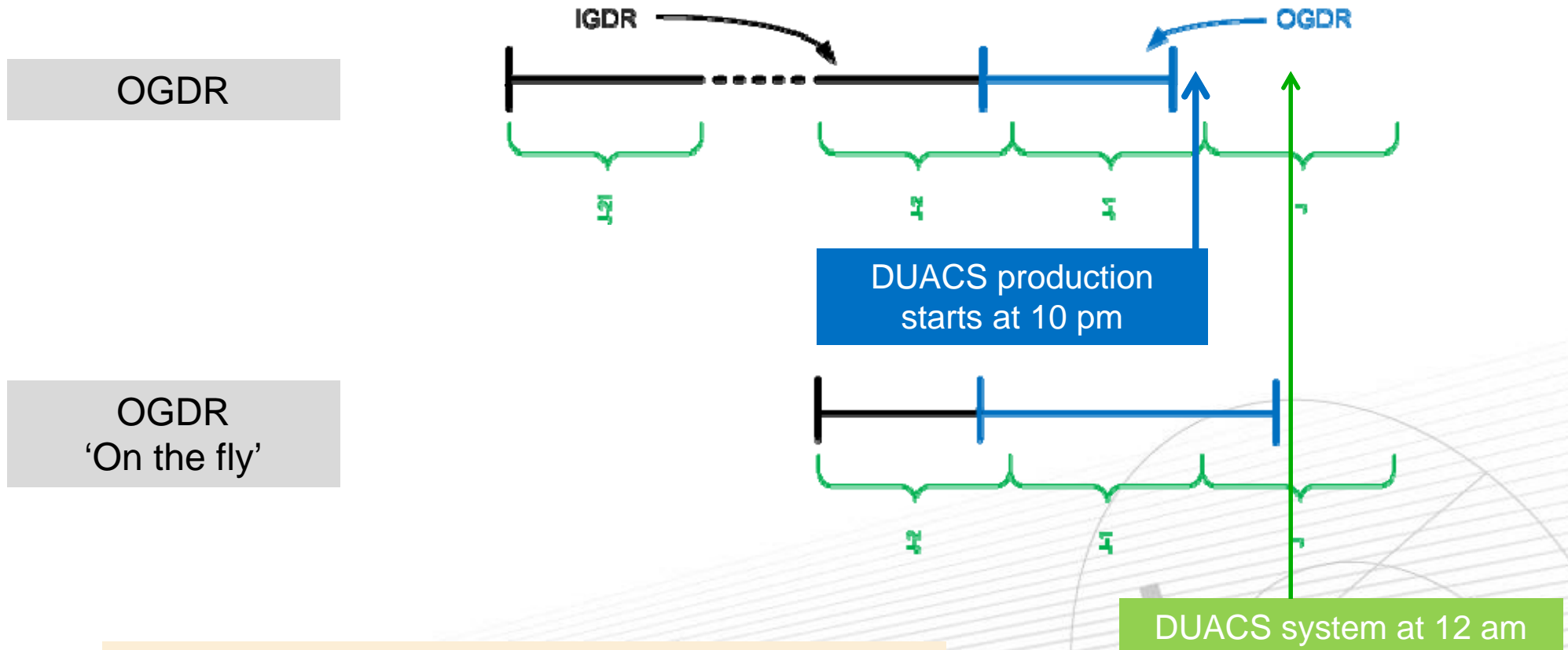
- OGDR data have a significant impact on areas with important spatial & temporal variability

RMS of the differences between NRT and DT SLA (Pascual & al, 2008)



