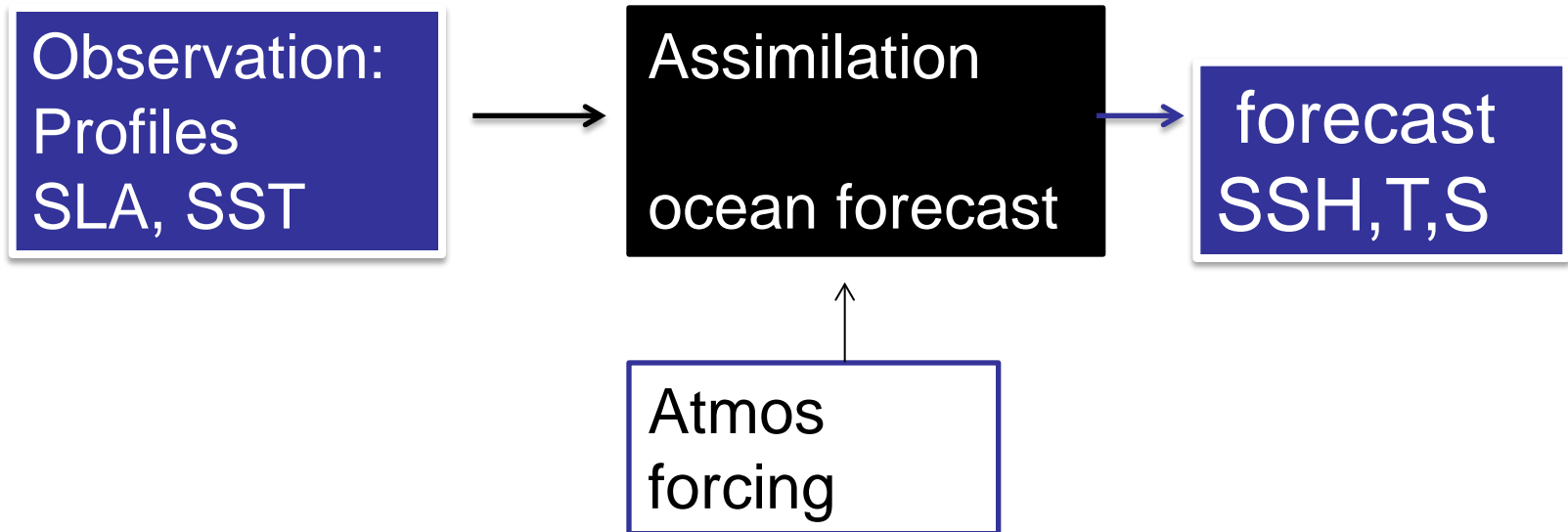# Intercomparison of Sea level Datasets used in OceanMAPS

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OceanMAPS

- OceanMAPS (Ocean Model Analysis and Prediction System) is operational ocean forecasting system in the Australian Bureau of Meteorology

- Developed from BLUElink project

| Observation: Profiles SLA, SST | → | Assimilation ocean forecast | → | forecast SSH,T,S |

Atmos forcing

Sea Level data used in OceanMAPS

Data stream	Period	Source
Envisat	2007 - 2012	JPL
Jason-1	2012 - 2013	JPL/RADS
Jason-2	2009 - now	JPL/RADS
CryoSat-2	2012 - now	RADS
SARAL/AltiKa	2013 - now	RADS

