Inverted Barometer correction : Era Interim (Reanalysis) versus ECMWF (Operational)

Study variable	**Inverted Barometer Era Interim (reanalysis)**
Reference variable	**Inverted Barometer ECMWF (operational)**
Missions	Topex-Posedon *(tp)*, Jason-1 *(j1)*, Envisat *(en)*
Period	[15705, 22280]

Creation date : 2011/07/01

Contents

Study overview

In this study, the Era Interim (reanalysis) inverted barometer (IB) has been compared to the ECMWF IB (operational).

The impact of using these both inverted barometer corrections on the SSH calculation has been analyzed for Topex-Posedon, Jason-1 and Envisat missions :

- for Topex-Poseidon : from October 1992 (cycle 4) to October 2006 (Cycle 481)

- for Jason-1 : from January 2002 (cycle 1) to December 2010 (Cycle 331)

- for Envisat : from September 2002 (cycle 9) to December 2010 (Cycle 94)

The Era Interim inverted barometer correction is computed from ERA Interim pressure fields which correspond to the latest global atmospheric reanalysis produced by the European Centre forMedium-RangeWeather Forecasts (ECMWF). For more details, see The ERA-Interim reanalysis: configuration and performance of the data assimilation system (Q. J. R. Meteorol. Soc. 137: 553-597, April 2011 A).
The reference inverted barometer corrections is computed from the ECMWF operational model pressure fields as done in CNES/AVISO product.
All the validation diagnostics displayed in this report has been performed in agreement with the Sea-Level CCI Product Validation Plan (PVP).

Diagnostic A001 (mission en)

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

Mean of IB_ERA_INT - IB_Ref

Mission en, cycles 10 to 93

Mean = 0.1754   Slope = -0.00141

Standard deviation of IB_ERA_INT - IB_Ref
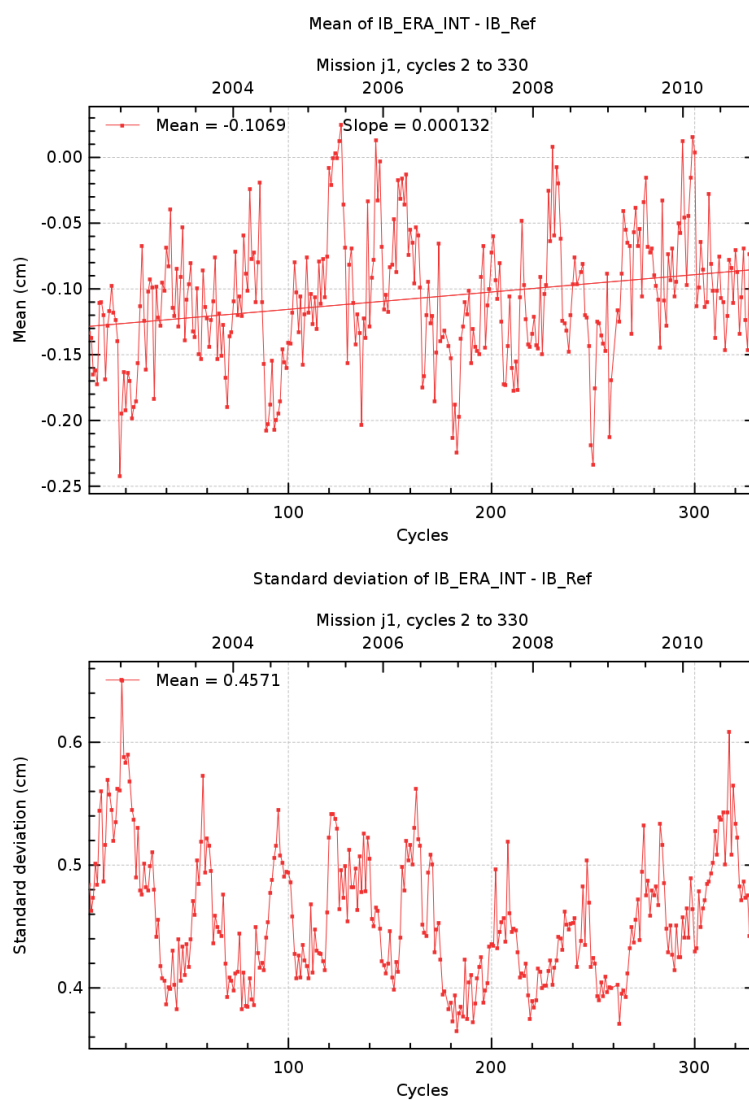
Mission en, cycles 10 to 93

Mean = 4.979

Diagnostic A001 (mission j1)

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.

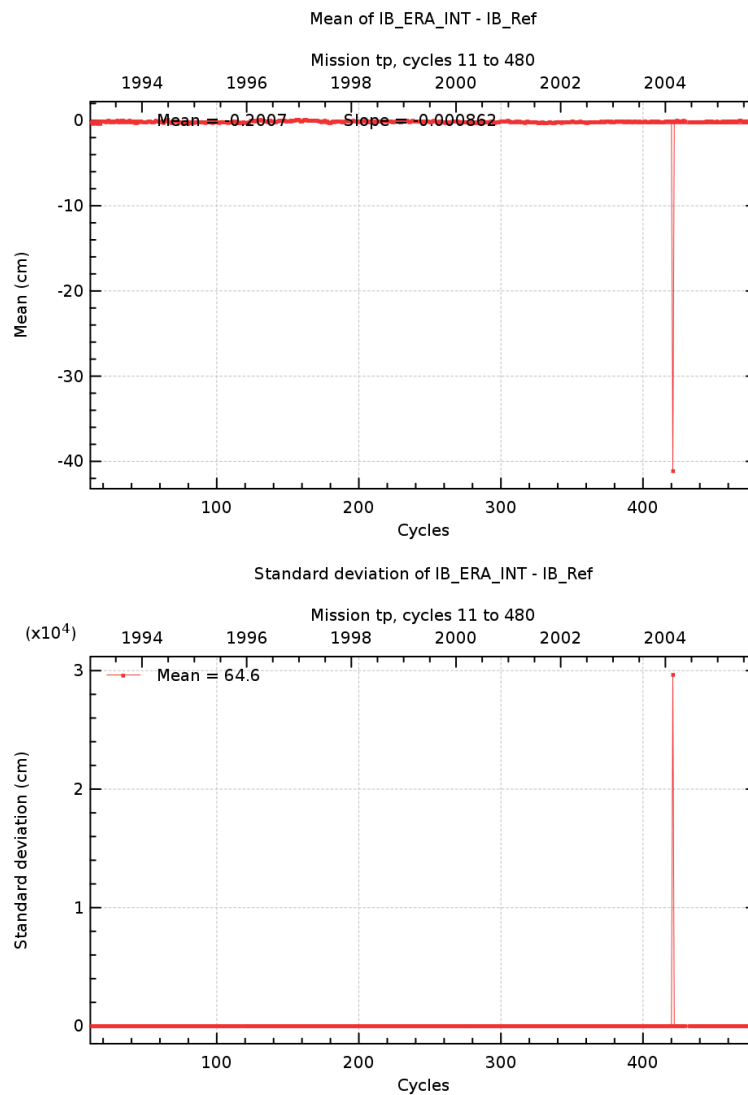**Diagnostic type :** Global internal analyses
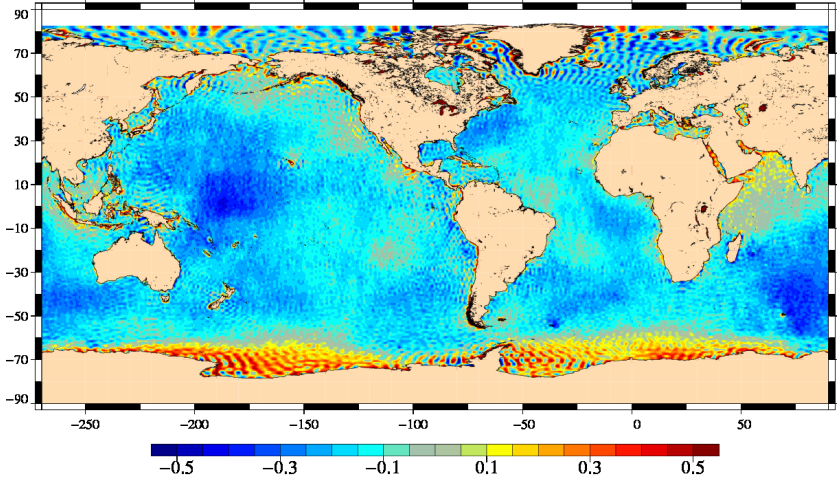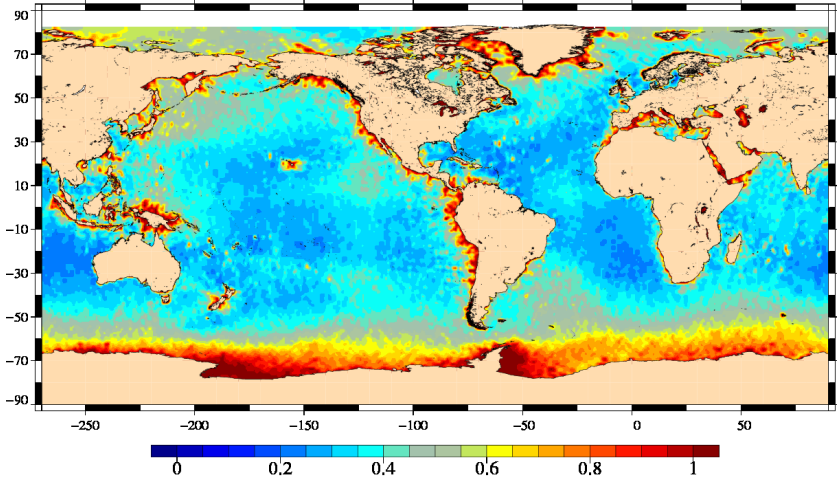
Diagnostic A001 (mission tp)

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

Mean of IB_ERA_INT - IB_Ref
Mission tp, cycles 11 to 480
Mean = -0.2007   Slope = -0.000862

Standard deviation of IB_ERA_INT - IB_Ref
Mission tp, cycles 11 to 480
Mean = 64.6

Diagnostic A002 (mission en)

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

Mean of IB_ERA_INT − IB_Ref
Mission en, cycles 10 to 93

Mean (cm)

Standard deviation of IB_ERA_INT − IB_Ref
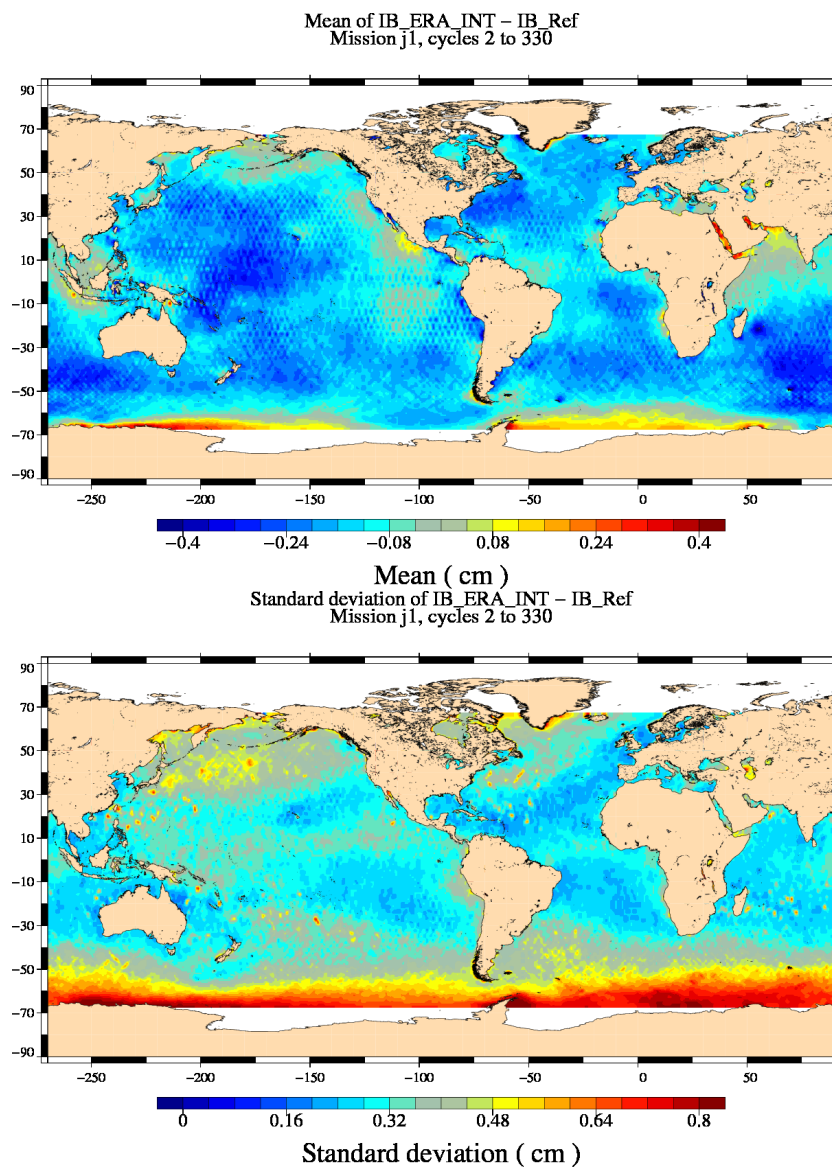Mission en, cycles 10 to 93

Standard deviation (cm)

Diagnostic A002 (mission j1)

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.
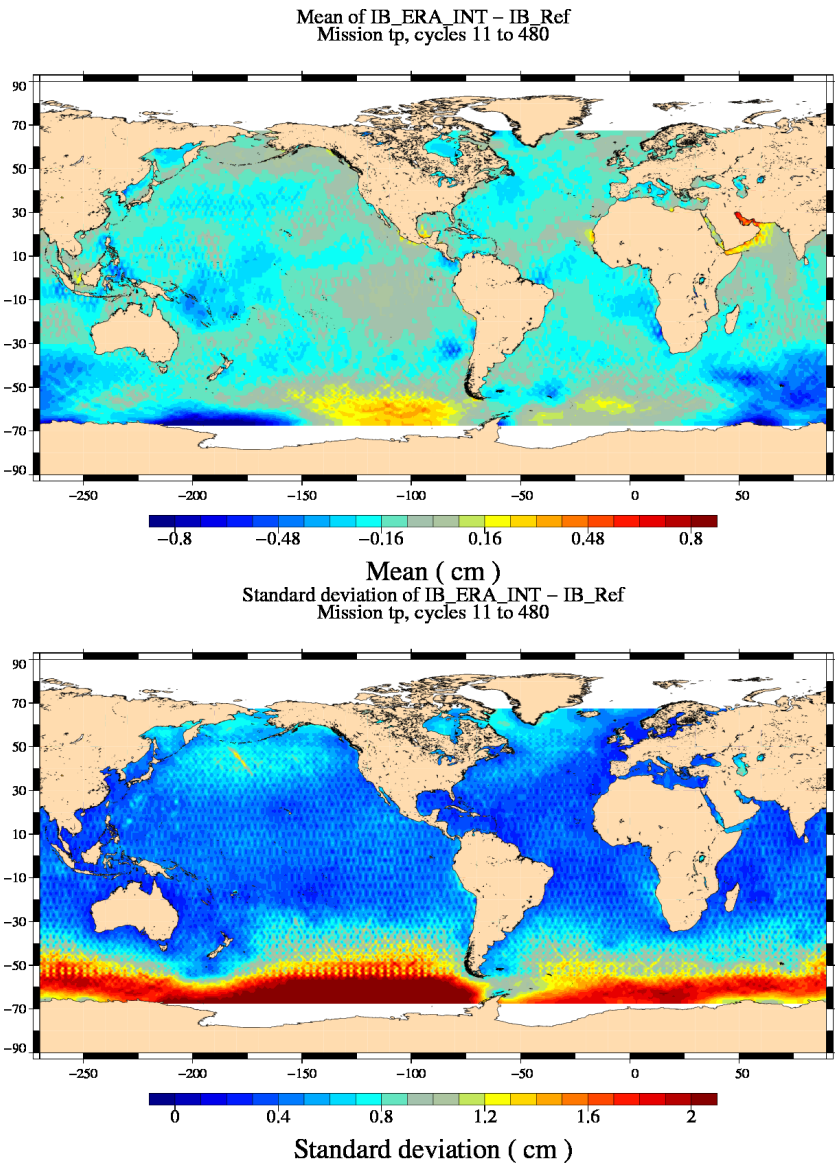
Diagnostic type : Global internal analyses

Mean of IB_ERA_INT − IB_Ref
Mission j1, cycles 2 to 330

Mean (cm)

Standard deviation of IB_ERA_INT − IB_Ref
Mission j1, cycles 2 to 330

Standard deviation (cm)
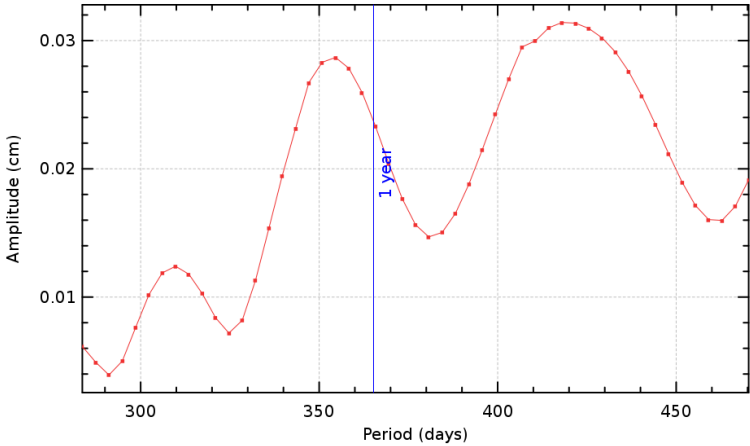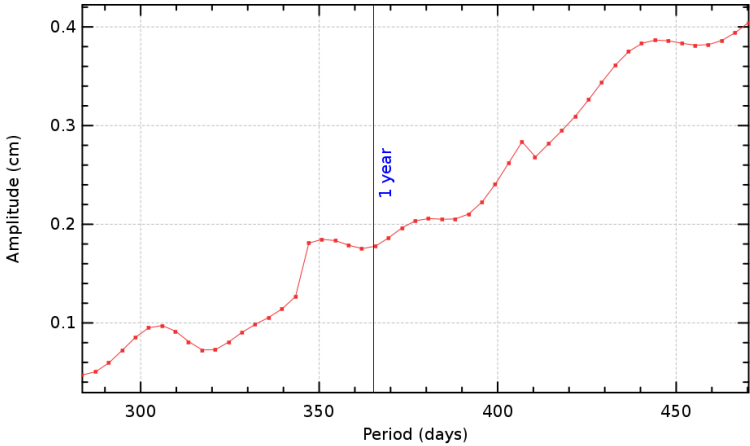
Diagnostic A002 (mission tp)

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.
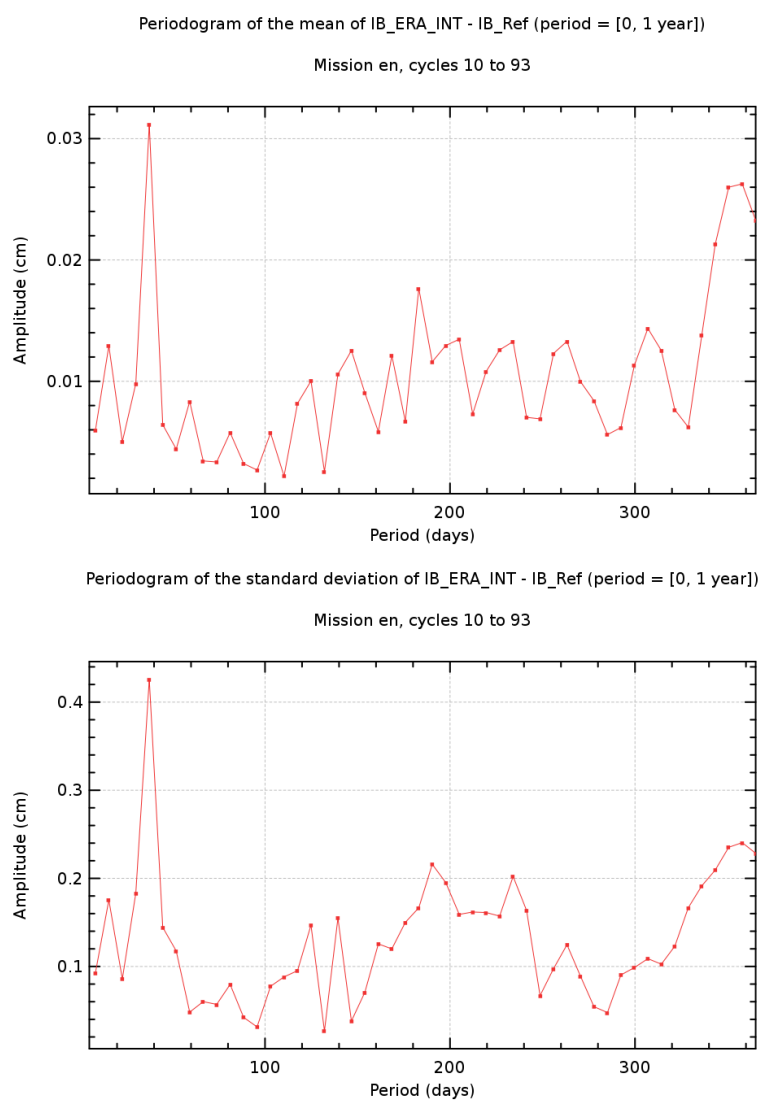
Diagnostic type : Global internal analyses

Mean of IB_ERA_INT − IB_Ref
Mission tp, cycles 11 to 480

Mean (cm)

Standard deviation of IB_ERA_INT − IB_Ref
Mission tp, cycles 11 to 480

Standard deviation (cm)

A003

Diagnostic A003_a (mission en)

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

Periodogram of the mean of IB_ERA_INT - IB_Ref (reference period = 1 year)

Mission en, cycles 10 to 93

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (reference period = 1 year)

Mission en, cycles 10 to 93

Diagnostic A003_b (mission en)

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.
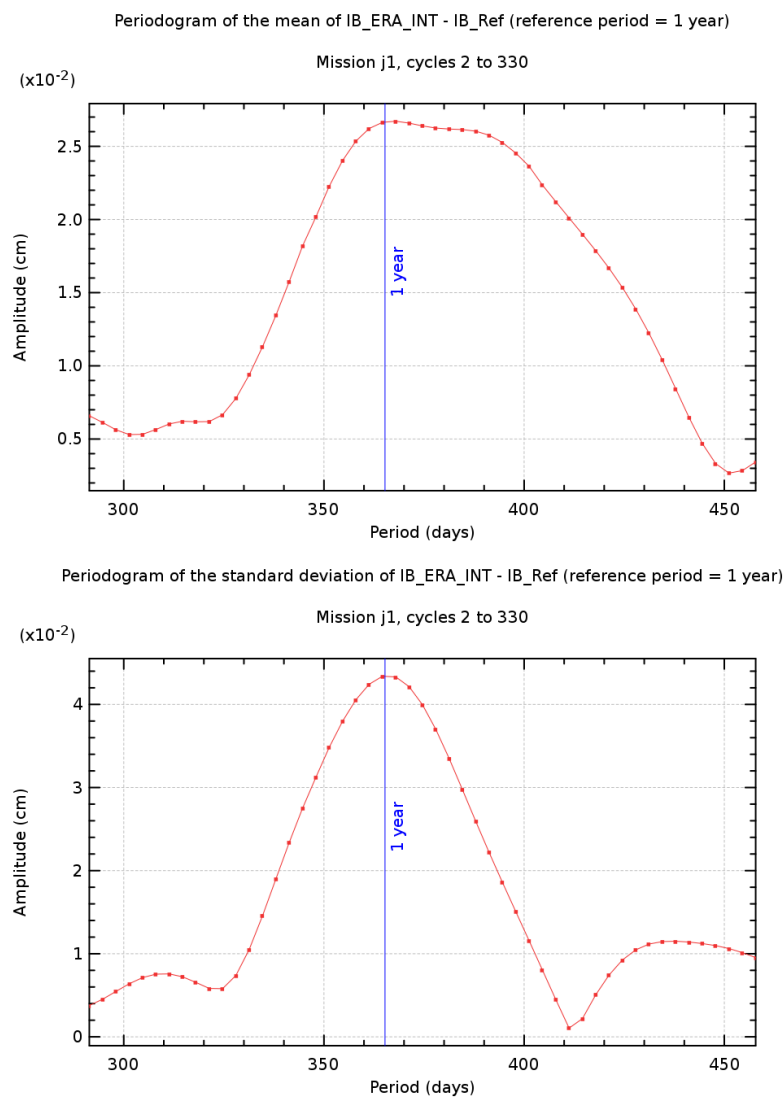
Diagnostic type : Global internal analyses

Periodogram of the mean of IB_ERA_INT - IB_Ref (period = [0, 1 year])

Mission en, cycles 10 to 93

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (period = [0, 1 year])

Mission en, cycles 10 to 93

Diagnostic A003_a (mission j1)

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.