0 cm Lost in NRT 10 cm

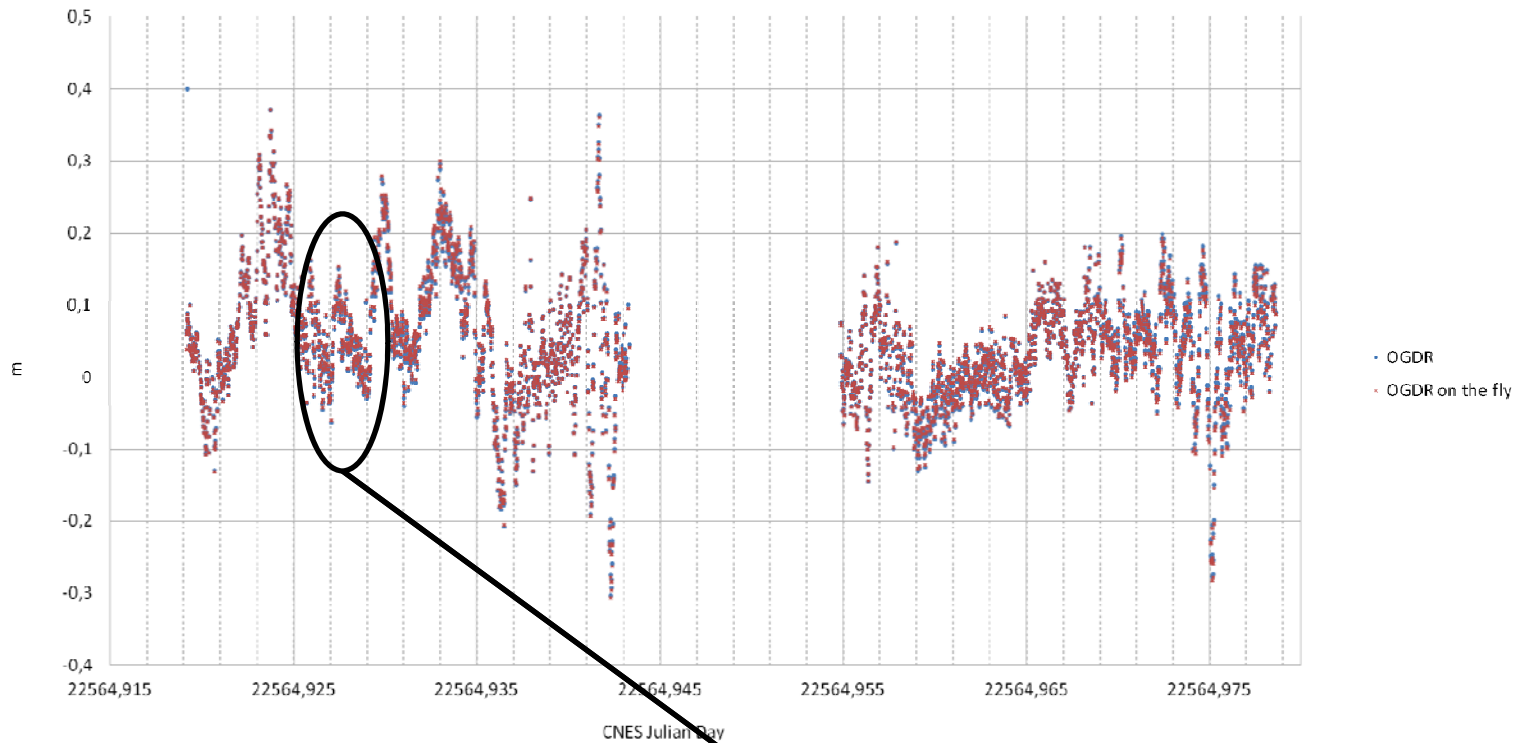
From OGDR to 'OGDR on the fly'