- Since Nov 2012 , Jason1 and Jason-2 data have been retrieved from Radar Altimeter Database System (RADS)
- JPL: NASA Jet Propulsion Laboratory (JPL)
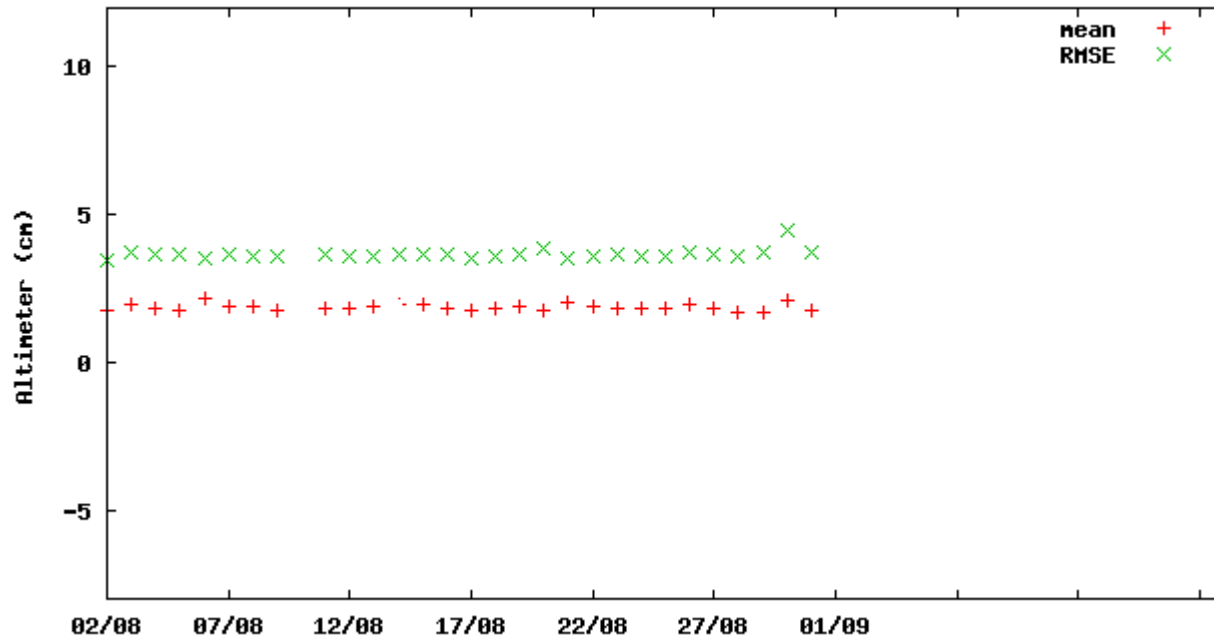- ESA: European Space Agency (ESA)

