Orbit comparison : COMBINED (Reaper) versus GFZ (Reaper)

Study variable	**COMBINED orbit (Reaper)**
Reference variable	**GFZ orbit (Reaper)**
Missions	ERS-1 *(e1)*, ERS-2 *(e2)*
Period	[15636, 19540]

Creation date : 2011/07/13

Contents

Study overview

In this study, the REAPER orbit solution (combined solulution derived from ESOC, GFZ and DEOS orbit center productions) has been compared to the GFZ orbit also developed in the frame of the Reaper project to calculate the ERS-2 and ERS-1 sea-level height (SSH).

The impact of using these both orbits on the SSH calculation has been analyzed for ERS-1 and ERS-2 missions :

- for ERS-1 : from October 1992 (cycle 15) to June 1996 (Cycle 53)
- for ERS-2 : from May 1995 (cycle 1) to July 2003 (Cycle 85)

The Reaper GFZ and COMBINED orbit solutions have been uploaded from the following ftp site: ftp://dgn6.esoc.esa.int/reaper/. The orbits are computed in the LPOD2005 terrestrial reference frame using the models and input data described in the poster presentation ”Improvements in ERS-1 and ERS-2 precise orbit determination” by S. Rudenko, M. Otten, P. Visser, R. Scharroo and T. Schoene, presented at the European Geosciences Union (EGU) General Assembly 2011, Vienna, Austria, 3-8 April 2011 and available as file ftp://dgn6.esoc.esa.int/reaper/poster_EGU-2011.pdf (S. Rudenko, M. Otten, P. Visser, R. Scharroo, T. Schoene, New improved homogeneous orbits of ERS-1 and ERS-2 satellites, Advances in Space Research, 2011, submitted).

All the validation diagnostics displayed in this report has been performed in agreement with the Sea-Level CCI Product Validation Plan (PVP).

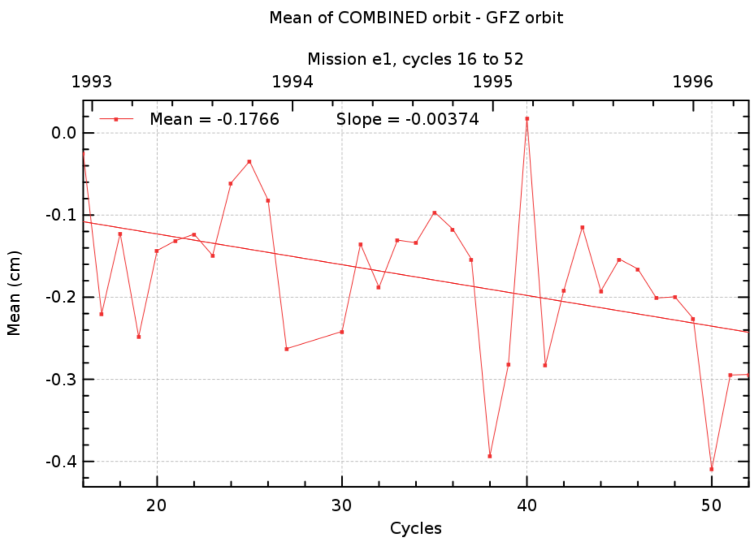
A001

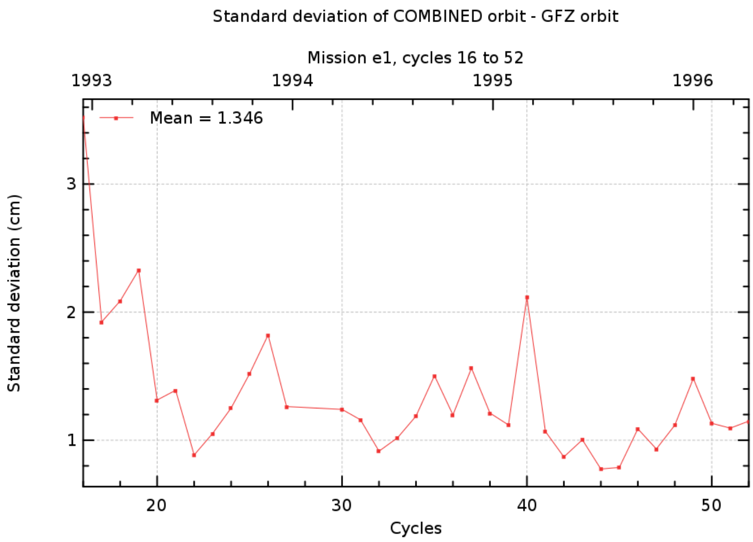
Diagnostic A001 (mission e1)

Name : Temporal evolution of differences between both altimetric components

Input data : Along-track altimetric components

Description : The temporal evolution of global statistics (mean, variance, slope) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) . These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





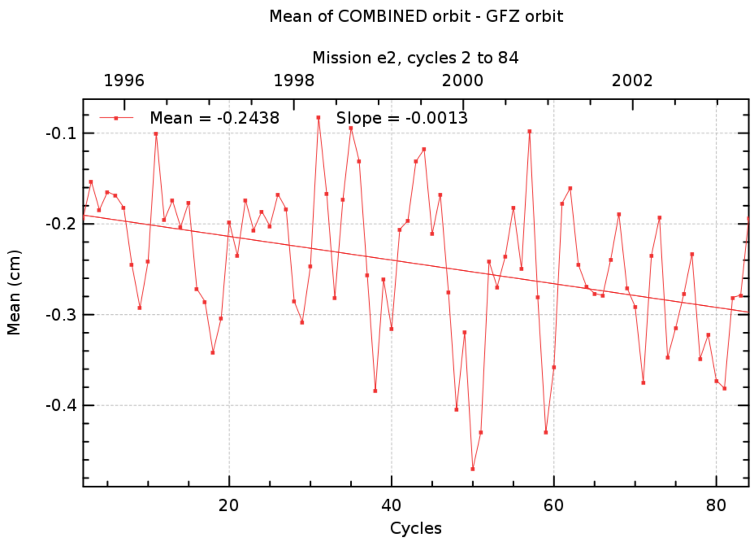
Diagnostic type : Global internal analyses

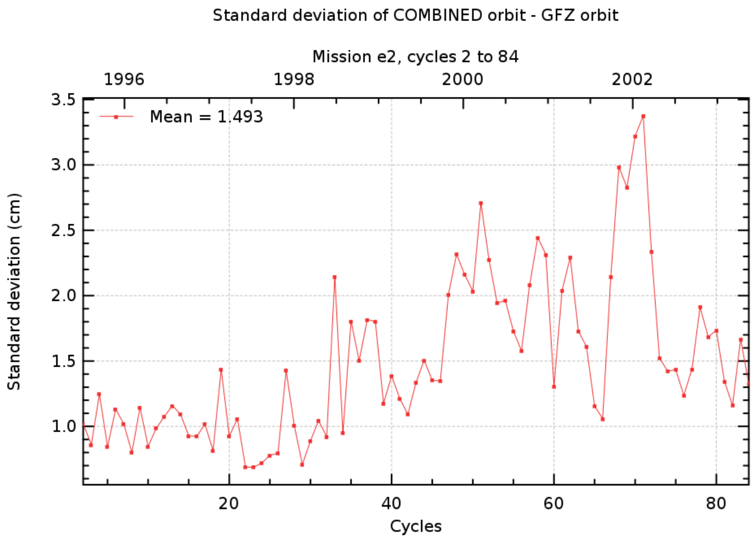
Diagnostic A001 (mission e2)

Name : Temporal evolution of differences between both altimetric components

Input data : Along-track altimetric components

Description : The temporal evolution of global statistics (mean, variance, slope) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) . These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





Diagnostic type : Global internal analyses

A002

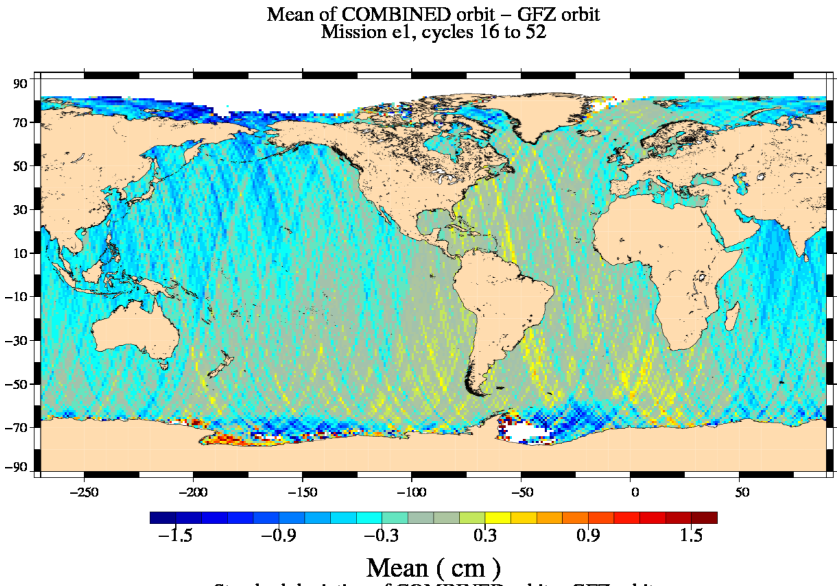
Diagnostic type : Global internal analyses

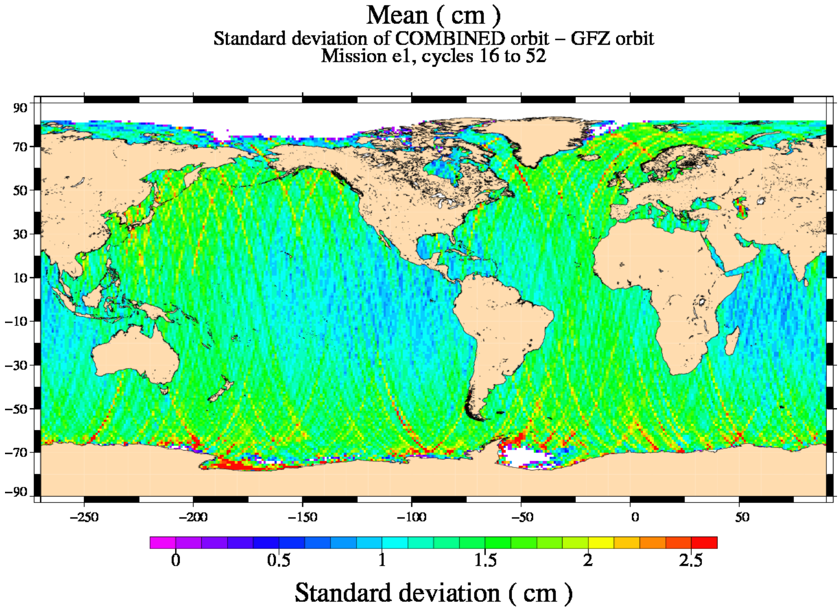
Diagnostic A002 (mission e1)

Name : Map of differences between both altimetric components over all the period

Input data : Along-track altimetric components

Description : The map of global statistics (mean, standard deviation) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated over a given period which is the longer as possible to have obtain reliable statically results. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.



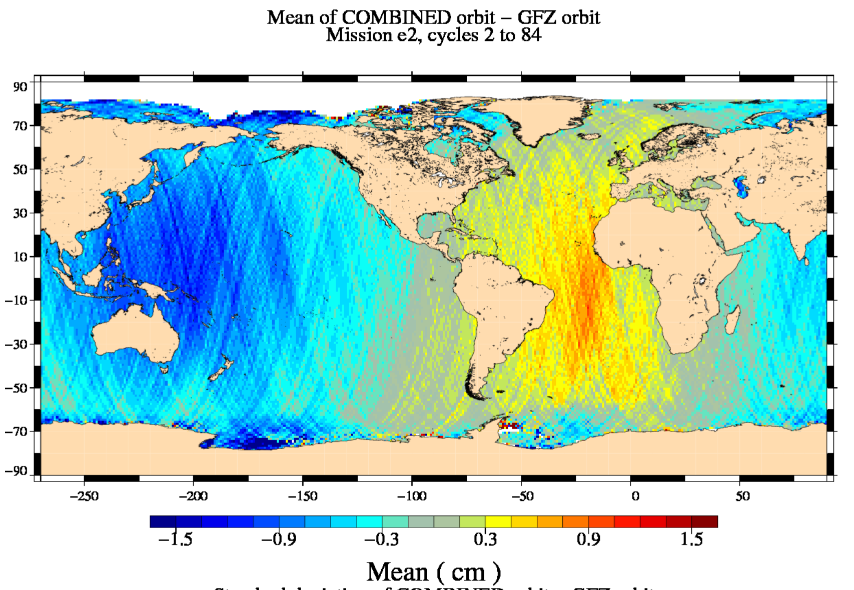


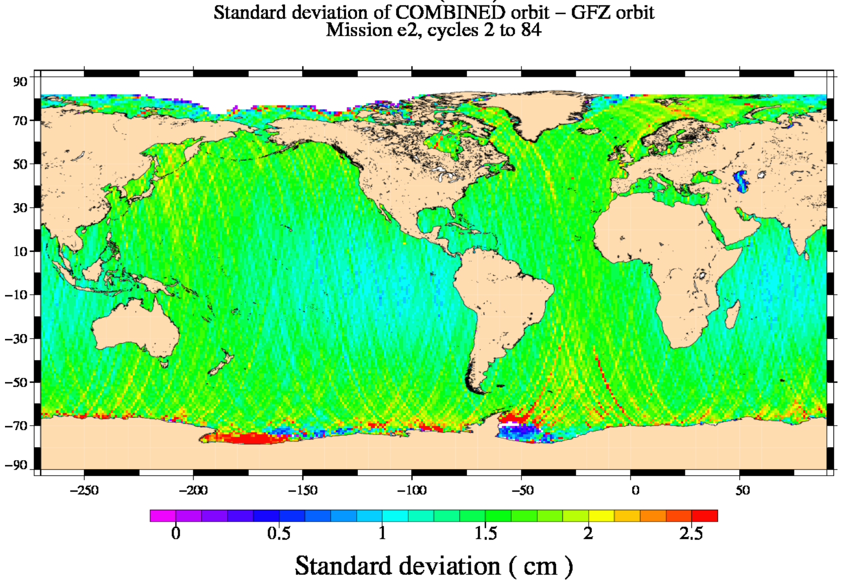
Diagnostic A002 (mission e2)

Name : Map of differences between both altimetric components over all the period

Input data : Along-track altimetric components

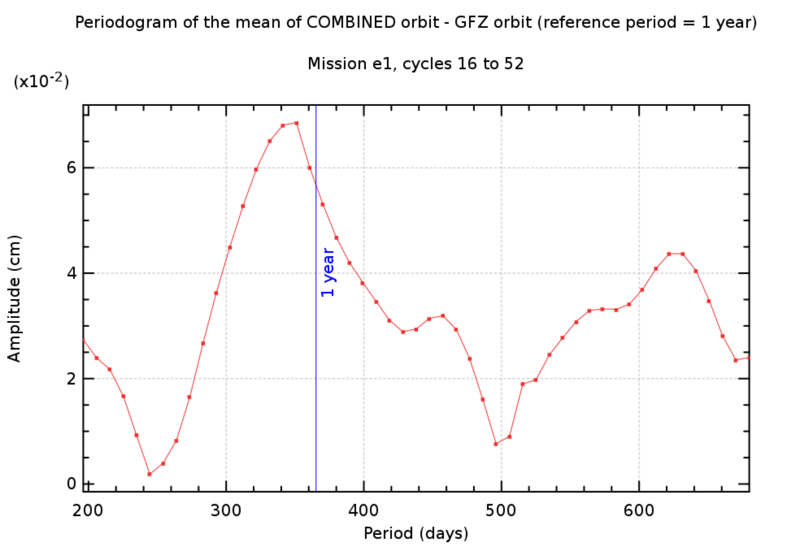
Description : The map of global statistics (mean, standard deviation) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated over a given period which is the longer as possible to have obtain reliable statically results. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.

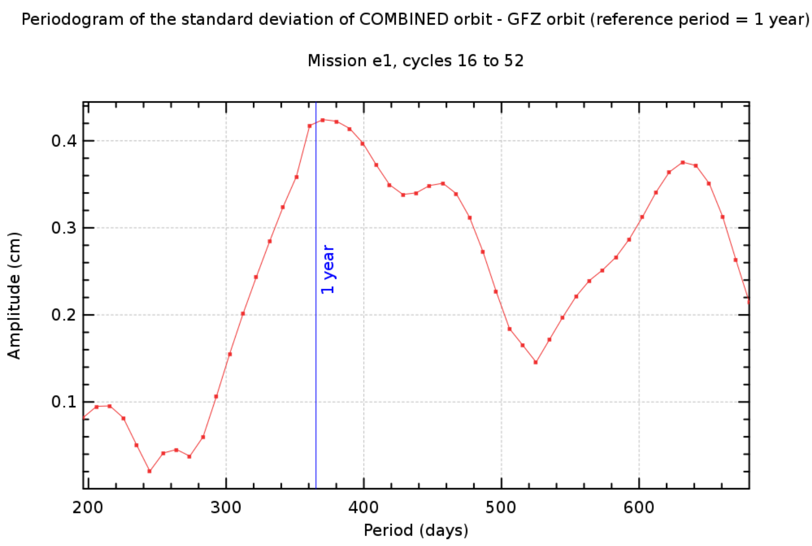




Diagnostic type : Global internal analyses

Diagnostic type : Global internal analyses	
	Diagnostic A003_a (mission e1)
	Name : Periodogram derived from temporal evolution of altimetric component differences
	Input data : Along-track altimetric components
	Description : The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.





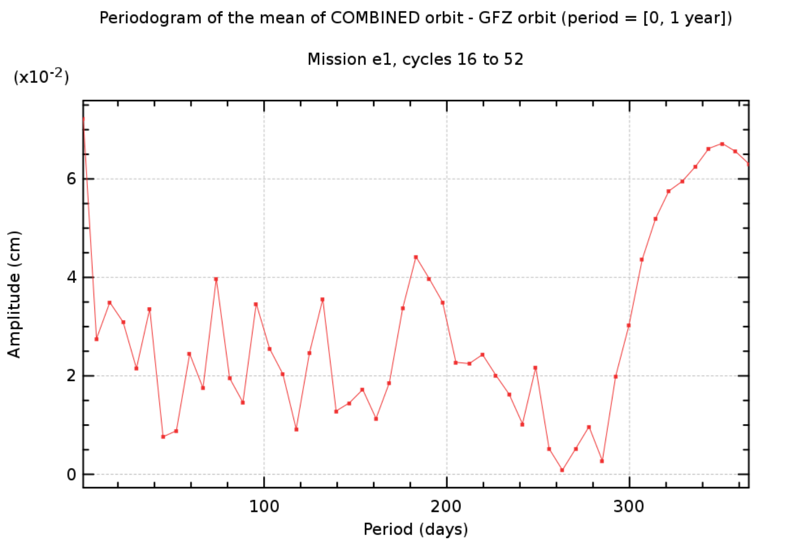
Diagnostic type : Global internal analyses

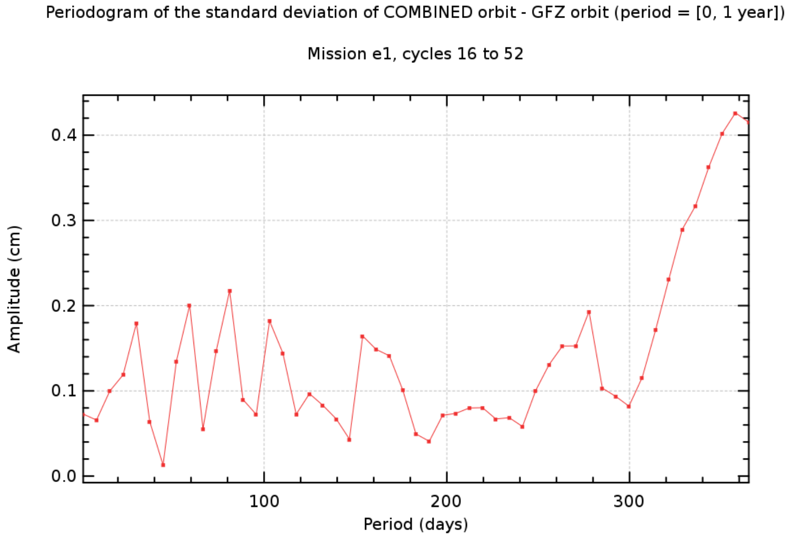
Diagnostic A003_b (mission e1)

Name : Periodogram derived from temporal evolution of altimetric component differences

Input data : Along-track altimetric components

Description : The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.





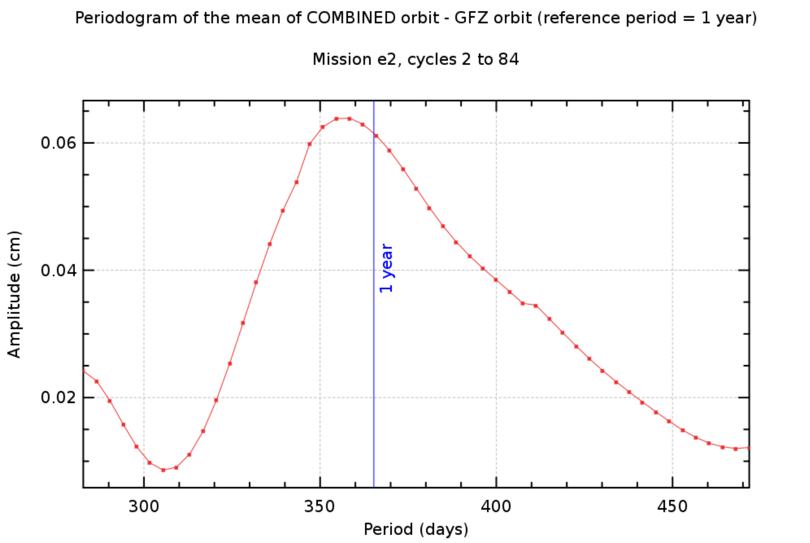
Diagnostic type : Global internal analyses

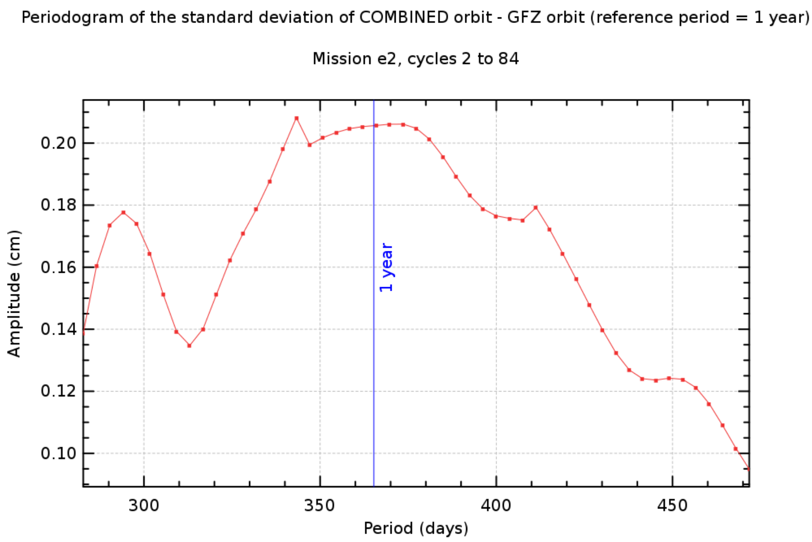
Diagnostic A003_a (mission e2)

Name : Periodogram derived from temporal evolution of altimetric component differences

Input data : Along-track altimetric components

Description : The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.