Timeliness reduced to 4 h for all the flows compared to 27 h

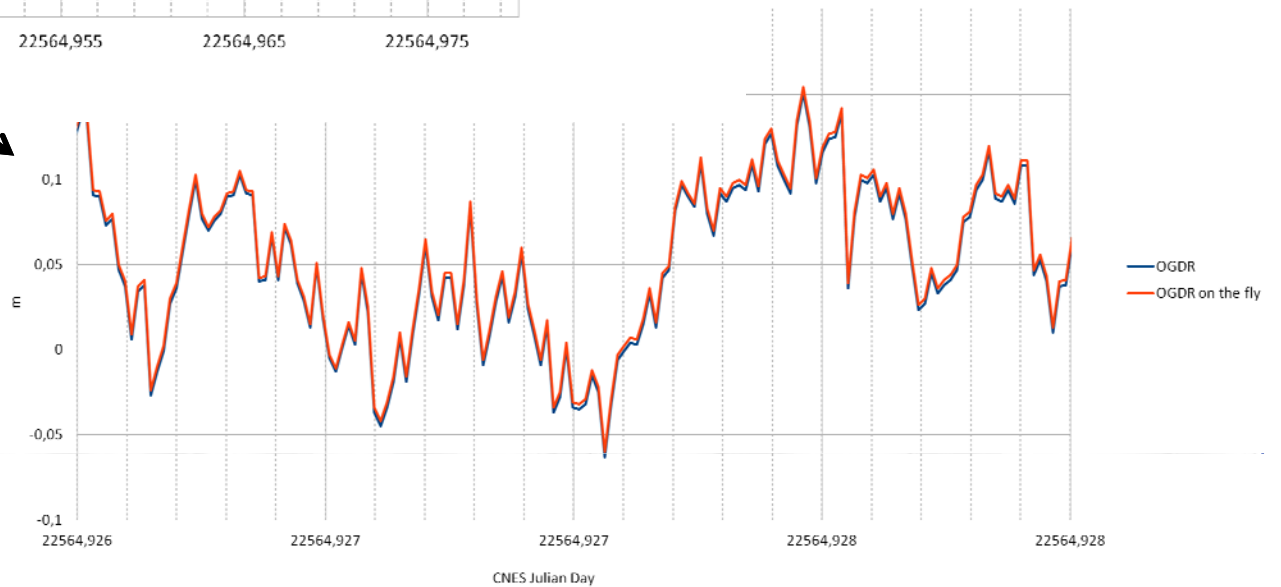
'OGDR on the fly' accuracy

SLA Envisat Extension Phase



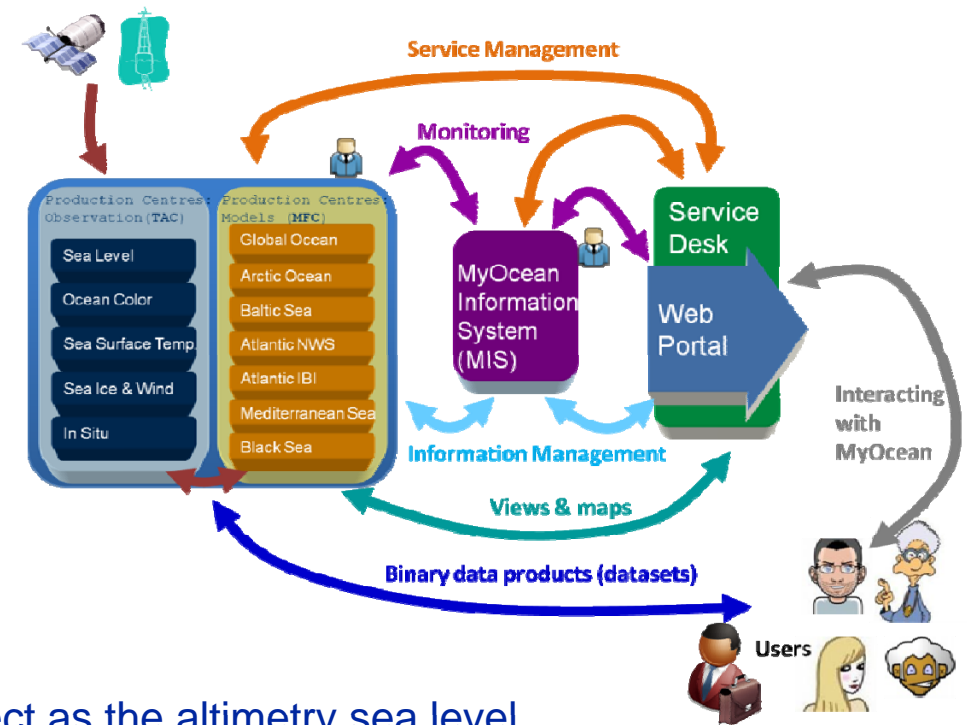
Mean < 1 mm
Std = 3 mm

Same accuracy than the
24 h OGDR processing



Who can be interested in using 'OGDR on the fly' ?