How to use

- Get data from external ftp site
- QC in the Bureau of Meteorology
  (Leon Majewski; Mikhail Entel)
- Generate the mean sea level
- Generate the sea level anomaly
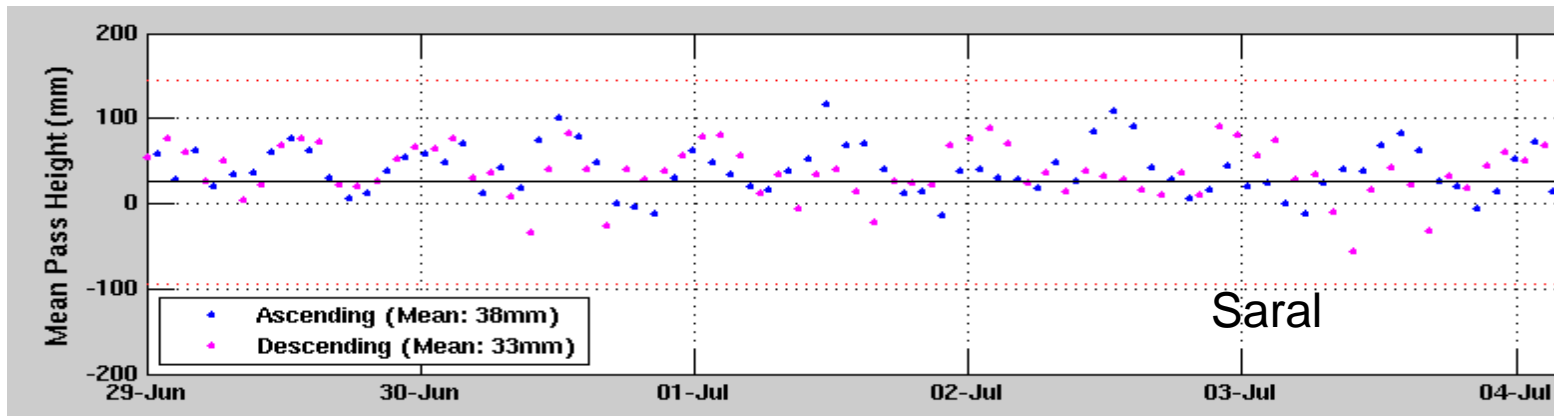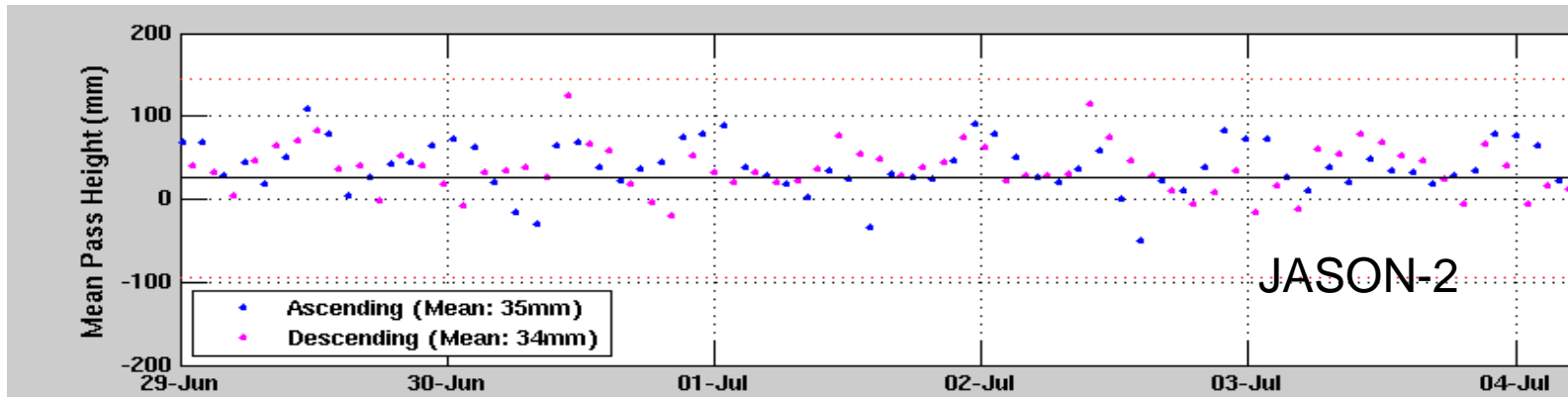
Uncertainty – missing data
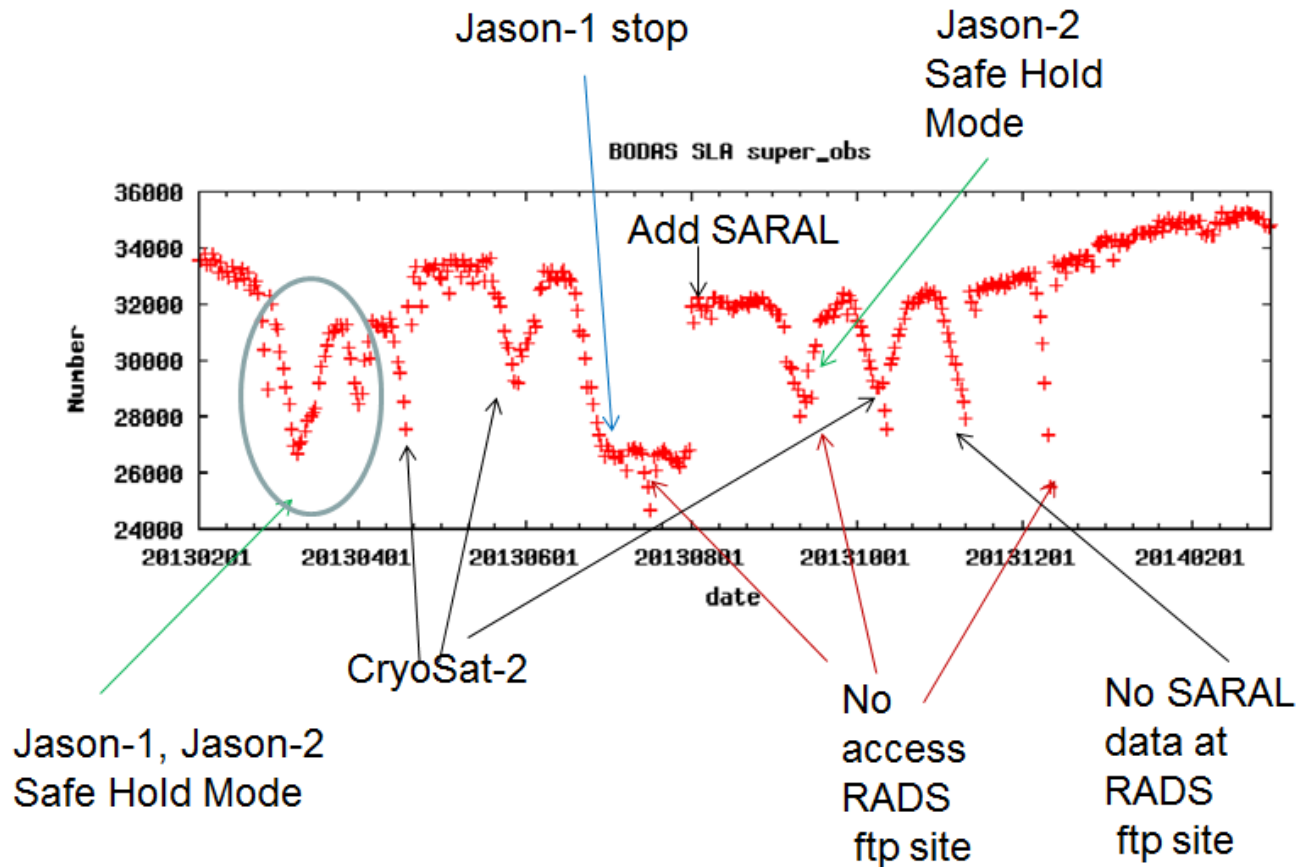
Uncertainty
J2 SLA difference between RADS and JPL