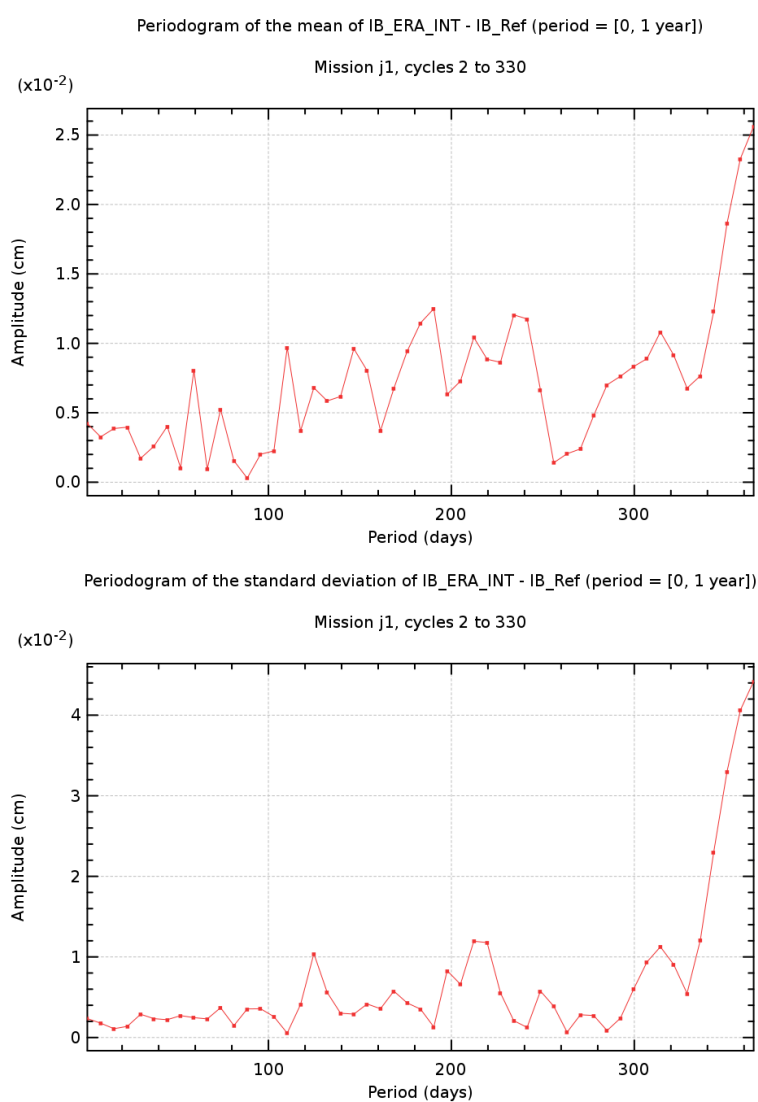**Diagnostic type :** Global internal analyses

Periodogram of the mean of IB_ERA_INT - IB_Ref (reference period = 1 year)

Mission j1, cycles 2 to 330

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (reference period = 1 year)

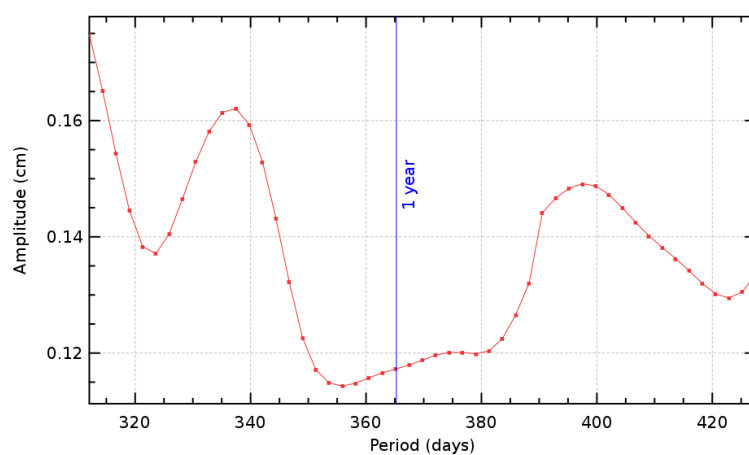Mission j1, cycles 2 to 330

Diagnostic A003_b (mission j1)

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.
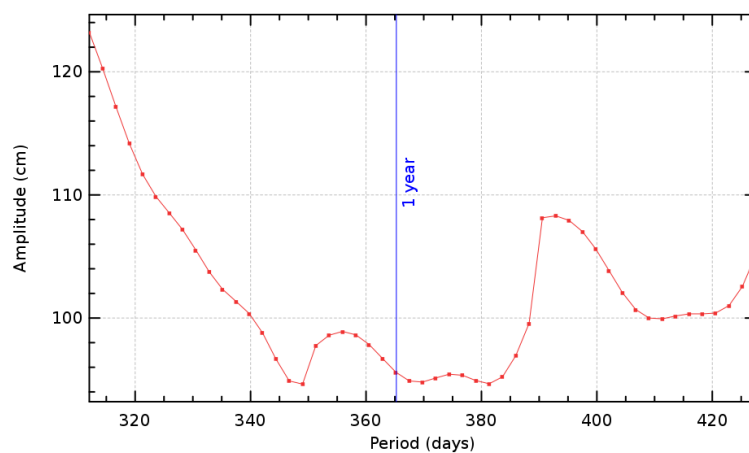
Diagnostic type : Global internal analyses

Periodogram of the mean of IB_ERA_INT - IB_Ref (period = [0, 1 year])

Mission j1, cycles 2 to 330

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (period = [0, 1 year])

Mission j1, cycles 2 to 330

Diagnostic A003_a (mission tp)

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.

Periodogram of the mean of IB_ERA_INT - IB_Ref (reference period = 1 year)

Mission tp, cycles 11 to 480

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (reference period = 1 year)
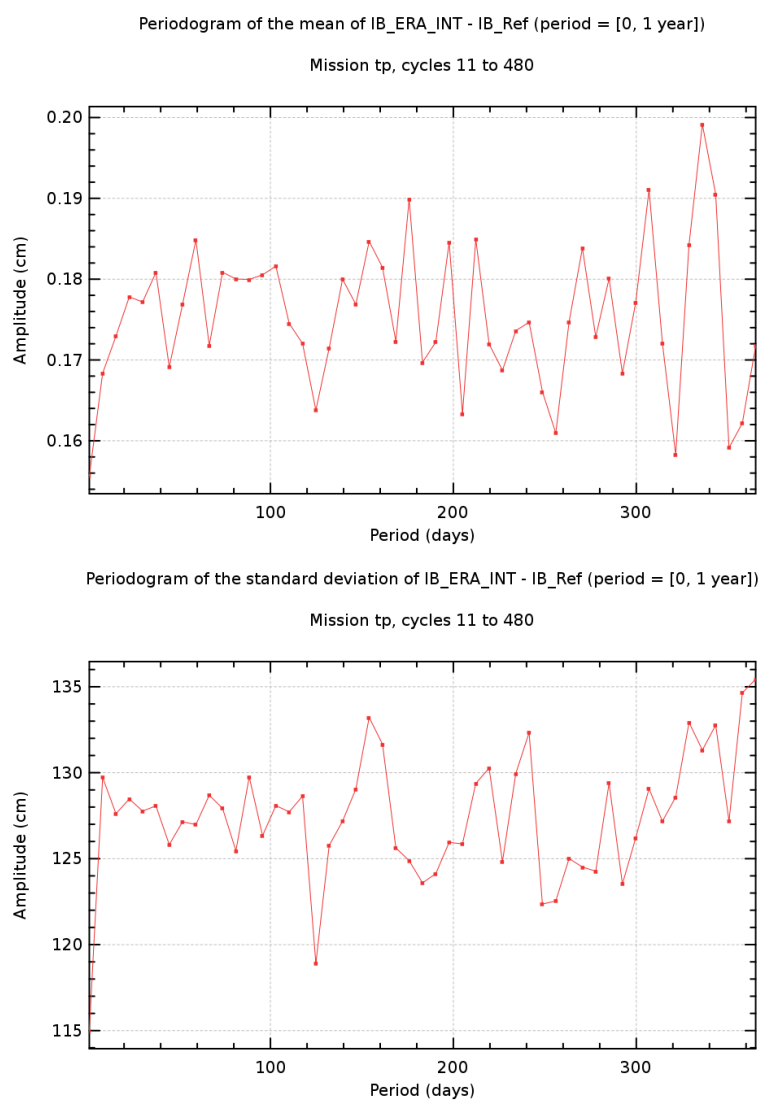
Mission tp, cycles 11 to 480

Diagnostic type : Global internal analyses

Diagnostic A003_b (mission tp)

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

Periodogram of the mean of IB_ERA_INT - IB_Ref (period = [0, 1 year])

Mission tp, cycles 11 to 480

Periodogram of the standard deviation of IB_ERA_INT - IB_Ref (period = [0, 1 year])
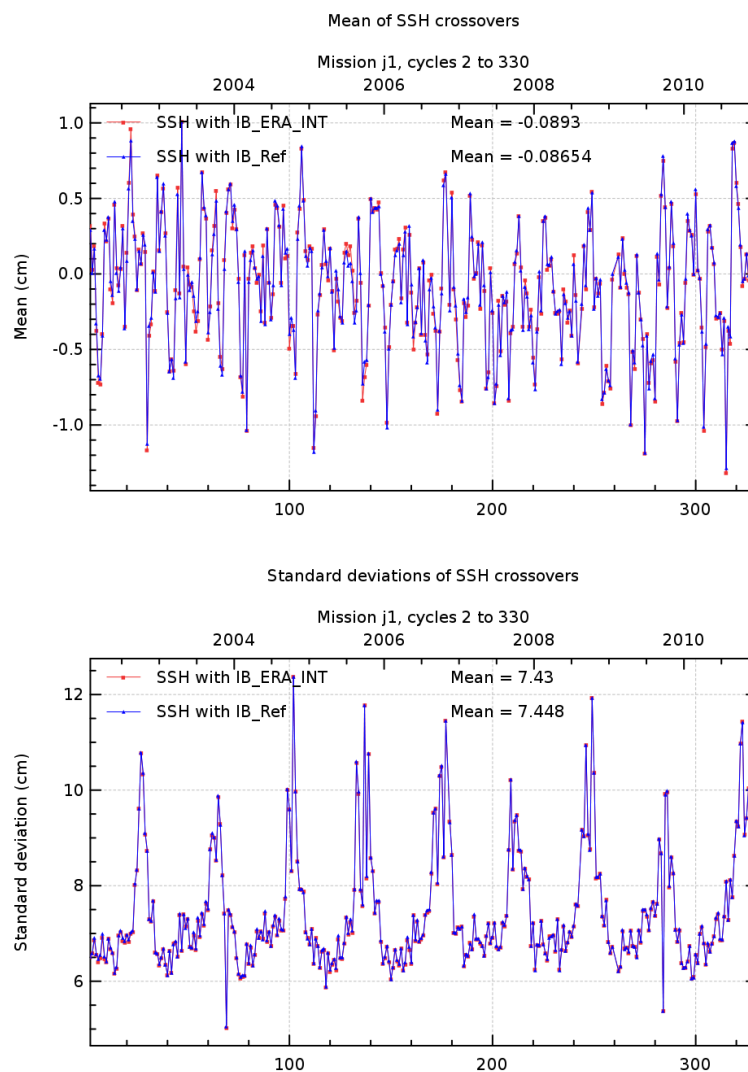
Mission tp, cycles 11 to 480

Diagnostic A101 (mission en)

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

Mean of SSH crossovers
Mission en, cycles 10 to 93

SSH with IB_ERA_INT   Mean = -0.2478
SSH with IB_Ref   Mean = -0.2339

Standard deviations of SSH crossovers
Mission en, cycles 10 to 93

SSH with IB_ERA_INT   Mean = 8.211
SSH with IB_Ref   Mean = 8.226

Diagnostic A101 (mission j1)

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).

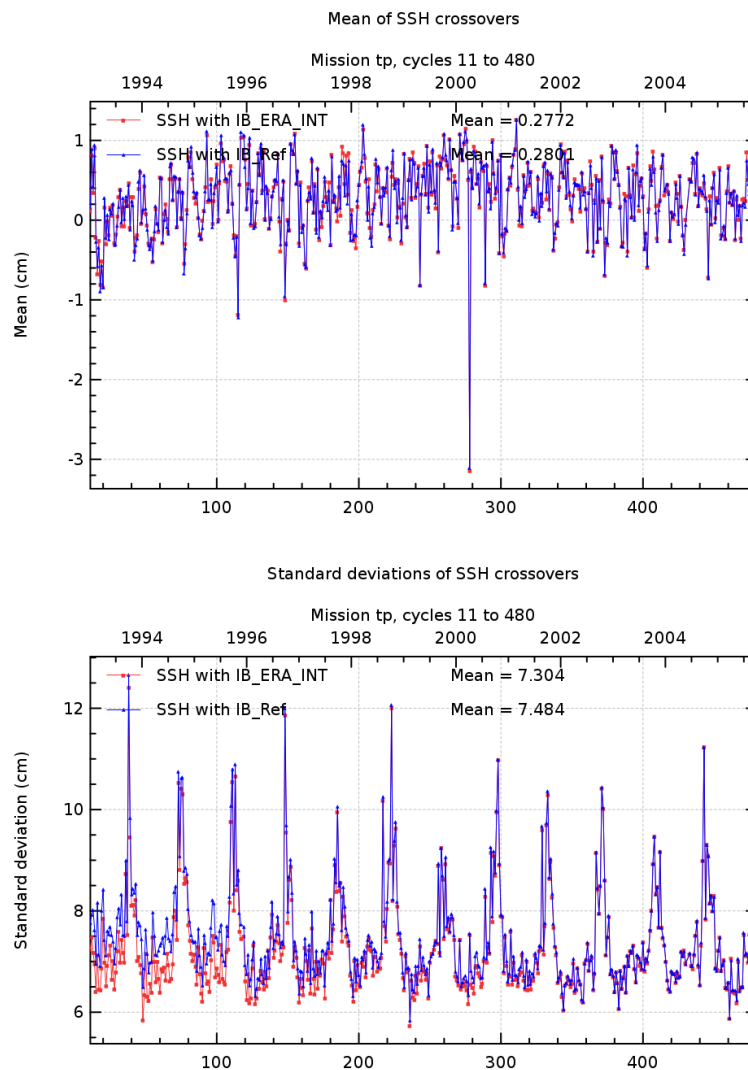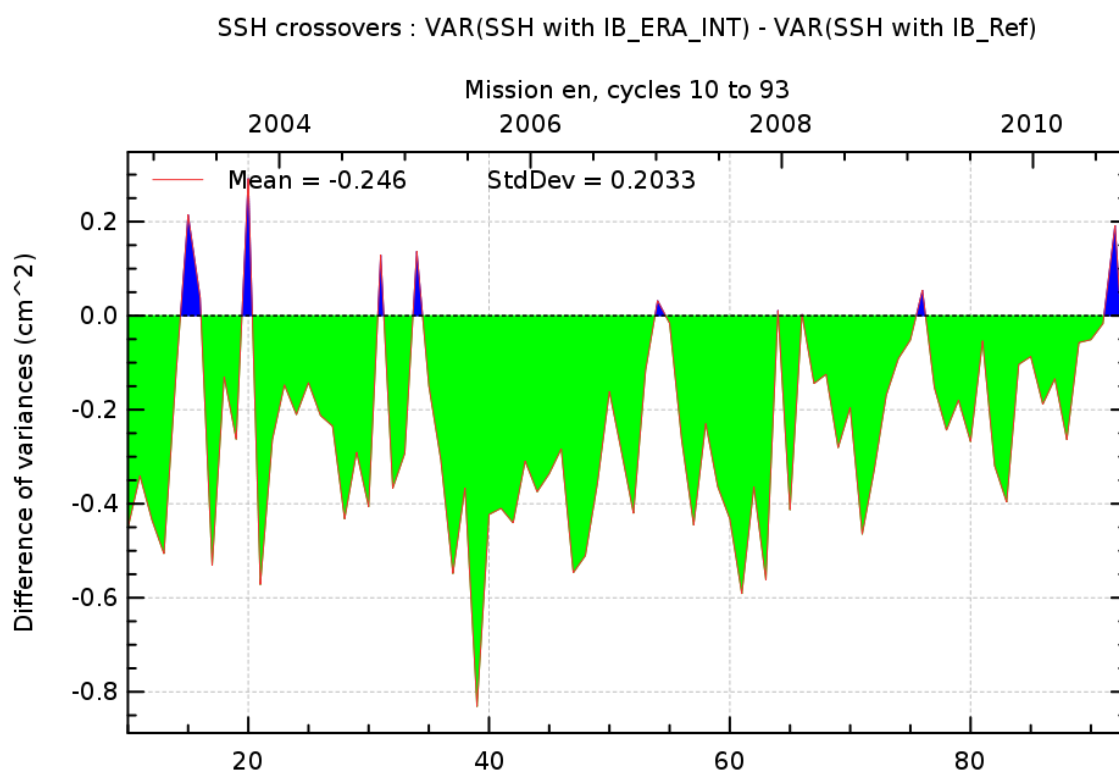**Diagnostic type :** Global internal analyses

Mean of SSH crossovers

Mission j1, cycles 2 to 330

Standard deviations of SSH crossovers

Mission j1, cycles 2 to 330

Diagnostic A101 (mission tp)

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).

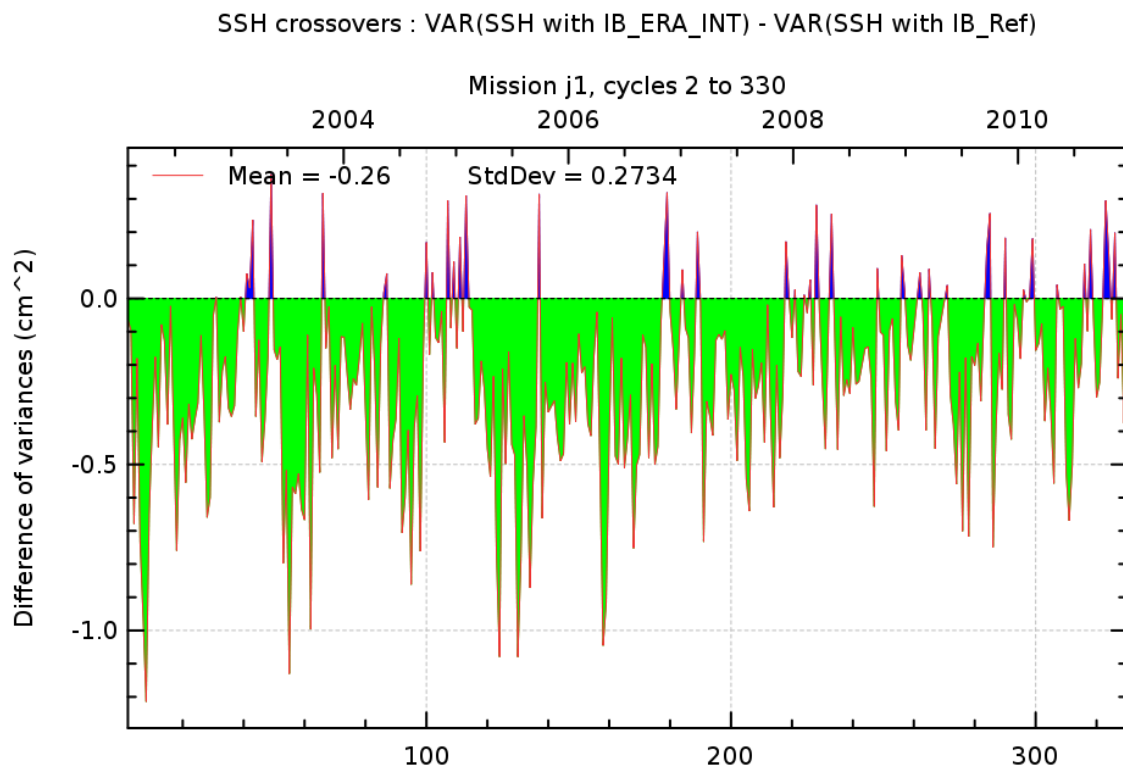**Diagnostic type :** Global internal analyses

Mean of SSH crossovers

Mission tp, cycles 11 to 480

SSH with IB_ERA_INT   Mean = 0.2772
SSH with IB_Ref   Mean = 0.2801

Standard deviations of SSH crossovers

Mission tp, cycles 11 to 480

SSH with IB_ERA_INT   Mean = 7.304
SSH with IB_Ref   Mean = 7.484

Diagnostic A102 (mission en)

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).
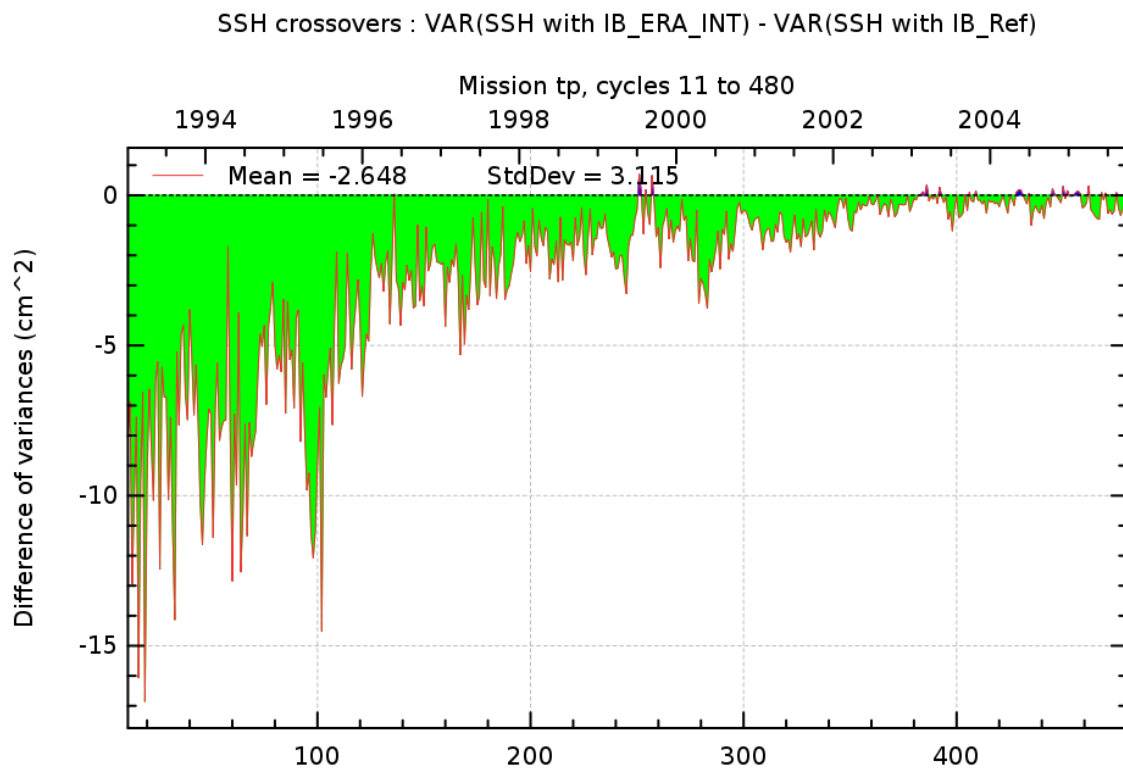
Diagnostic type : Global internal analyses