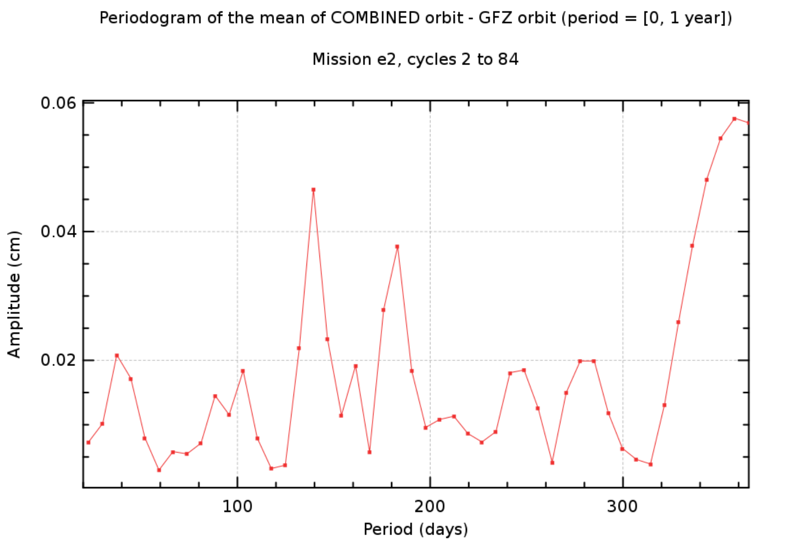
Diagnostic type : Global internal analyses

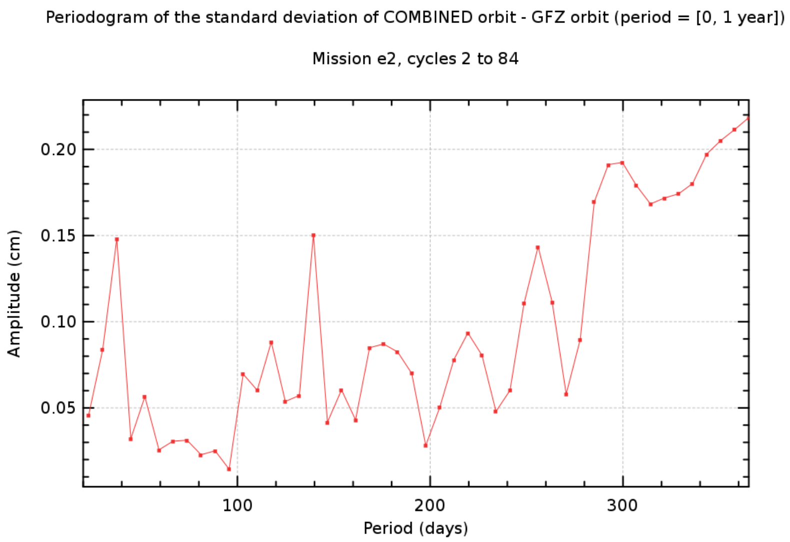
Diagnostic A003_b (mission e2)

Name : Periodogram derived from temporal evolution of altimetric component differences

Input data : Along-track altimetric components

Description : The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.





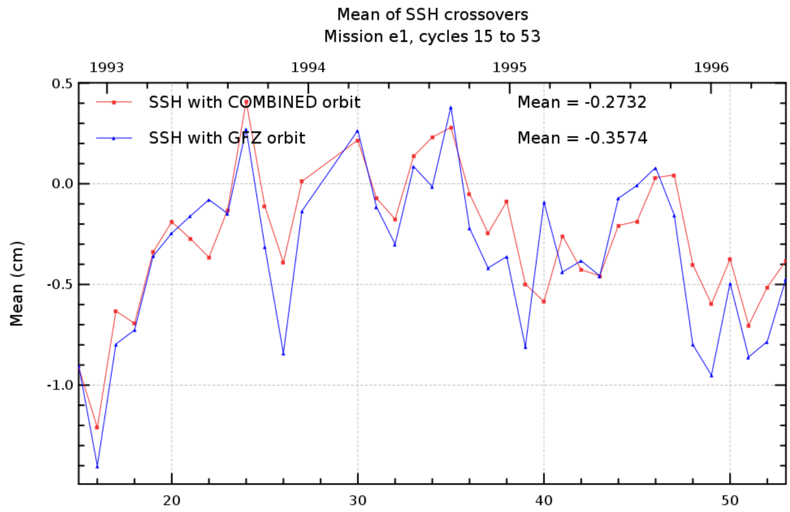
Diagnostic type : Global internal analyses

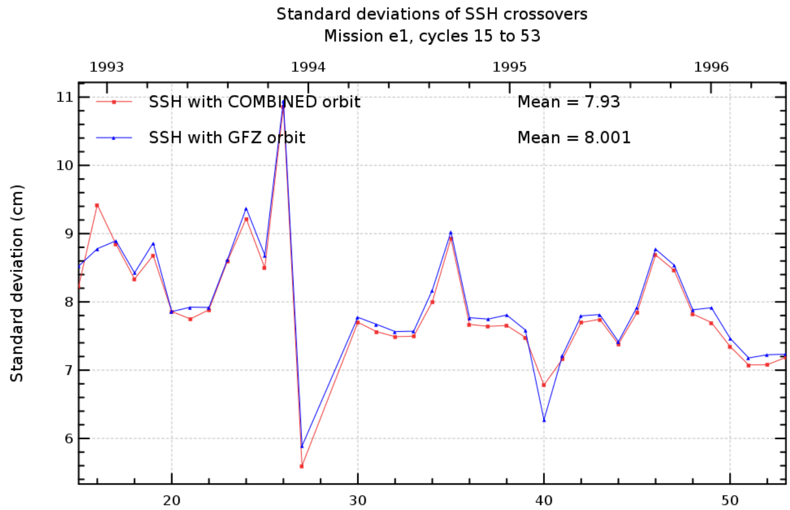
Diagnostic A101 (mission e1)

Name : Temporal evolution of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The temporal evolution of global statistics (mean, standard deviation) of SSH differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).



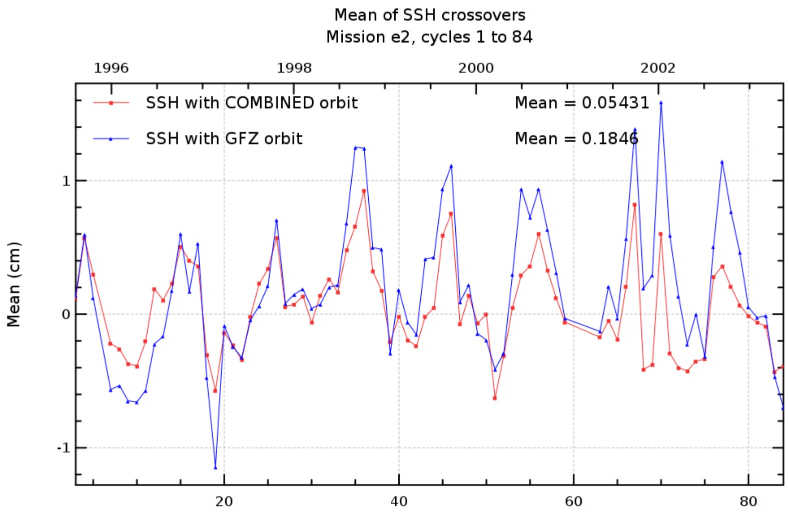


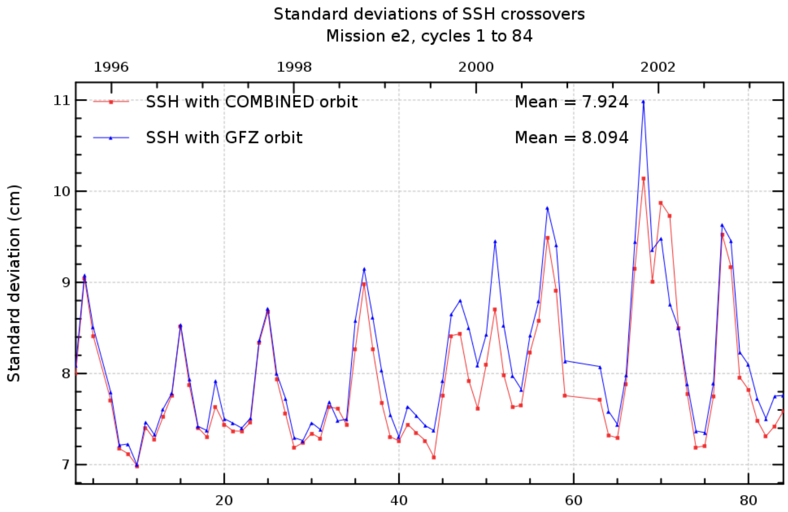
Diagnostic A101 (mission e2)

Name : Temporal evolution of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The temporal evolution of global statistics (mean, standard deviation) of SSH differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).





Diagnostic type : Global internal analyses

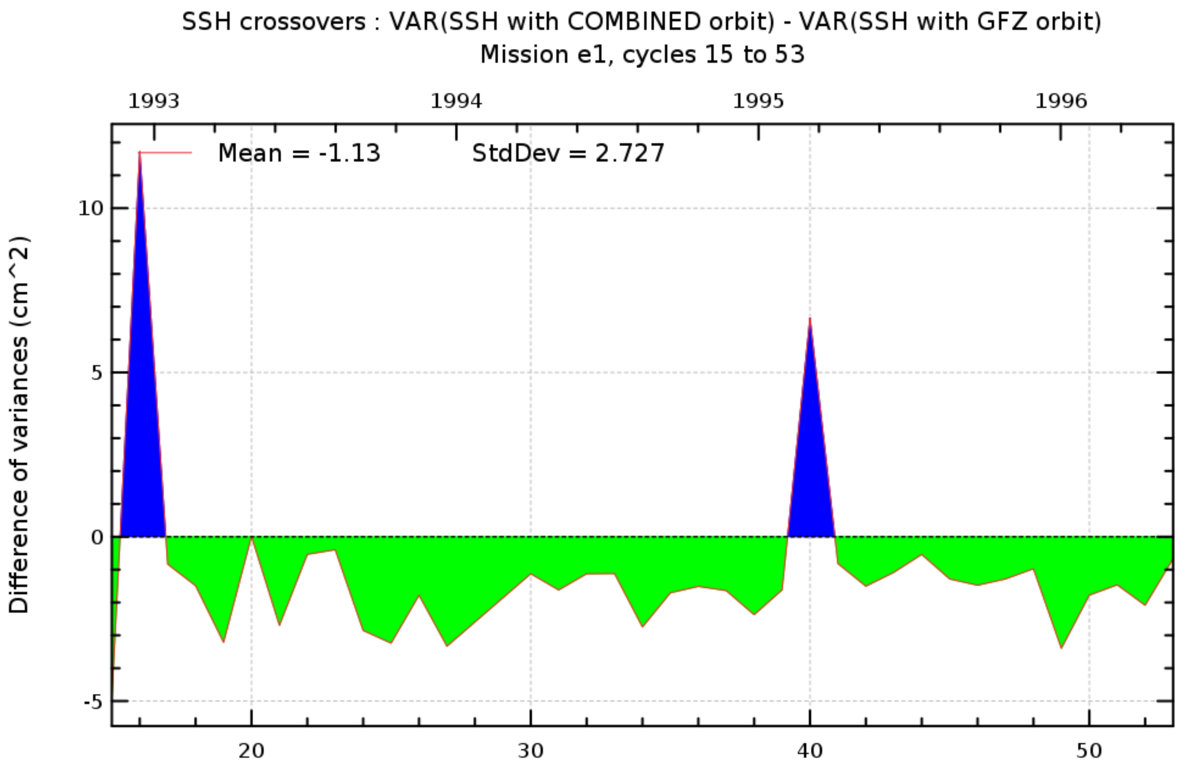
Diagnostic type : Global internal analyses

Diagnostic A102 (mission e1)

Name : Differences between temporal evolution of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The difference of temporal evolution between the global statistics (mean, standard deviation) of SSH differences are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).



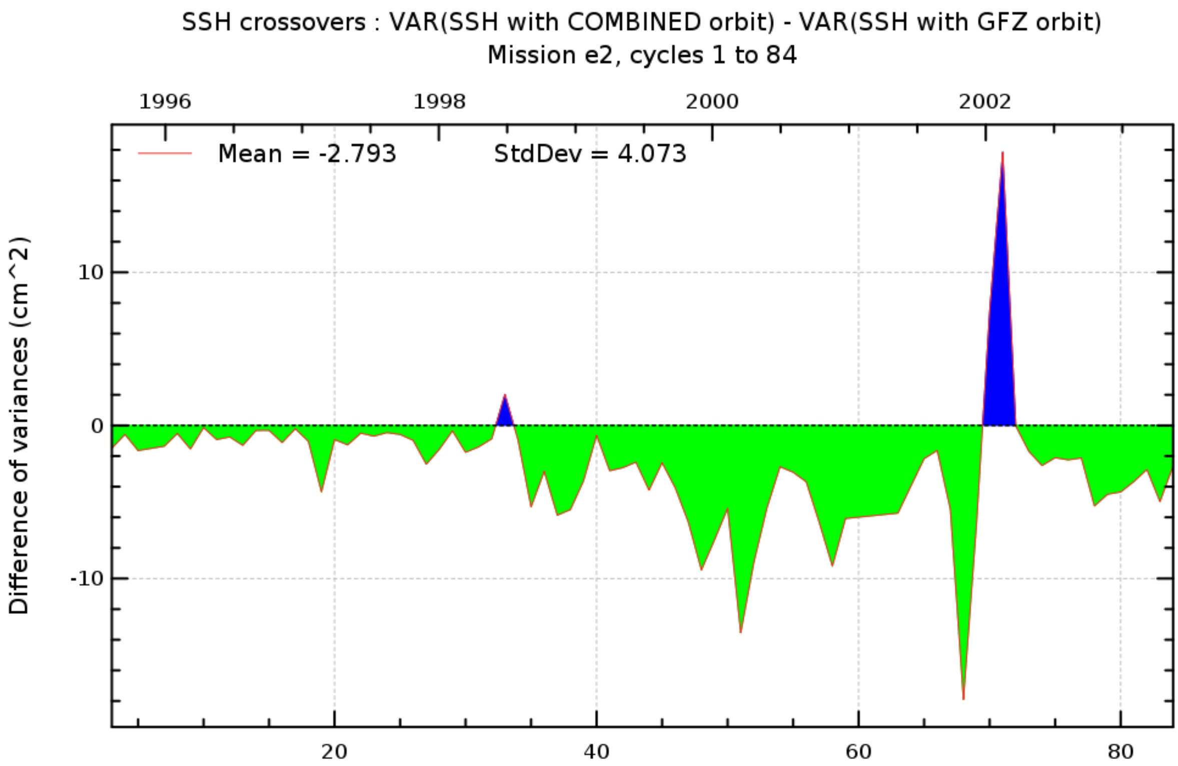
Diagnostic type : Global internal analyses

Diagnostic A102 (mission e2)

Name : Differences between temporal evolution of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The difference of temporal evolution between the global statistics (mean, standard deviation) of SSH differences are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).



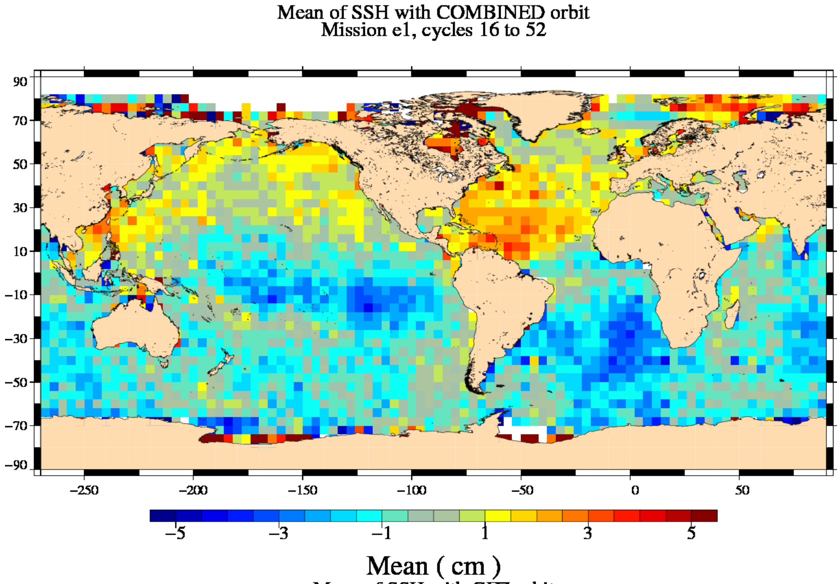
A103

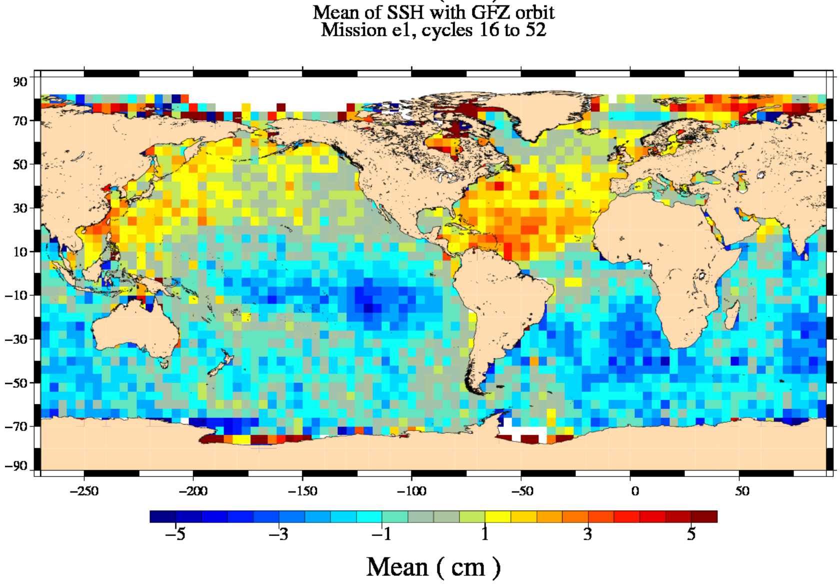
Diagnostic A103 (mission e1)

Name : Map of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The differences between maps of SSH crossovers differences (mean, variance) are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).





Diagnostic type : Global internal analyses

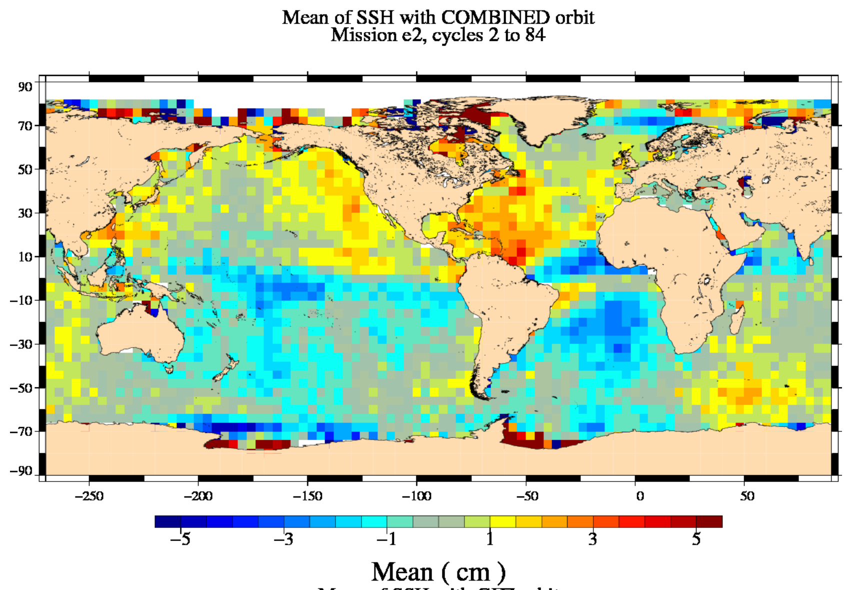
Diagnostic type : Global internal analyses

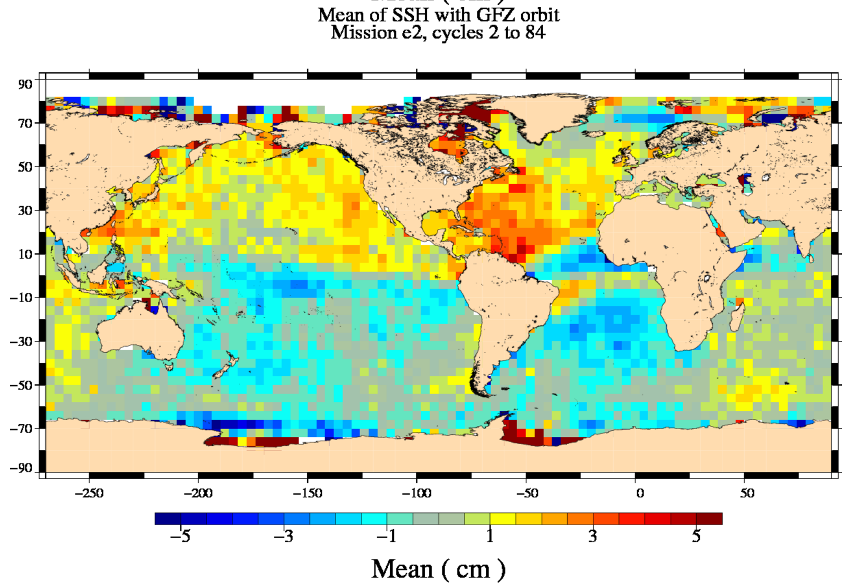
Diagnostic A103 (mission e2)

Name : Map of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The differences between maps of SSH crossovers differences (mean, variance) are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).