Global mean from different satellites

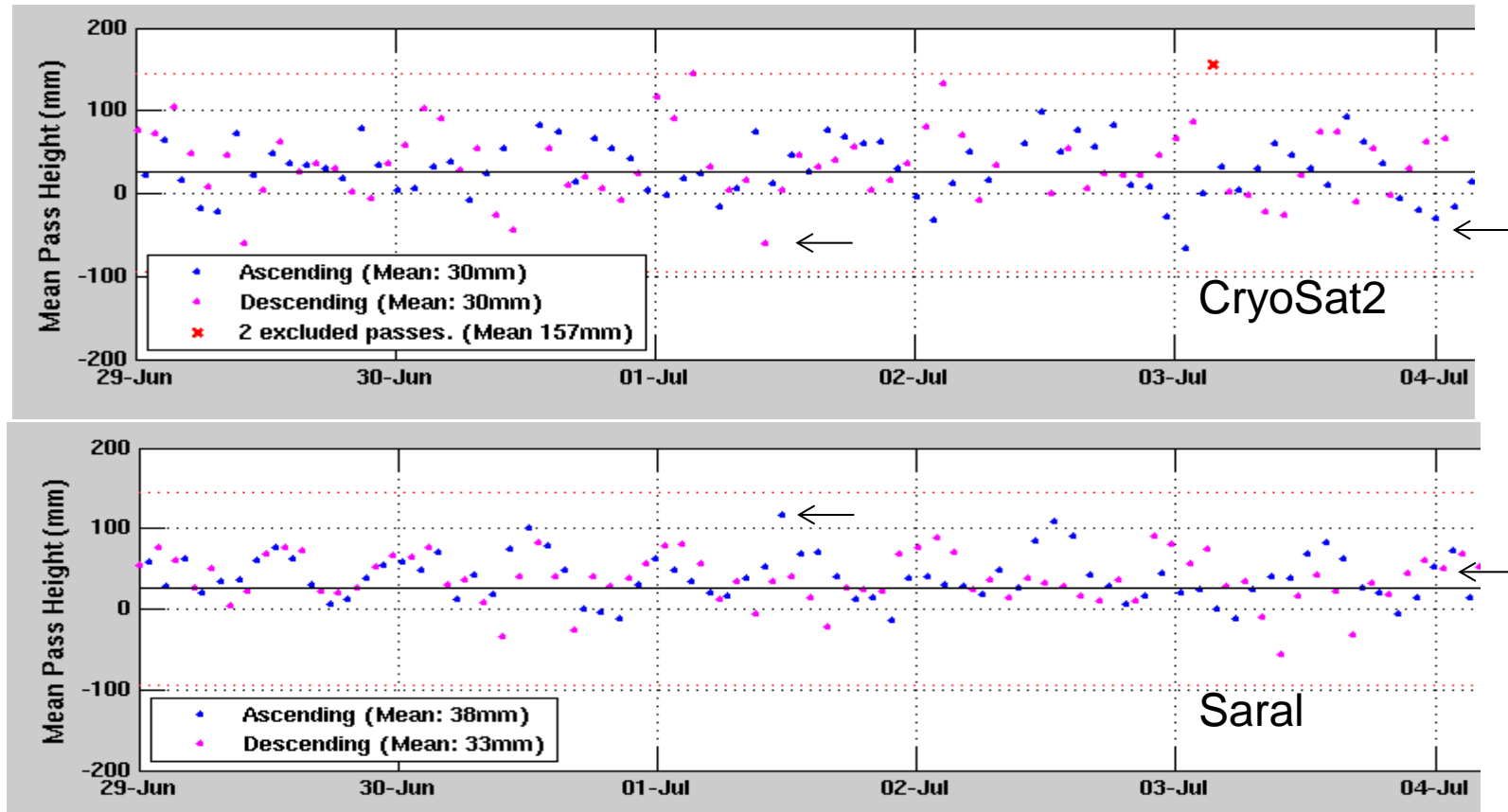http://oceancurrent.imos.org.au/sourcedata/passmean/