SSH crossovers : VAR(SSH with IB_ERA_INT) - VAR(SSH with IB_Ref)

Mission en, cycles 10 to 93
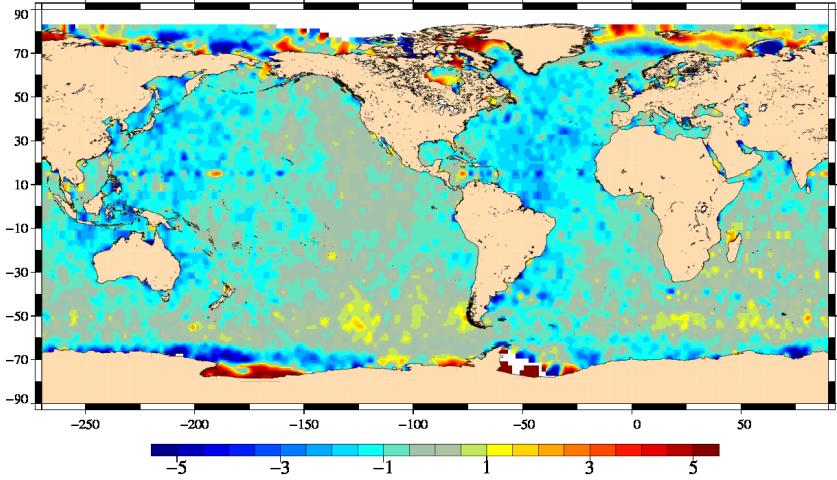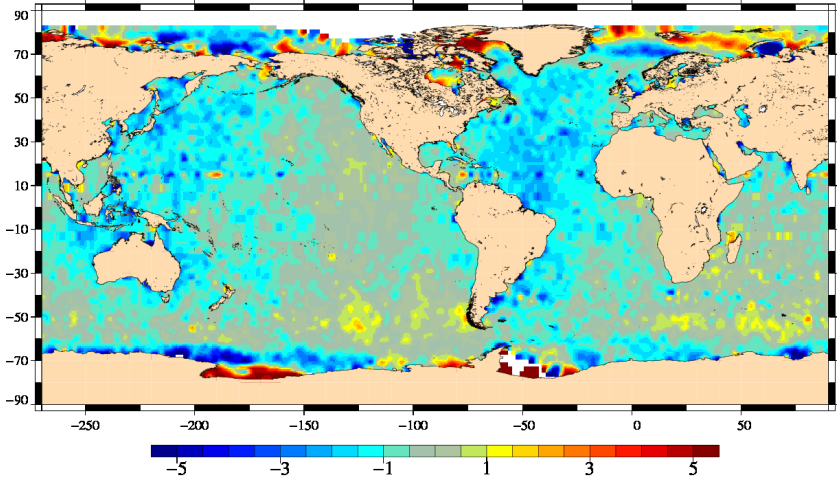
Diagnostic A102 (mission j1)

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

SSH crossovers : VAR(SSH with IB_ERA_INT) - VAR(SSH with IB_Ref)

Mission j1, cycles 2 to 330

Mean = -0.26   StdDev = 0.2734

Diagnostic A102 (mission tp)

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

SSH crossovers : VAR(SSH with IB_ERA_INT) - VAR(SSH with IB_Ref)

Mission tp, cycles 11 to 480
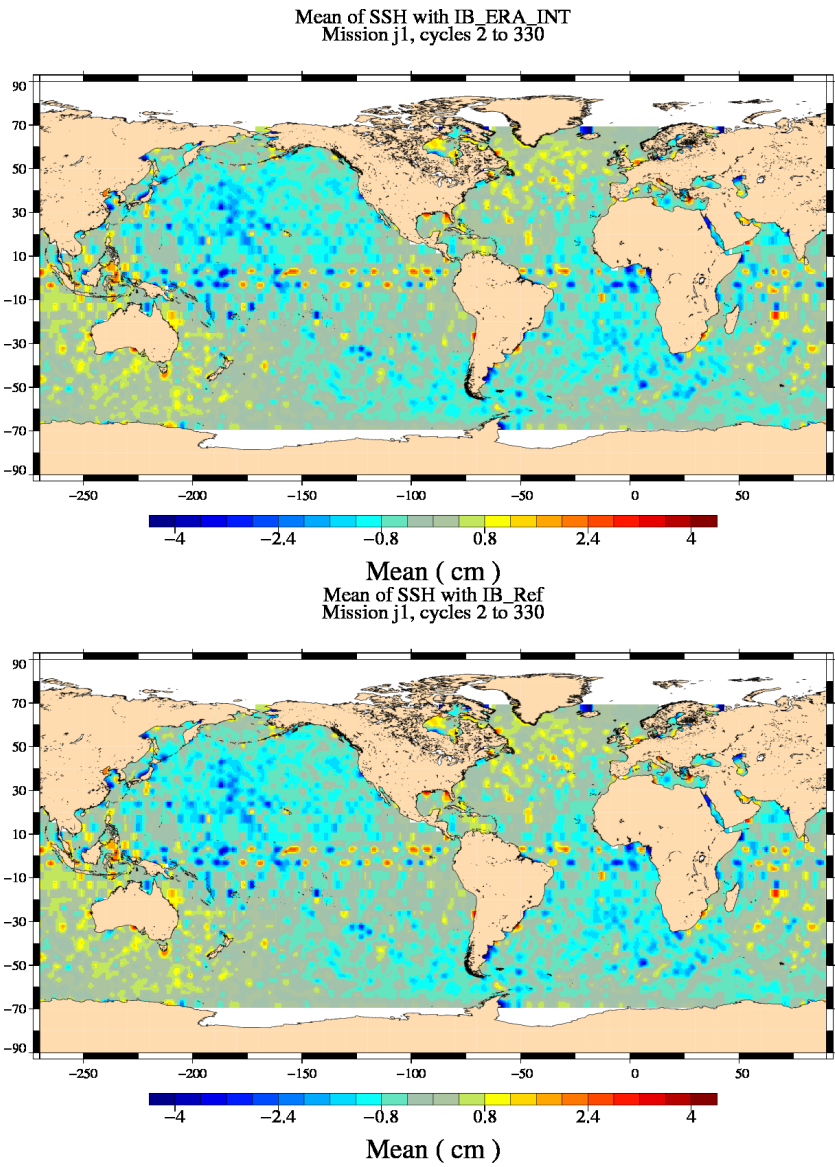
Mean = -2.648   StdDev = 3.115

A103

Diagnostic A103 (mission en)

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).
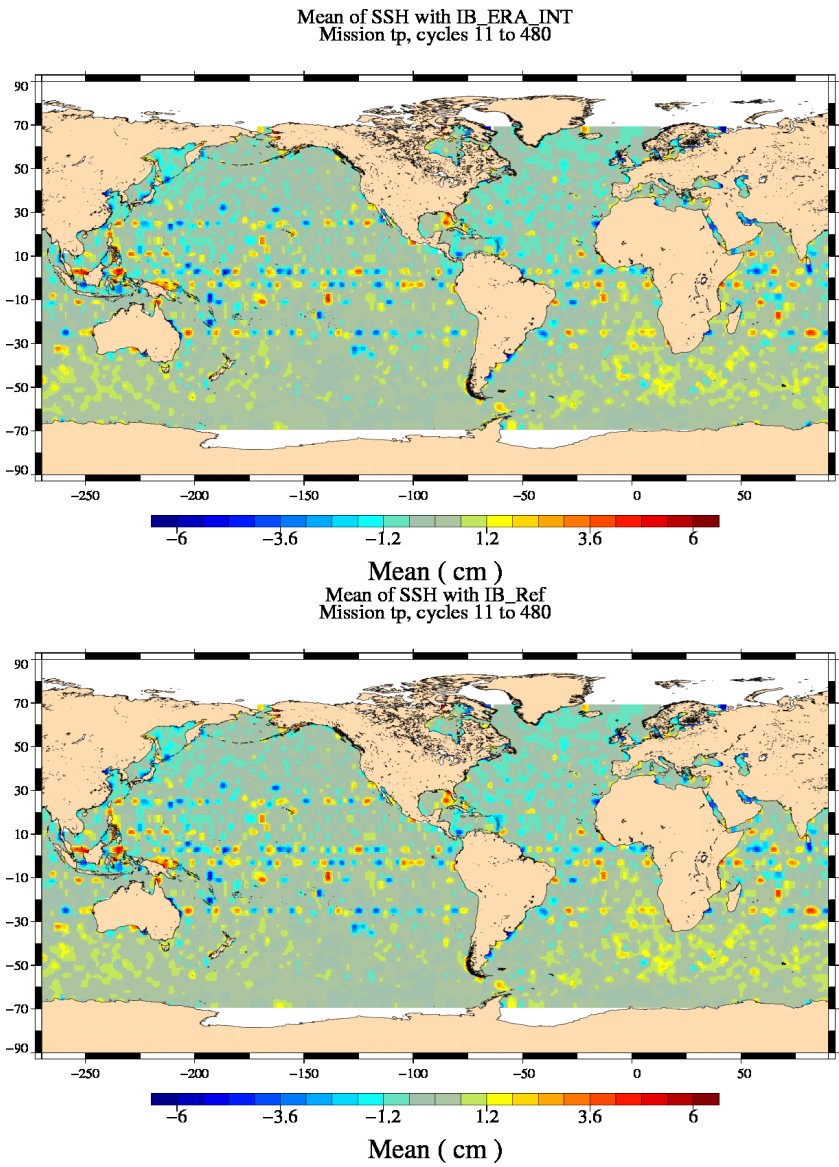
Diagnostic type : Global internal analyses

Mean of SSH with IB_ERA_INT
Mission en, cycles 10 to 93

Mean (cm)

Mean of SSH with IB_Ref
Mission en, cycles 10 to 93

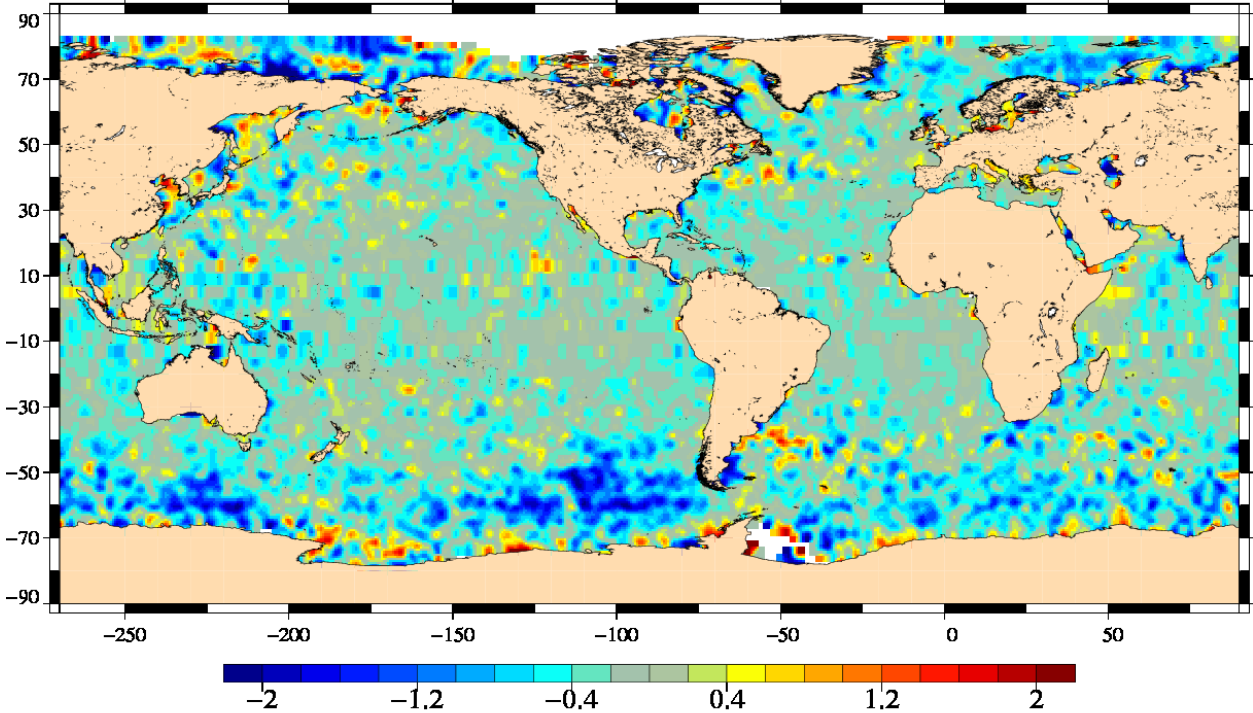Mean (cm)

Diagnostic A103 (mission j1)

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

Mean of SSH with IB_ERA_INT
Mission j1, cycles 2 to 330

Mean (cm)

Mean of SSH with IB_Ref
Mission j1, cycles 2 to 330

Mean (cm)

Diagnostic A103 (mission tp)

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

Mean of SSH with IB_ERA_INT
Mission tp, cycles 11 to 480

Mean (cm)

Mean of SSH with IB_Ref
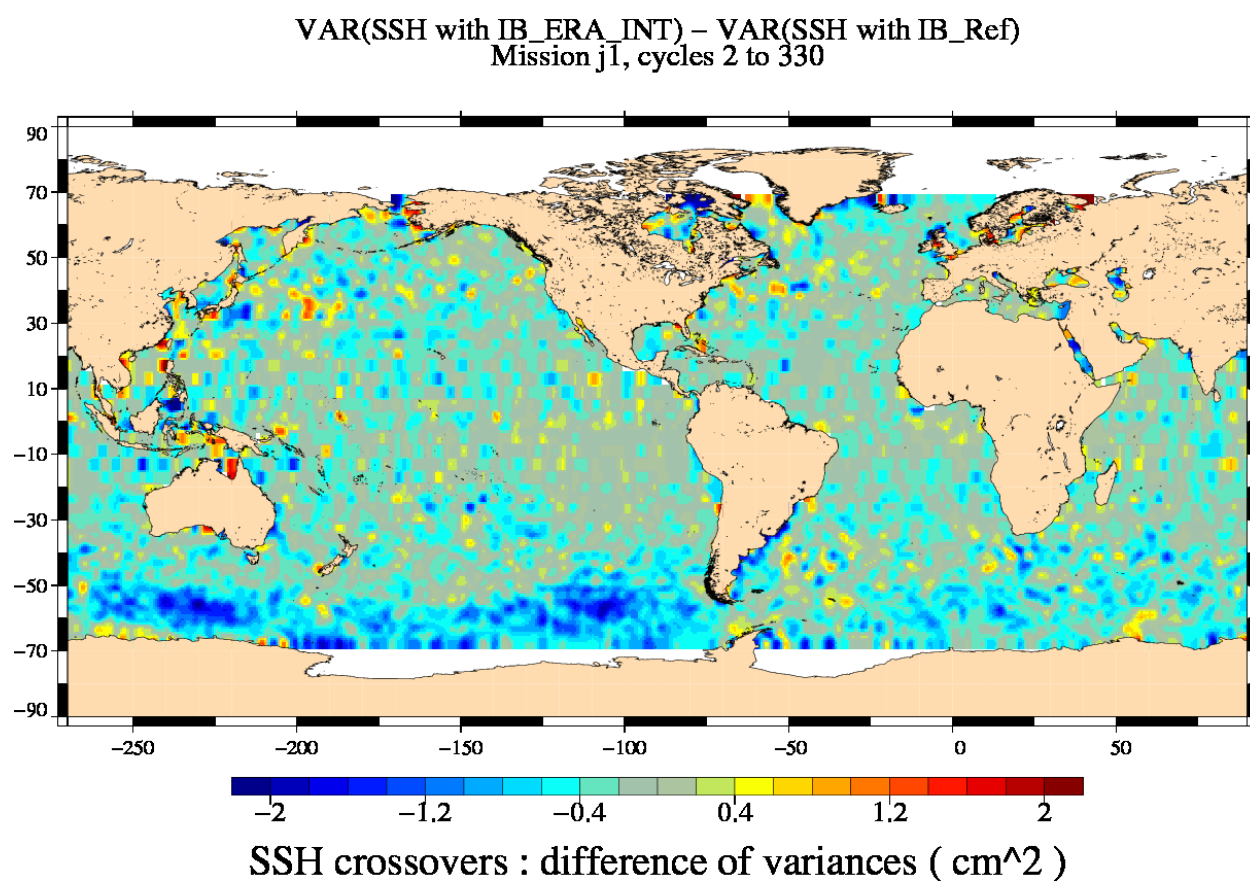Mission tp, cycles 11 to 480

Mean (cm)

Diagnostic A104 (mission en)

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).

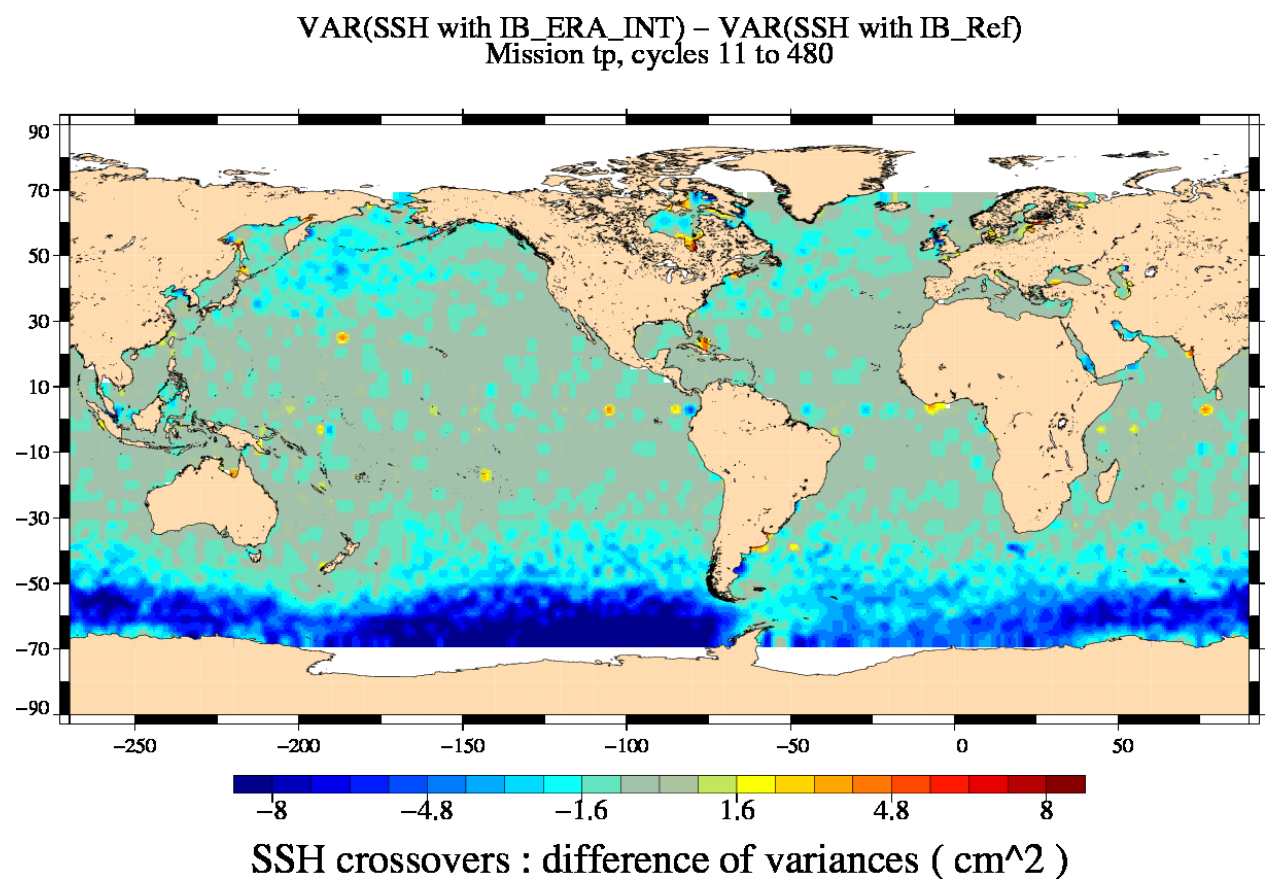**Diagnostic type : Global internal analyses**

VAR(SSH with IB_ERA_INT) − VAR(SSH with IB_Ref)
Mission en, cycles 10 to 93

SSH crossovers : difference of variances (cm^2)

Diagnostic A104 (mission j1)

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

VAR(SSH with IB_ERA_INT) − VAR(SSH with IB_Ref)
Mission j1, cycles 2 to 330

SSH crossovers : difference of variances (cm^2)

Diagnostic A104 (mission tp)

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

VAR(SSH with IB_ERA_INT) − VAR(SSH with IB_Ref)
Mission tp, cycles 11 to 480

SSH crossovers : difference of variances (cm^2)

A201

	Diagnostic A201_a (mission en)
	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.