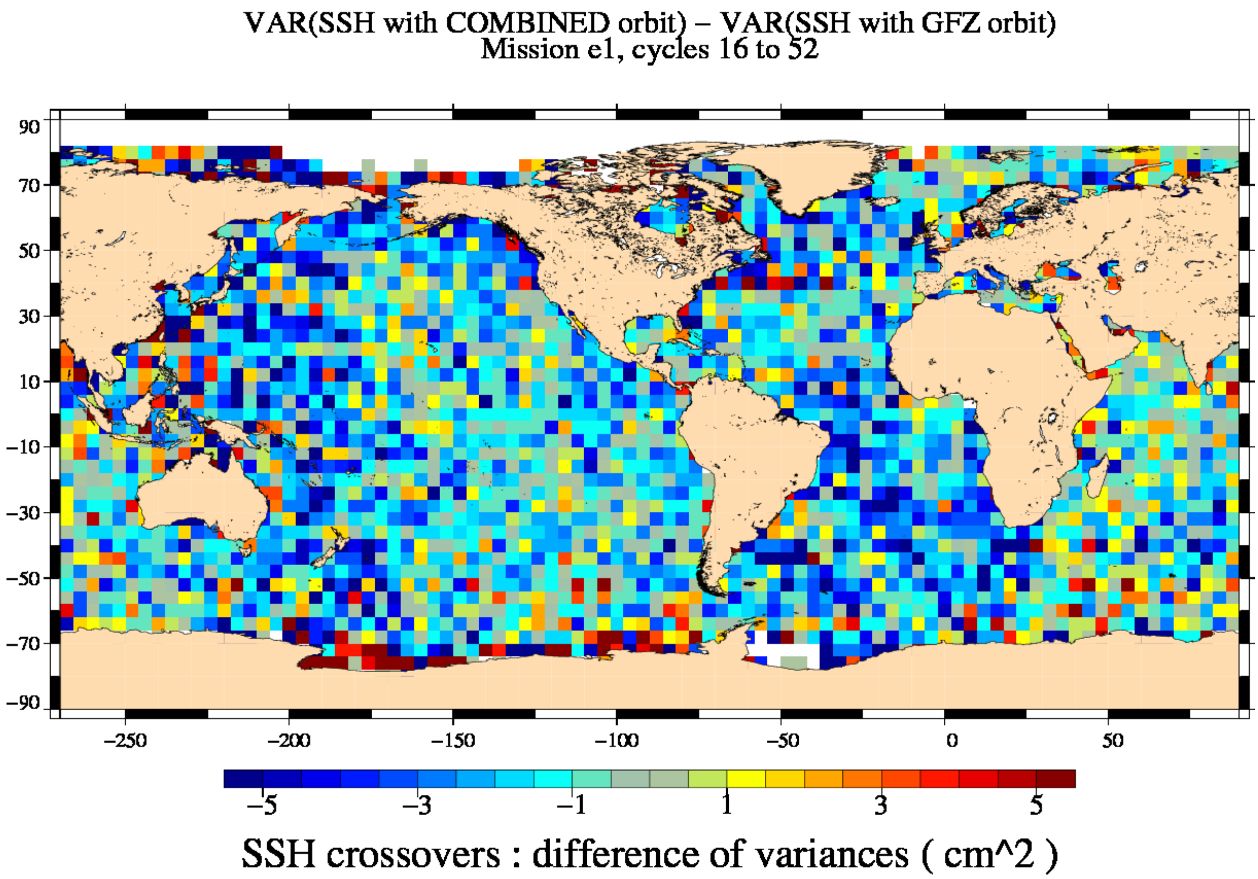
Diagnostic type : Global internal analyses

Diagnostic A104 (mission e1)

Name : Differences between maps of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The differences between maps of SSH crossovers (derived from diagnostic A103) are calculated from the SSH crossover differences (mean, standard deviation) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).



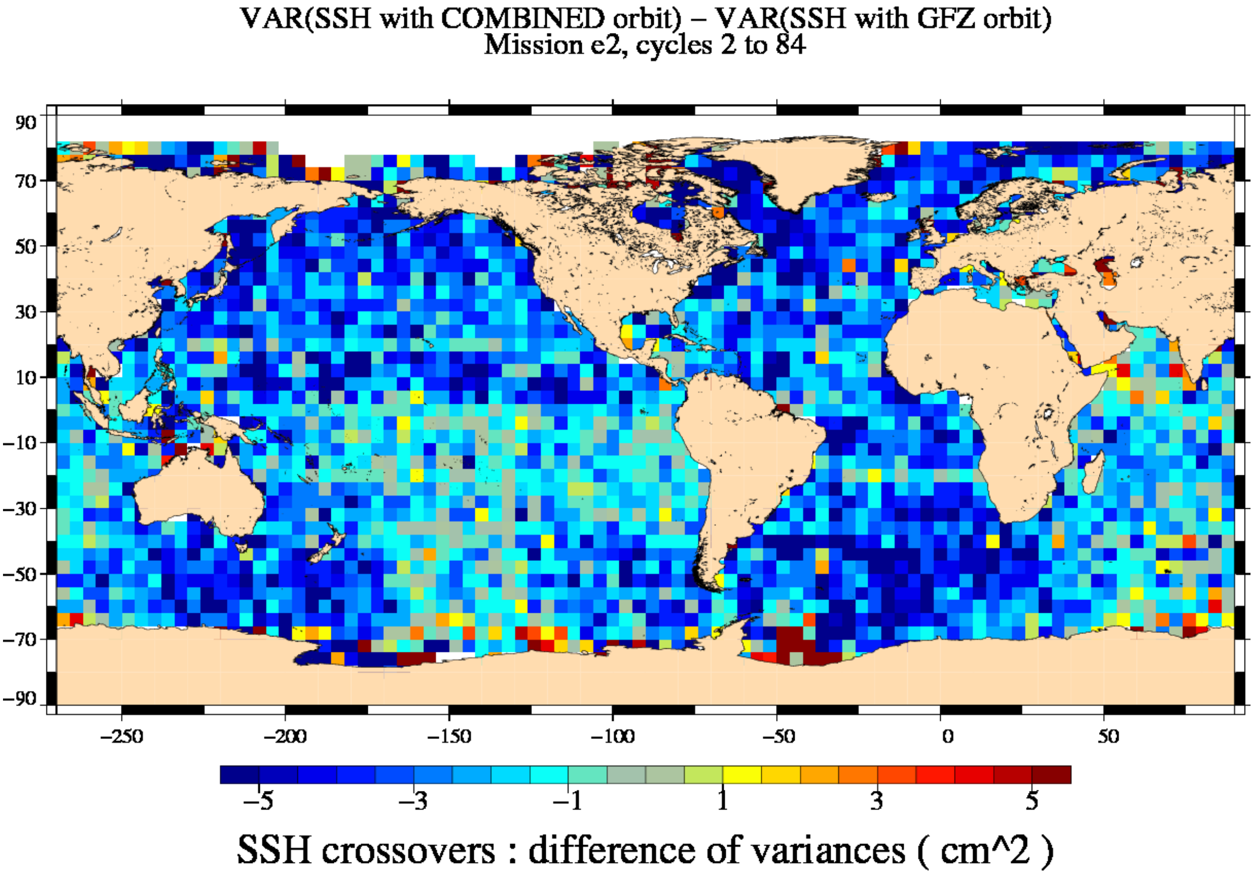
Diagnostic type : Global internal analyses

Diagnostic A104 (mission e2)

Name : Differences between maps of SSH crossovers

Input data : Sea Surface Height (SSH) crossovers

Description : The differences between maps of SSH crossovers (derived from diagnostic A103) are calculated from the SSH crossover differences (mean, standard deviation) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).



A201

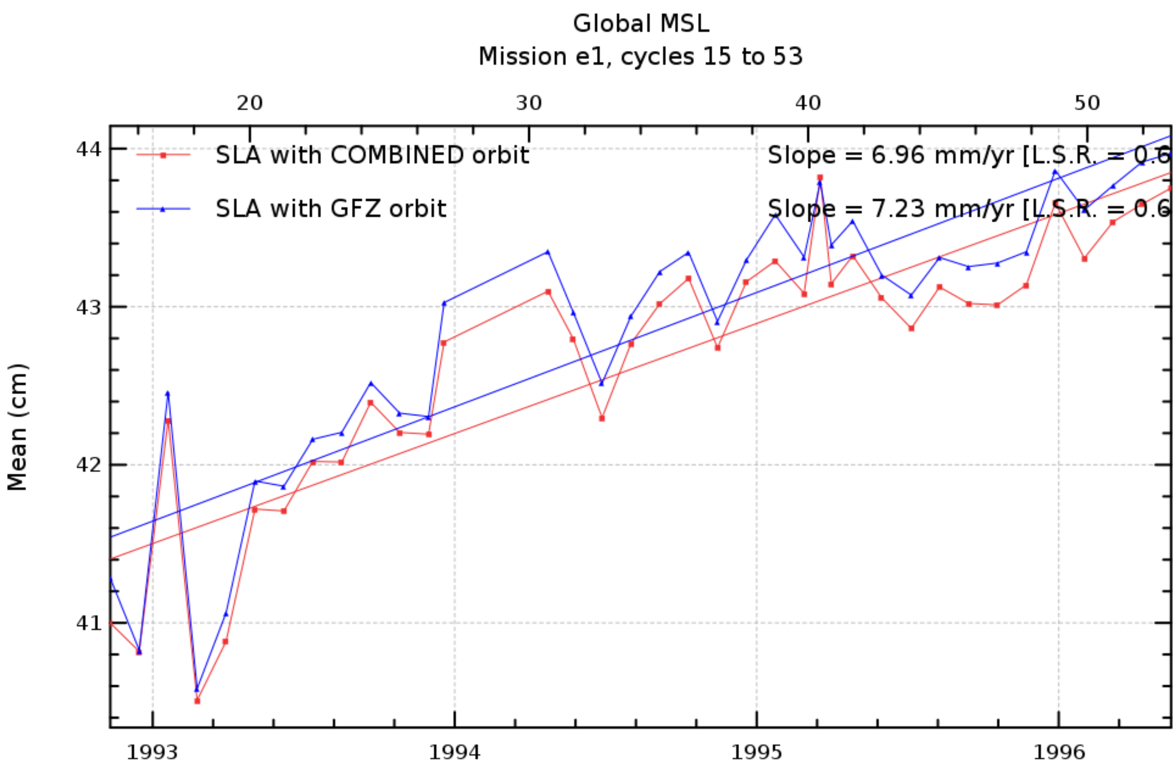
Diagnostic type : Global internal analyses

Diagnostic A201_a (mission e1)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.



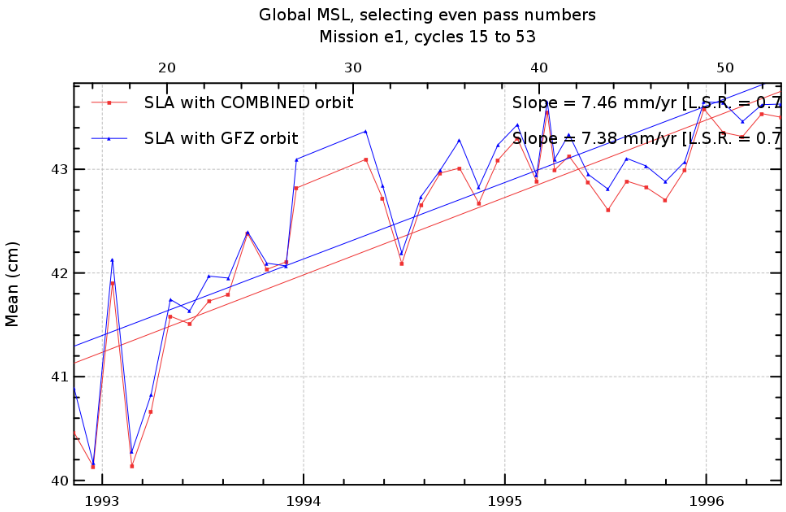
Diagnostic type : Global internal analyses

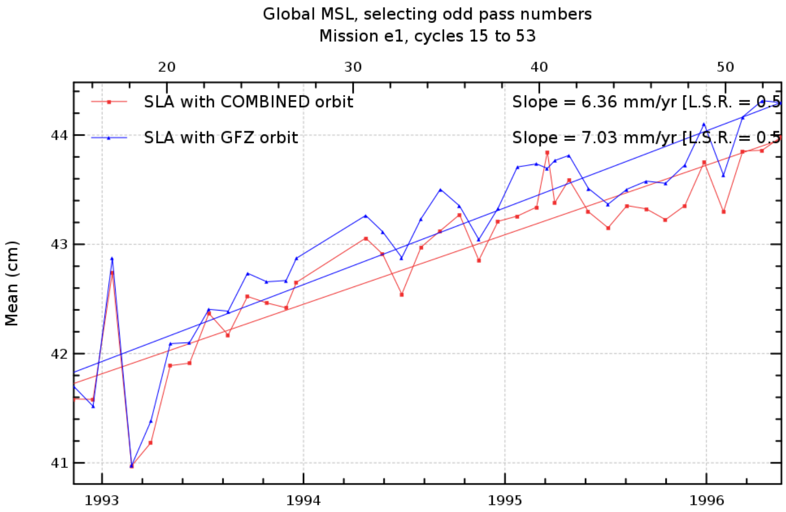
Diagnostic A201_b (mission e1)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.





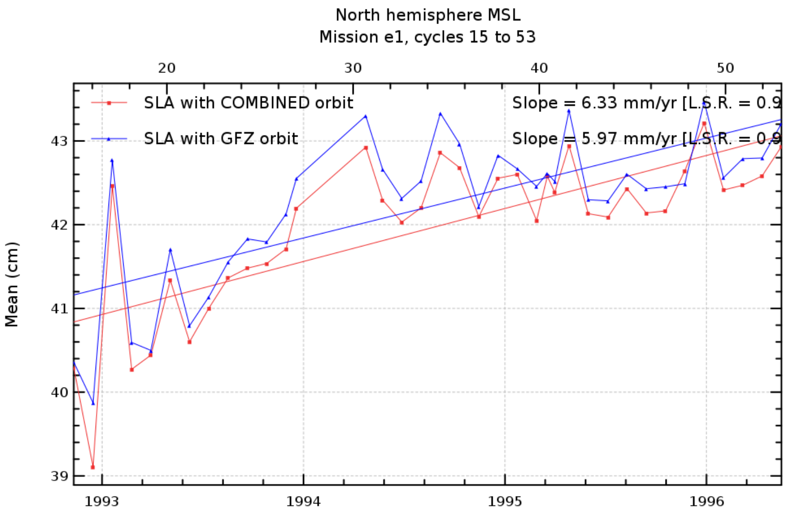
Diagnostic type : Global internal analyses

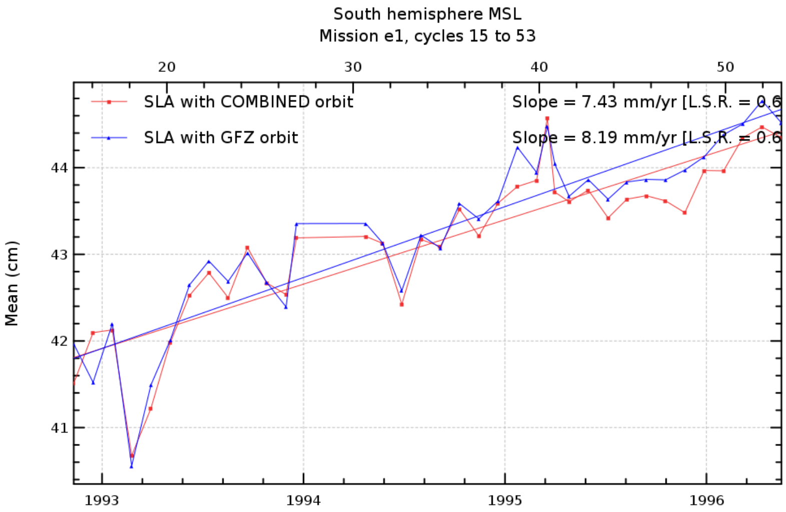
Diagnostic A201_c (mission e1)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.





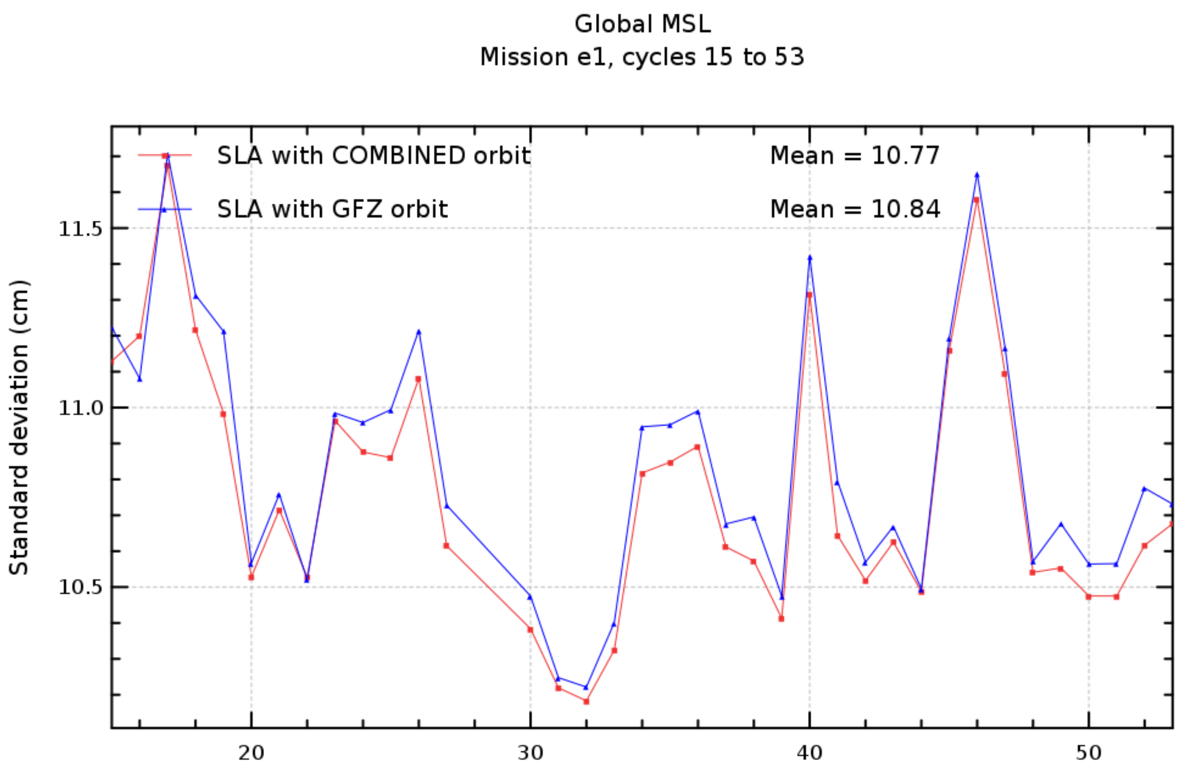
Diagnostic type : Global internal analyses

Diagnostic A201_d (mission e1)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.



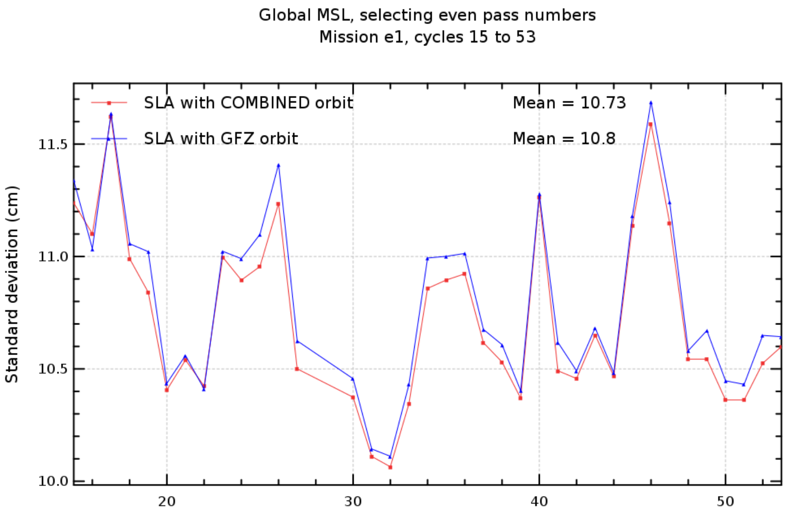
Diagnostic type : Global internal analyses

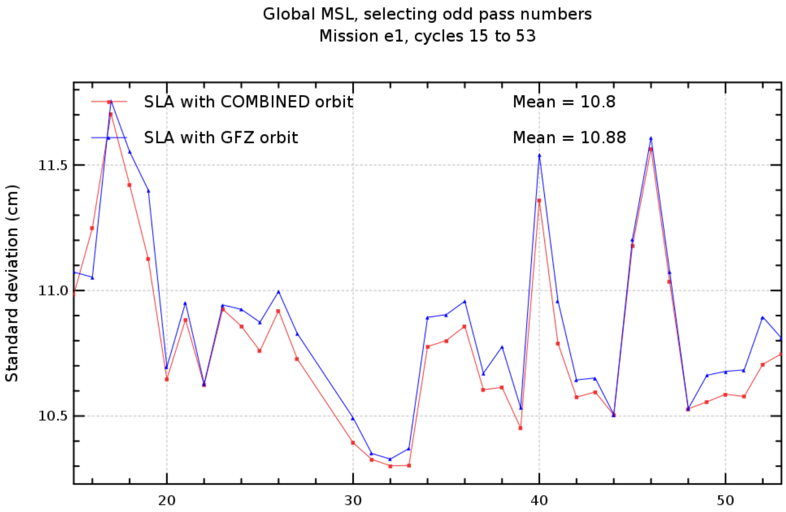
Diagnostic A201_e (mission e1)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.





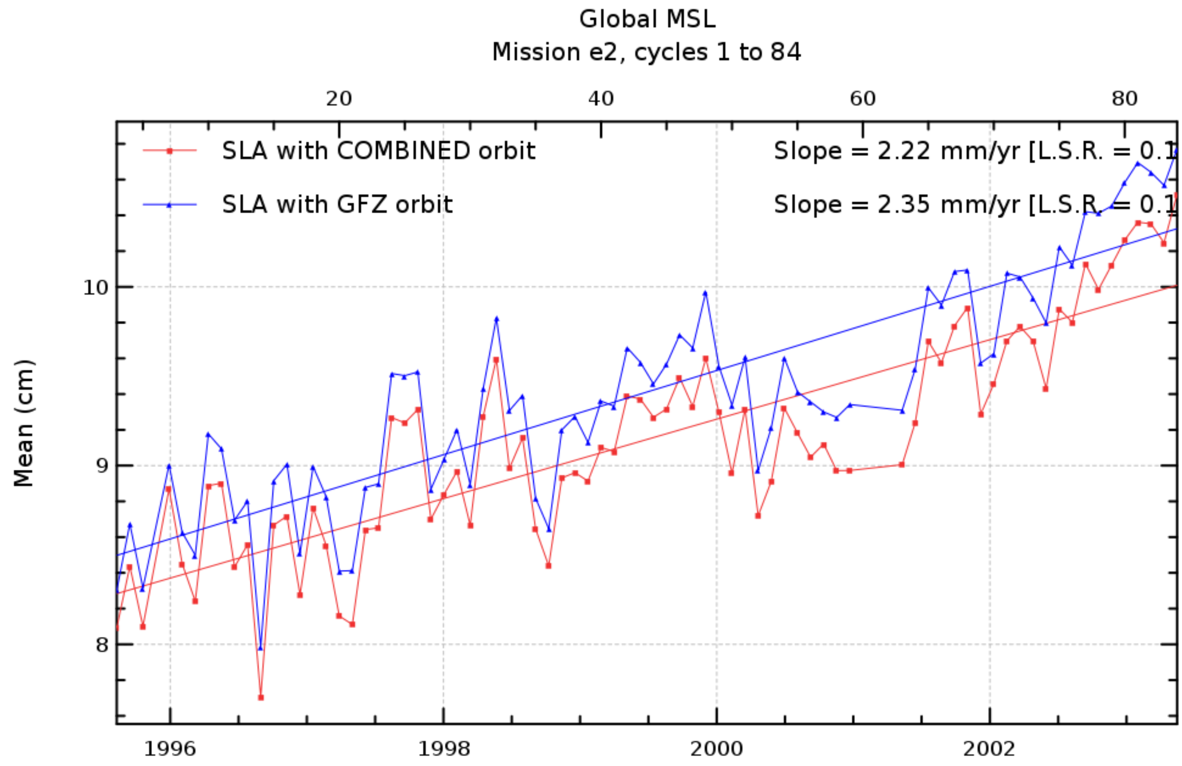
Diagnostic type : Global internal analyses

Diagnostic A201_a (mission e2)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.