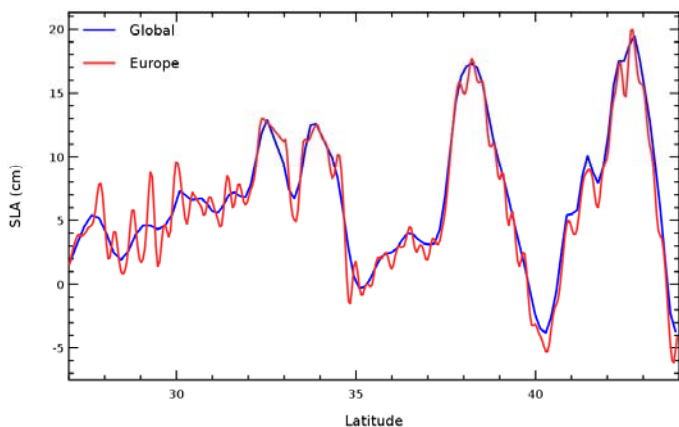
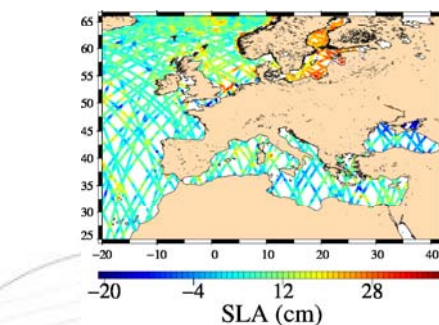
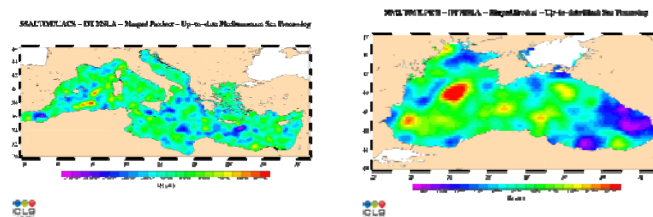
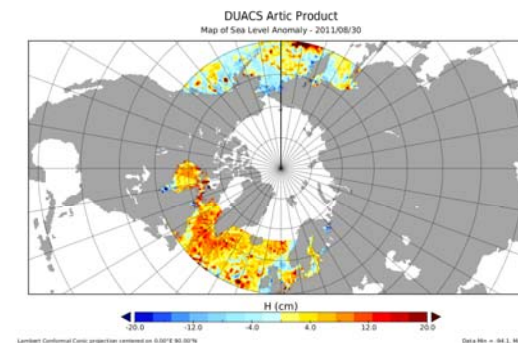
- OGDR 'on the fly' serve operational needs of oceanography modeling centers
- OGDR 'on the fly' will allow
 - Continuous data flow
 - Reception of altimetry data whenever the most suitable for the modeling center and not necessarily at midnight (end of DUACS production)