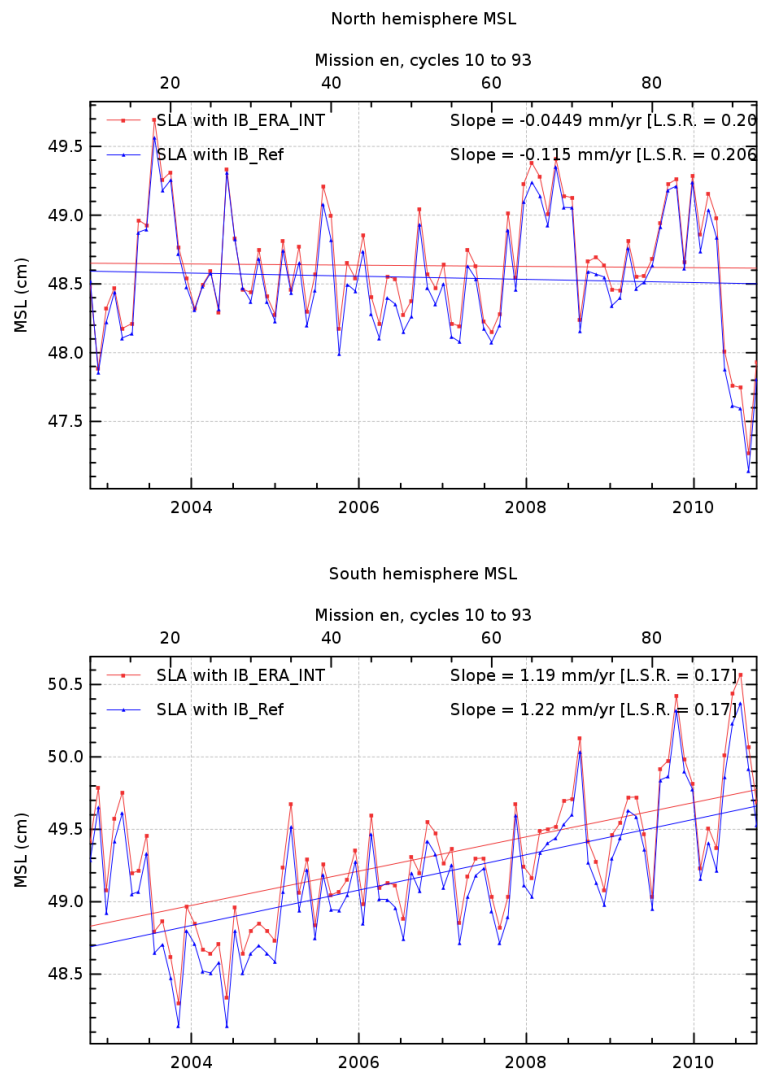**Diagnostic type : Global internal analyses**

Global MSL

Mission en, cycles 10 to 93

SLA with IB_ERA_INT   Slope = 0.625 mm/yr [L.S.R. = 0.115]

SLA with IB_Ref   Slope = 0.616 mm/yr [L.S.R. = 0.118]

Diagnostic A201_b (mission en)

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.
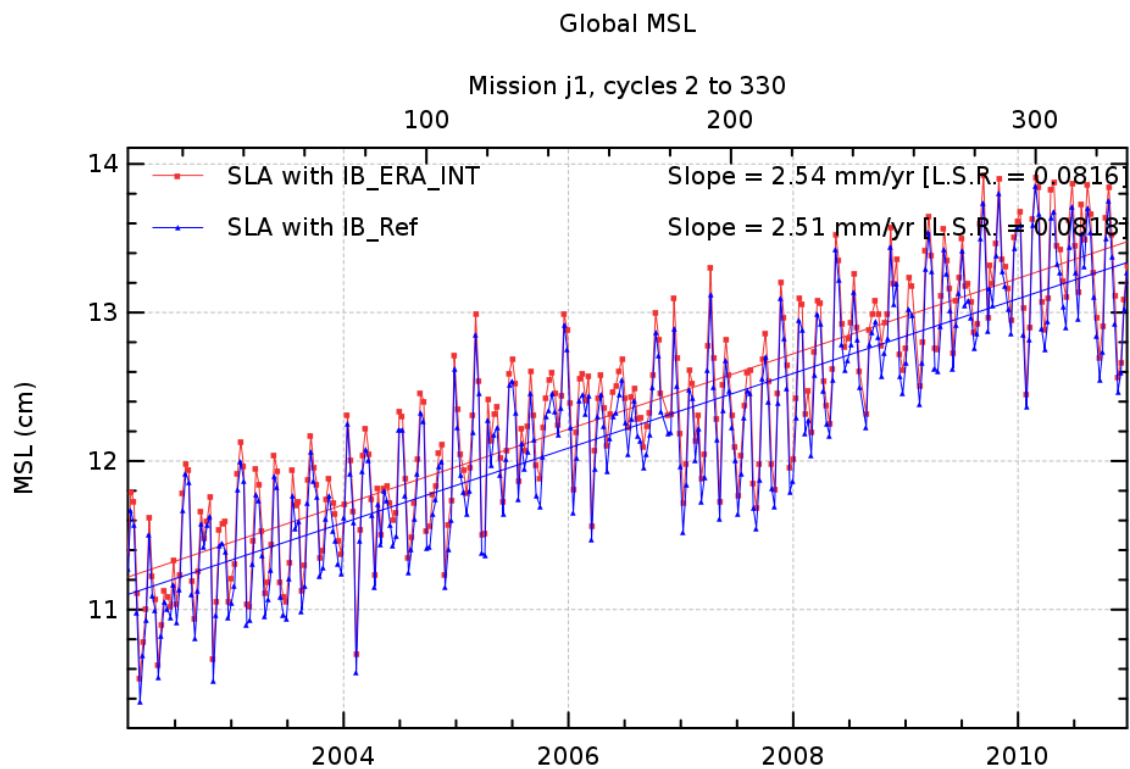
Diagnostic type : Global internal analyses

Global MSL, selecting even pass numbers

Global MSL, selecting odd pass numbers

Diagnostic A201_c (mission en)

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.
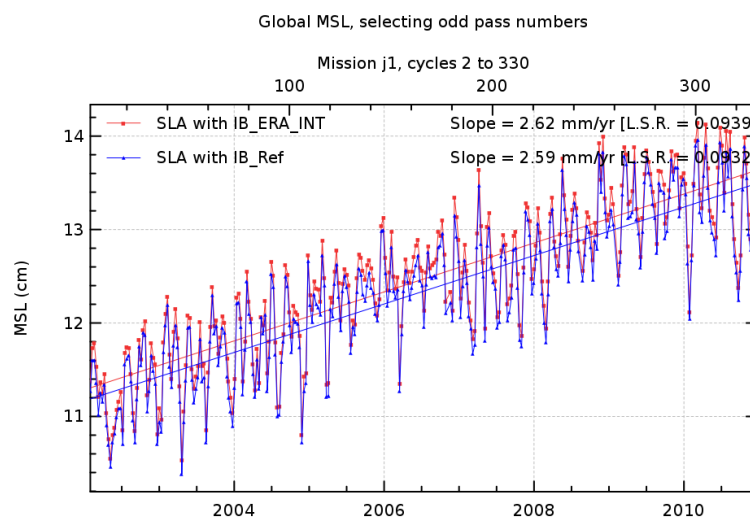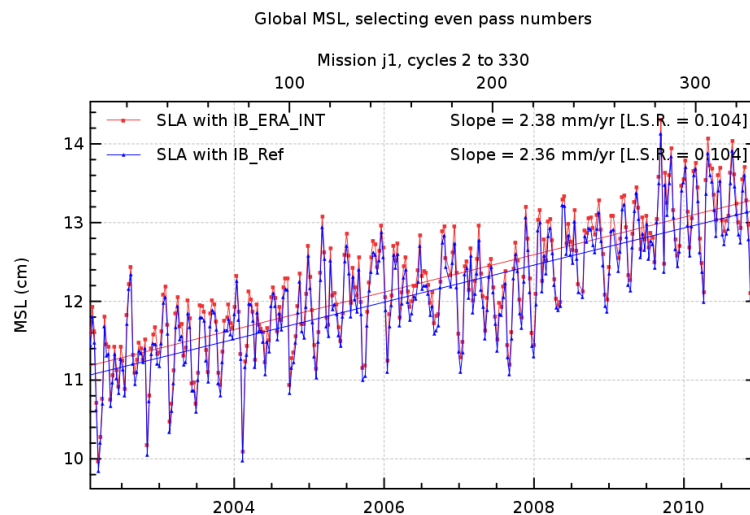
Diagnostic type : Global internal analyses

North hemisphere MSL

Mission en, cycles 10 to 93

SLA with IB_ERA_INT   Slope = -0.0449 mm/yr [L.S.R. = 0.20]
SLA with IB_Ref   Slope = -0.115 mm/yr [L.S.R. = 0.206]

South hemisphere MSL

Mission en, cycles 10 to 93

SLA with IB_ERA_INT   Slope = 1.19 mm/yr [L.S.R. = 0.17]
SLA with IB_Ref   Slope = 1.22 mm/yr [L.S.R. = 0.17]

Diagnostic A201_a (mission j1)

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.
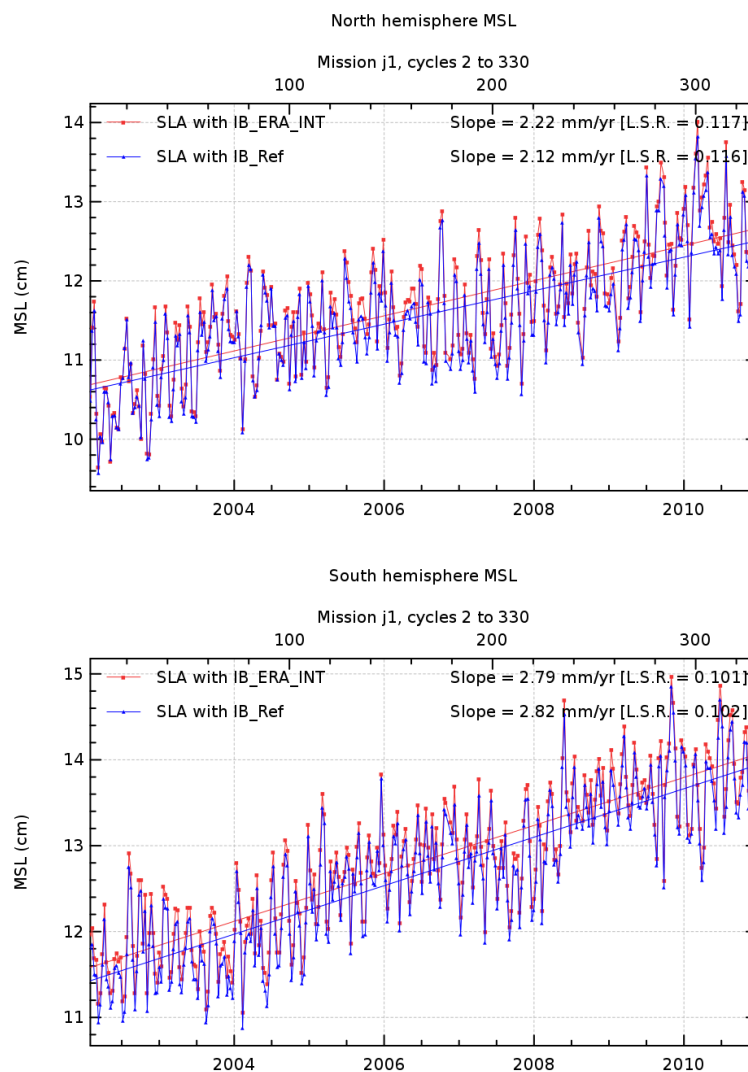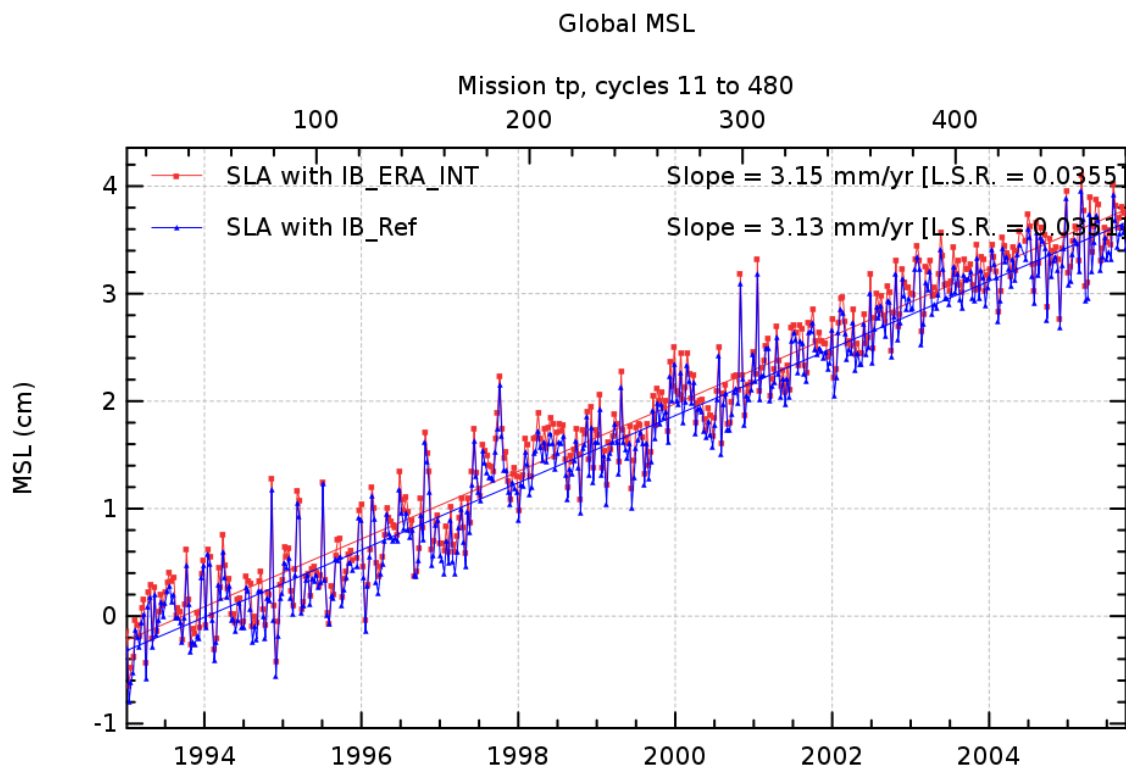
Diagnostic type : Global internal analyses

Global MSL

Mission j1, cycles 2 to 330

SLA with IB_ERA_INT — Slope = 2.54 mm/yr [L.S.R. = 0.0816]

SLA with IB_Ref — Slope = 2.51 mm/yr [L.S.R. = 0.0818]

Diagnostic A201_b (mission j1)

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.
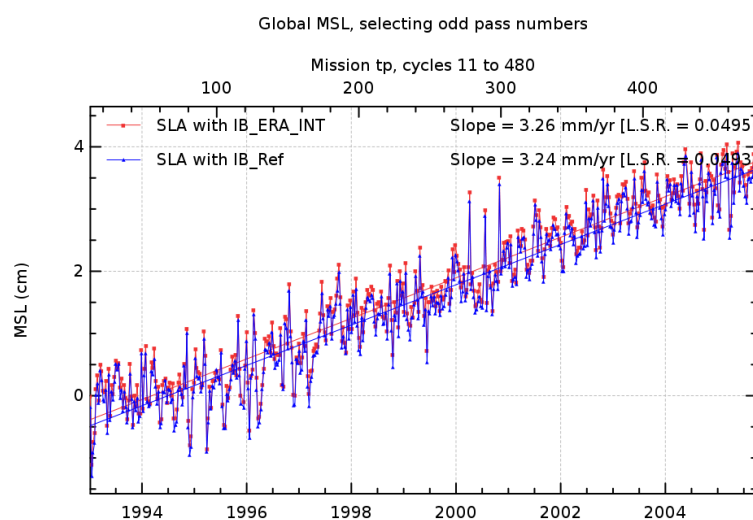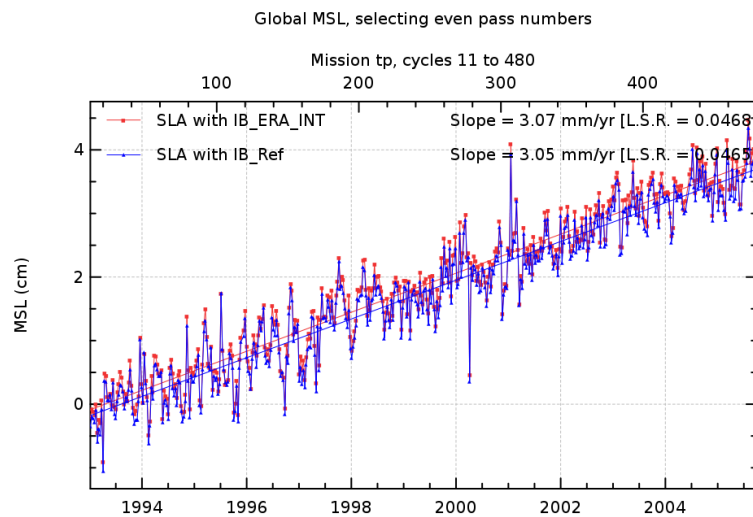
Diagnostic type : Global internal analyses

Global MSL, selecting even pass numbers

Mission j1, cycles 2 to 330

Global MSL, selecting odd pass numbers

Mission j1, cycles 2 to 330

Diagnostic A201_c (mission j1)

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.
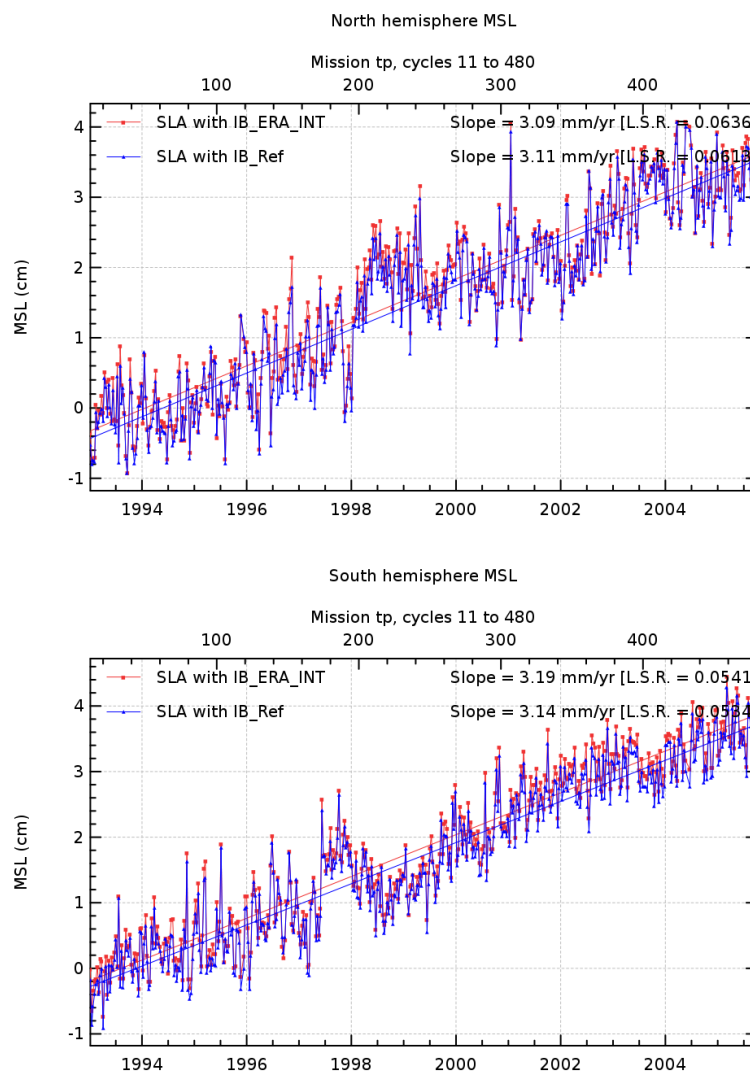
Diagnostic type : Global internal analyses

North hemisphere MSL

Mission j1, cycles 2 to 330

- SLA with IB_ERA_INT — Slope = 2.22 mm/yr [L.S.R. = 0.117]
- SLA with IB_Ref — Slope = 2.12 mm/yr [L.S.R. = 0.116]

South hemisphere MSL

Mission j1, cycles 2 to 330

- SLA with IB_ERA_INT — Slope = 2.79 mm/yr [L.S.R. = 0.101]
- SLA with IB_Ref — Slope = 2.82 mm/yr [L.S.R. = 0.102]

Diagnostic A201_a (mission tp)

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.
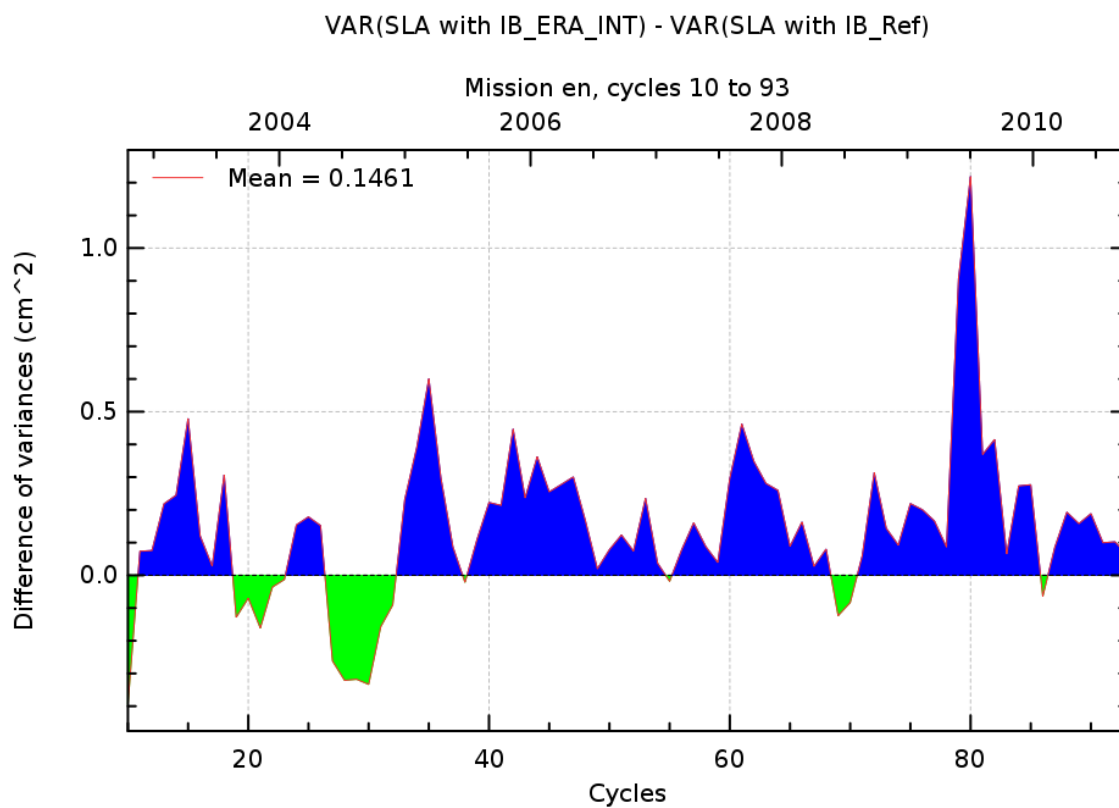
Diagnostic type : Global internal analyses

Global MSL

Mission tp, cycles 11 to 480

SLA with IB_ERA_INT — Slope = 3.15 mm/yr [L.S.R. = 0.0355]

SLA with IB_Ref — Slope = 3.13 mm/yr [L.S.R. = 0.0351]

Diagnostic A201_b (mission tp)

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.
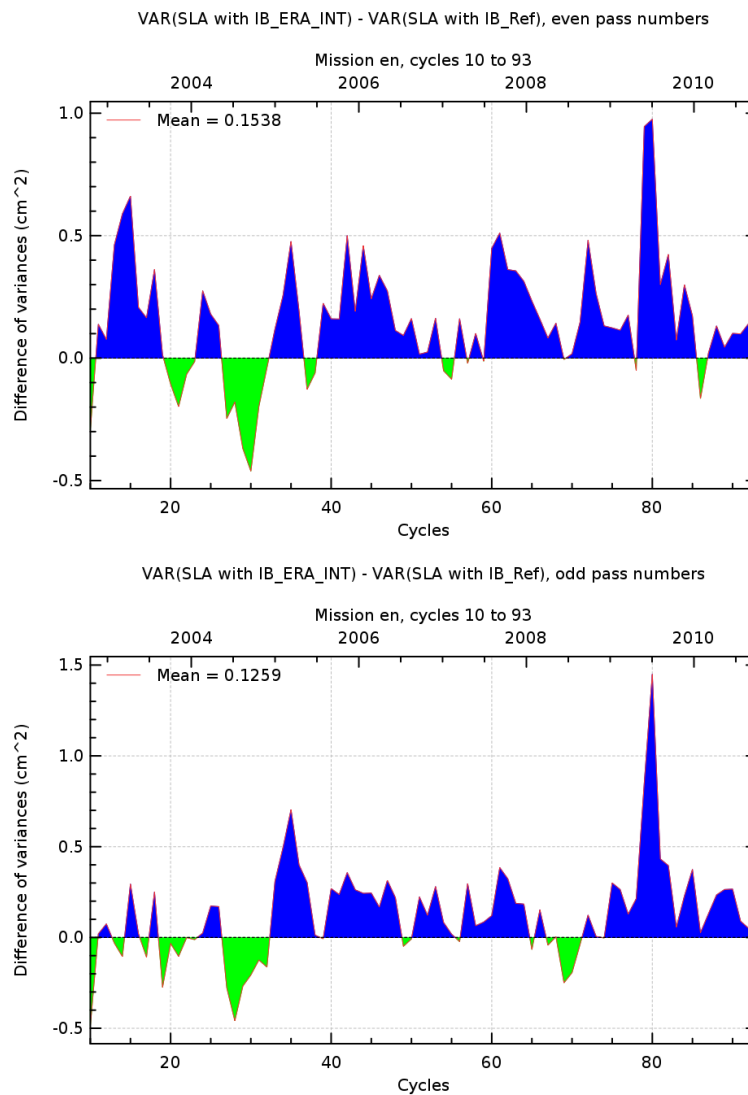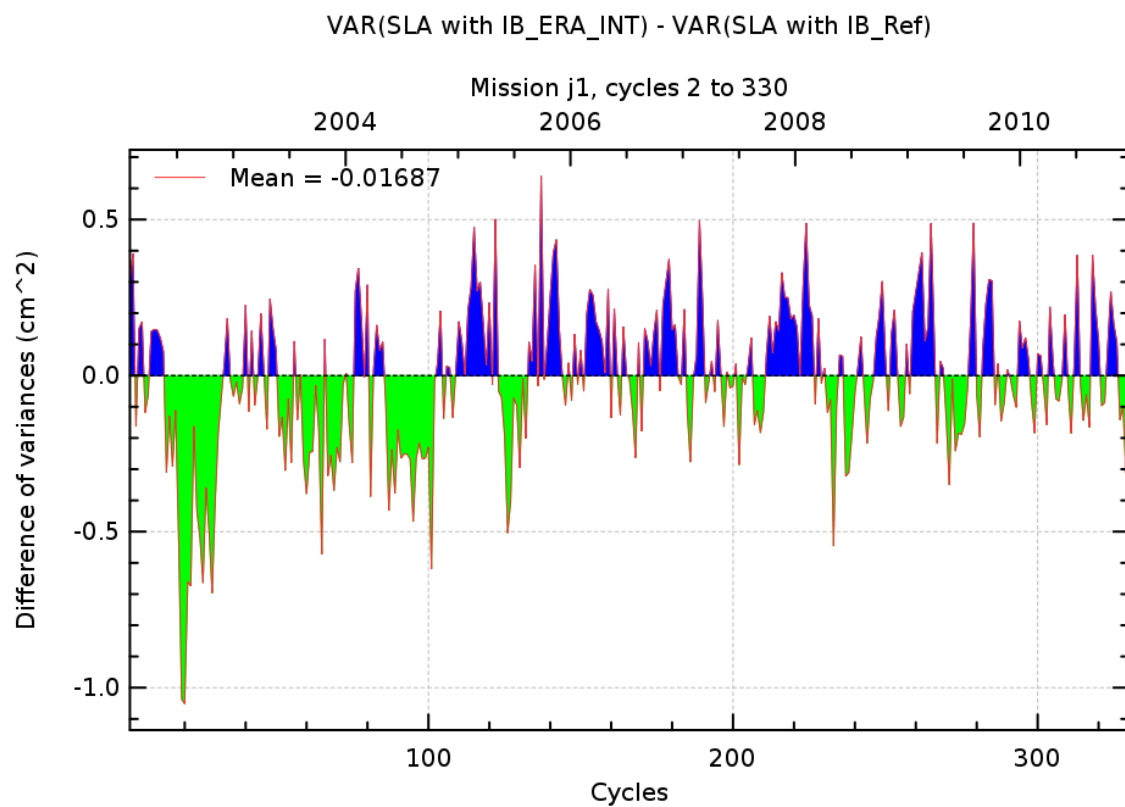
Diagnostic type : Global internal analyses

