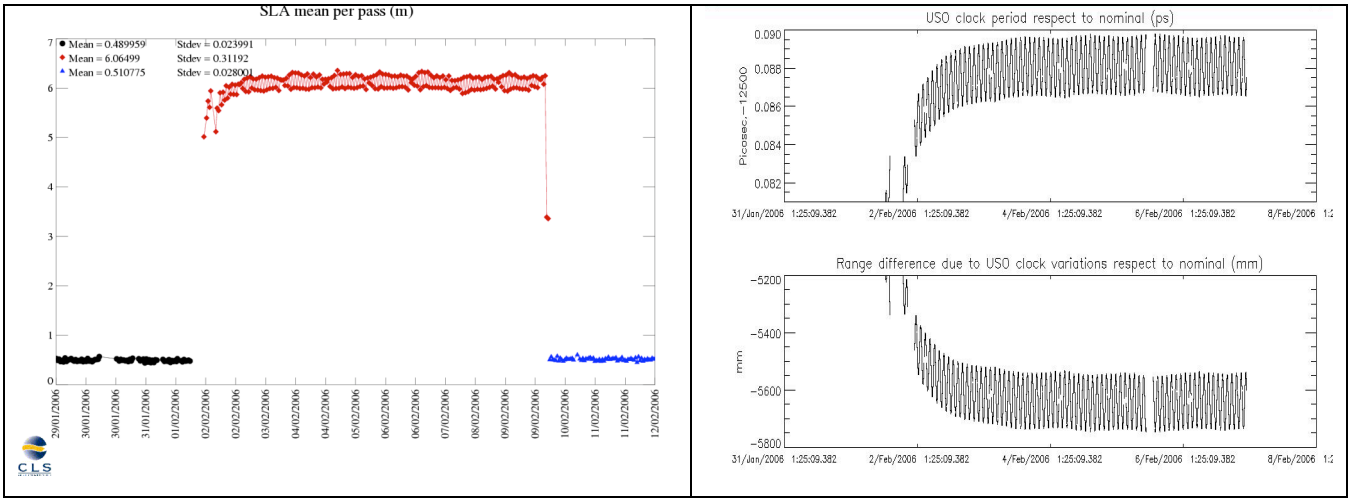
RA-2 Anomaly of 01/02/2006

On the 1st February 2006 two RA-2 sensor unavailability events occurred:
- From 1st February 2006 at 05.17.56.000 to 1st February 2006 at 12.04.30 (absolute orbits 20514 to 20518)
- From 1st February 2006 at 16.30.28.000 to 1st February 2006 at 18.36.30 (absolute orbits 20521 to 20522)

Following the Envisat RA-2 sensor recovery of the first event, a jump on the Ku and S band altimetric range (through the Sea Level Anomaly) was detected. The figure below (left) shows a 5.5m jump with a 30 cm orbital variability (ascending /descending pass behaviour) affecting the Ku range parameter. The altimetric range anomaly lasted from the 1st February to the 10th February 2006.

Investigations showed that this spurious signal was due to the USO range correction (right figure here below). More investigations are on-going at instrument level to explain the cause of this un-expected behaviour.

Since 10th February 2006 around 10:00 AM, the RA-2 altimetric range came back to a nearly nominal behaviour: the 5.5m jump and the oscillation have disappeared but a 1-2 cm bias is still observed on the first days after the anomaly recovery.



For what concern the altimetry data products, three periods are to be considered:
1- During the anomaly, from 1st to 10th February 2006
- The Near Real Time data products, FDGDR and IGDR, produced during this period are affected and not corrected with the suitable USO range correction.
- An offline correction is under investigation, and could be provided to the user community to correct themselves the altimetric range.

2- From 11th to 28th February 2006 (i.e. from absolute orbit number 20654 to 20898)
- The FDGDR and IGDR data products, generated during this period are not corrected with the suitable USO range correction causing a 1-2 cm bias (range being shorter).
- The GDR Altimetric Range parameter is corrected with the nominal USO range correction.

3- From 28th February 2006 onwards (i.e. from absolute orbit number 20899)
- The FDGDR and IGDR data products, generated are corrected with the nominal USO range correction
- The GDR data products generated are corrected with the nominal USO range correction

	01/02/2006	10/02/2006	11/02/2006	28/02/2006 onwards
FDGDR IGDR GDR	To be a posteriori corrected			Nominal USO Range Correction