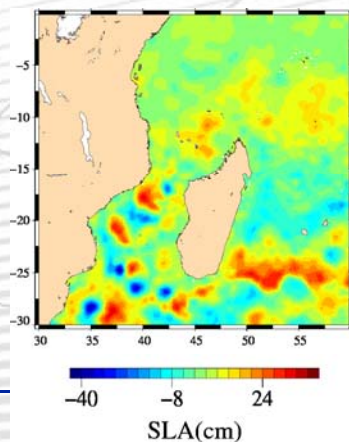
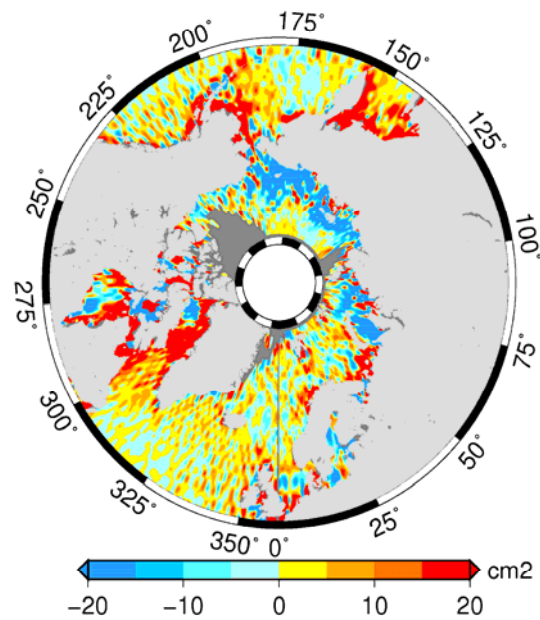
- SSALTO DUACS system is part of MyOcean project as the altimetry sea level data provider (Sea Level TAC)
- The L3 Near Real Time products are used by several modeling Centres (MFC)
 - Global models
 - Regional models as Mediterranean and Black Sea
 - New products coming soon (December 2011) cover Arctic Ocean and Europe area

Improvement Level 3 along track products

- Better serve the need for accurate along track operational products for modeling centers
- Towards L3 regional products
- Improvement of regional products
 - Towards higher resolution
 - Specific ocean tide models
 - Improving data coverage