Global MSL, selecting even pass numbers

Mission tp, cycles 11 to 480

Global MSL, selecting odd pass numbers

Mission tp, cycles 11 to 480

Diagnostic A201_c (mission tp)

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.
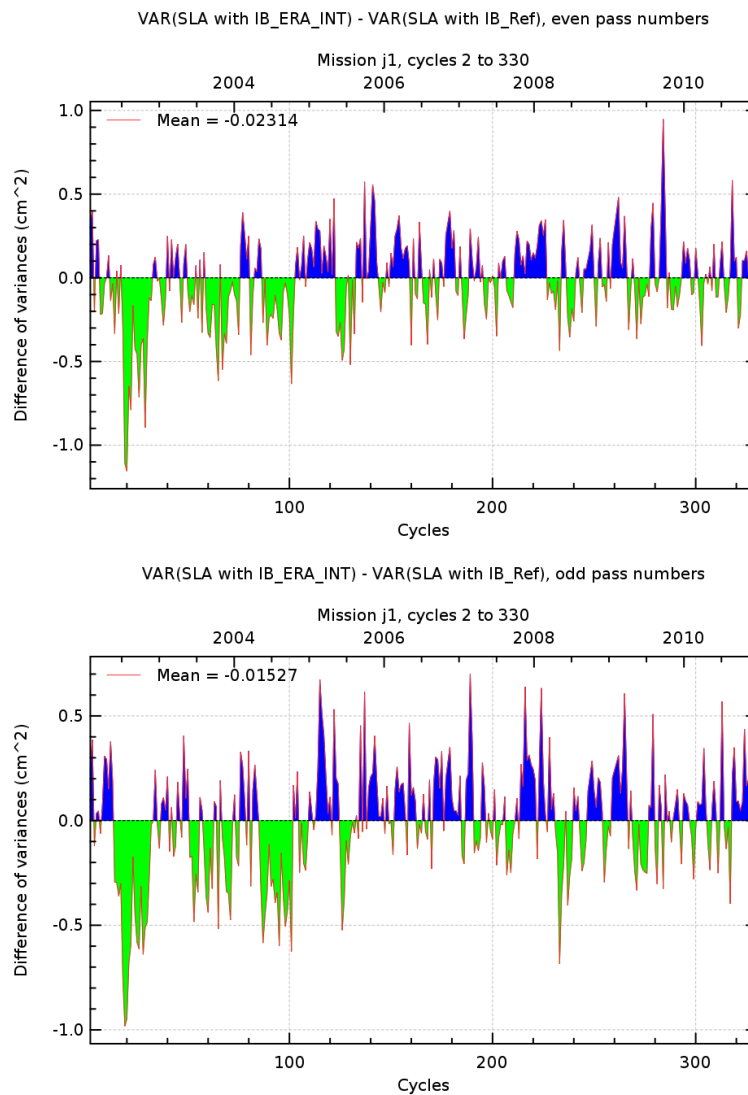
Diagnostic type : Global internal analyses

North hemisphere MSL

Mission tp, cycles 11 to 480

SLA with IB_ERA_INT Slope = 3.09 mm/yr [L.S.R. = 0.0636]
SLA with IB_Ref Slope = 3.11 mm/yr [L.S.R. = 0.0613]

South hemisphere MSL

Mission tp, cycles 11 to 480

SLA with IB_ERA_INT Slope = 3.19 mm/yr [L.S.R. = 0.0541]
SLA with IB_Ref Slope = 3.14 mm/yr [L.S.R. = 0.0584]

A202

<table>
<tr><td></td><td colspan="2">

Diagnostic A202_a (mission en)

</td></tr>
<tr><td rowspan="5">**Diagnostic type :** Global internal analyses</td><td colspan="2">
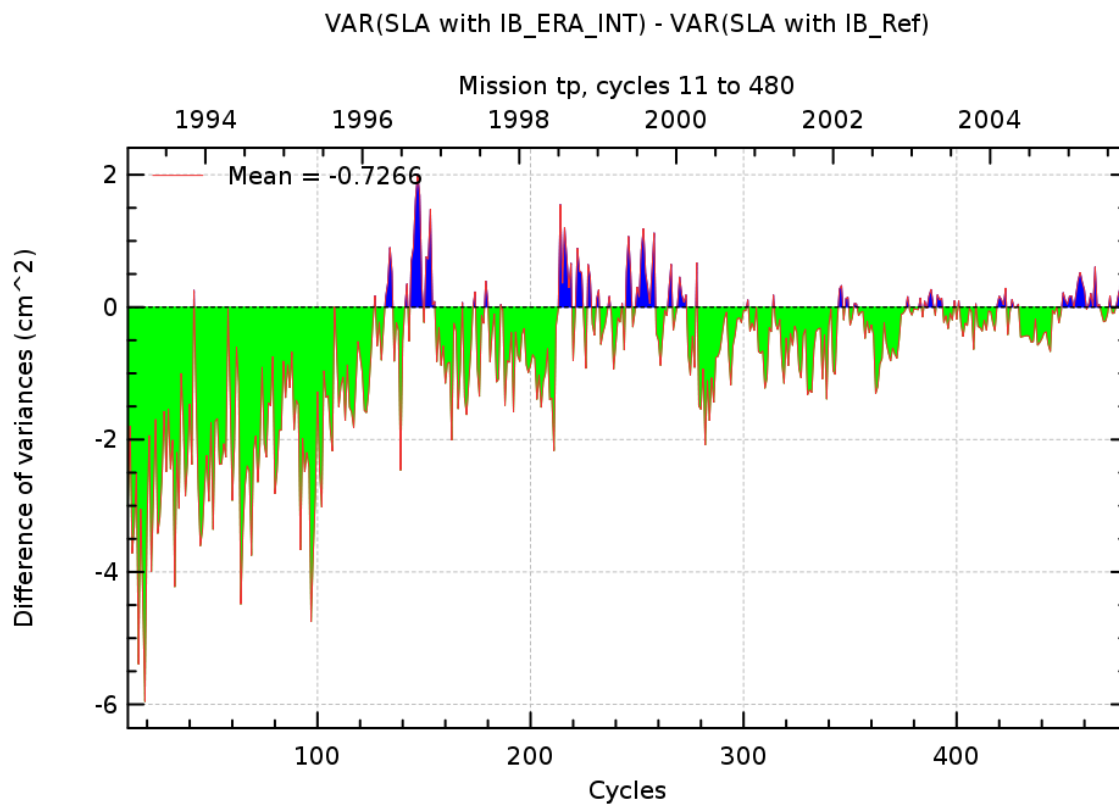
Name : Differences of temporal evolution of Sea Level Anomaly (SLA)

</td></tr>
<tr><td colspan="2">

Input data : Along track SLA

</td></tr>
<tr><td colspan="2">

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.

</td></tr>
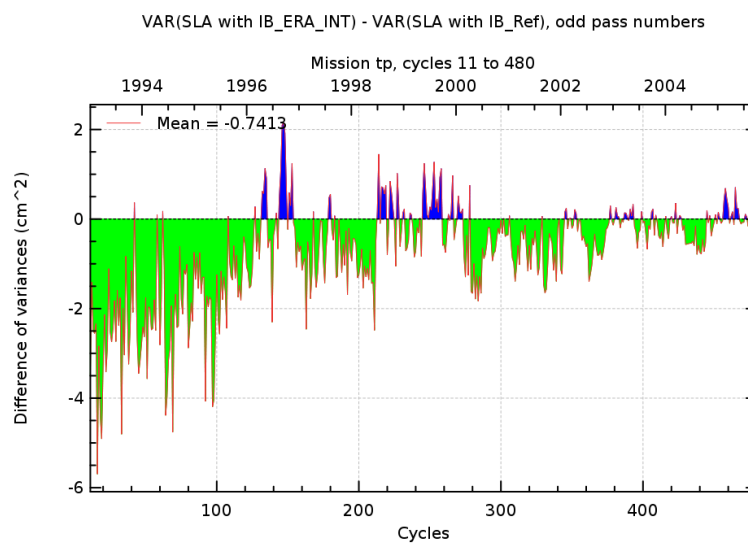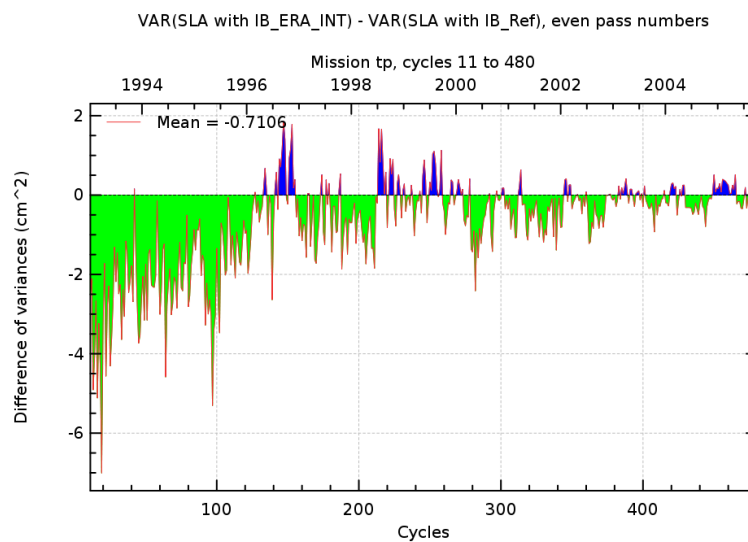<tr><td colspan="2">

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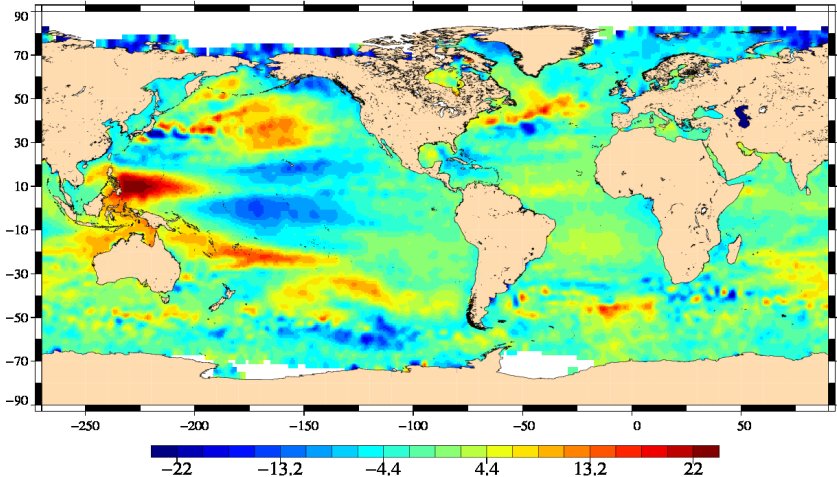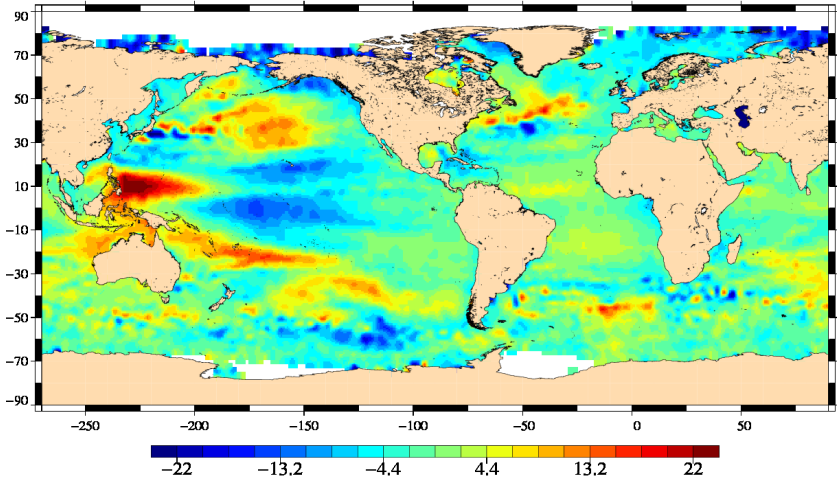</table>

Diagnostic A202_b (mission en)

Name : Differences of 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

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref), even pass numbers

Mission en, cycles 10 to 93

Mean = 0.1538

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref), odd pass numbers

Mission en, cycles 10 to 93

Mean = 0.1259

Diagnostic A202_a (mission j1)

Name : Differences of 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

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref)

Mission j1, cycles 2 to 330

Diagnostic A202_b (mission j1)

Name : Differences of 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

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref), even pass numbers

Mission j1, cycles 2 to 330

Mean = -0.02314

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref), odd pass numbers

Mission j1, cycles 2 to 330

Mean = -0.01527

Diagnostic A202_a (mission tp)

Name : Differences of 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

VAR(SLA with IB_ERA_INT) - VAR(SLA with IB_Ref)

Mission tp, cycles 11 to 480

Diagnostic A202_b (mission tp)

Name : Differences of 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

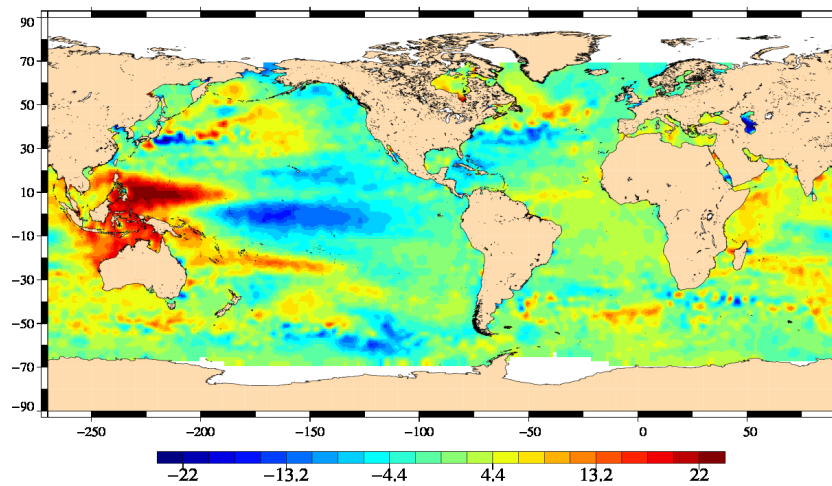| Diagnostic A203_a (mission en) |
| --- |

Name : Map of Sea Level Anomaly (SLA) over all the period
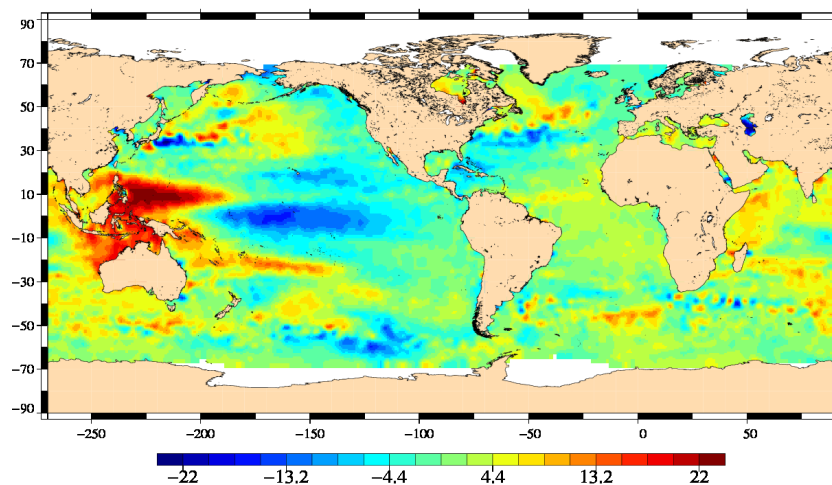
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends
Mission en, cycles 10 to 93

Trends (mm/yr)

SLA with IB_Ref : trends
Mission en, cycles 10 to 93

Trends (mm/yr)

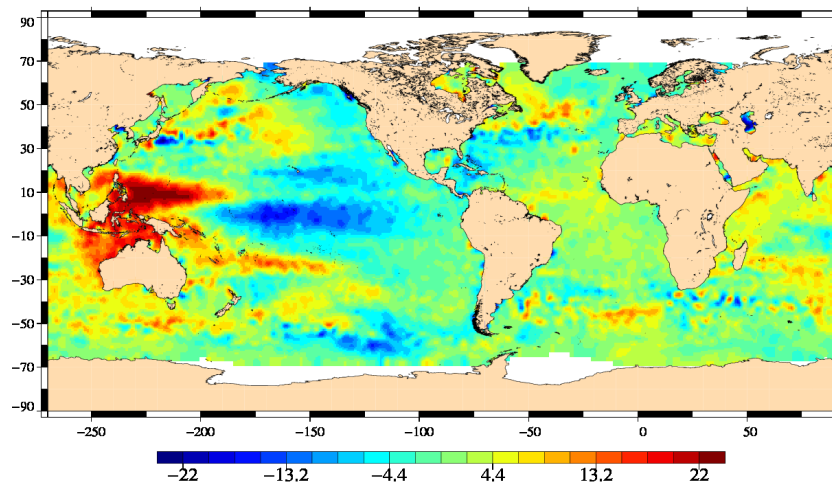# Diagnostic A203_b (mission en)

Name : Map of Sea Level Anomaly (SLA) over all the period
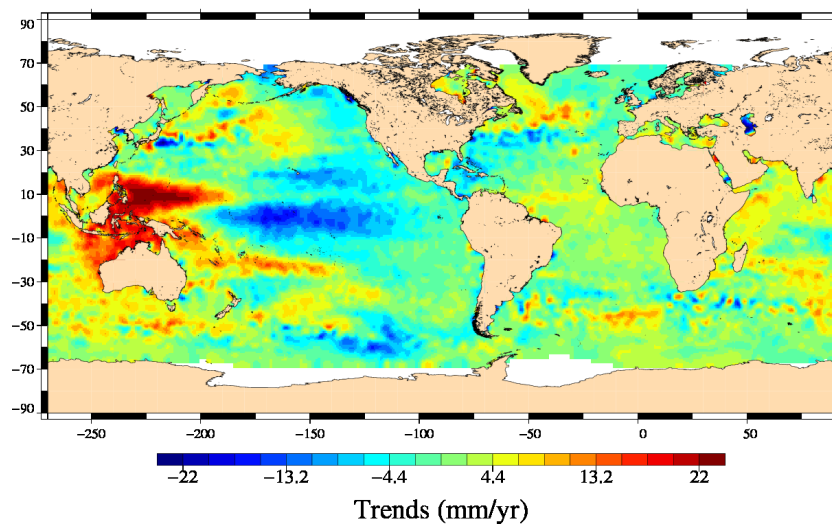
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends, even pass numbers
Mission en, cycles 10 to 93

Trends (mm/yr)

SLA with IB_Ref : trends, even pass numbers
Mission en, cycles 10 to 93

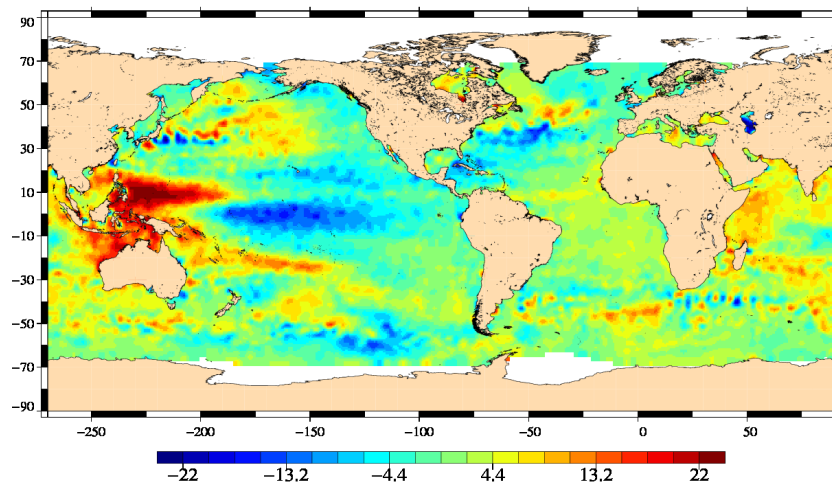Trends (mm/yr)

Diagnostic A203_c (mission en)

Name : Map of Sea Level Anomaly (SLA) over all the period
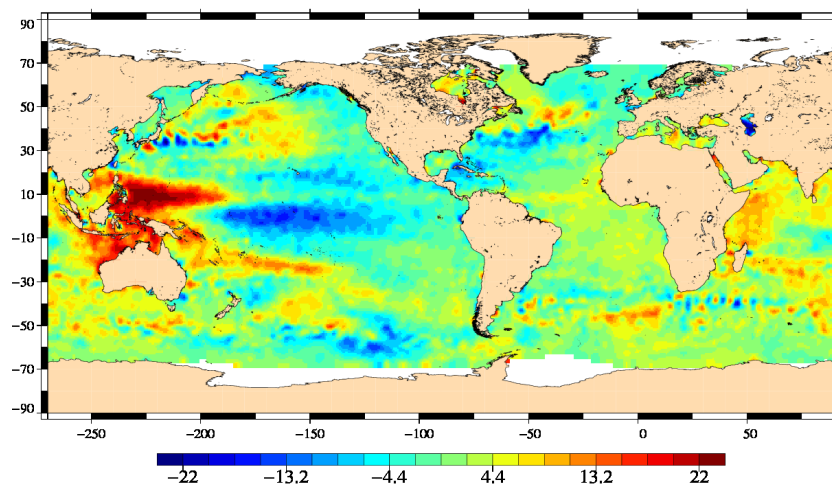
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends, odd pass numbers
Mission en, cycles 10 to 93

Trends (mm/yr)