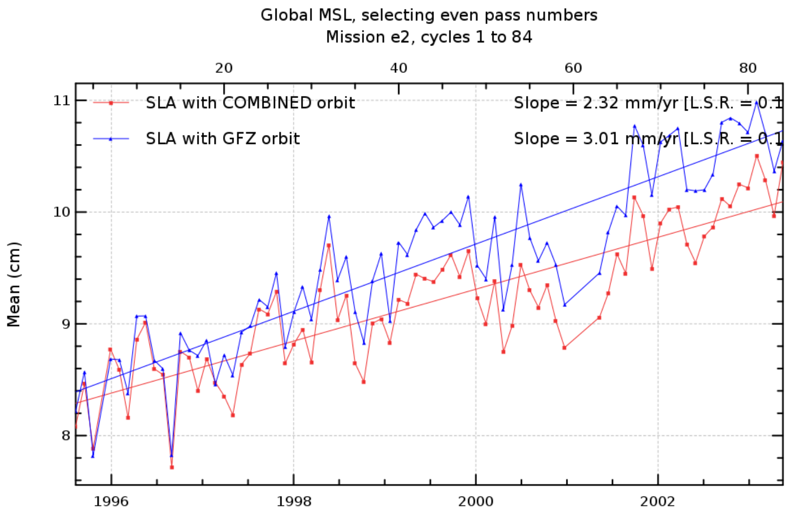
Diagnostic type : Global internal analyses

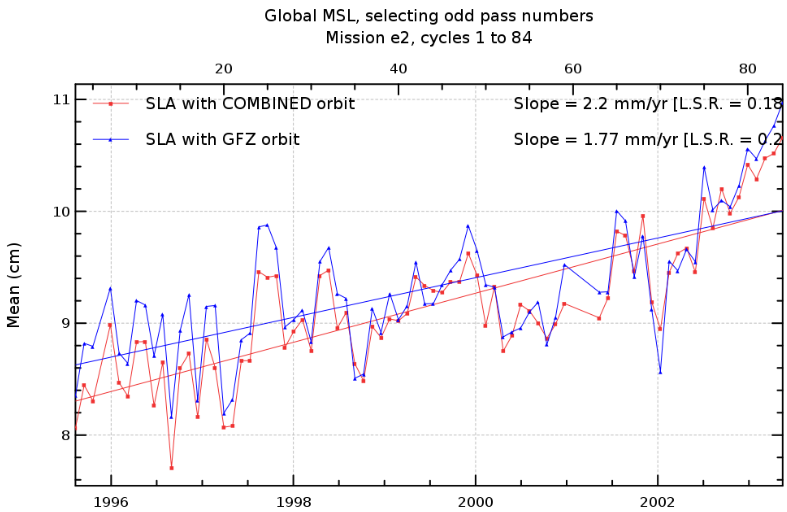
Diagnostic A201_b (mission e2)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.



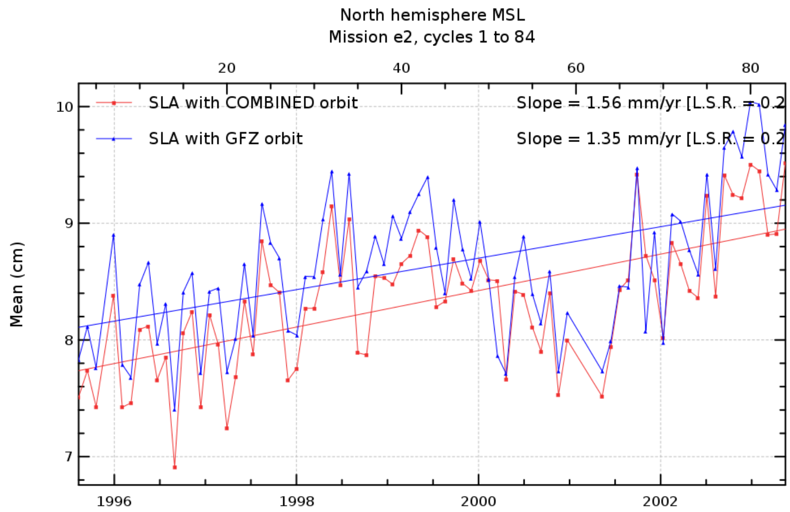


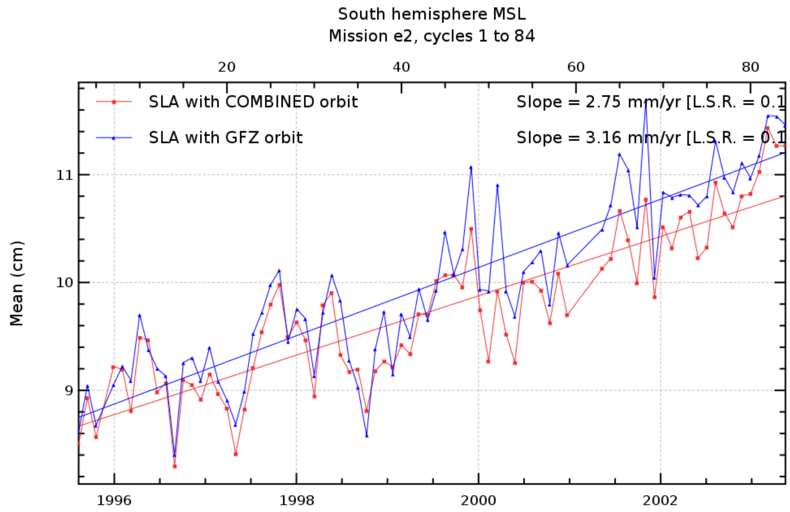
Diagnostic A201_c (mission e2)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.





Diagnostic type : Global internal analyses

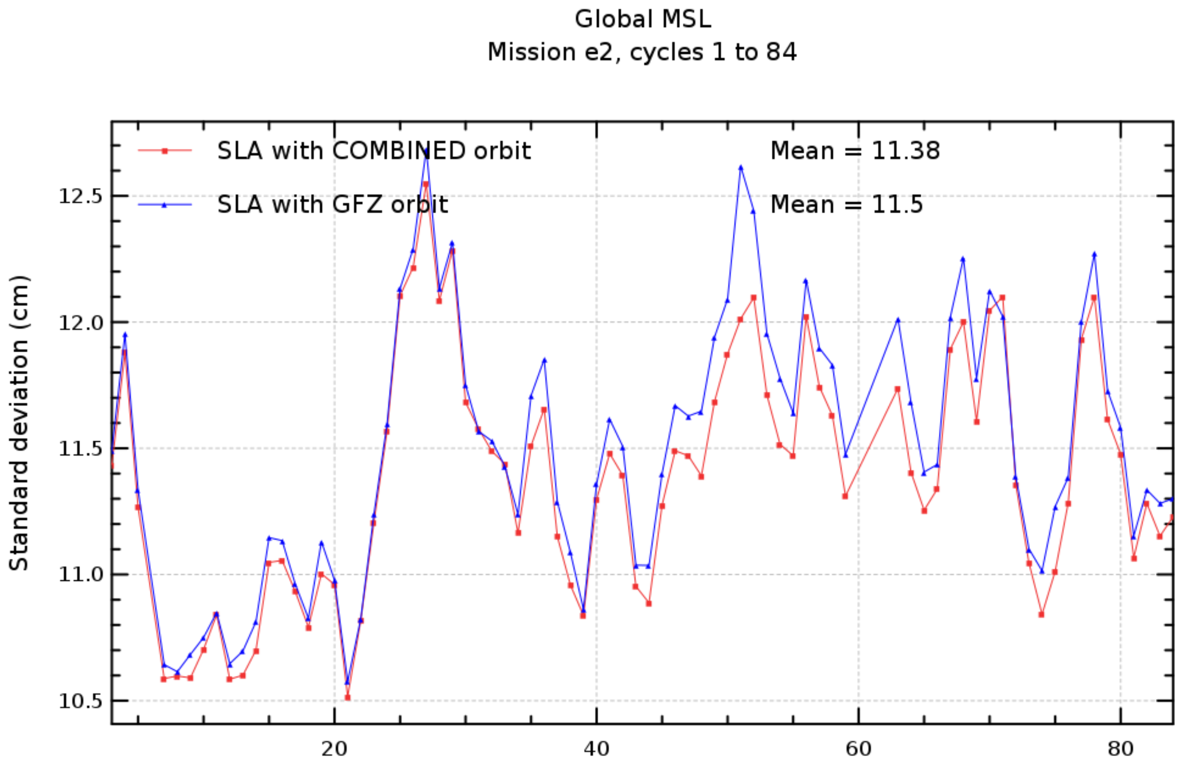
Diagnostic type : Global internal analyses

Diagnostic A201_d (mission e2)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.

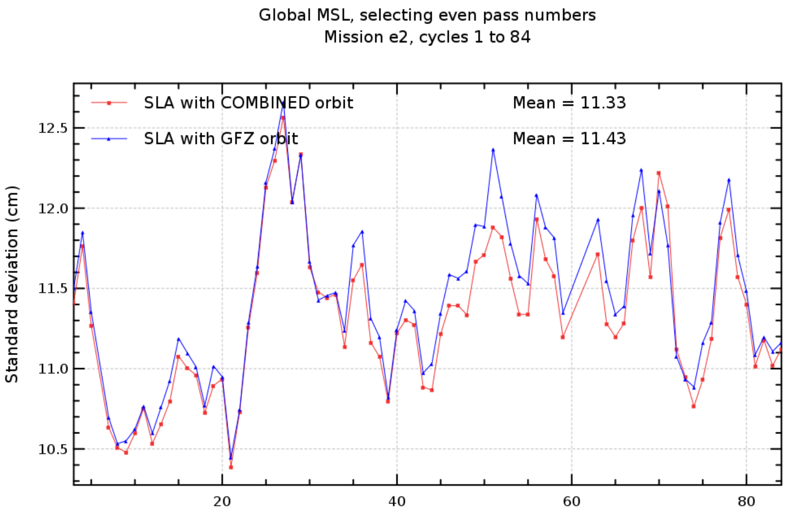


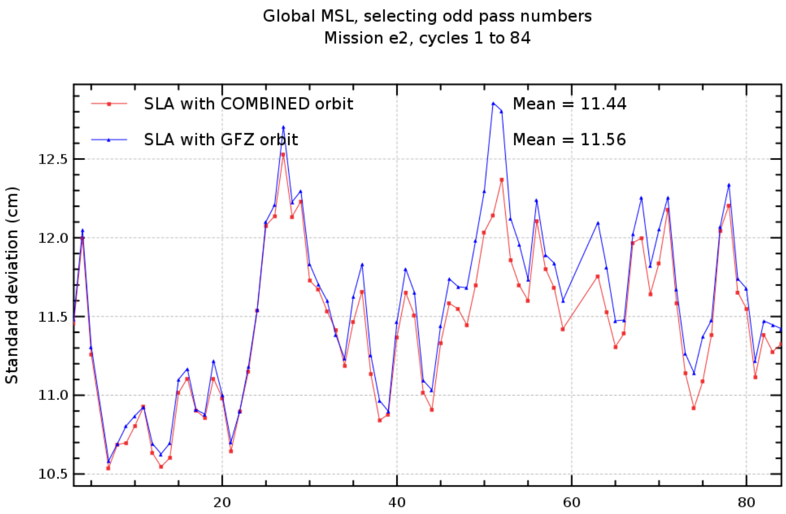
Diagnostic A201_e (mission e2)

Name : Temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) , or separating North and South hemispheres.





Diagnostic type : Global internal analyses

A202

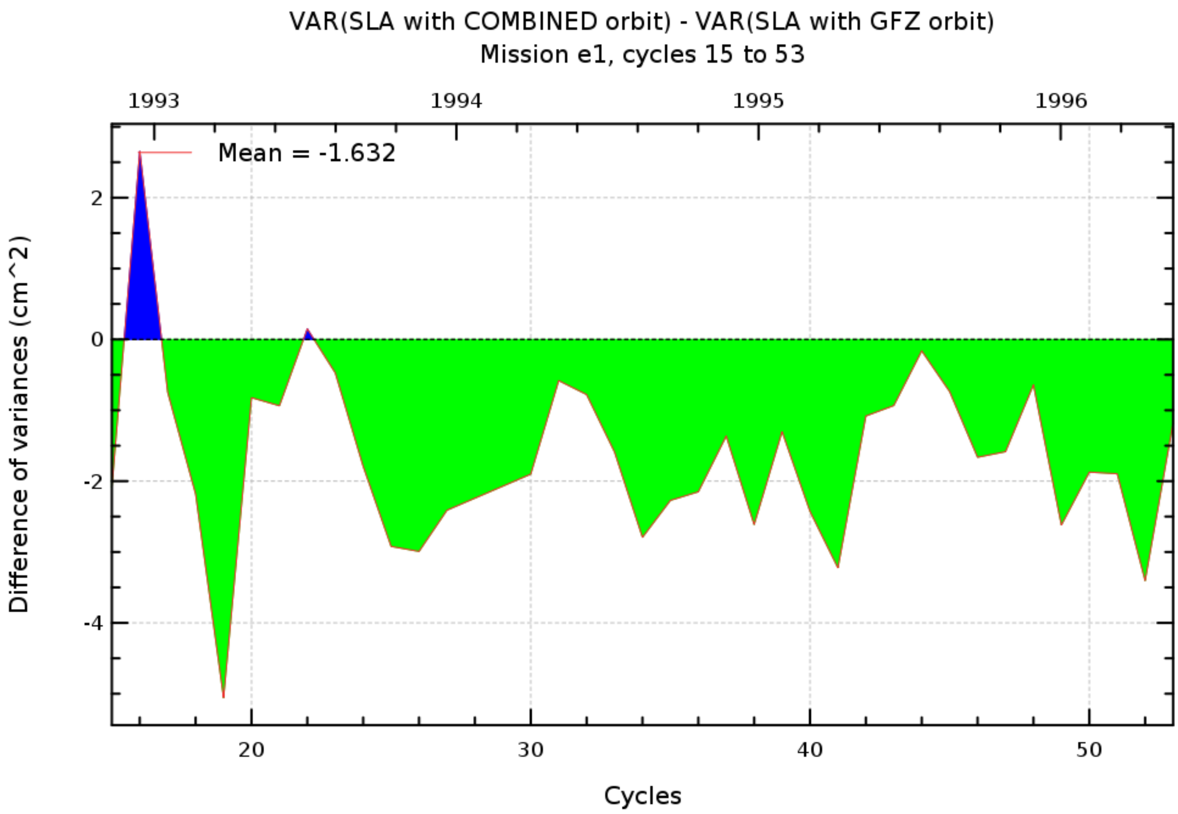
Diagnostic type : Global internal analyses

Diagnostic A202_a (mission e1)

Name : Differences between temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) or separating North and South hemispheres.

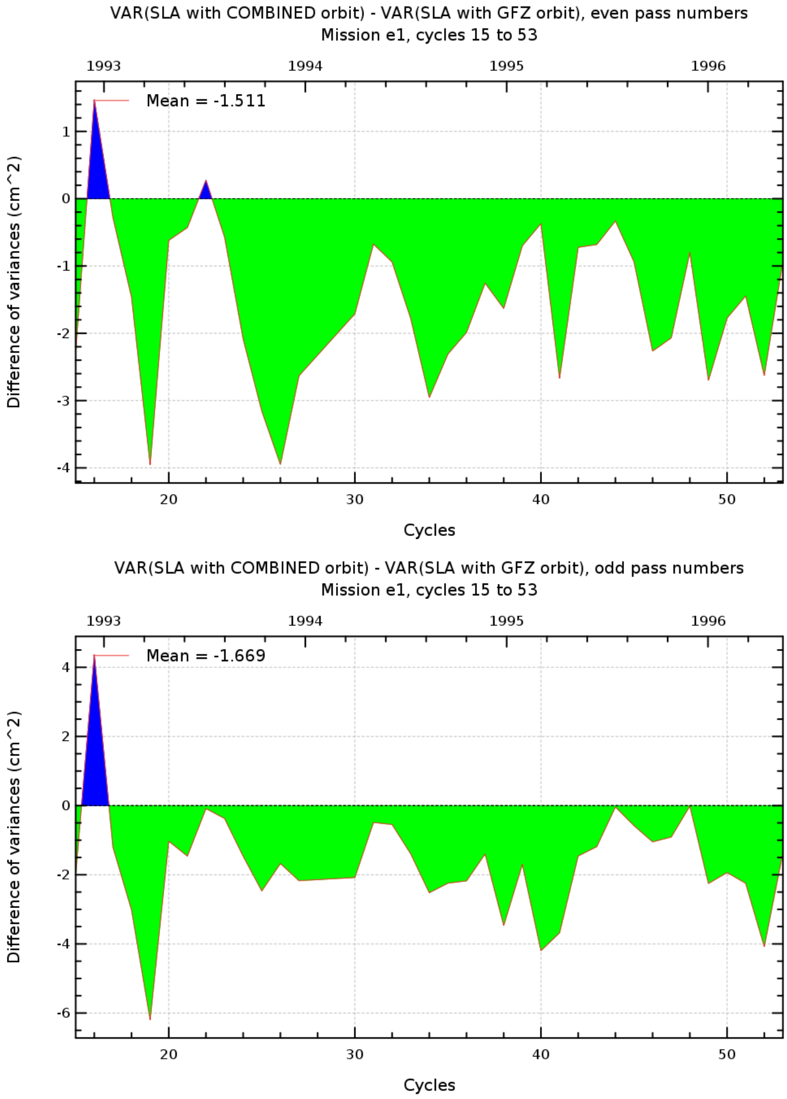


Diagnostic A202_b (mission e1)

Name : Differences between temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) or separating North and South hemispheres.



Diagnostic type : Global internal analyses

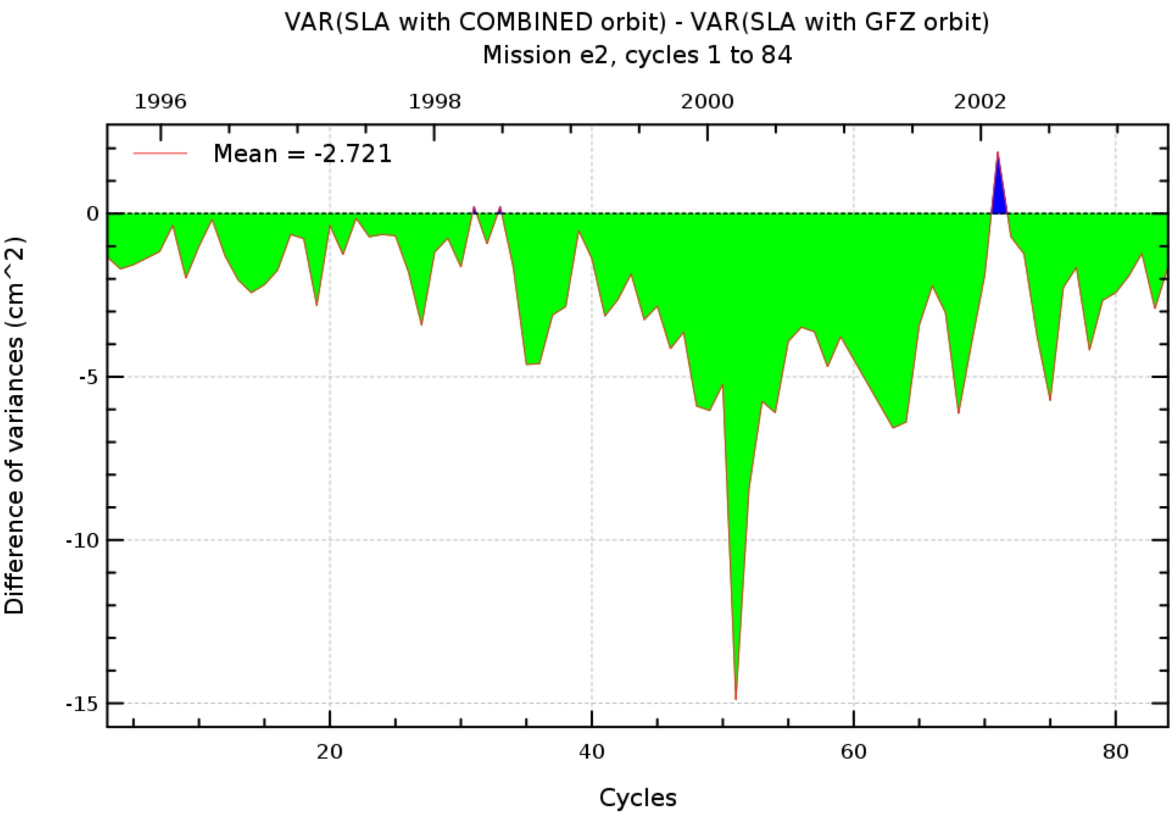
Diagnostic type : Global internal analyses

Diagnostic A202_a (mission e2)

Name : Differences between temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) or separating North and South hemispheres.

