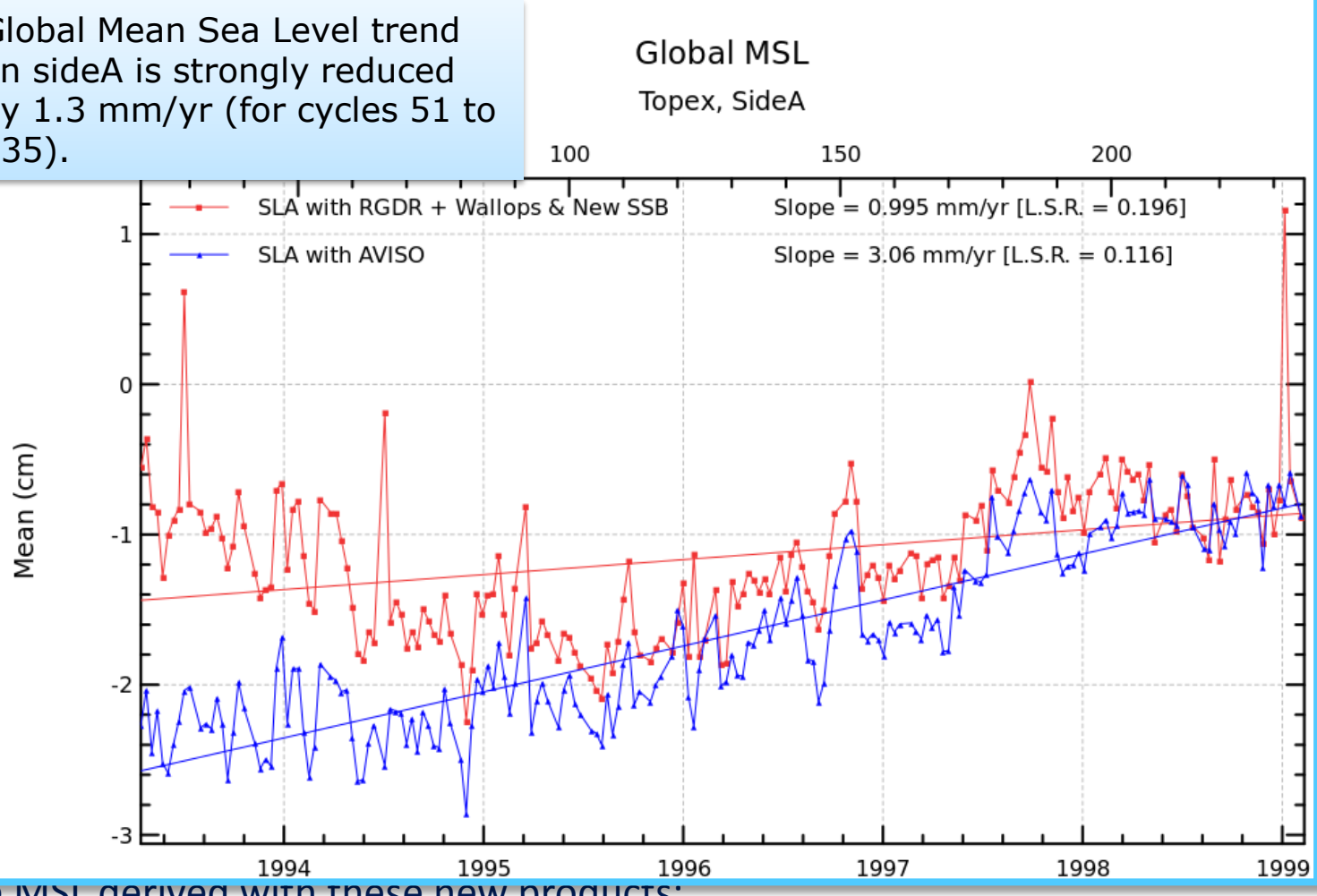
Selection of new L2 products

M.Ablain (CLS)

Select

	L2 pr S
TOPEX	

Global Mean Sea Level trend on sideA is strongly reduced by 1.3 mm/yr (for cycles 51 to 235).