SLA with IB_Ref : trends, odd pass numbers
Mission en, cycles 10 to 93

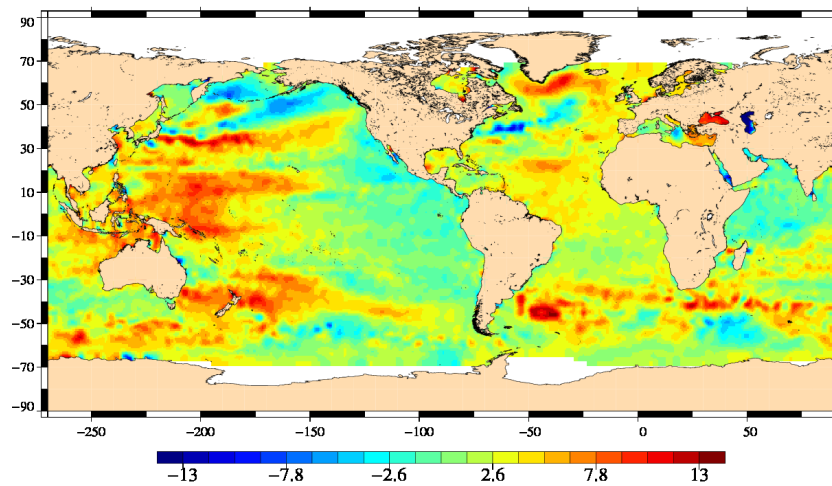Trends (mm/yr)

Diagnostic A203_a (mission j1)

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

SLA with IB_ERA_INT : trends
Mission j1, cycles 2 to 330

Trends (mm/yr)

SLA with IB_Ref : trends
Mission j1, cycles 2 to 330

Trends (mm/yr)

Diagnostic A203_b (mission j1)

Name : Map of Sea Level Anomaly (SLA) over all the period
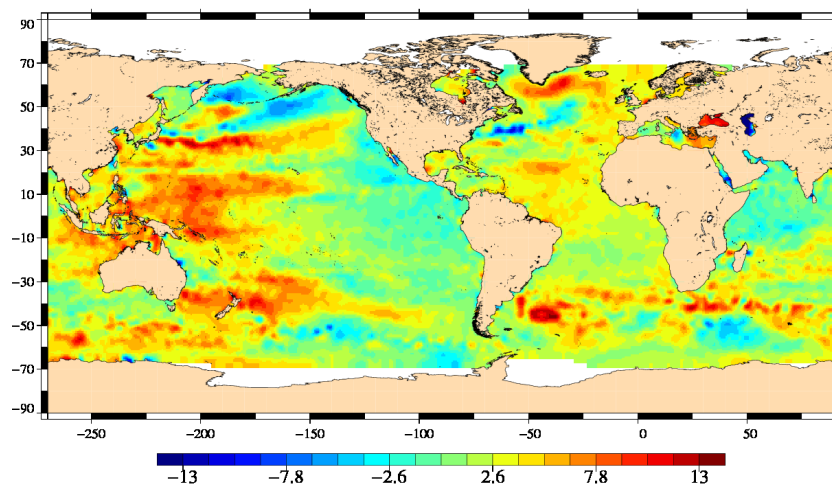
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends, even pass numbers
Mission j1, cycles 2 to 330

Trends (mm/yr)

SLA with IB_Ref : trends, even pass numbers
Mission j1, cycles 2 to 330

Trends (mm/yr)

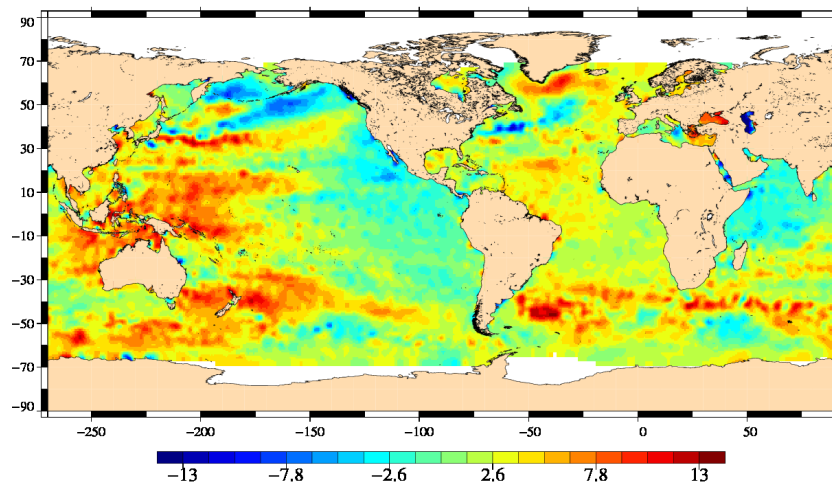# Diagnostic A203_c (mission j1)

Name : Map of Sea Level Anomaly (SLA) over all the period
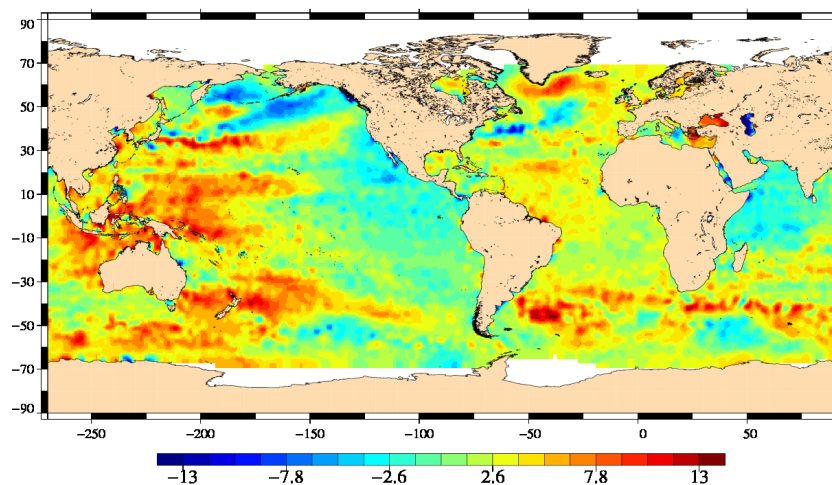
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends, odd pass numbers
Mission j1, cycles 2 to 330

Trends (mm/yr)

SLA with IB_Ref : trends, odd pass numbers
Mission j1, cycles 2 to 330

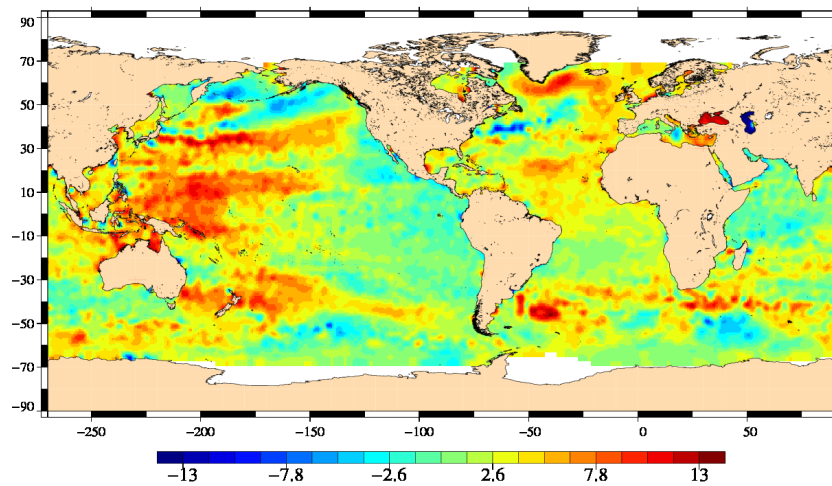Trends (mm/yr)

Diagnostic A203_a (mission tp)

Name : Map of Sea Level Anomaly (SLA) over all the period
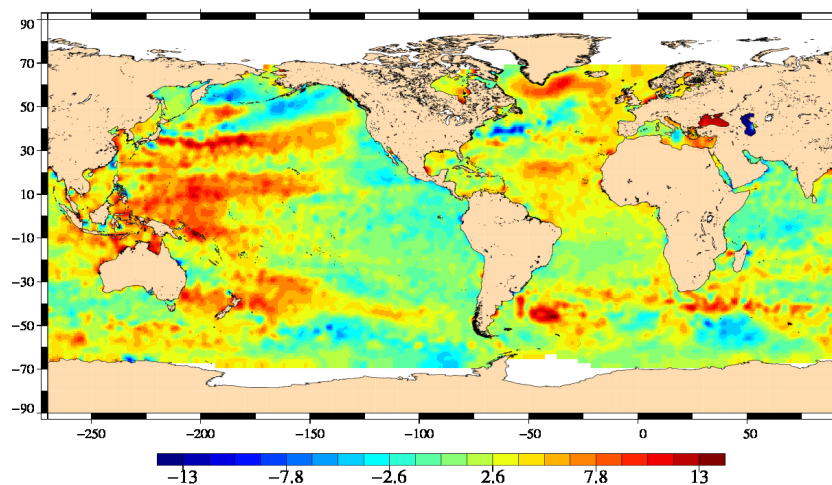
Input data : Along track SLA

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

SLA with IB_ERA_INT : trends
Mission tp, cycles 11 to 480

Trends (mm/yr)

SLA with IB_Ref : trends
Mission tp, cycles 11 to 480

Trends (mm/yr)

Diagnostic A203_b (mission tp)

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.

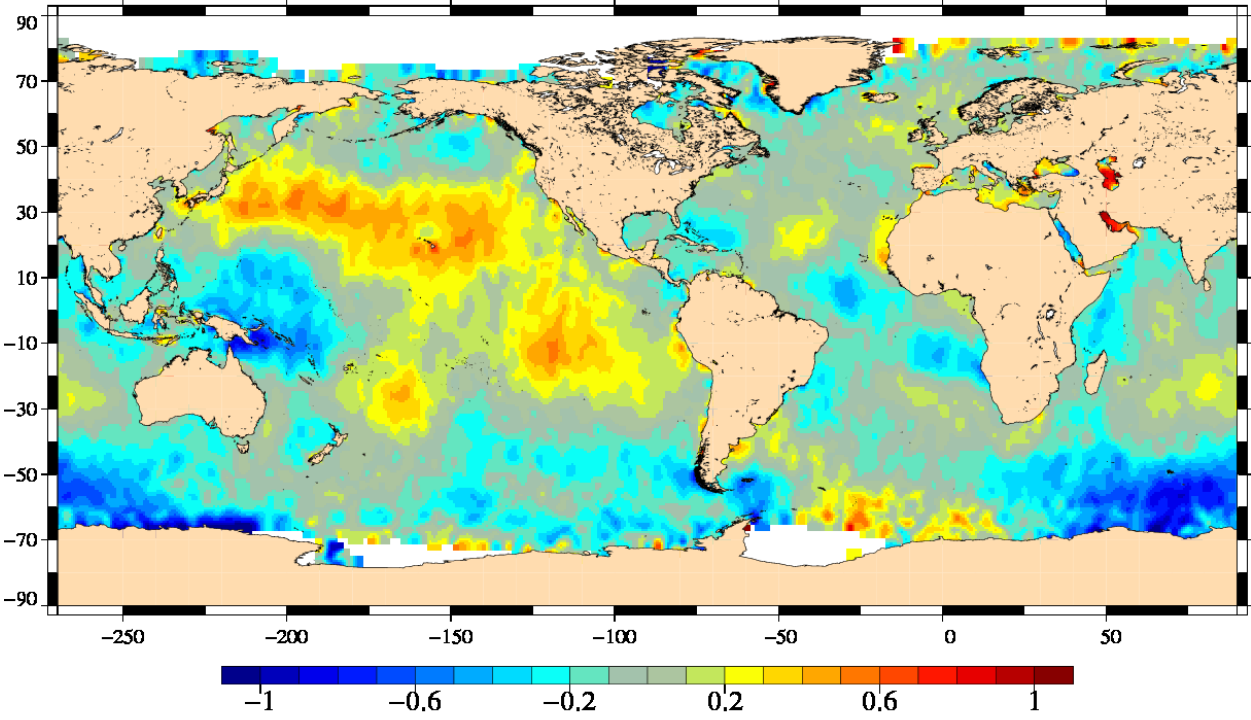**Diagnostic type :** Global internal analyses

SLA with IB_ERA_INT : trends, even pass numbers
Mission tp, cycles 11 to 480

Trends (mm/yr)

SLA with IB_Ref : trends, even pass numbers
Mission tp, cycles 11 to 480

Trends (mm/yr)

Diagnostic A203_c (mission tp)

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

SLA with IB_ERA_INT : trends, odd pass numbers
Mission tp, cycles 11 to 480

Trends (mm/yr)

SLA with IB_Ref : trends, odd pass numbers
Mission tp, cycles 11 to 480

Trends (mm/yr)

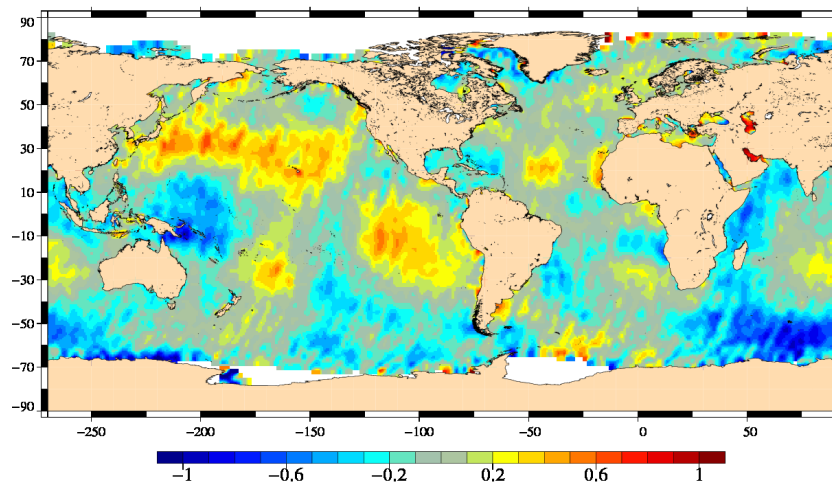## Diagnostic A204_a (mission en)

Name : Differences between maps of SLA
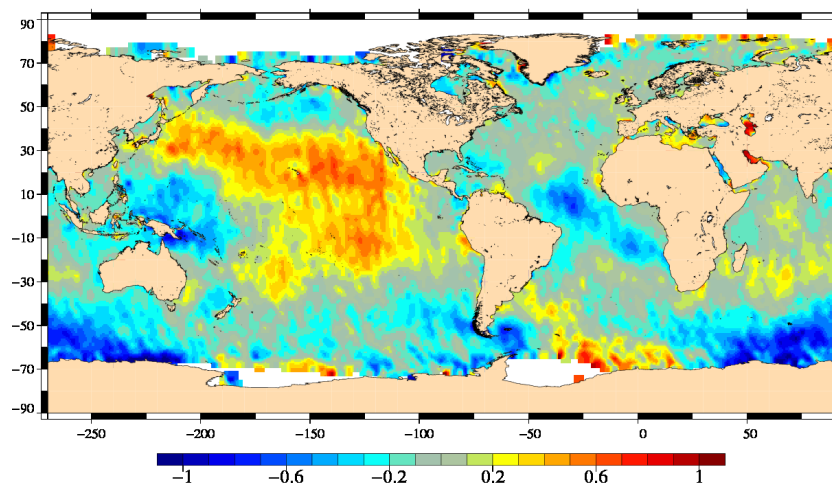
Input data : Along track SLA

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

SLA with IB_ERA_INT − SLA with IB_Ref : trends
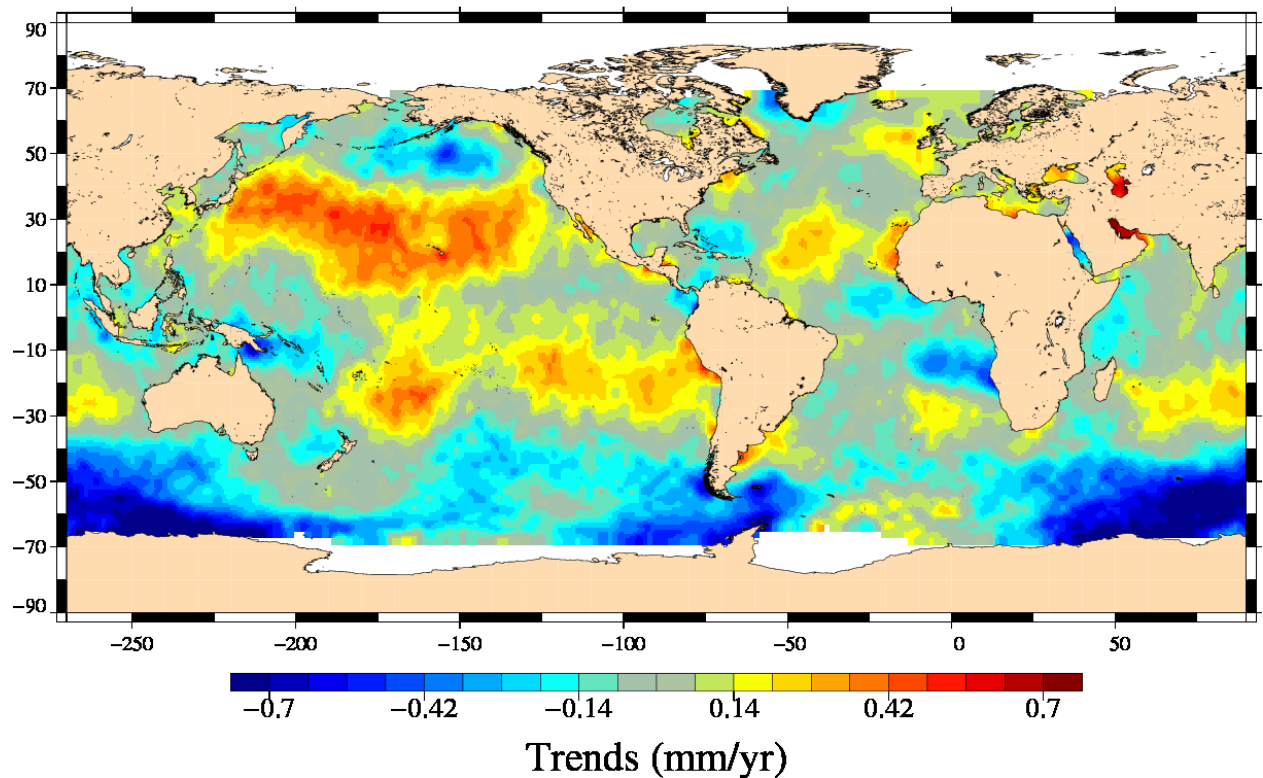Mission en, cycles 10 to 93

Trends (mm/yr)

Diagnostic A204_b (mission en)

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

SLA with IB_ERA_INT − SLA with IB_Ref : trends, even pass numbers
Mission en, cycles 10 to 93

Trends (mm/yr)

SLA with IB_ERA_INT − SLA with IB_Ref : trends, odd pass numbers
Mission en, cycles 10 to 93

Trends (mm/yr)

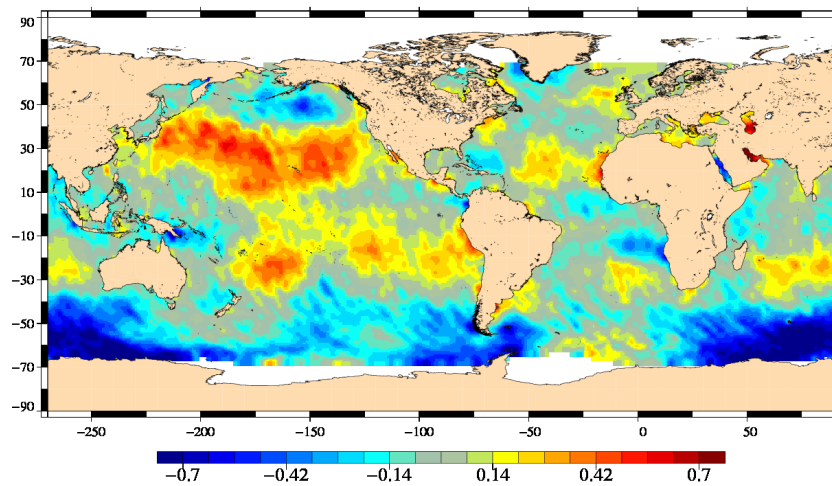# Diagnostic A204_a (mission j1)

Name : Differences between maps of SLA
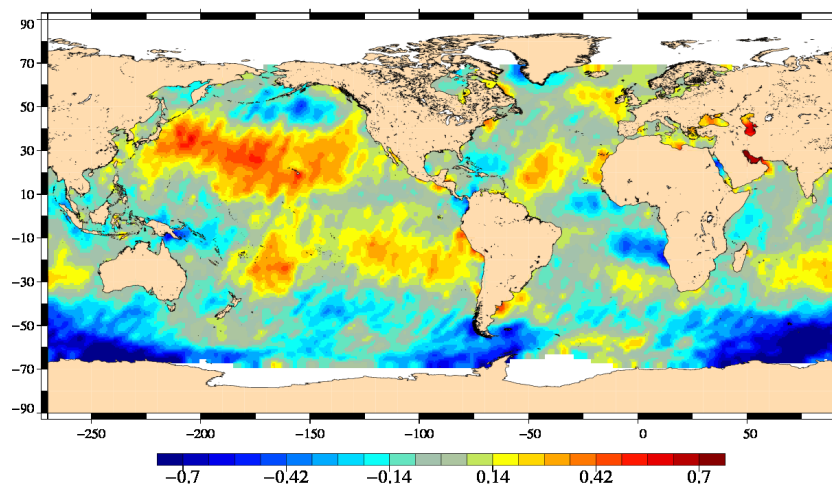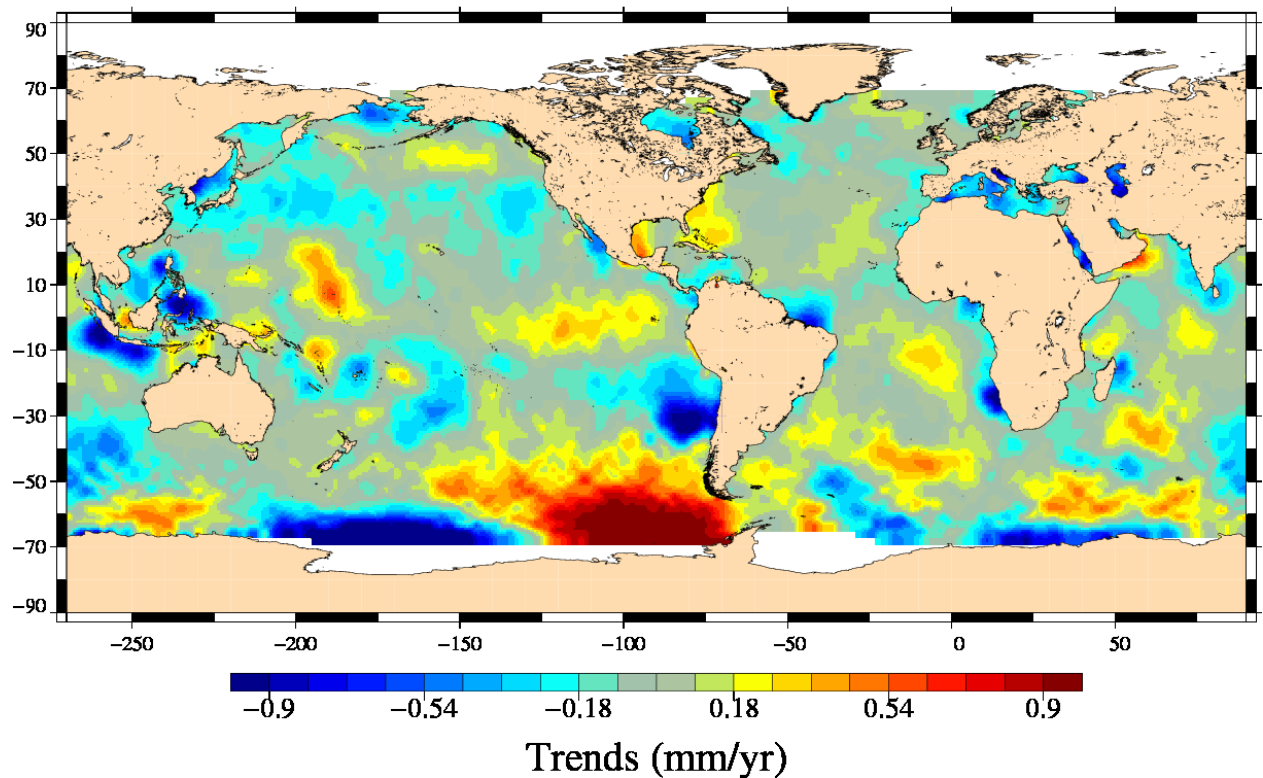
Input data : Along track SLA