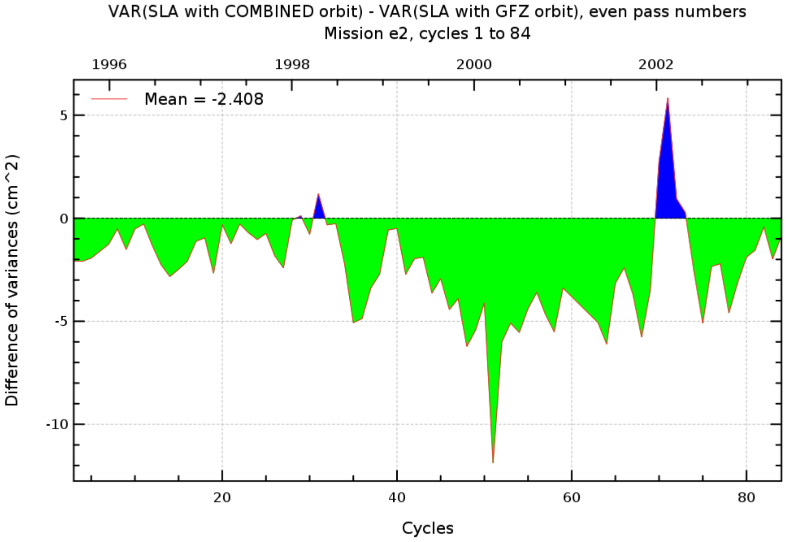


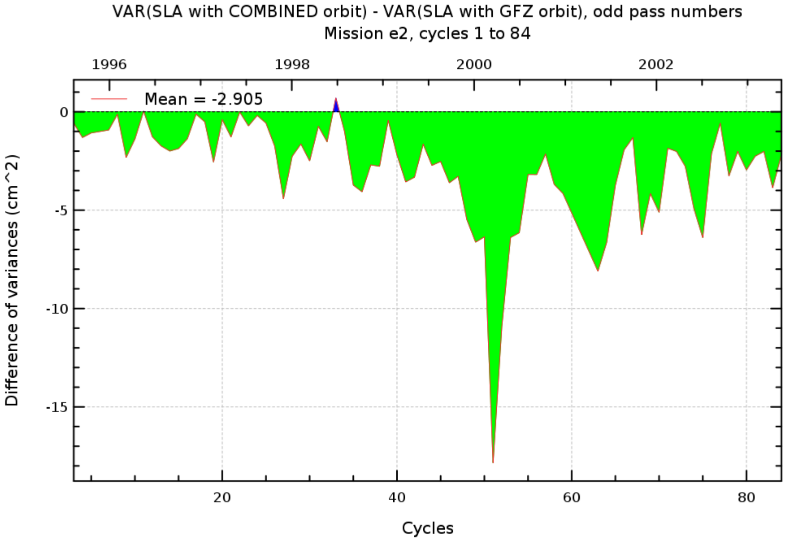
Diagnostic A202_b (mission e2)

Name : Differences between temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) or separating North and South hemispheres.





Diagnostic type : Global internal analyses

A203

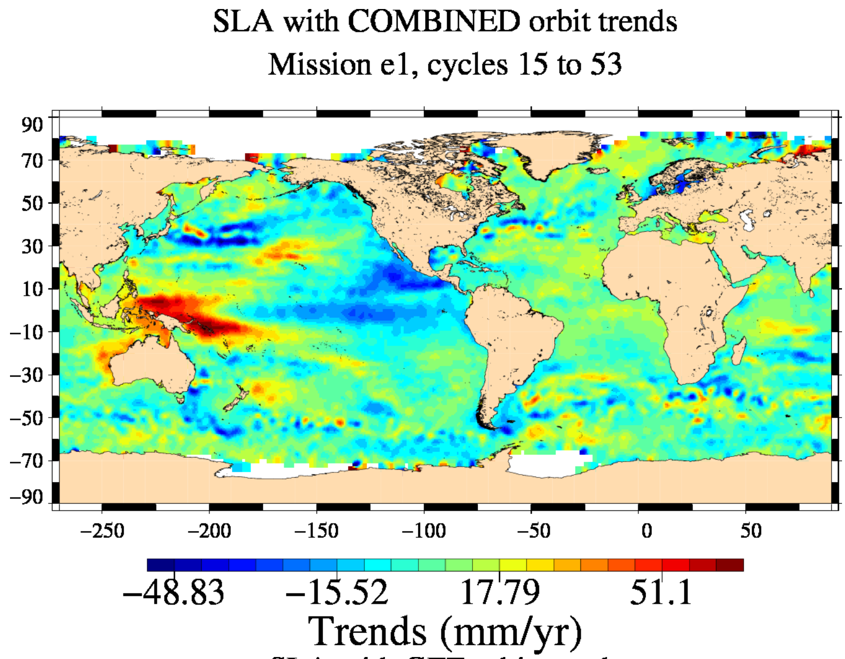
Diagnostic type : Global internal analyses

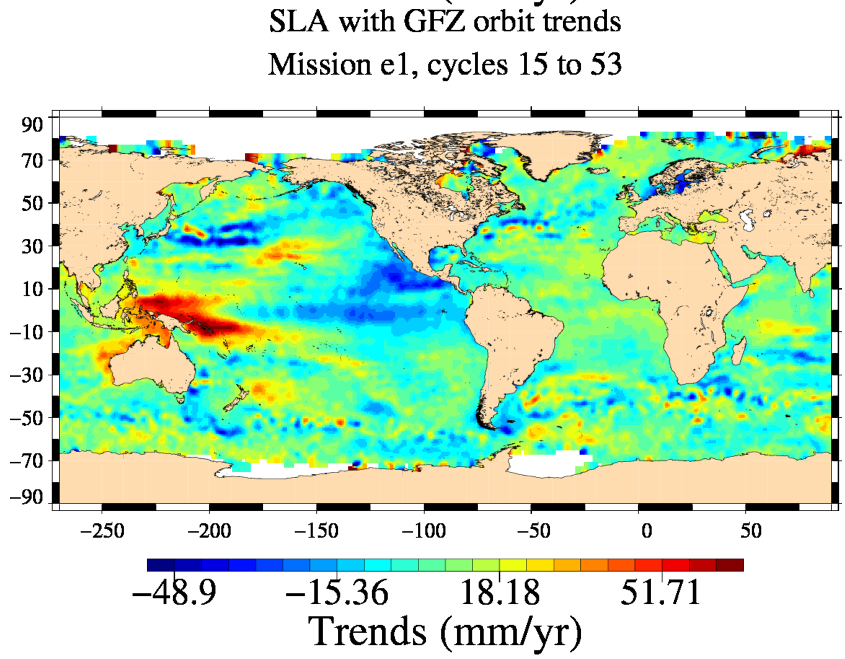
Diagnostic A203_a (mission e1)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





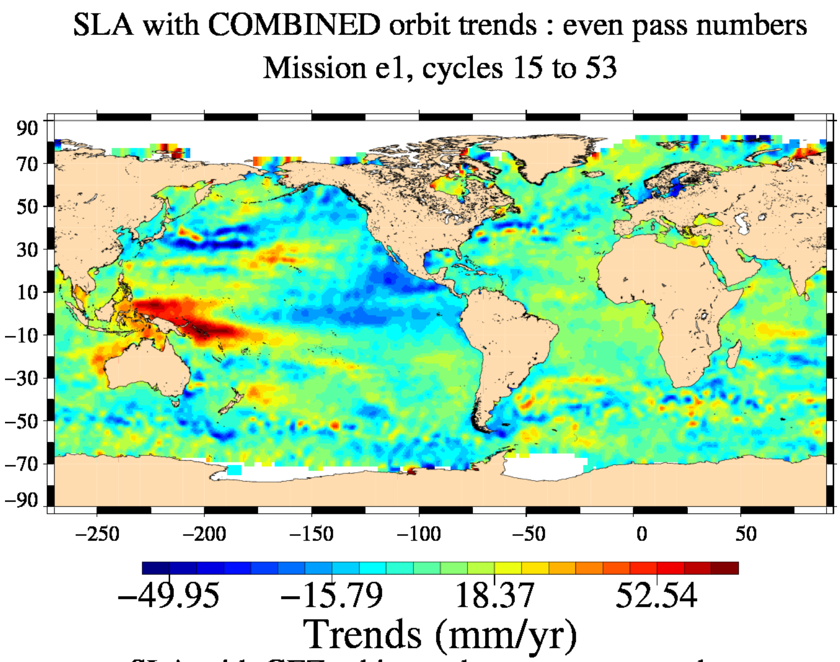
Diagnostic type : Global internal analyses

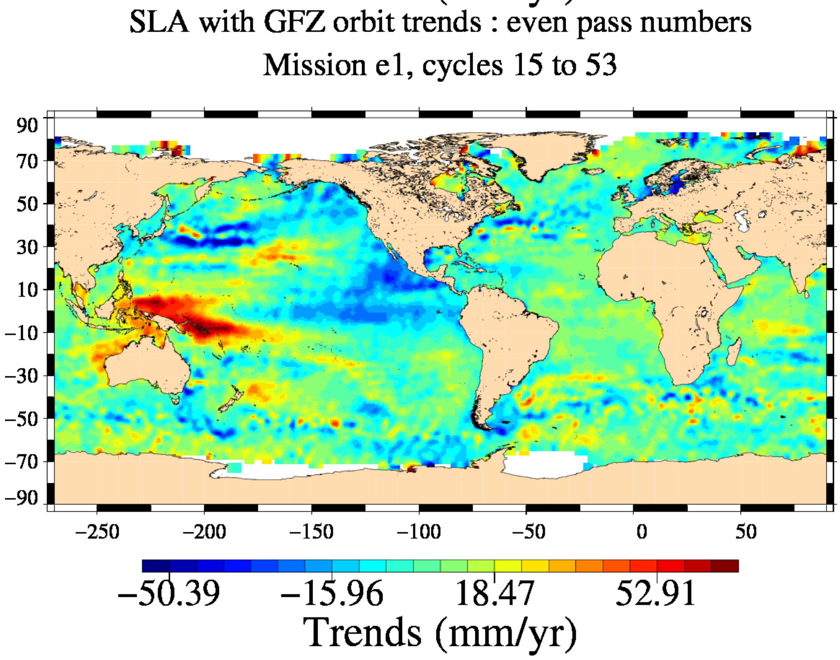
Diagnostic A203_b (mission e1)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





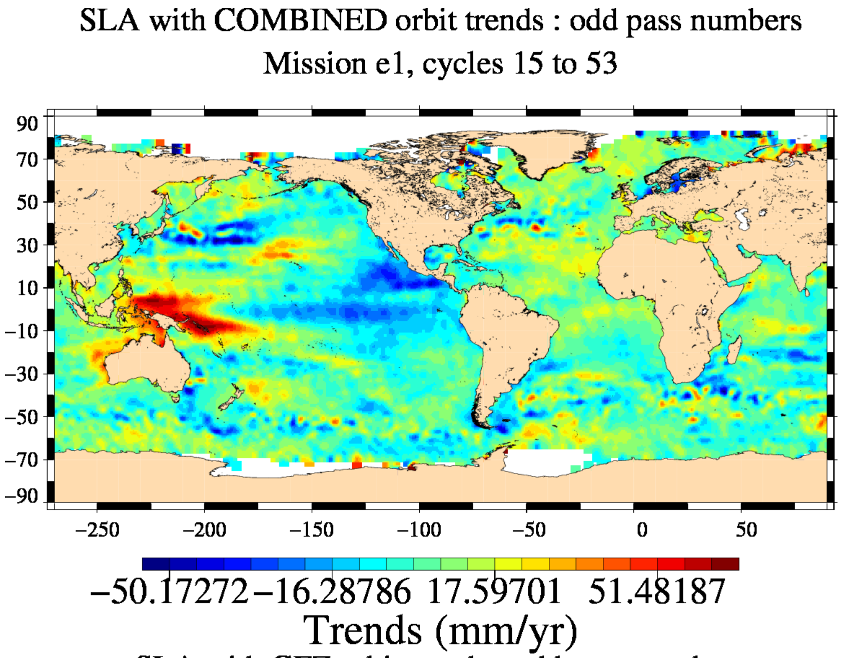
Diagnostic type : Global internal analyses

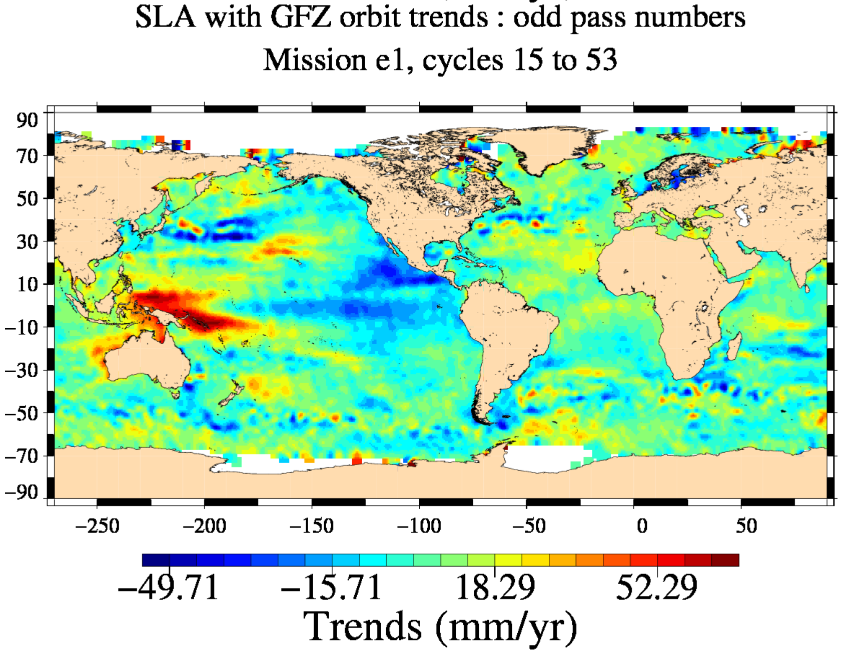
Diagnostic A203_c (mission e1)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.



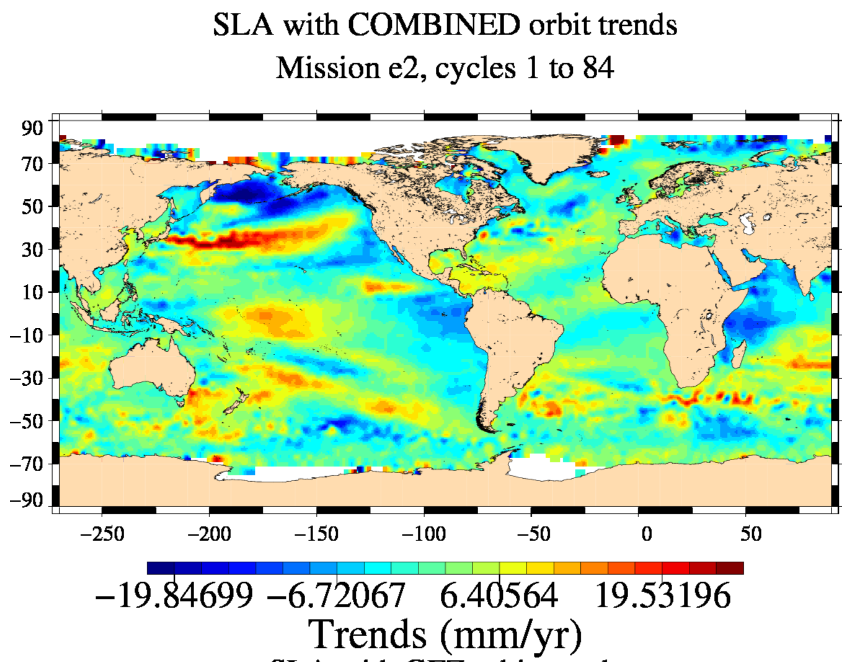


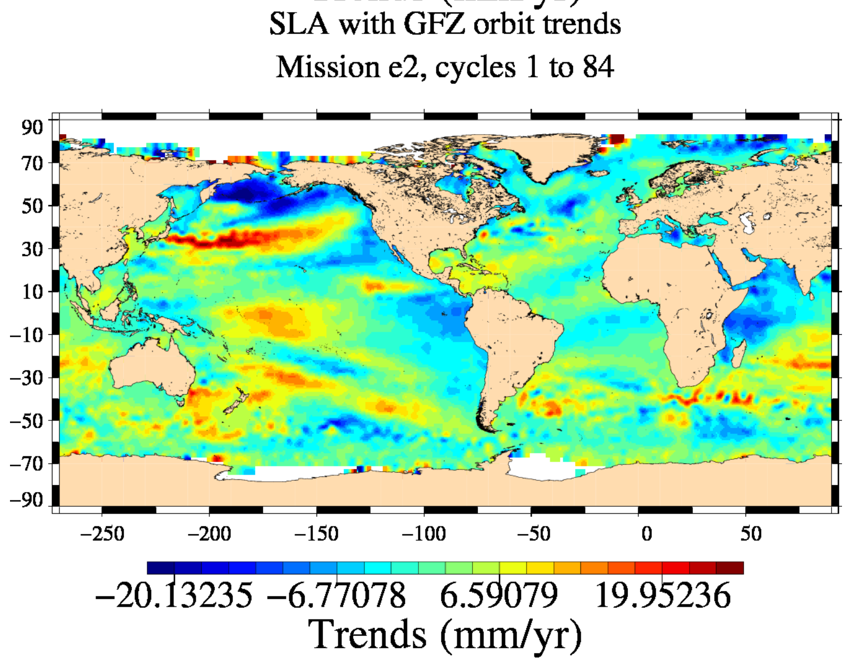
Diagnostic A203_a (mission e2)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





Diagnostic type : Global internal analyses

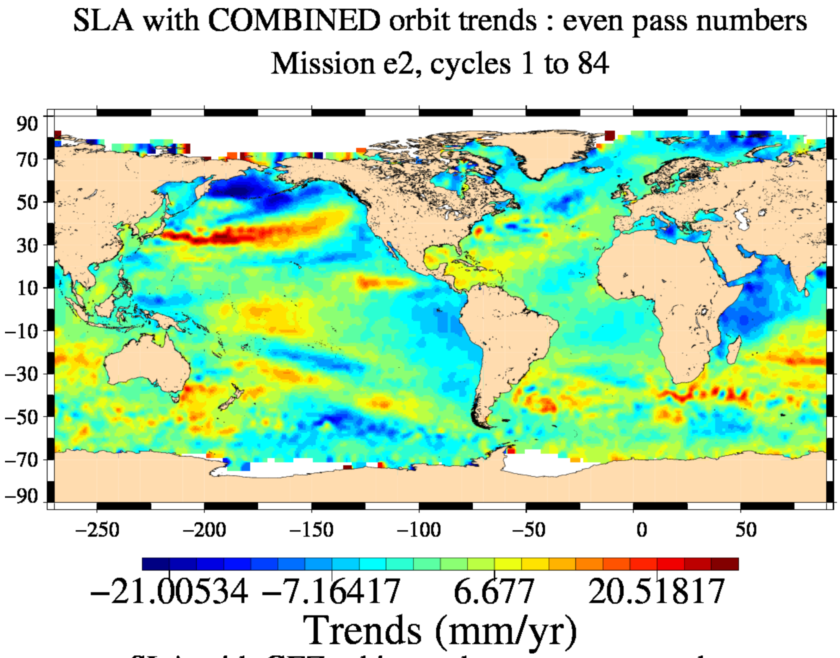
Diagnostic type : Global internal analyses

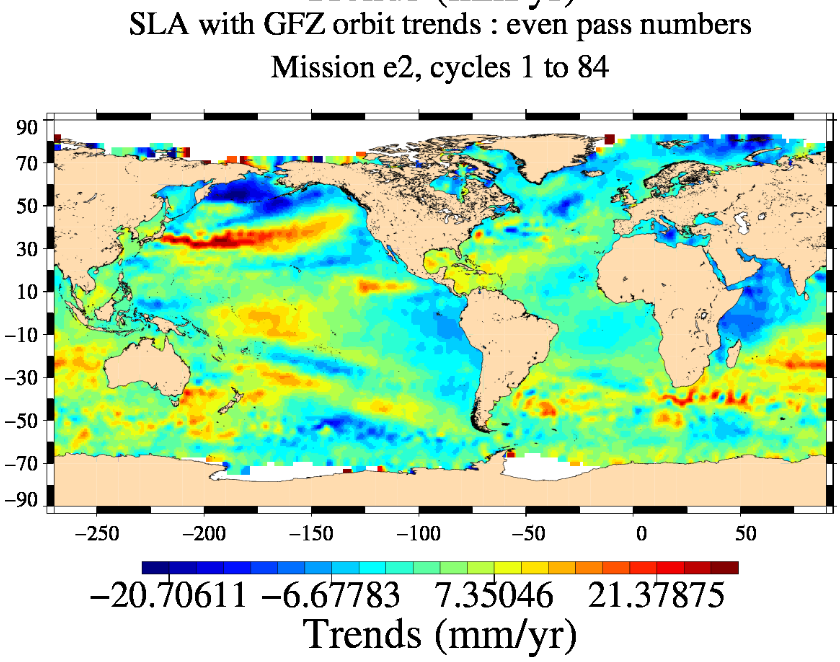
Diagnostic A203_b (mission e2)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.



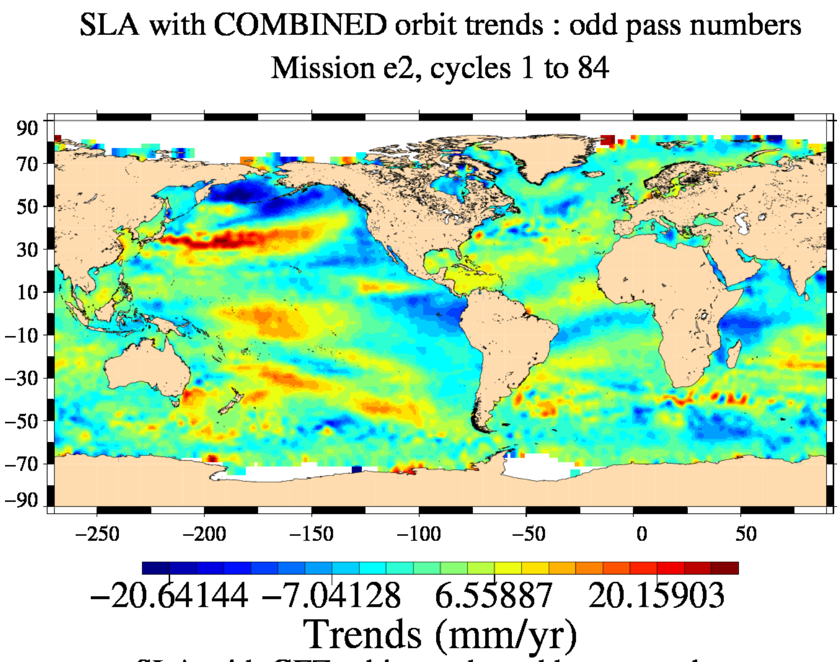


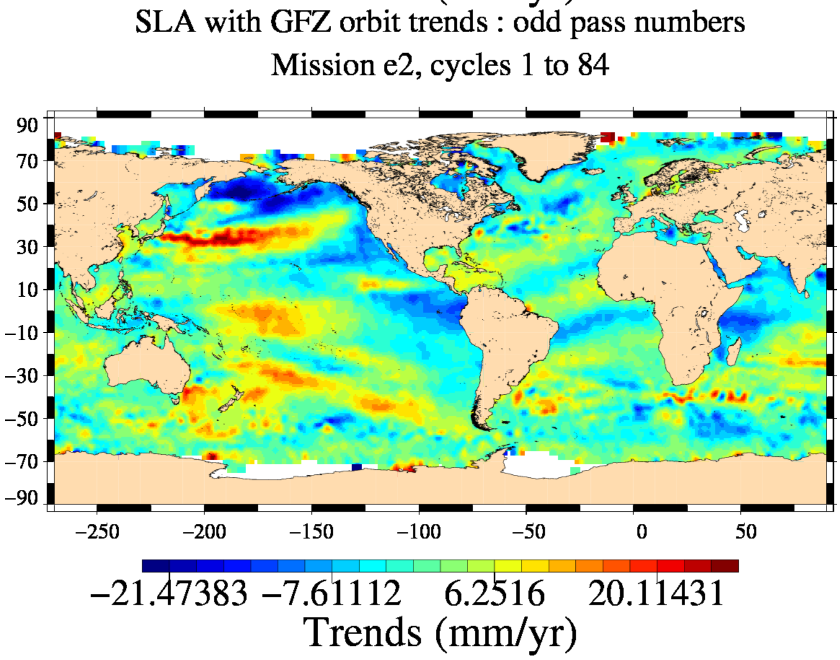
Diagnostic A203_c (mission e2)

Name : Map of Sea Level Anomaly (SLA) over all the period

Input data : Along track SLA

Description : The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.