- New RGDR release ha
- New altimeter range (
- For the SL_cci project, correct the instrumen
- All the other altimeter

- Studies performed wit long-term stability of the MSL derived with these new products:
  - ⇒ Results are not good !
  - ⇒ Although the SWH drift was partially corrected, the MSL evolution on TOPEX-A period highlights an abnormal behavior

- This reprocessing is a very important issue to improve the TOPEX MSL evolution:
  - ⇒ a new R-GDR release could be produced by the end of 2016 (too late for the SL_cci phase 2)

Selection of new L2 products

	L2 products used in SL_cci V1.1	New L2 products	
		Available	Expected
Jason-1	GDR-C		GDR-E (early in 2016)

- New GDR-E release will be available early in 2016 but probably too late for the SL_cci V2 release
- However most of the new altimeter standards available in Jason-1 GDR-E have been already used in SL_cci V1.1 (e.g. : DAC ERA-interim) or will be (likely) used in SL_cci V2.0 (e.g. POE-E orbit)
- There is an exception for the wet troposphere correction :
  - ⇒ New WTC derived from radiometer will be available
  - ⇒ Some anomalies have been corrected : e.g. 1 mm jump around cycles 230-250
  - ⇒ Impact on the GMSL would be interesting to take into account in SL_cci V2.0
  - ⇒ It should be interesting to reprocess the GPD V2.0 correction derived from the radiometer WTC GDR-E for Jason-1
  - ⇒ Is-it possible to do it by the end of February 2016 (deadline for V2.0 reprocessing) ? (JPL agreement is needed)

Selection of new L2 products

	L2 products used in SL_cci V1.1	New L2 products	
		Available	Expected
ERS-1/ERS-2	OPR	REAPER	REAPER-2

- New ERS-1/ERS-2 have been produced in the framework of the REAPER project
- As the validation of these products have been performed on a short period within the REAPER project (commissioning phases), we have preferred to wait for a global assessment over all the period to use these products in the SL_cci products (it is a huge work to correctly validate a whole L2 datasets not possible within the SL_cci project).
- However most of the new altimeter standards available in REAPER have been already used in SL_cci V1.1 (e.g. : ERA-interim, REAPER Orbit, Iono, ...) and will be updated in SL_cci V2.0
- A new REAPER-2 project might be foreseen in the future: to be confirm by ESA

Selection of new L2 products

	L2 products used in SL_cci V1.1	New L2 products	
		Available	Expected
Envisat	V2.1		V3.0 (2016-2017)

- New Envisat V3.0 reprocessing will be available in 2016/2017: too late for the SL_cci project
- New WTC derived from radiometer is already available and available
- It could be interesting to reprocess the GPD V2.0 correction derived from the radiometer WTC V3.0 for Envisat before the V2.0 reprocessing
- Is-it possible to do it by the end of February 2016 (deadline for the V2.0 reprocessing) ? To be discussed with UoP (J. Fernandes).

Selection of new L2 products

	L2 products used in SL_cci V1.1	New L2 products	
		Available	Expected
SARAL/Altika		GDR-T Patch 2	GDR-E (2017)
Cryosat-2		CNES CPP products	ESA products (2016/2017)

- SARAL/Altika and Cryosat-2 are not used in SL_cci V1.1, but it will be the case in V2.0
- For Altika:
  - ⇒ Quality of GDR-T L2 products is very good (SALP): could be used in Sl_cci project
  - ⇒ L2 reprocessing is planned in 2017 (SALP)
- For Cryosat-2:
  - ⇒ CNES CPP products will be used (validated database (L2P) already available at CLS)
  - ⇒ ESA products reprocessing (GOP) is expected in 2016/2017 (too late within the SL_cci project)

Selection of new L2 products

	L2 products used in SL_cci V1.1	New L2 products	
		Available	Expected
TOPEX	M-GDR	RGDR-2015	New RGDR (2016 ?)
Jason-1	GDR-C (*)		GDR-E (early in 2016)
Jason-2	GDR-D		
ERS-1/ERS-2	OPR	REAPER	REAPER-2
Envisat	V2.1 (**)		V3.0 (2016-2017)
SARAL/Altika		GDR-T Patch 2	GDR-E (2017)
Cryosat-2		CNES CPP products	ESA products (2016/2017)

(*) With the possibility of using a new Jason-1 GPD correction derived from the new GDR-E wet troposphere correction: to be confirmed by J.Fernandes and S.Desai (JPL) => this issue is of great interest for the SL_cci project (GMSL evolution)

(**) With the possibility of using a new Envisat GPD correction derived from the new V3.0 wet troposphere correction: to be confirmed by J.Fernandes.