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

SLA with IB_ERA_INT − SLA with IB_Ref : trends
Mission j1, cycles 2 to 330

Trends (mm/yr)

Diagnostic A204_b (mission j1)

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

SLA with IB_ERA_INT − SLA with IB_Ref : trends, even pass numbers
Mission j1, cycles 2 to 330

Trends (mm/yr)

SLA with IB_ERA_INT − SLA with IB_Ref : trends, odd pass numbers
Mission j1, cycles 2 to 330

Trends (mm/yr)

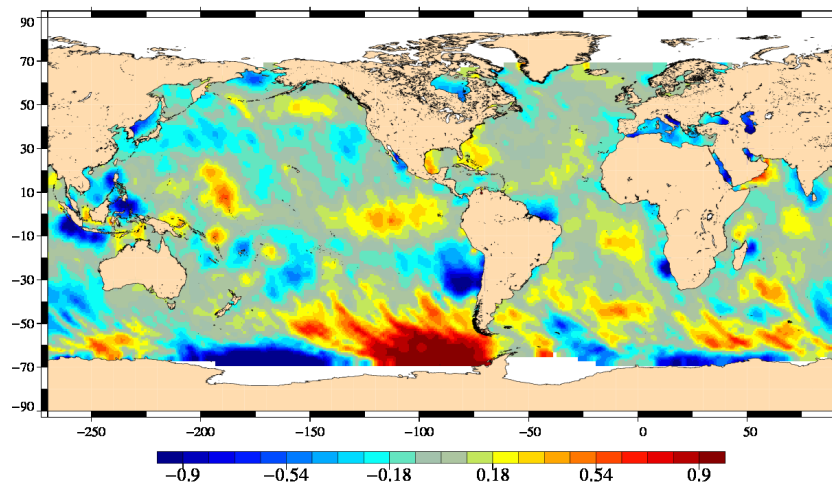# Diagnostic A204_a (mission tp)

Name : Differences between maps of SLA

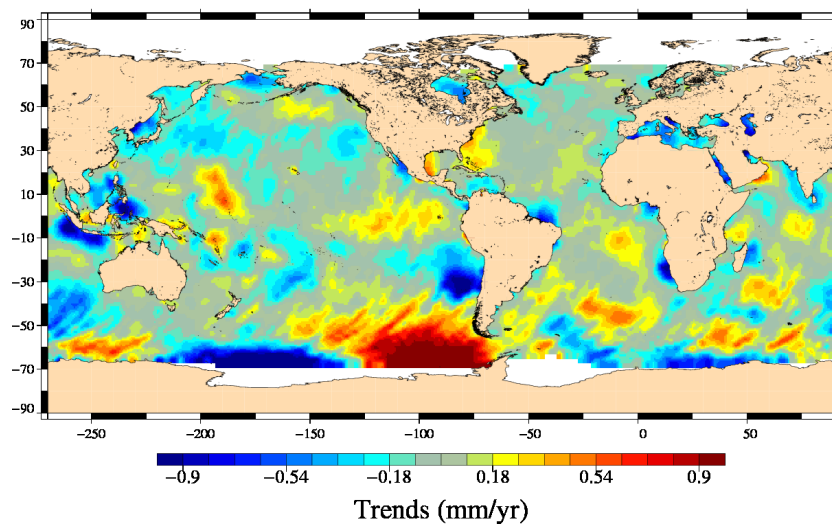**Input data :** Along track SLA

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

SLA with IB_ERA_INT − SLA with IB_Ref : trends
Mission tp, cycles 11 to 480

Trends (mm/yr)

Diagnostic A204_b (mission tp)

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).

SLA with IB_ERA_INT − SLA with IB_Ref : trends, even pass numbers
Mission tp, cycles 11 to 480

Trends (mm/yr)

SLA with IB_ERA_INT − SLA with IB_Ref : trends, odd pass numbers
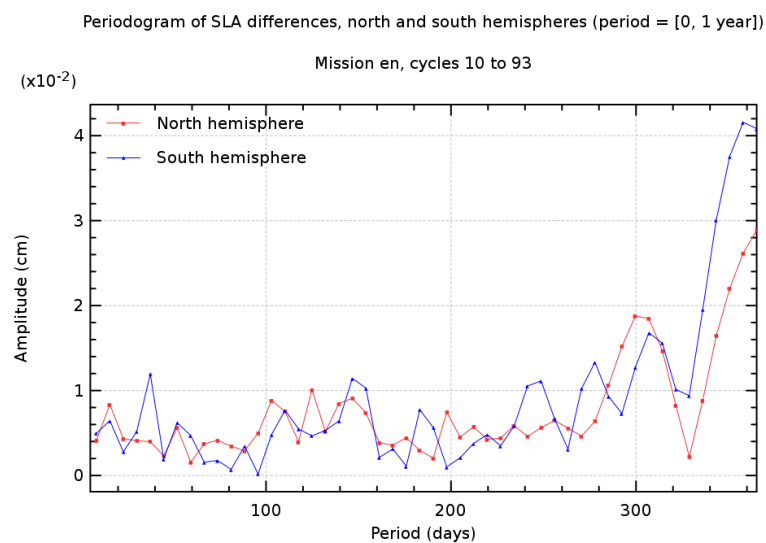Mission tp, cycles 11 to 480

Trends (mm/yr)

Diagnostic A206_a (mission en)

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

Periodogram of SLA differences (reference period = 1 year)

Mission en, cycles 10 to 93

Periodogram of SLA differences (period = [0, 1 year])
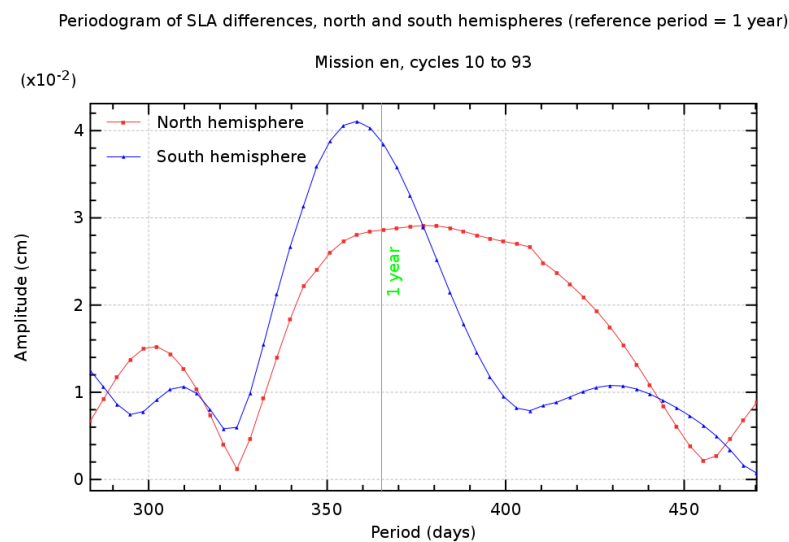
Mission en, cycles 10 to 93

Diagnostic A206_b (mission en)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)
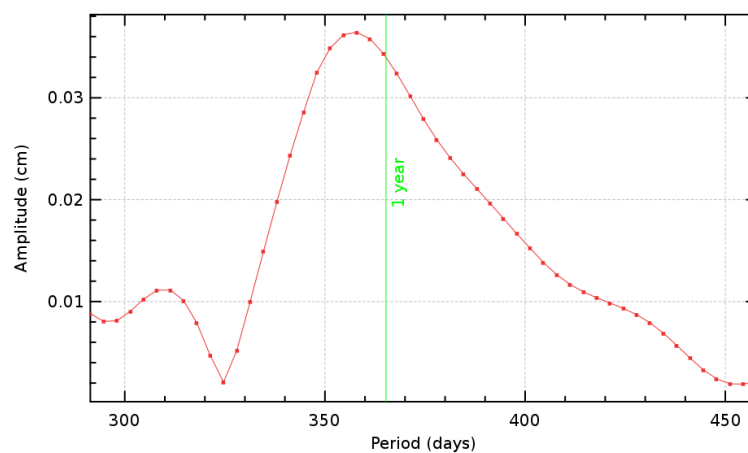
Input data : Along track SLA

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

Periodogram of SLA differences, north and south hemispheres (reference period = 1 year)

Mission en, cycles 10 to 93

Periodogram of SLA differences, north and south hemispheres (period = [0, 1 year])

Mission en, cycles 10 to 93

Diagnostic A206_a (mission j1)

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.

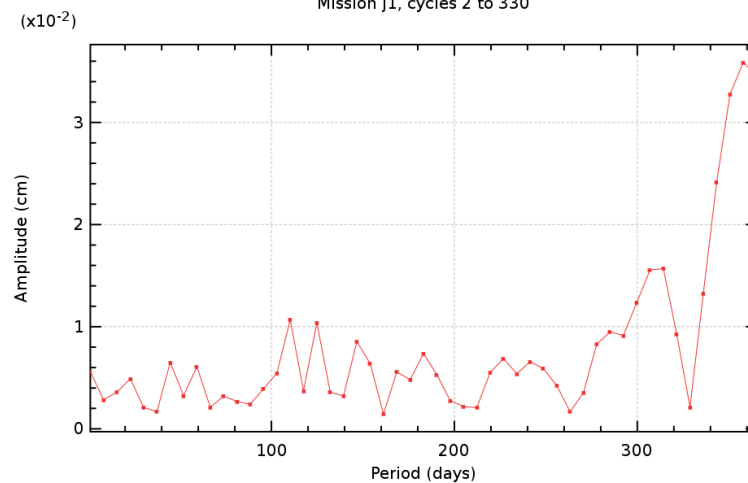**Diagnostic type :** Global internal analyses

Periodogram of SLA differences (reference period = 1 year)

Mission j1, cycles 2 to 330

Periodogram of SLA differences (period = [0, 1 year])
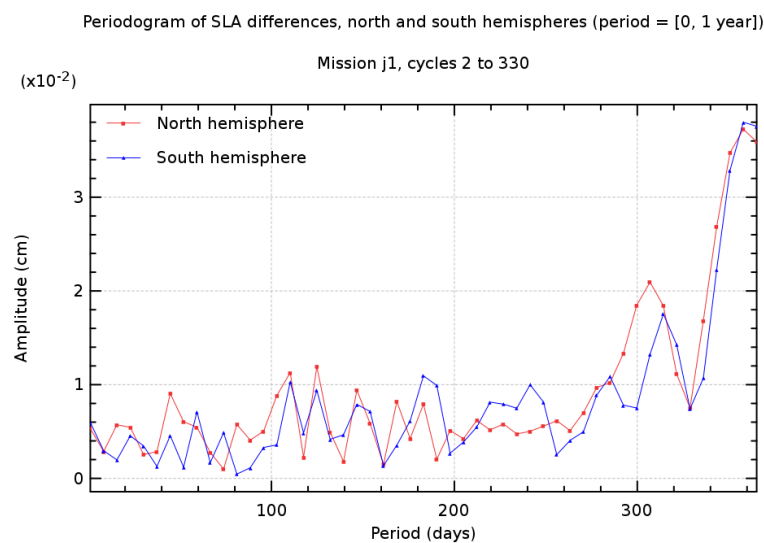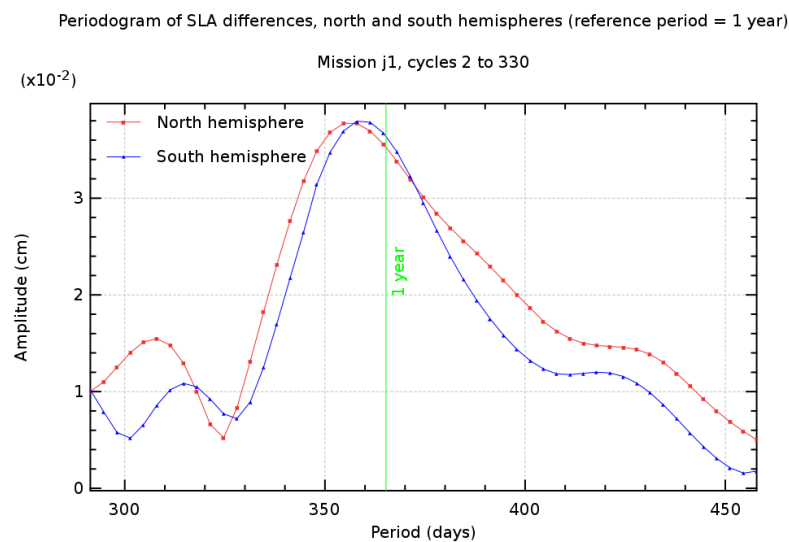
Mission j1, cycles 2 to 330

Diagnostic A206_b (mission j1)

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.

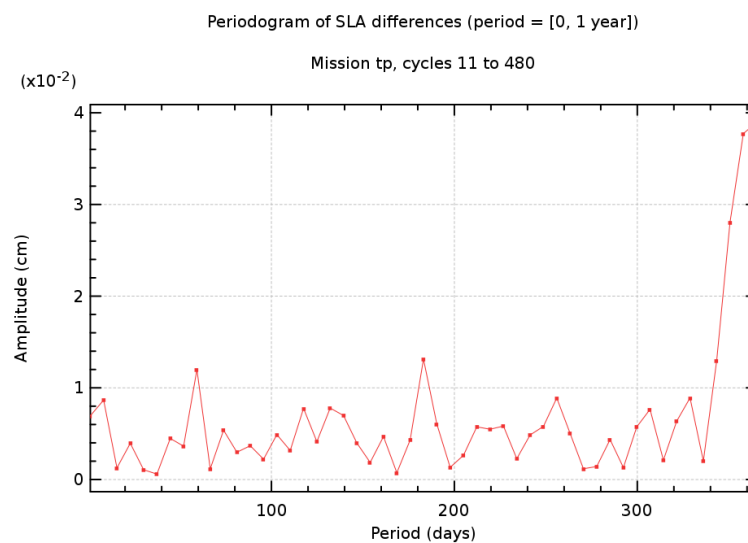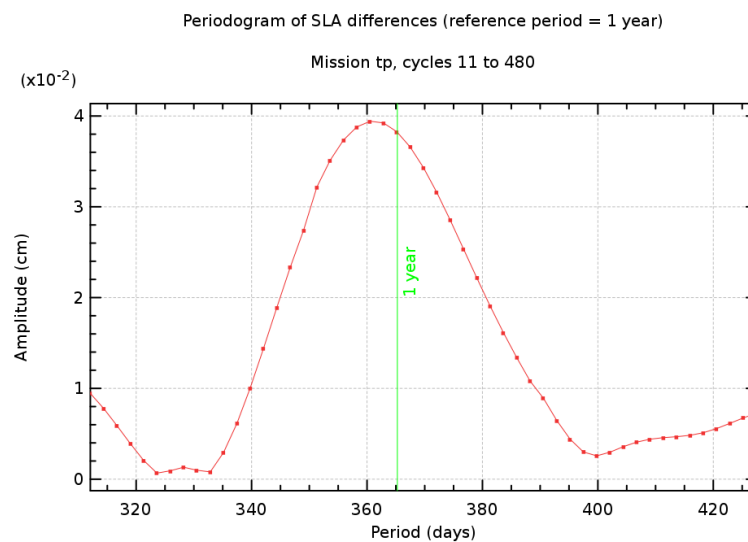**Diagnostic type :** Global internal analyses

Periodogram of SLA differences, north and south hemispheres (reference period = 1 year)

Mission j1, cycles 2 to 330

Periodogram of SLA differences, north and south hemispheres (period = [0, 1 year])

Mission j1, cycles 2 to 330

Diagnostic A206_a (mission tp)

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 tp)

Name : Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)
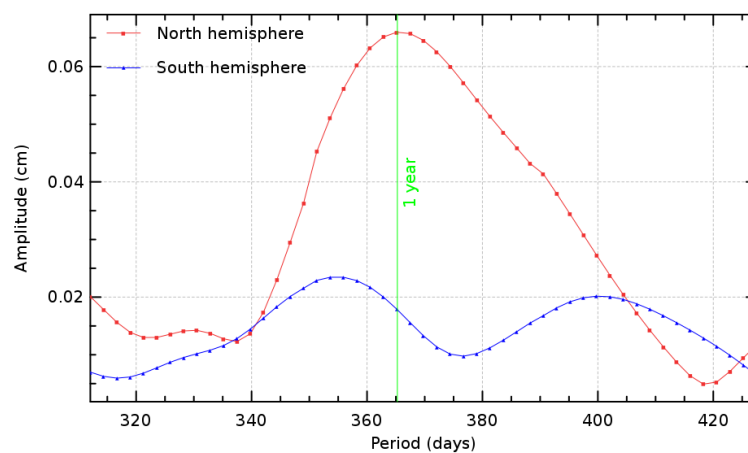
Input data : Along track SLA

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.

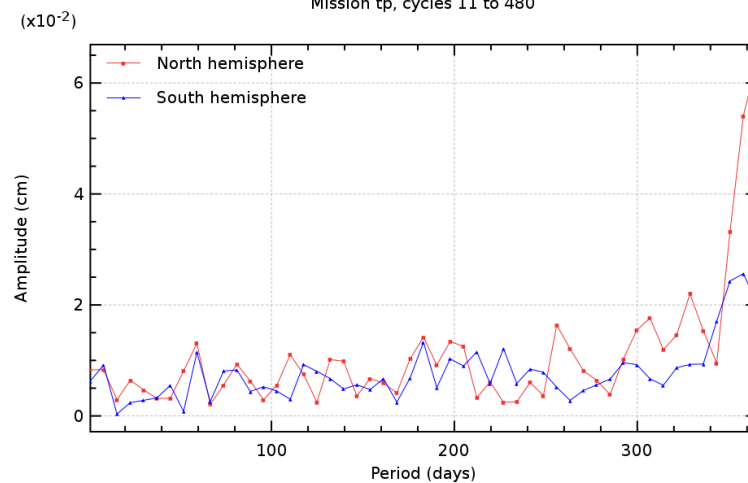**Diagnostic type :** Global internal analyses

Periodogram of SLA differences, north and south hemispheres (reference period = 1 year)
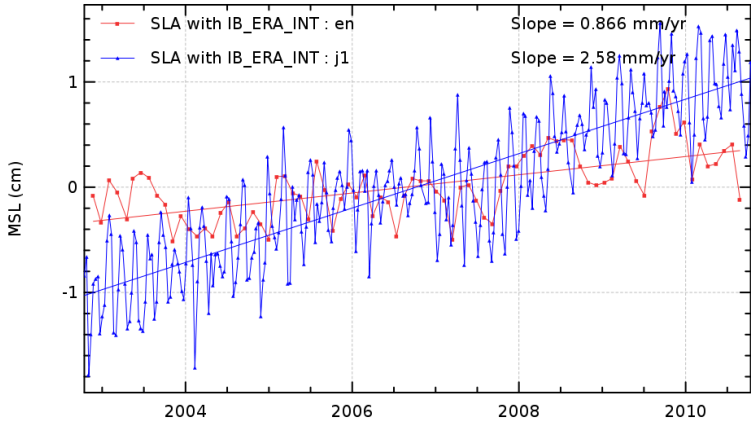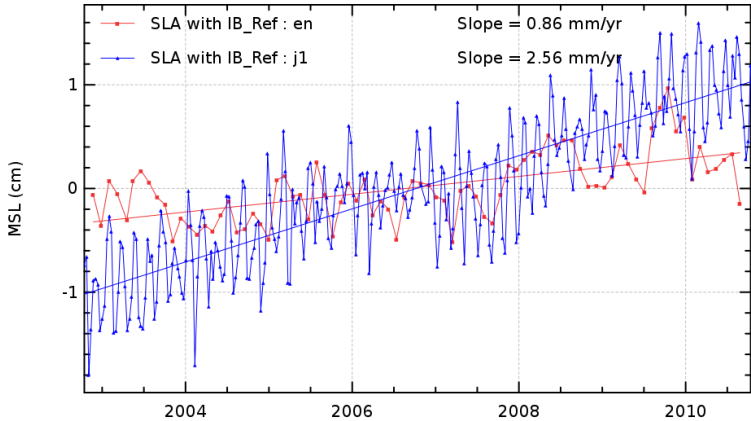
Mission tp, cycles 11 to 480

Periodogram of SLA differences, north and south hemispheres (period = [0, 1 year])
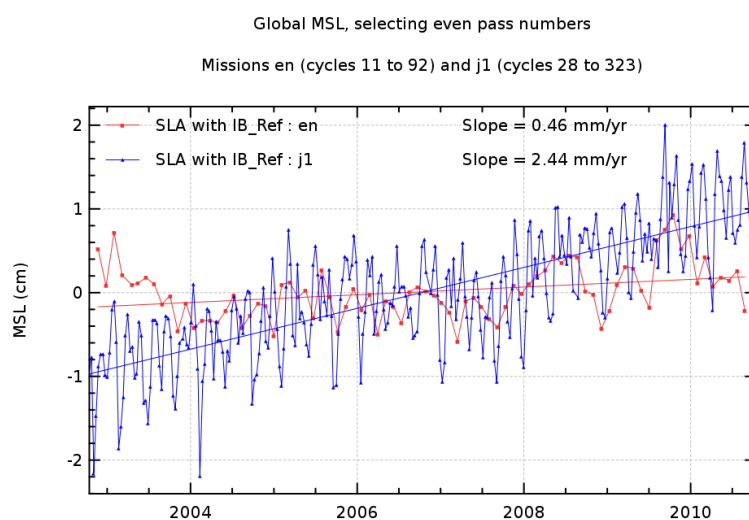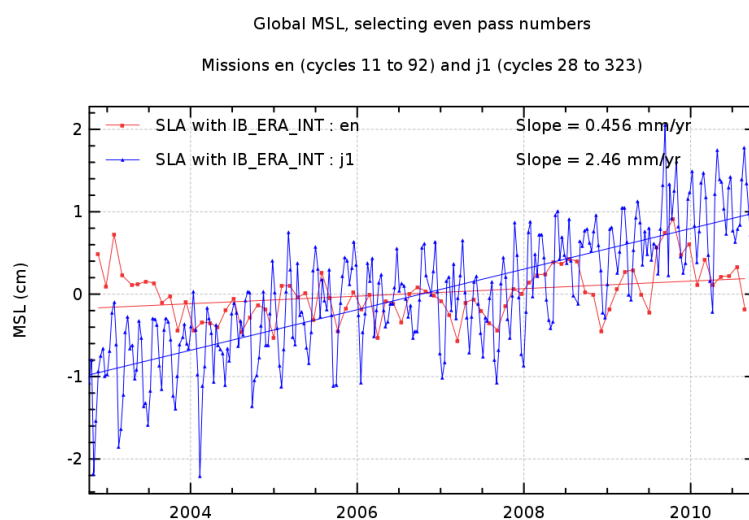
Mission tp, cycles 11 to 480

Diagnostic B001_a (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.

Diagnostic type : Global multi-mission comparaisons

Diagnostic B001_b (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.