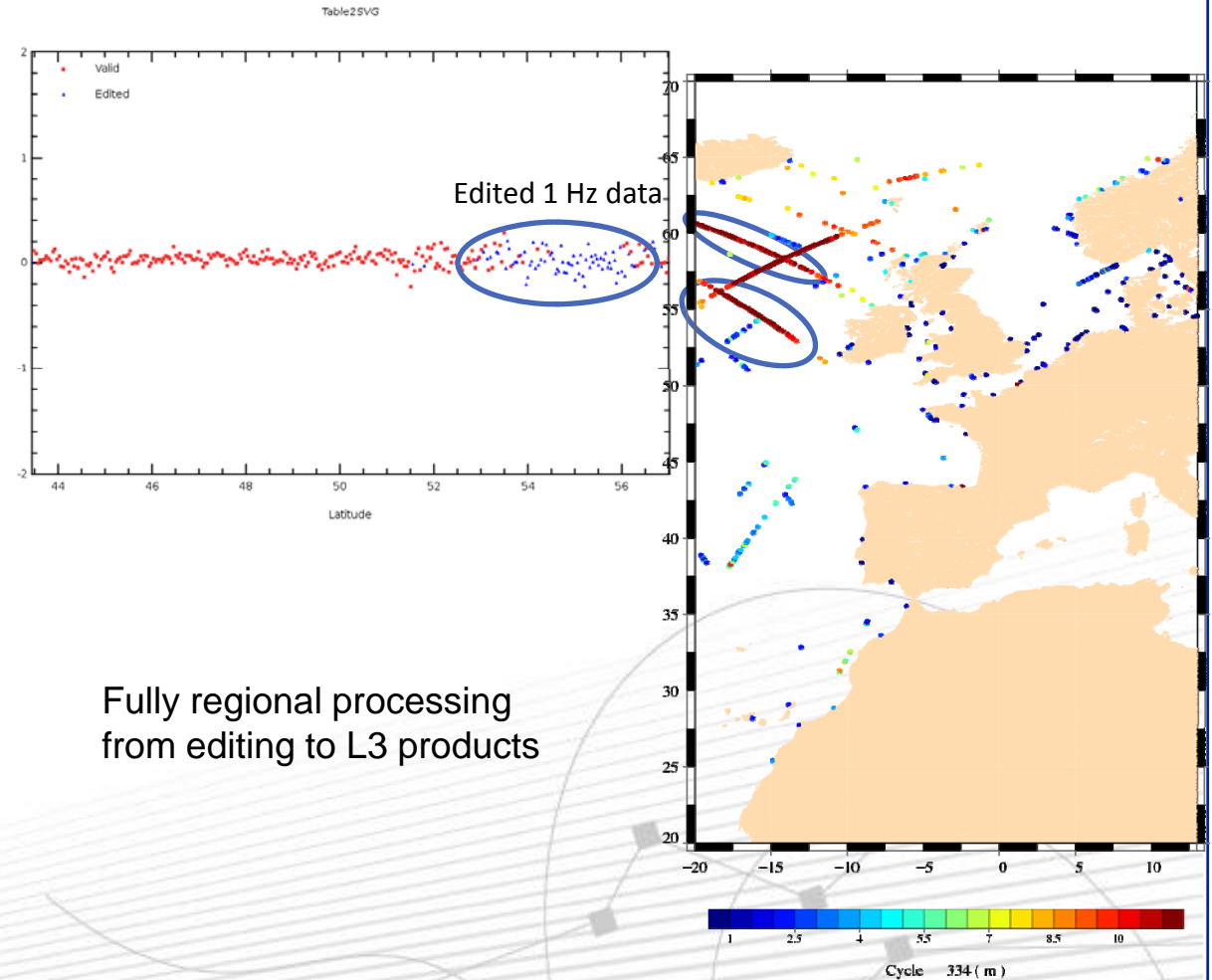
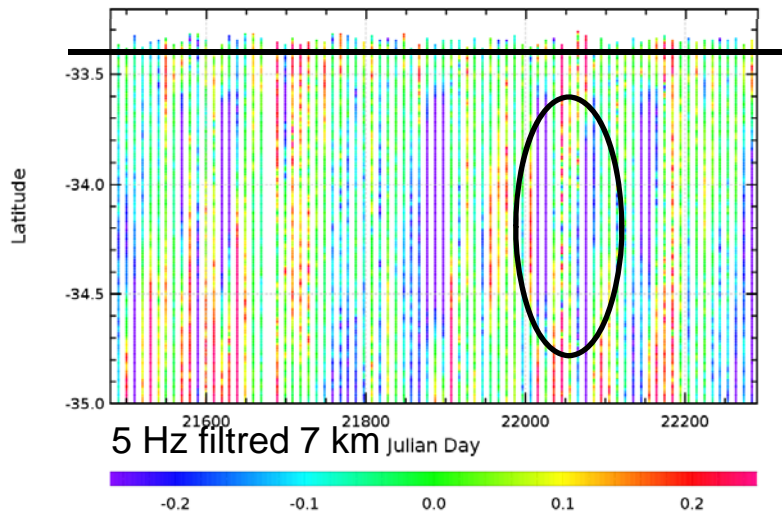
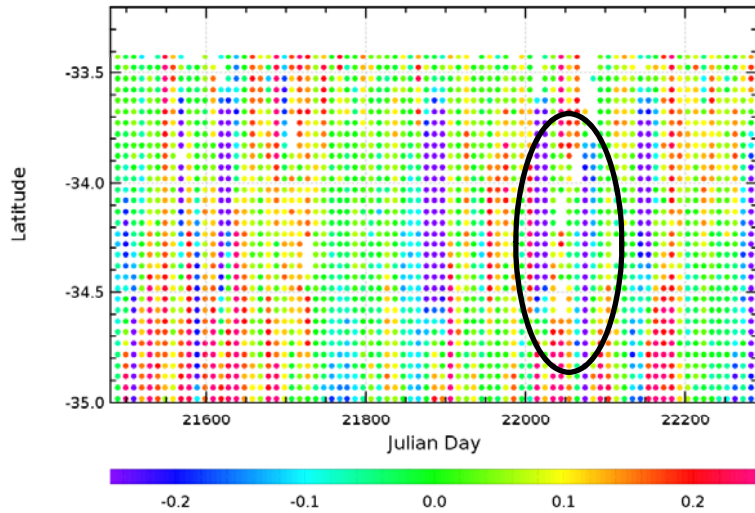


EN 2007 $\text{Var}[\text{SLA}(\text{TPX})] - \text{Var}[\text{SLA}(\text{GOT47})]$



Improvement Level 3 along track products - Perspectives

High resolution along track data starting from the 20 Hz data



Fully regional processing from editing to L3 products

ST San Diego, October 2011