Diagnostic type : Global internal analyses

A204

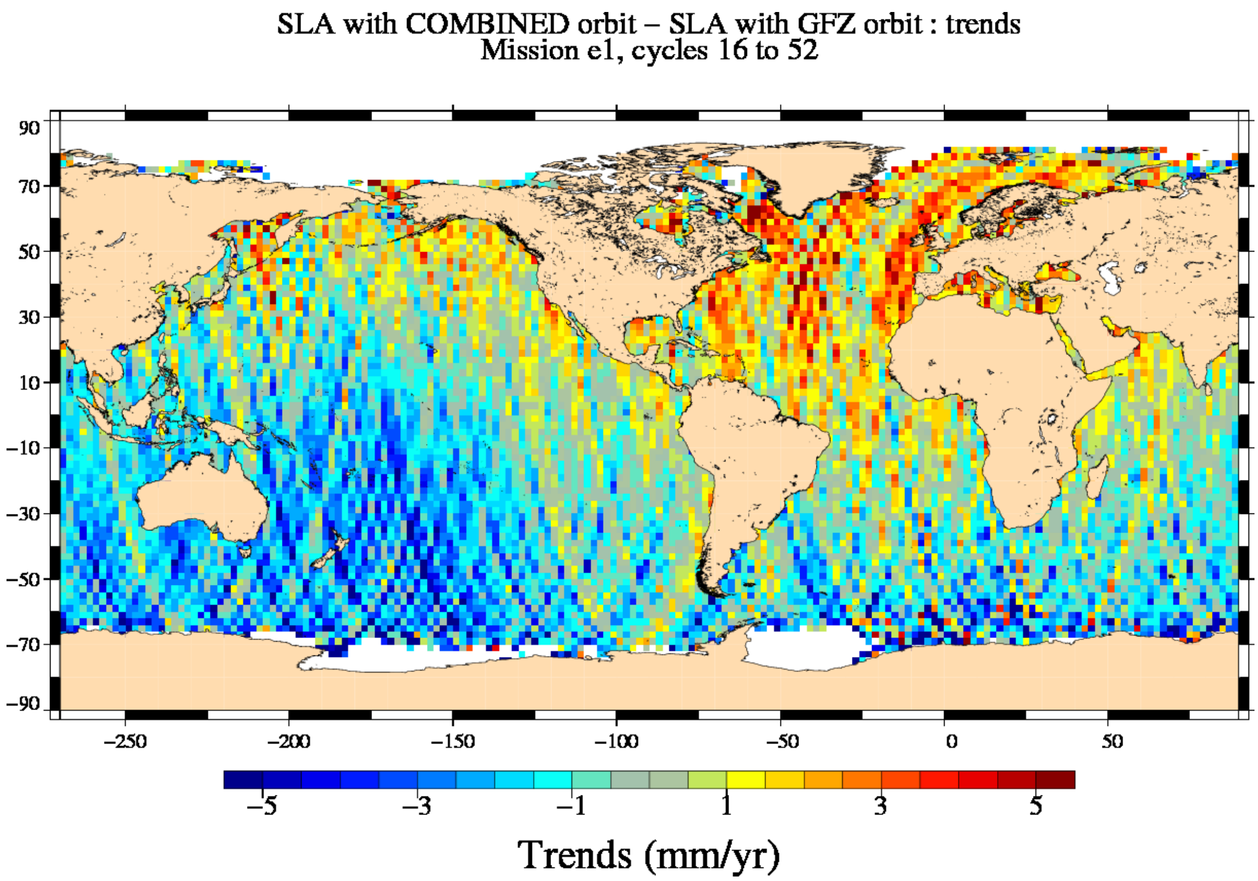
Diagnostic type : Global internal analyses

Diagnostic A204_a (mission e1)

Name : Differences between maps of SLA

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).

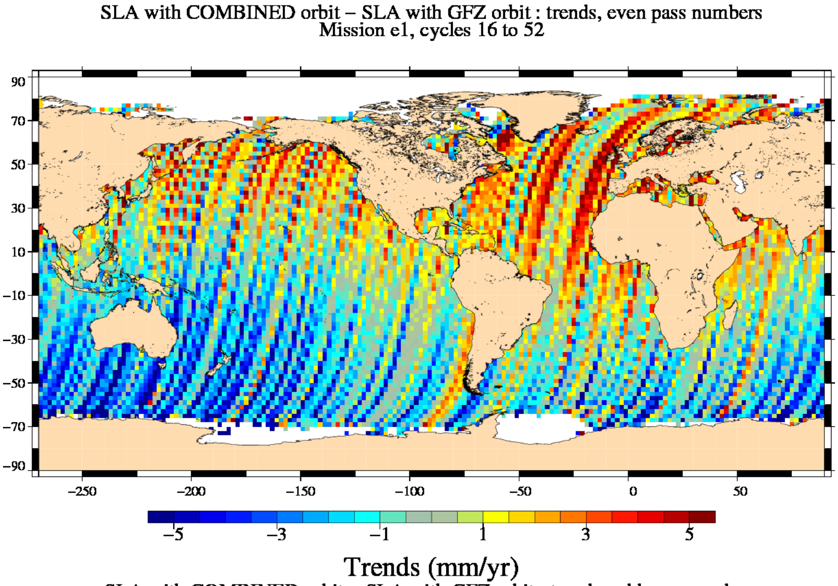


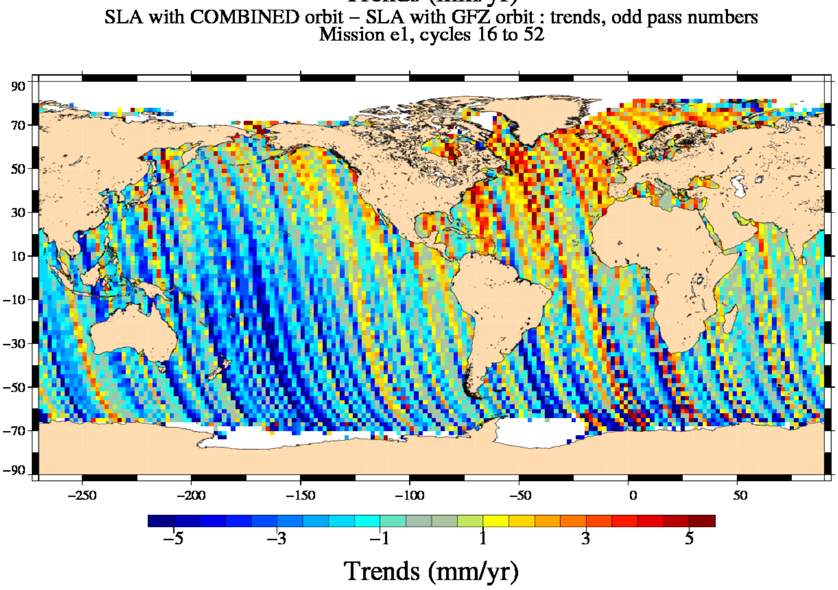
Diagnostic A204_b (mission e1)

Name : Differences between maps of SLA

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





Diagnostic type : Global internal analyses

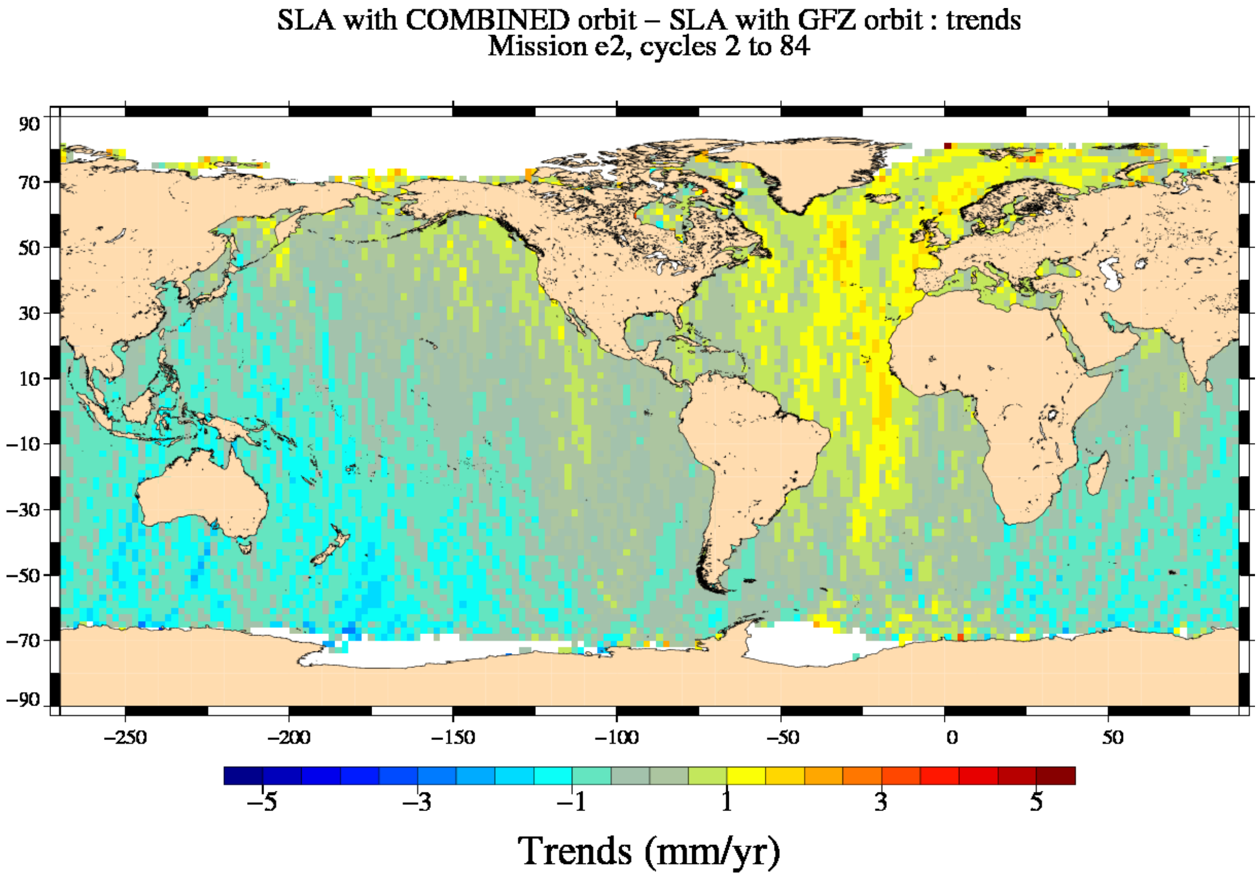
Diagnostic type : Global internal analyses

Diagnostic A204_a (mission e2)

Name : Differences between maps of SLA

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).



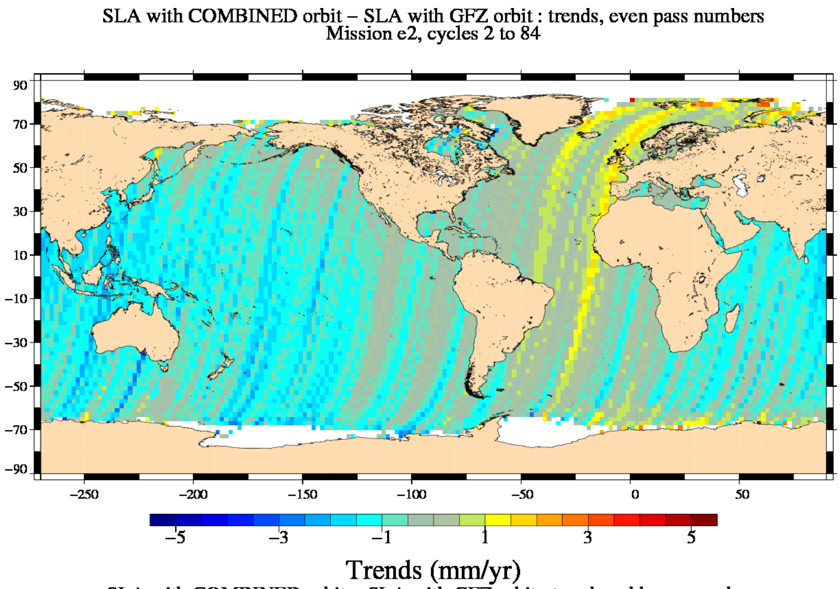
Diagnostic type : Global internal analyses

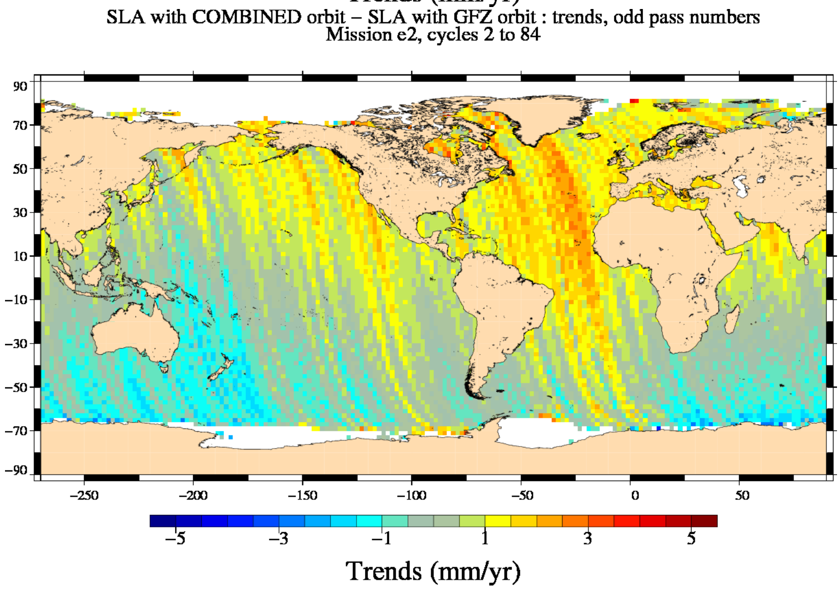
Diagnostic A204_b (mission e2)

Name : Differences between maps of SLA

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





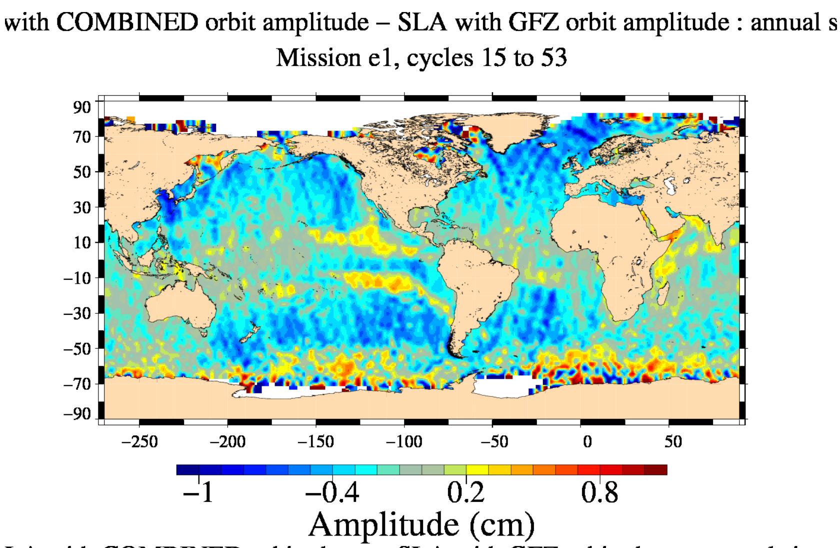
Diagnostic type : Global internal analyses

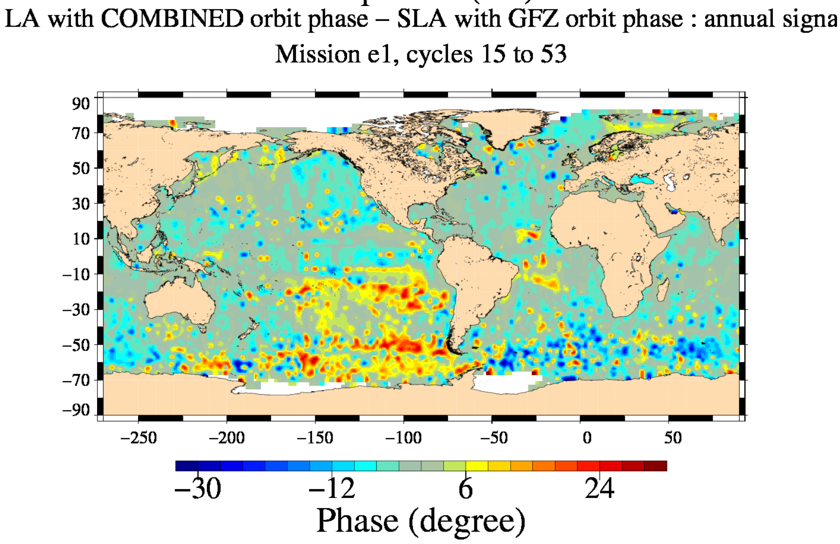
Diagnostic A205_a (mission e1)

Name : Differences between maps of SLA (2)

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





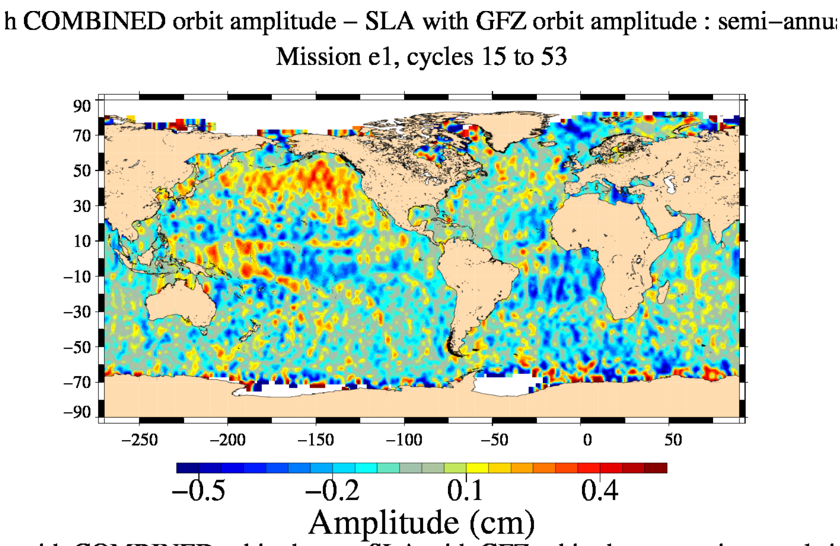
Diagnostic type : Global internal analyses

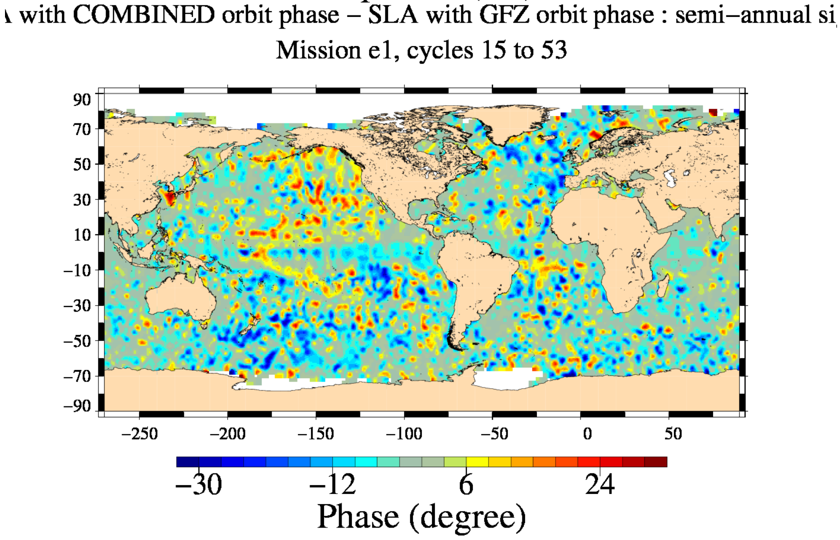
Diagnostic A205_b (mission e1)

Name : Differences between maps of SLA (2)

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





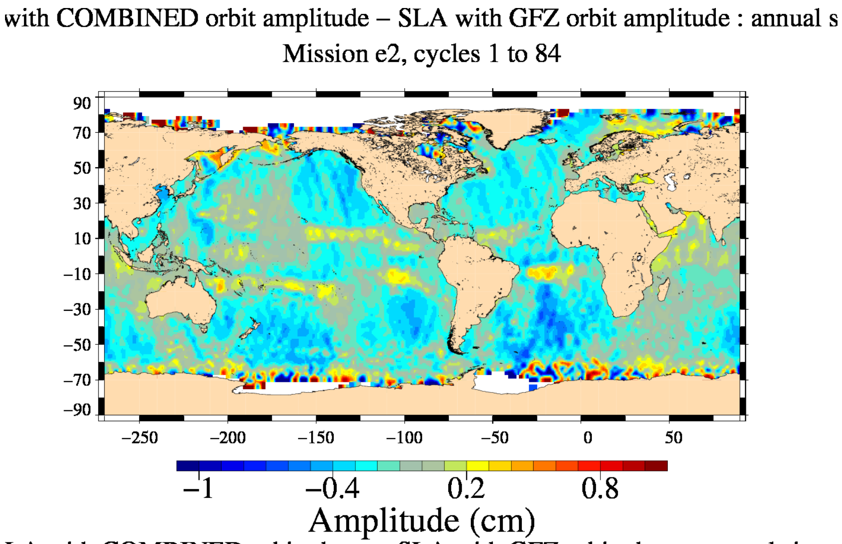
Diagnostic type : Global internal analyses