- 10 days global mean not the same from different satellite
- daily variation; Ascending and descending mean different.
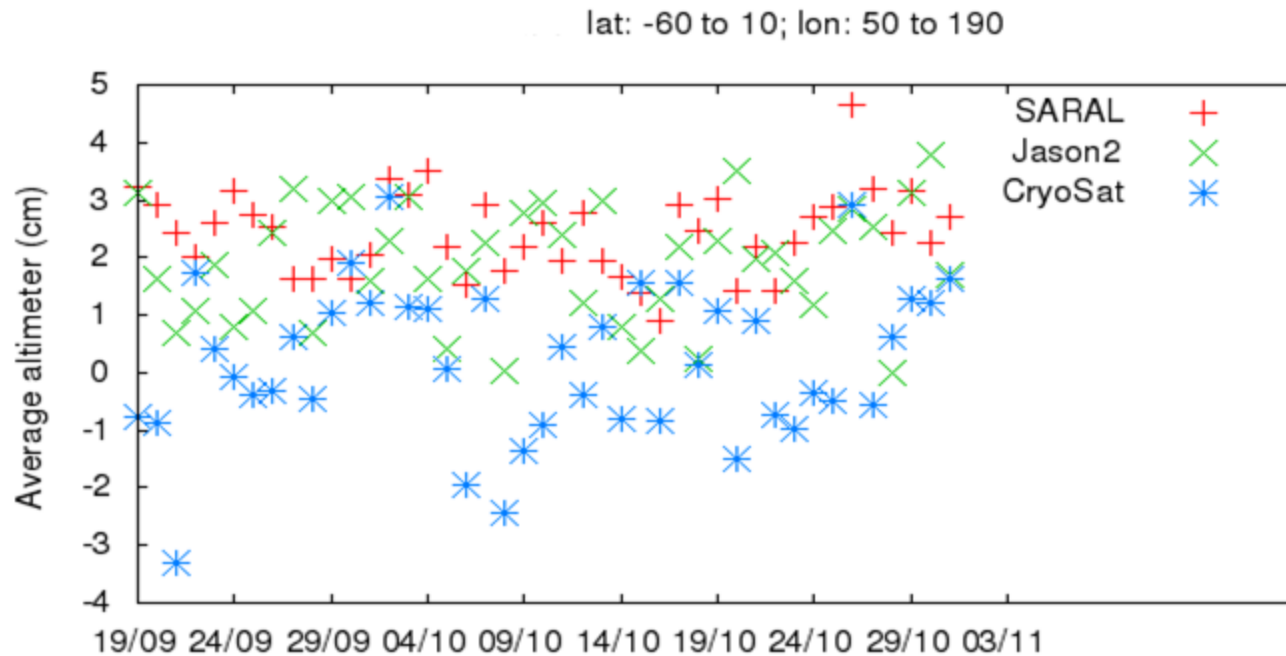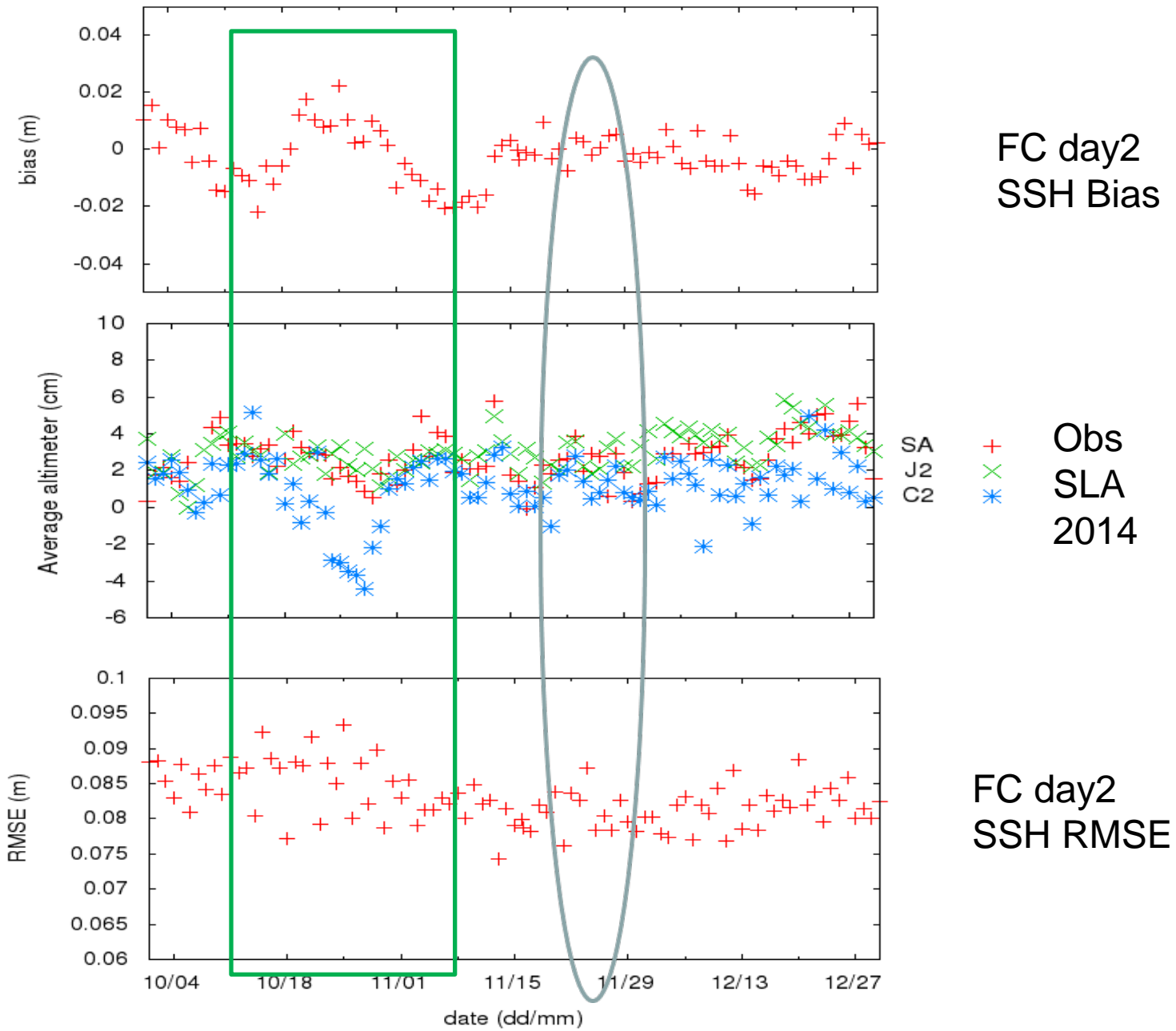
Global Mean from different satellites

http://oceancurrent.imos.org.au/sourcedata/passmean/

Mean difference may be larger in some days

Mean SLA from different satellites
Australian region

lat: -60 to 10; lon: 50 to 190

FC day2
SSH Bias

SA
J2
C2

Obs
SLA
2014

FC day2
SSH RMSE

Questions

- Which NRT sea level datasets I can used?
- What are the difference between datasets?
- How to verify them?

Summary

- Sea level data from RADS, JPL and ESA used in OeanMAPS

- Same satellite altimetry data from different sources may different

- Different satellite altimetry data may be different from the same data site

- If the difference between satellites is relative large, it has impact on the ocean forecast model performance.

Thank you…

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