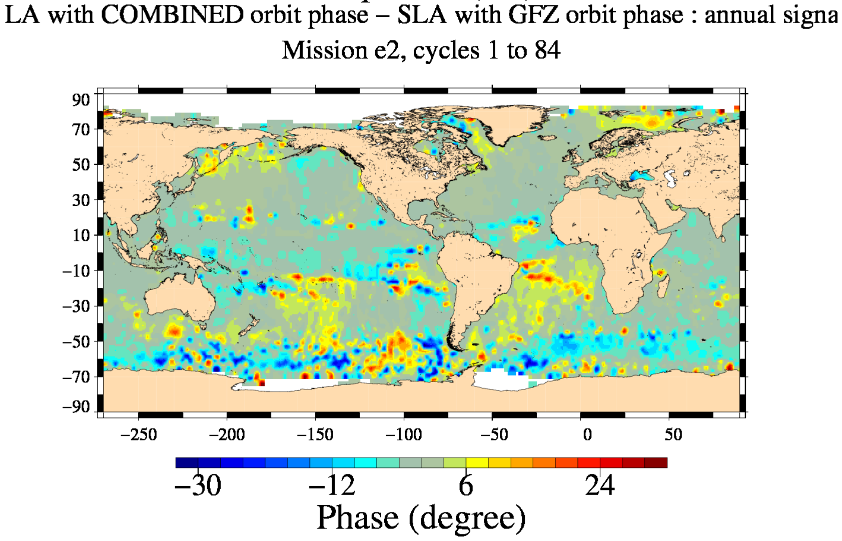
Diagnostic A205_a (mission e2)

Name : Differences between maps of SLA (2)

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





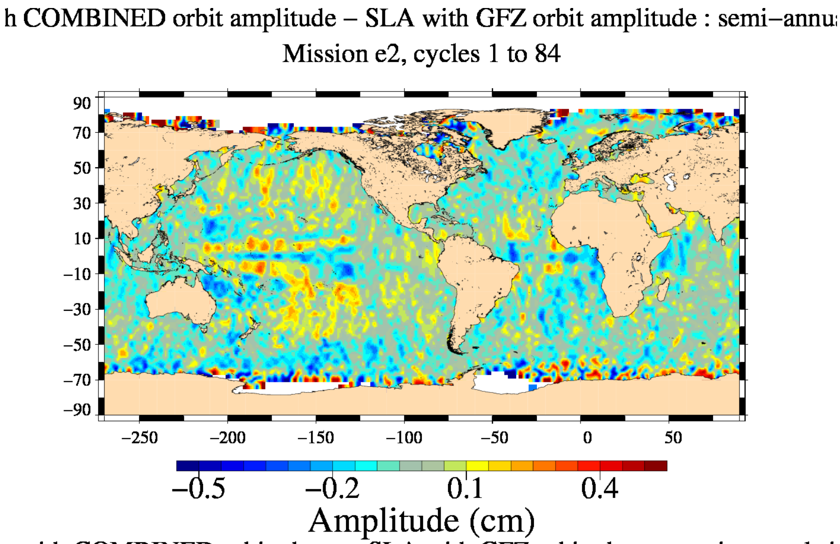
Diagnostic type : Global internal analyses

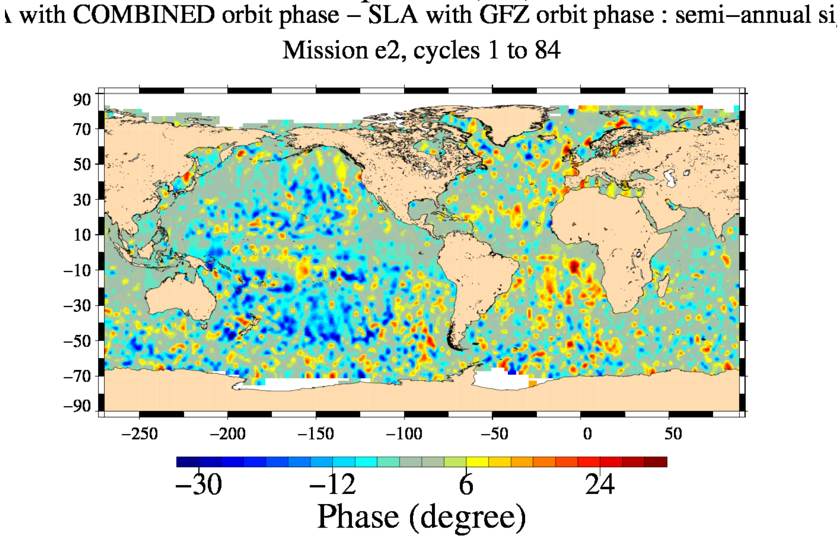
Diagnostic A205_b (mission e2)

Name : Differences between maps of SLA (2)

Input data : Along track SLA

Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except for SLA Grids).





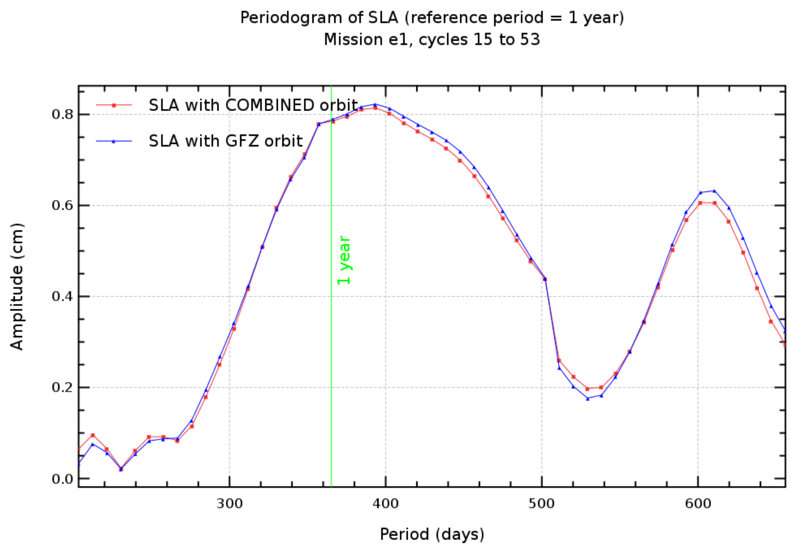
A206

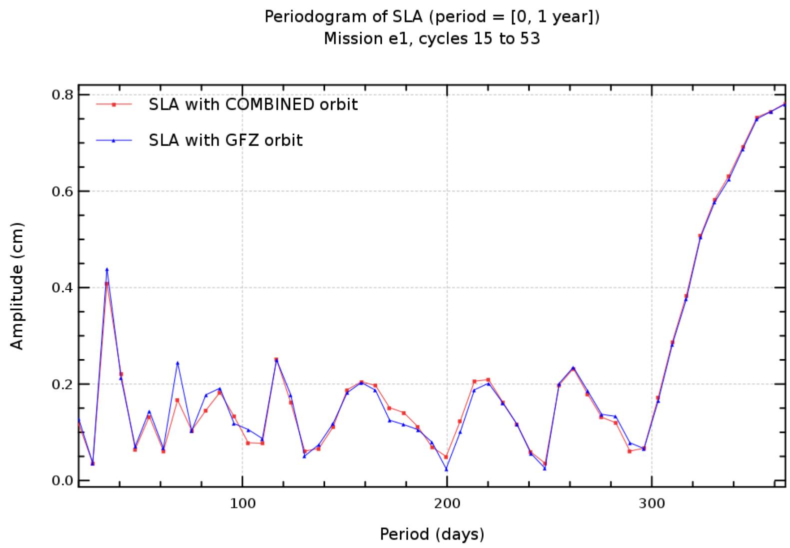
Diagnostic A206_a (mission e1)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.





Diagnostic type : Global internal analyses

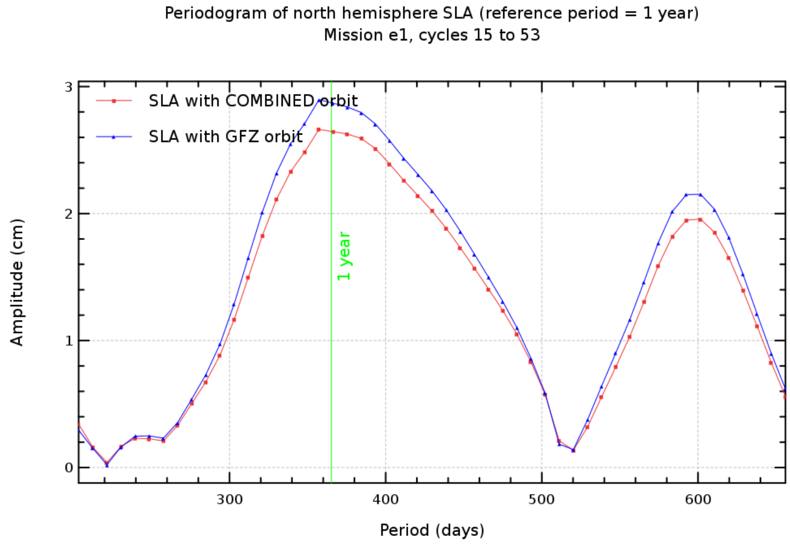
Diagnostic type : Global internal analyses

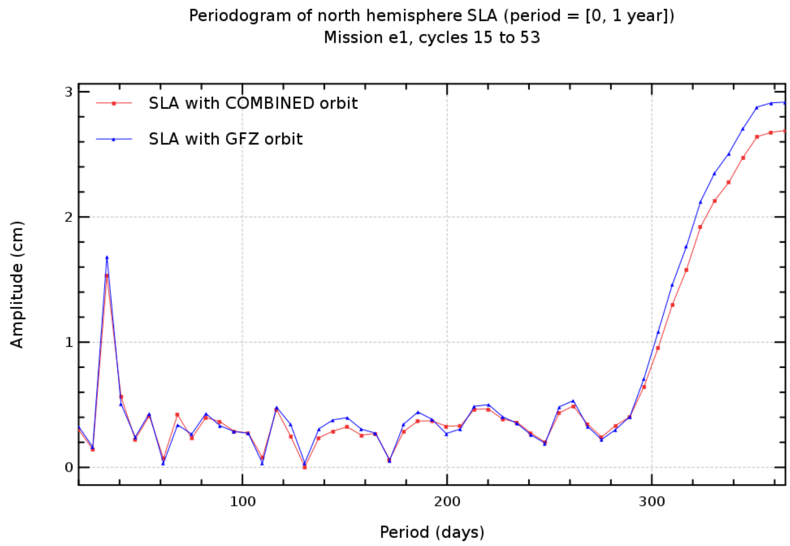
Diagnostic A206_b (mission e1)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.



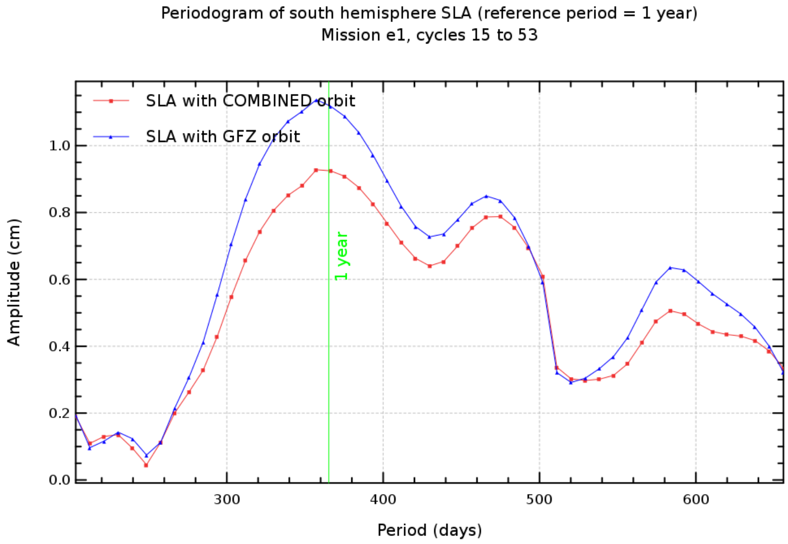


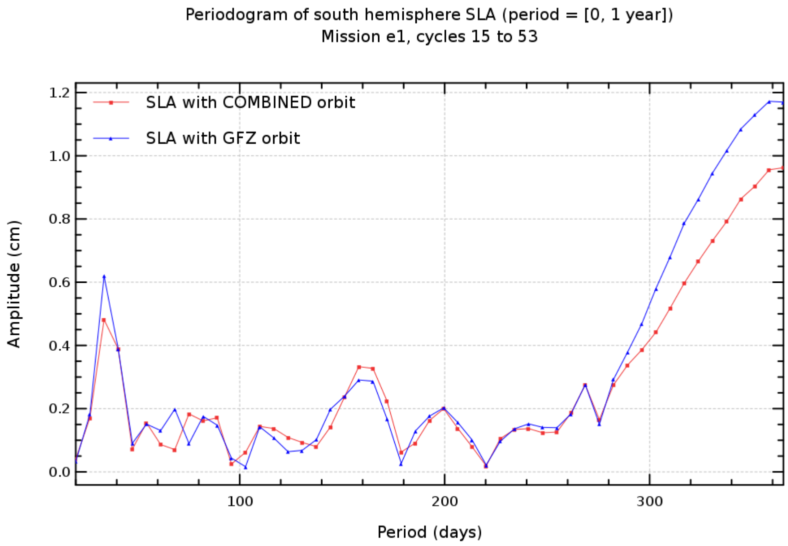
Diagnostic A206_c (mission e1)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.





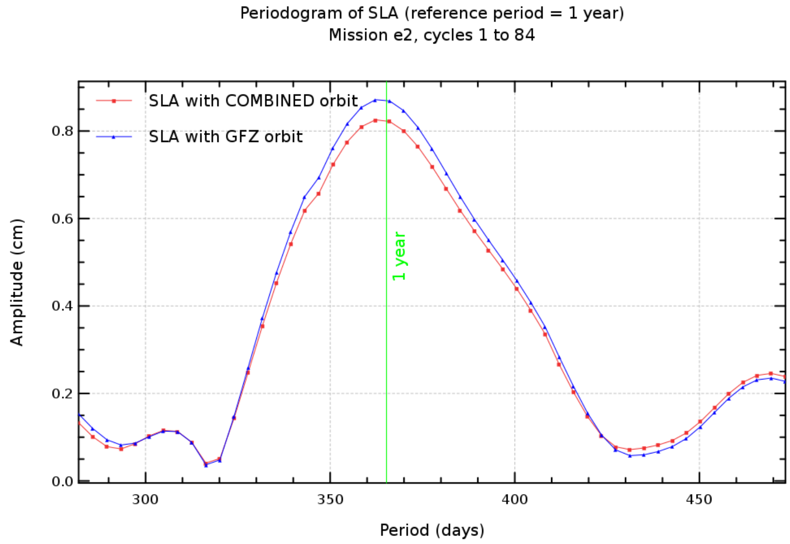
Diagnostic type : Global internal analyses

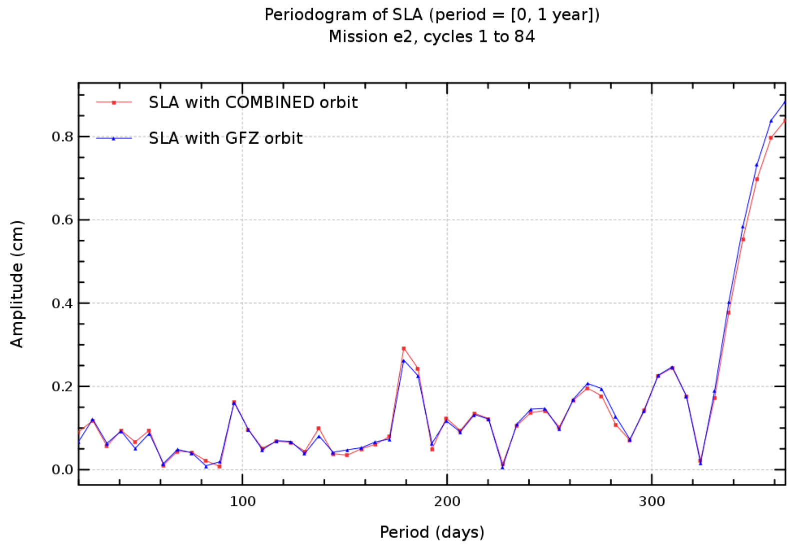
Diagnostic A206_a (mission e2)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.





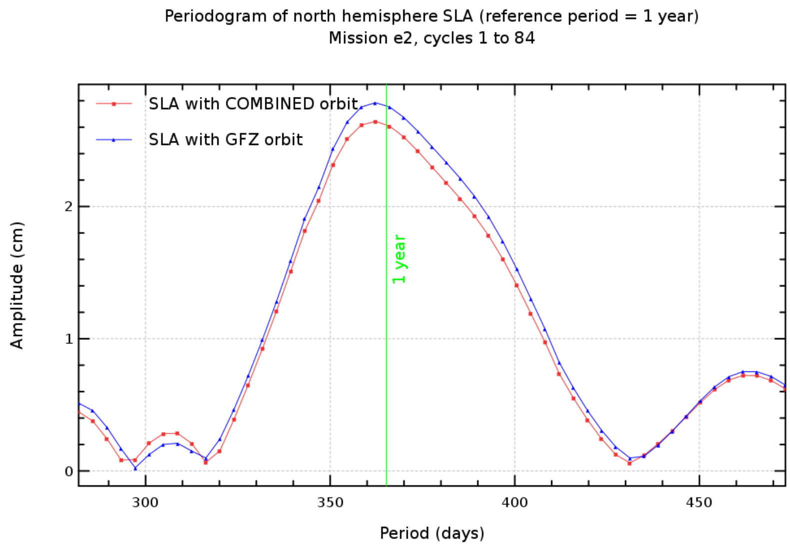
Diagnostic type : Global internal analyses

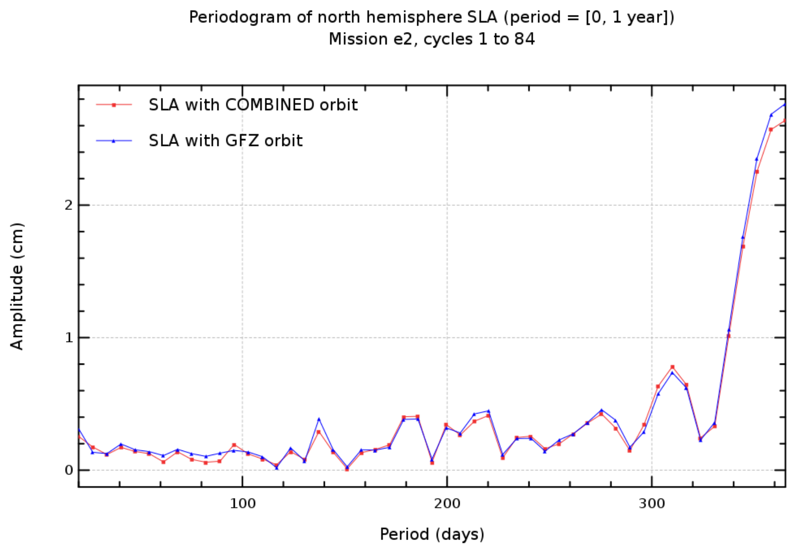
Diagnostic A206_b (mission e2)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.





Diagnostic type : Global internal analyses

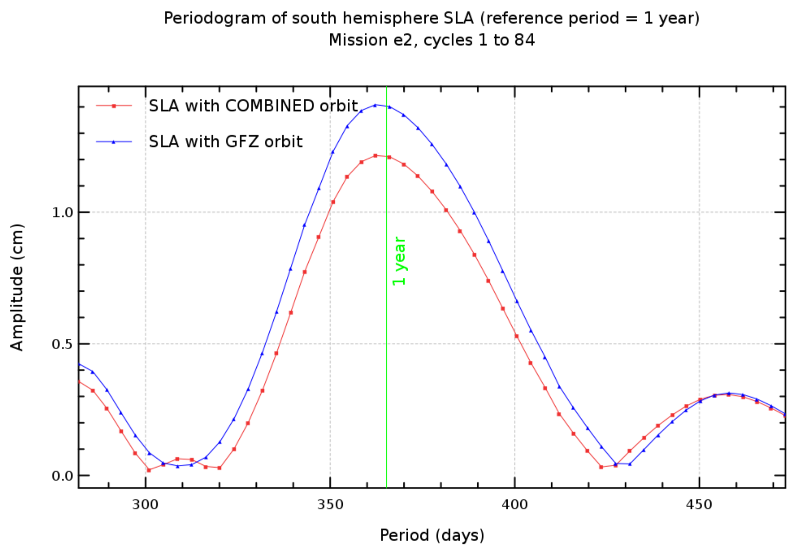
Diagnostic type : Global internal analyses

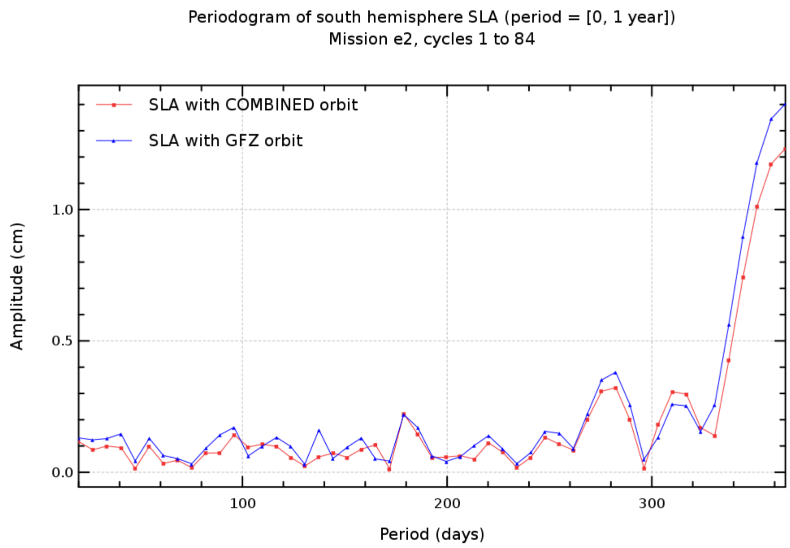
Diagnostic A206_c (mission e2)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data : Along track SLA

Description : The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.





C001

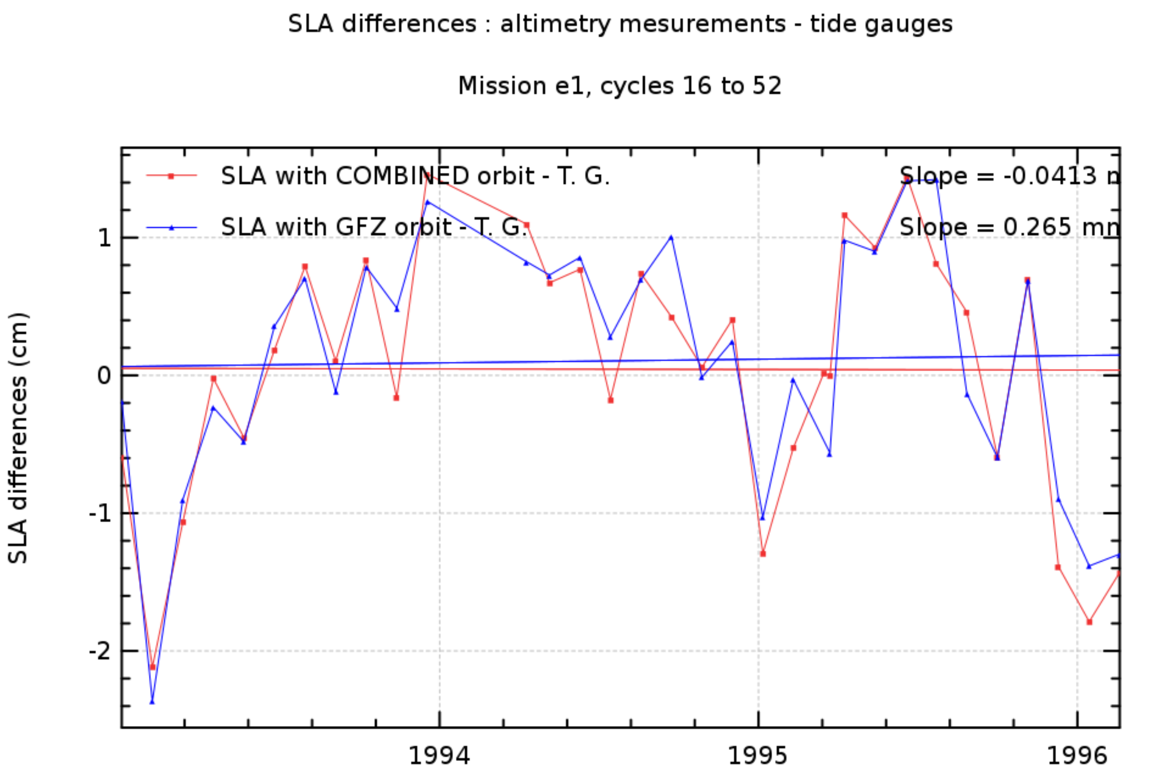
Diagnostic C001 (mission e1)

Diagnostic type : Altimetry and in-situ data comparaison

Name : Temporal evolution of SSH differences between tide gauges and altimetry measurements

Input data : Tide gauges SSH measurements

Description : The temporal evolution of global statistics (mean, variance, slope) of SSH differences between tide gauges and altimeter measurements are calculated from a cyclic way (altimeter repetivity) using successively both altimetric components in SSH calculation. The altimetric and tide gauges data are colocated with criteria of maximum of correlation, and tide gauges used are derived from global networks (GLOSS/CLIVAR, REFMAR).



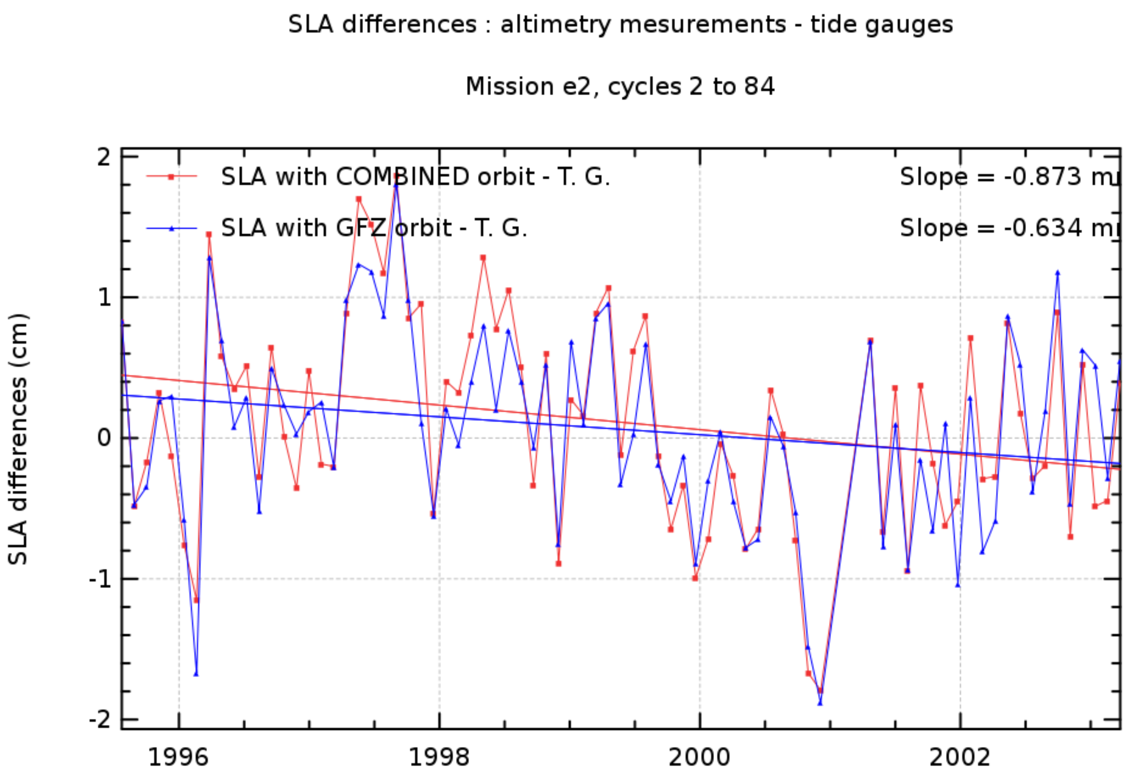
Diagnostic type : Altimetry and in-situ data comparaison

Diagnostic C001 (mission e2)

Name : Temporal evolution of SSH differences between tide gauges and altimetry measurements

Input data : Tide gauges SSH measurements

Description : The temporal evolution of global statistics (mean, variance, slope) of SSH differences between tide gauges and altimeter measurements are calculated from a cyclic way (altimeter repetivity) using successively both altimetric components in SSH calculation. The altimetric and tide gauges data are colocated with criteria of maximum of correlation, and tide gauges used are derived from global networks (GLOSS/CLIVAR, REFMAR).



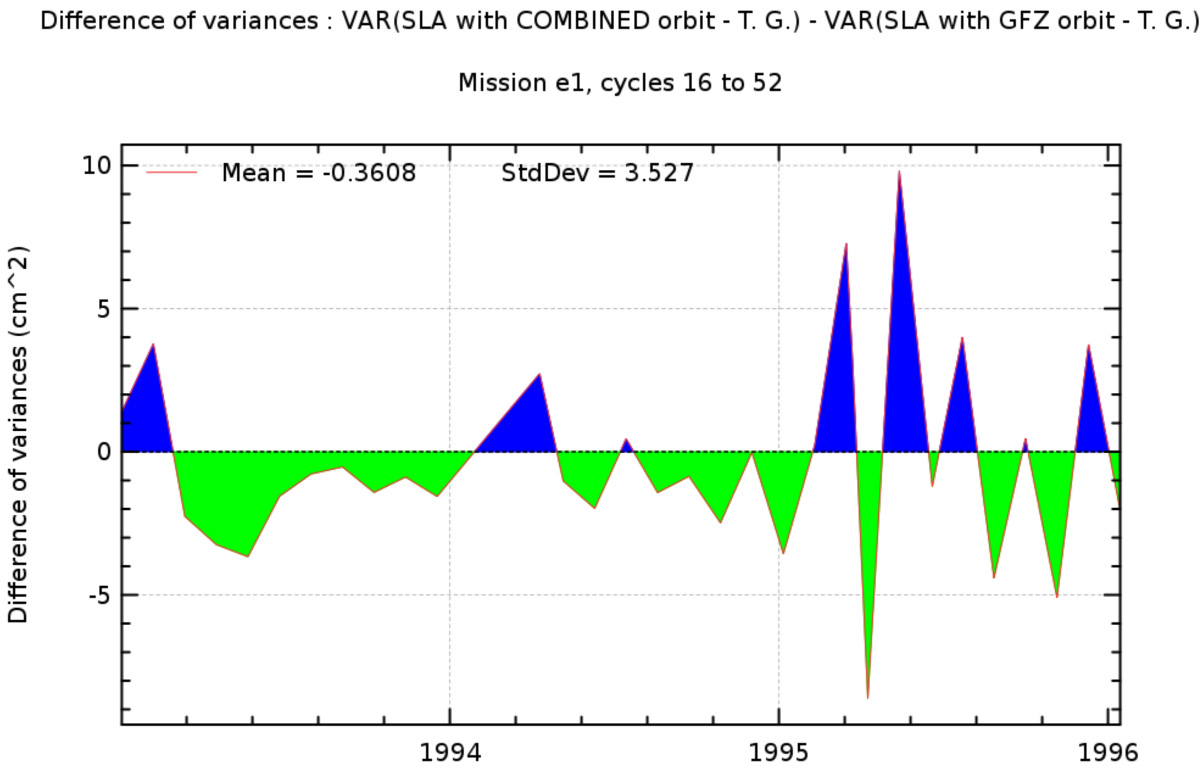
C002

Diagnostic C002 (mission e1)

Name : Differences of temporal evolution of SSH differences between tide gauges and altimetry measurements

Input data : Tide gauges SSH measurements

Description : The difference between temporal evolution of global statistics of differences between tide gauge and altimeter data differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in altimetric SSH calculation. The altimetric and tide gauges data are collocated with criteria of maximum of correlation, and tide gauges used are derived from global networks as GLOSS/CLIVAR.



Diagnostic type : Altimetry and in-situ data comparaison

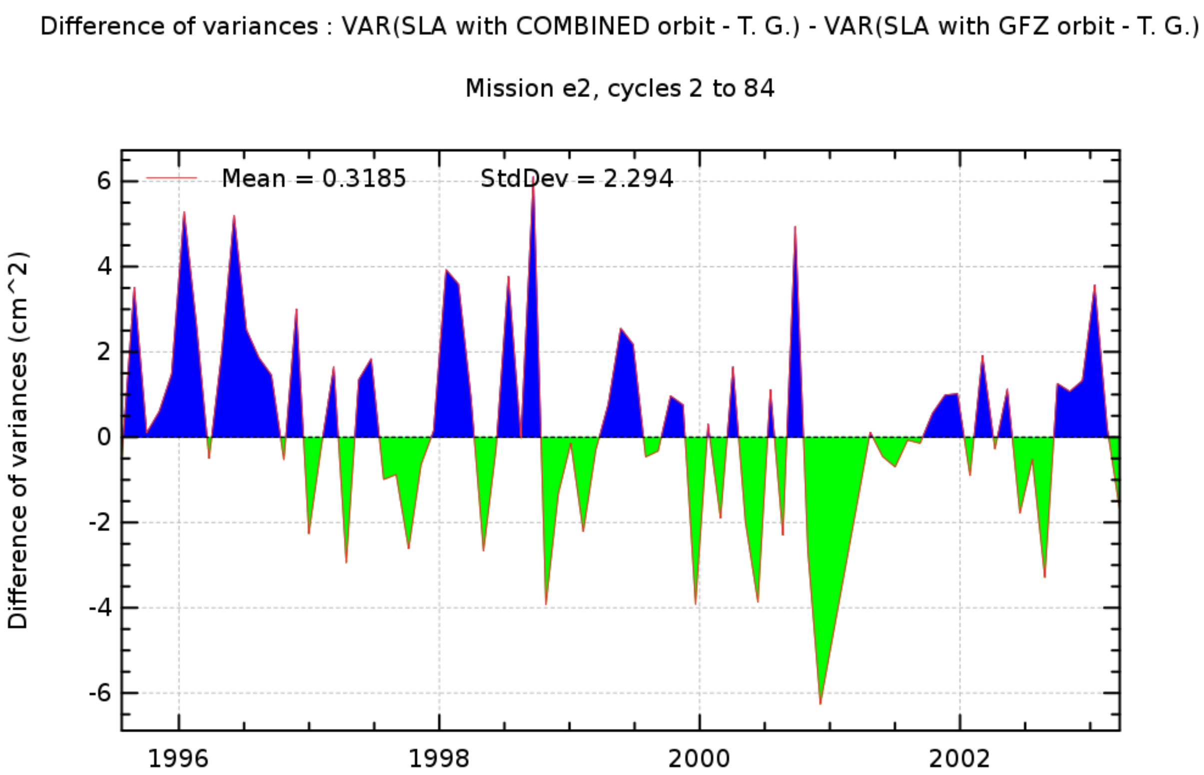
Diagnostic type : Altimetry and in-situ data comparaison

Diagnostic C002 (mission e2)

Name : Differences of temporal evolution of SSH differences between tide gauges and altimetry measurements

Input data : Tide gauges SSH measurements

Description : The difference between temporal evolution of global statistics of differences between tide gauge and altimeter data differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in altimetric SSH calculation. The altimetric and tide gauges data are collocated with criteria of maximum of correlation, and tide gauges used are derived from global networks as GLOSS/CLIVAR.



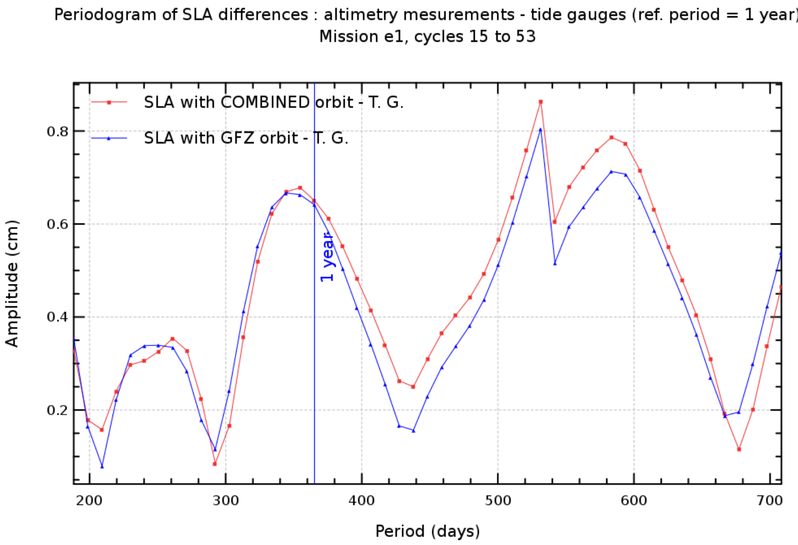
Diagnostic type : Altimetry and in-situ data comparaison

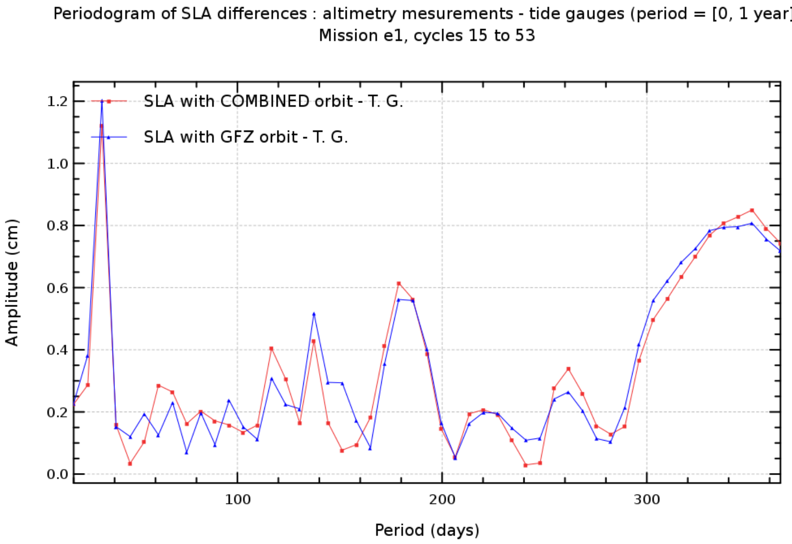
Diagnostic C003 (mission e1)

Name : Periodogram derived from temporal evolution of SSH differences between tide gauges and altimetry

Input data : Tide gauges SSH measurements

Description : The periodogram derived from temporal evolution of altimetric and tide gauges SSH differences is calculated using successively both altimetric components in the altimetric SSH. The periodogram is calculated from the mean or variance statistics and it can be displayed for all the whole time period or a dedicated one



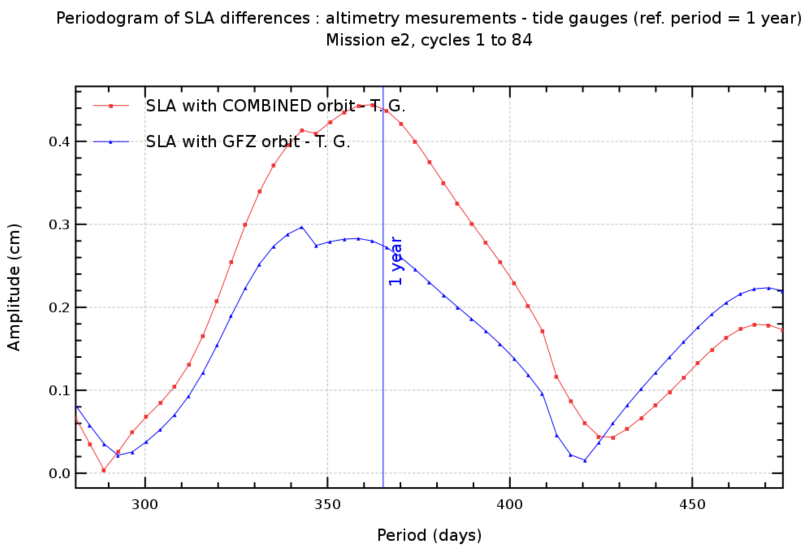


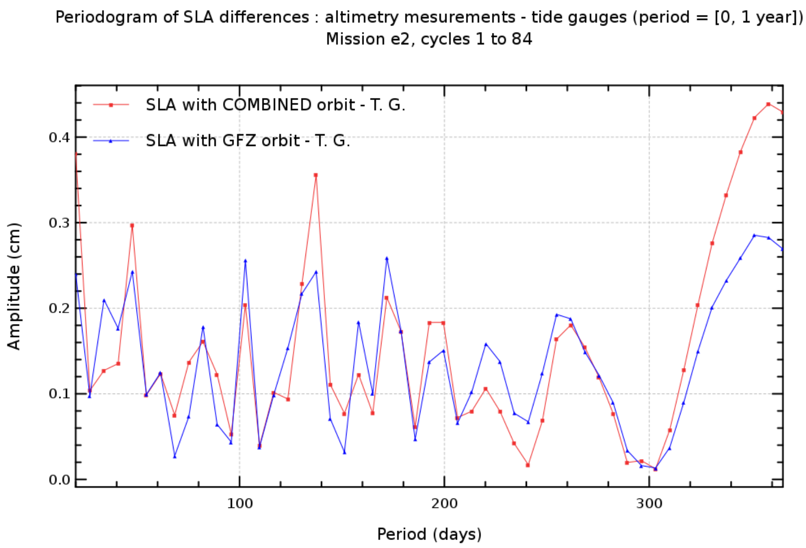
Diagnostic C003 (mission e2)

Name : Periodogram derived from temporal evolution of SSH differences between tide gauges and altimetry

Input data : Tide gauges SSH measurements

Description : The periodogram derived from temporal evolution of altimetric and tide gauges SSH differences is calculated using successively both altimetric components in the altimetric SSH. The periodogram is calculated from the mean or variance statistics and it can be displayed for all the whole time period or a dedicated one





Diagnostic type : Altimetry and in-situ data comparaison

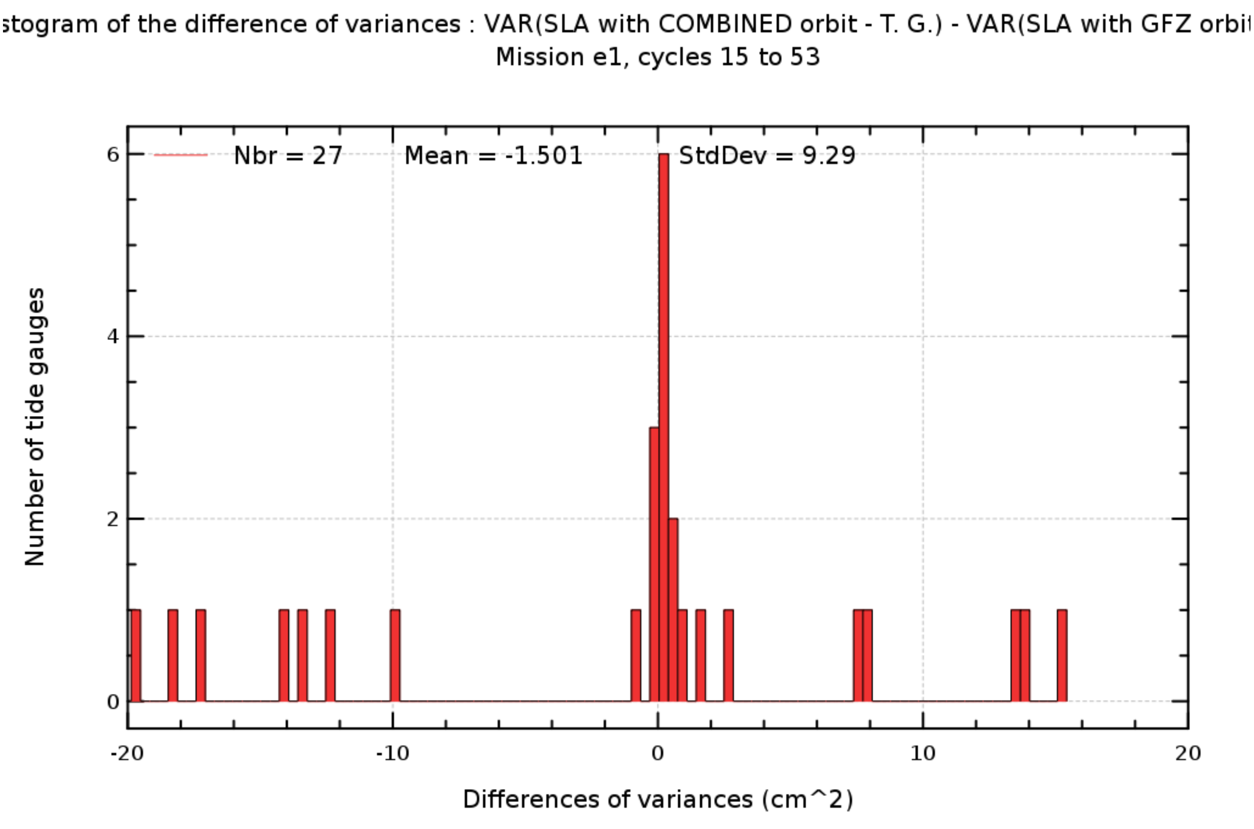
Diagnostic type : Altimetry and in-situ data comparaison

Diagnostic C004 (mission e1)

Name : Histograms of differences between tide gauges and altimeter SSH differences

Input data : Tide gauges SSH measurements

Description : The difference of histograms between altimeter and tide gauge SSH differences is computed from the elementary statistics (mean, variance) at each tide gauge using successively both altimetric components in the altimetry SSH.



Diagnostic type : Altimetry and in-situ data comparaison

Diagnostic C004 (mission e2)

Name : Histograms of differences between tide gauges and altimeter SSH differences

Input data : Tide gauges SSH measurements

Description : The difference of histograms between altimeter and tide gauge SSH differences is computed from the elementary statistics (mean, variance) at each tide gauge using successively both altimetric components in the altimetry SSH.