Diagnostic type : Global multi-mission comparaisons

Global MSL, selecting even pass numbers

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Global MSL, selecting even pass numbers

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Diagnostic B001_c (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
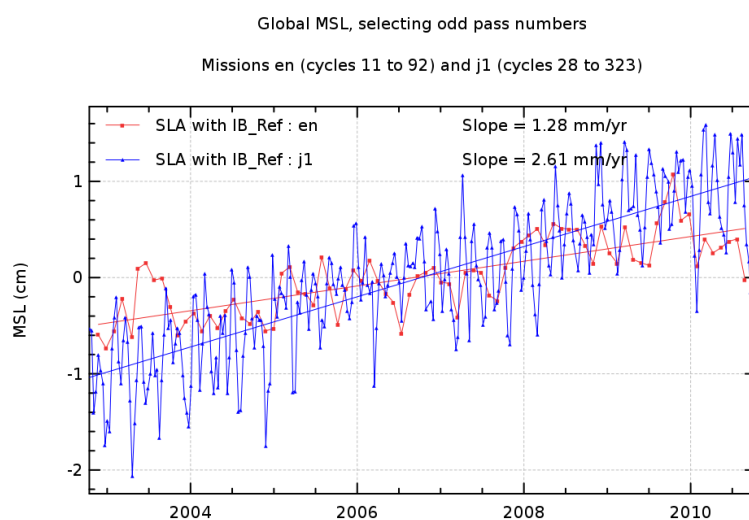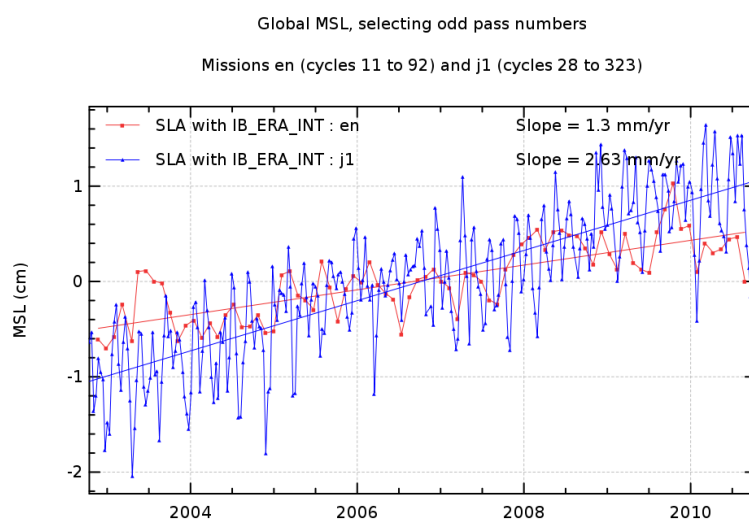
Diagnostic type : Global multi-mission comparaisons

Global MSL, selecting odd pass numbers

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Global MSL, selecting odd pass numbers

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Diagnostic B001_d (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
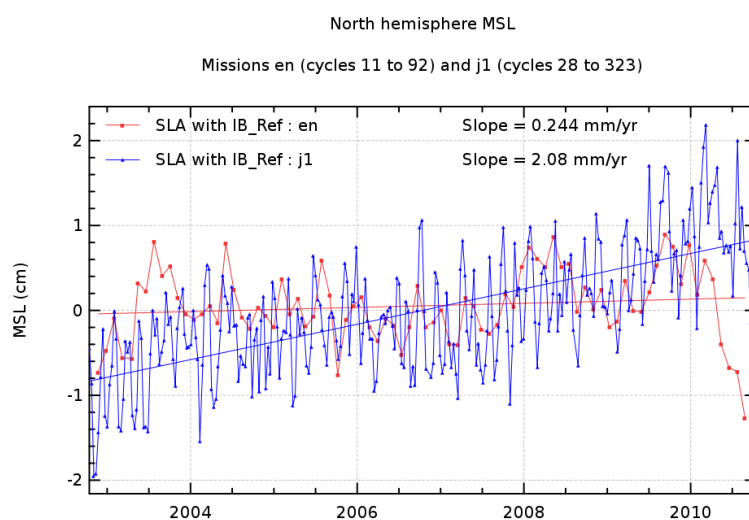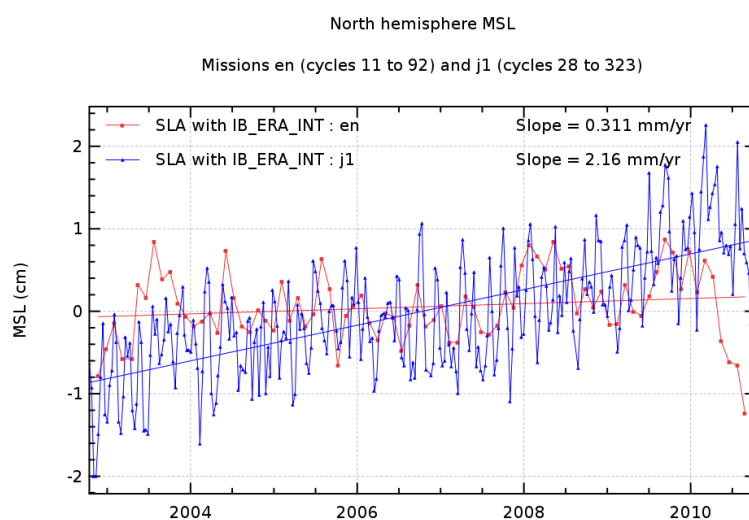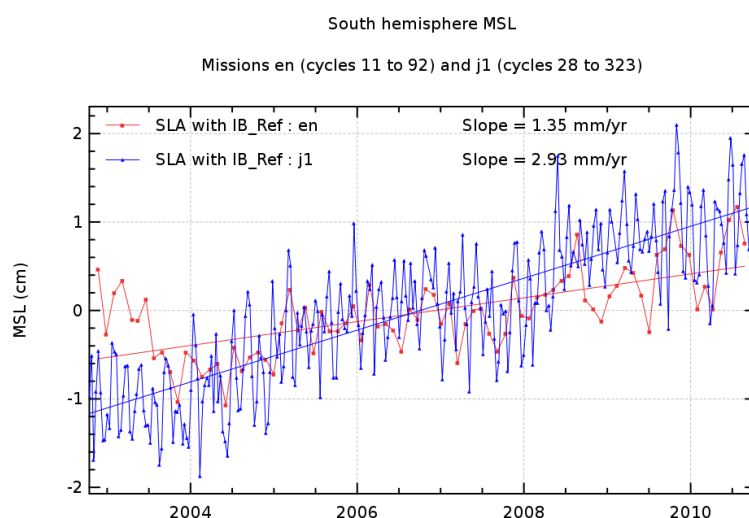
Diagnostic type : Global multi-mission comparaisons

North hemisphere MSL

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

North hemisphere MSL

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Diagnostic B001_e (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
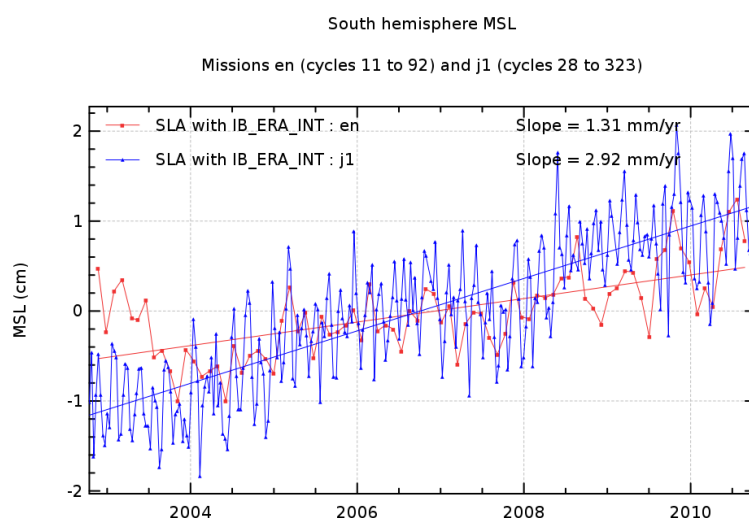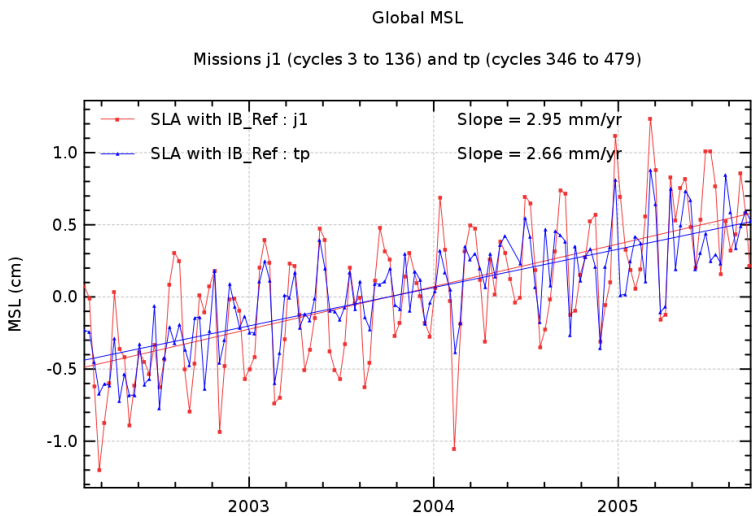
Diagnostic type : Global multi-mission comparaisons

South hemisphere MSL

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

South hemisphere MSL

Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Diagnostic B001 a (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
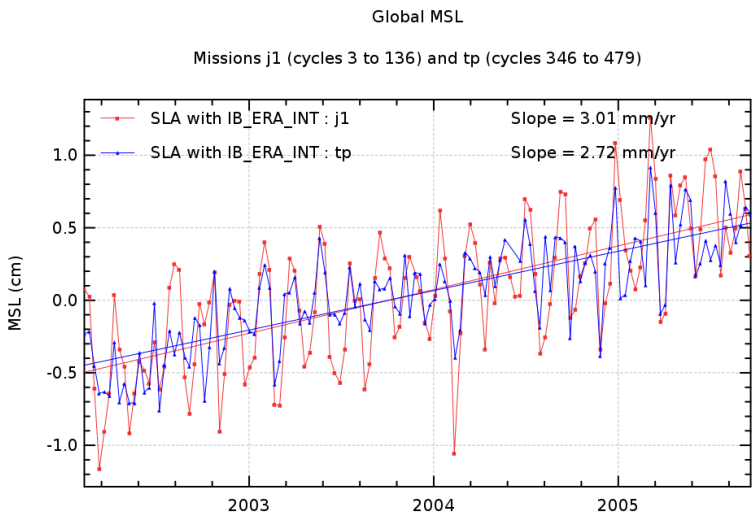
<div style="writing-mode: vertical">
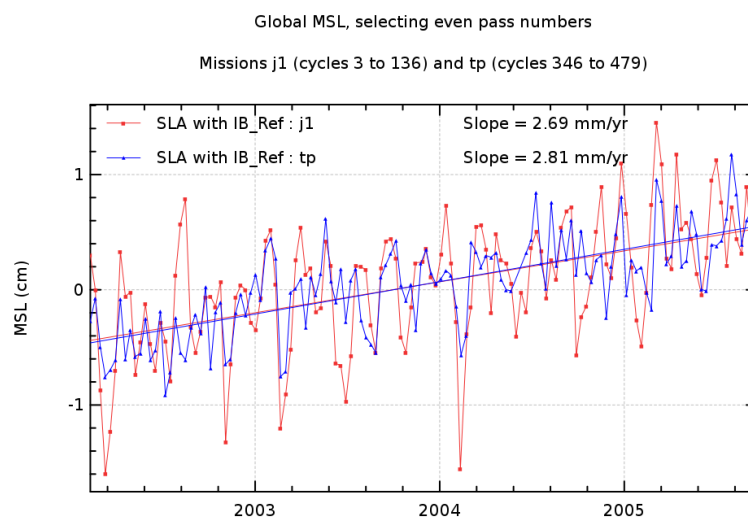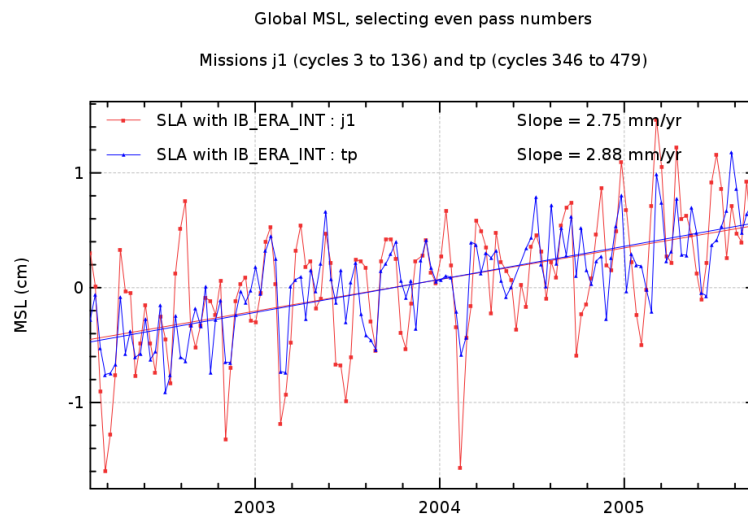
Diagnostic type : Global multi-mission comparaisons

</div>

Global MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

SLA with IB_ERA_INT : j1 — Slope = 3.01 mm/yr
SLA with IB_ERA_INT : tp — Slope = 2.72 mm/yr

Global MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

SLA with IB_Ref : j1 — Slope = 2.95 mm/yr
SLA with IB_Ref : tp — Slope = 2.66 mm/yr

Diagnostic B001_b (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
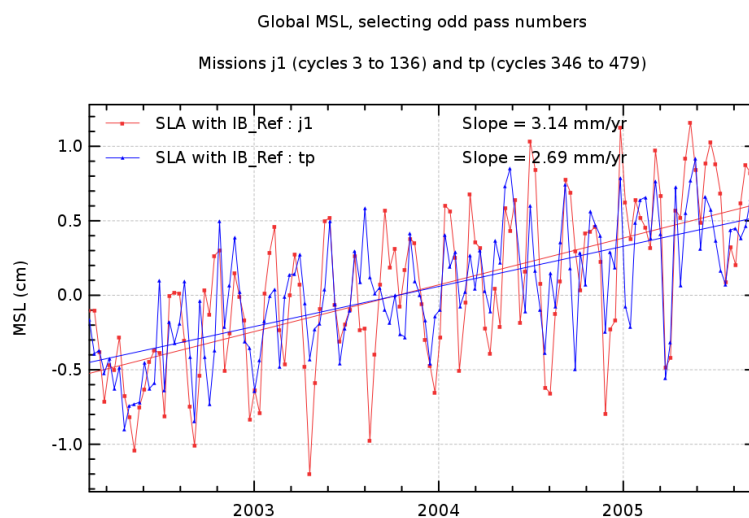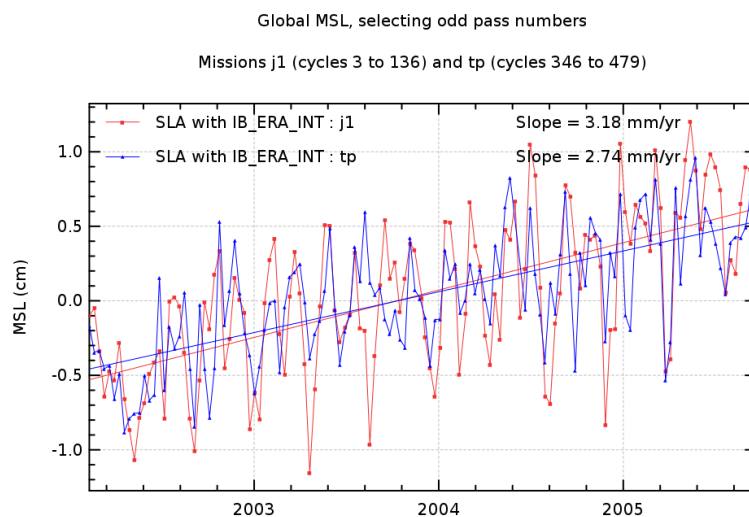
Diagnostic type : Global multi-mission comparaisons

Global MSL, selecting even pass numbers

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Global MSL, selecting even pass numbers

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Diagnostic B001_c (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
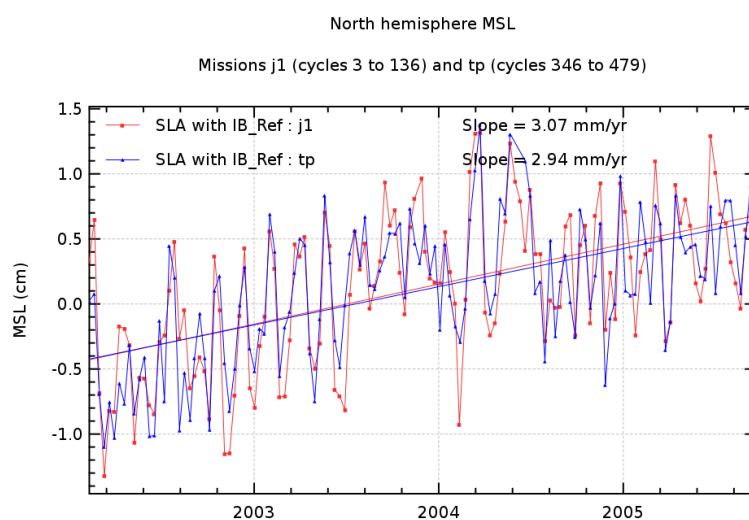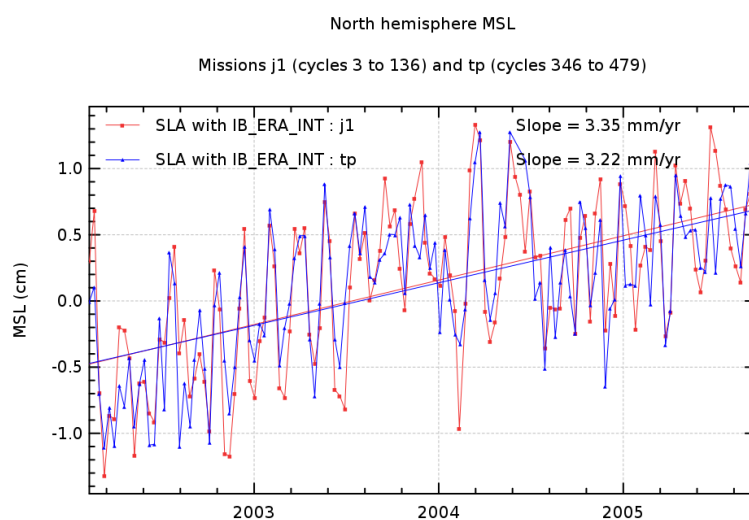
Diagnostic type : Global multi-mission comparaisons

Global MSL, selecting odd pass numbers

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Global MSL, selecting odd pass numbers

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Diagnostic B001_d (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
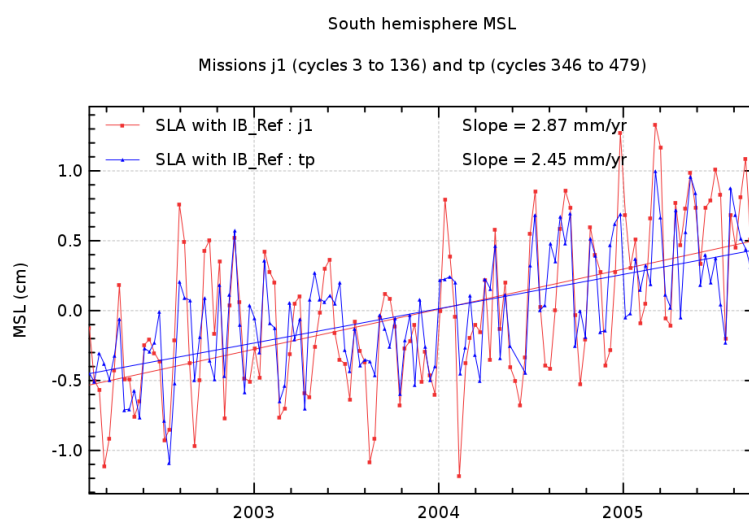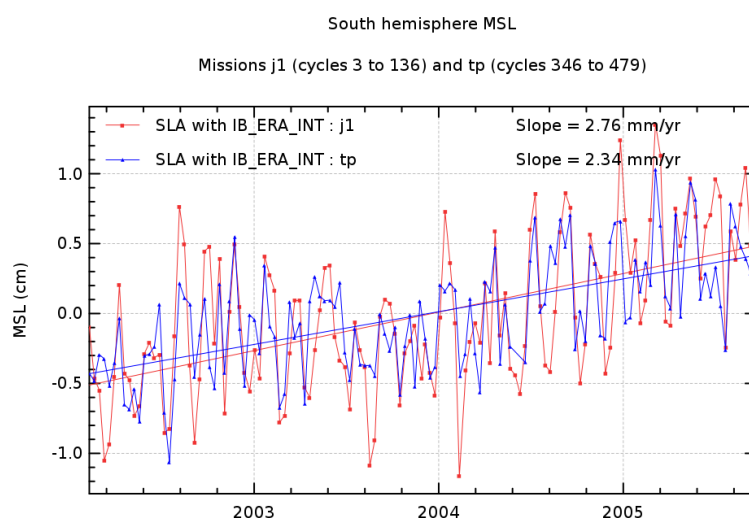
Diagnostic type : Global multi-mission comparaisons

North hemisphere MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

North hemisphere MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Diagnostic B001_e (mission)

Name : Temporal evolution of Sea level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : Temporal evolution of SLA statistics (mean, standard deviation) of 2 or more missions are computed over the same period as longest as possible using successively both components in the SLA calculation. This can be done globally, or separating in ascending and descending or in northern and southern hemisphere. In order to assure comparability, statistics are computed using sea level standard calculation (mean per box of 2x2 and weighted by cosine of latitude for the global mean) limited to 66 latitude.
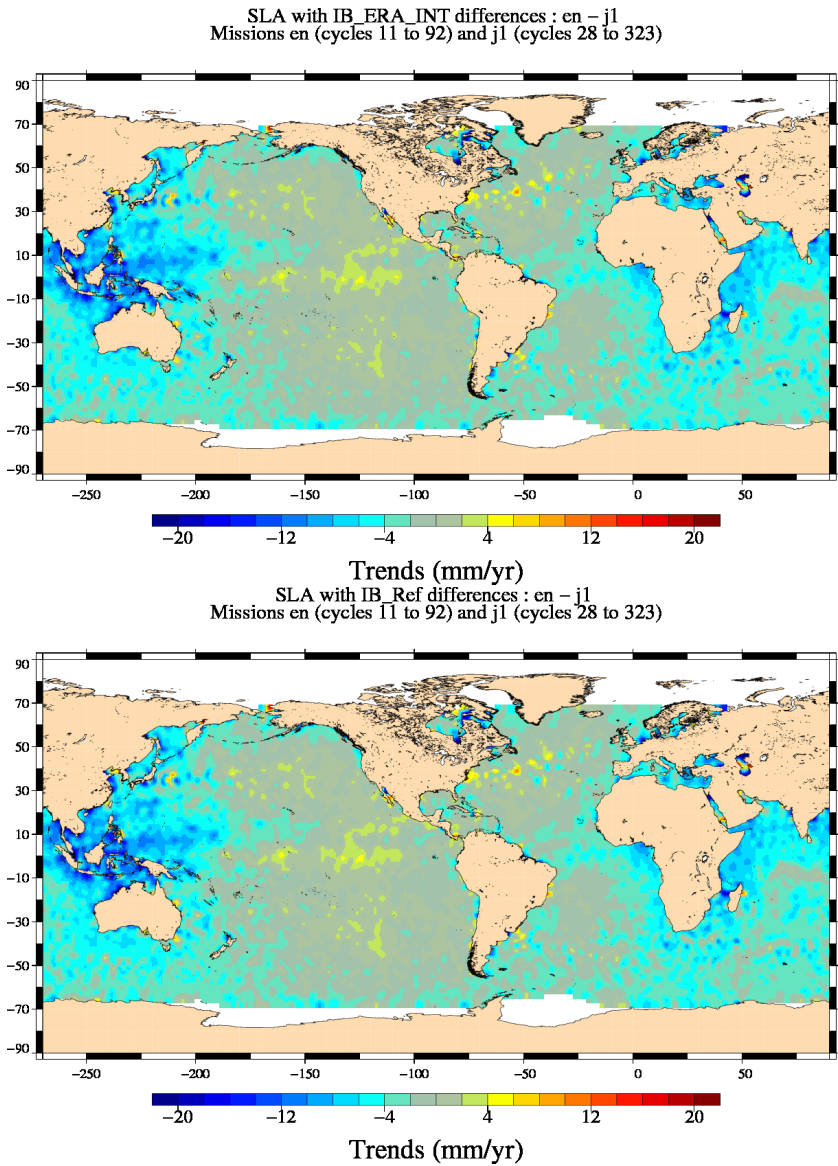
Diagnostic type : Global multi-mission comparaisons

South hemisphere MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

South hemisphere MSL

Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)
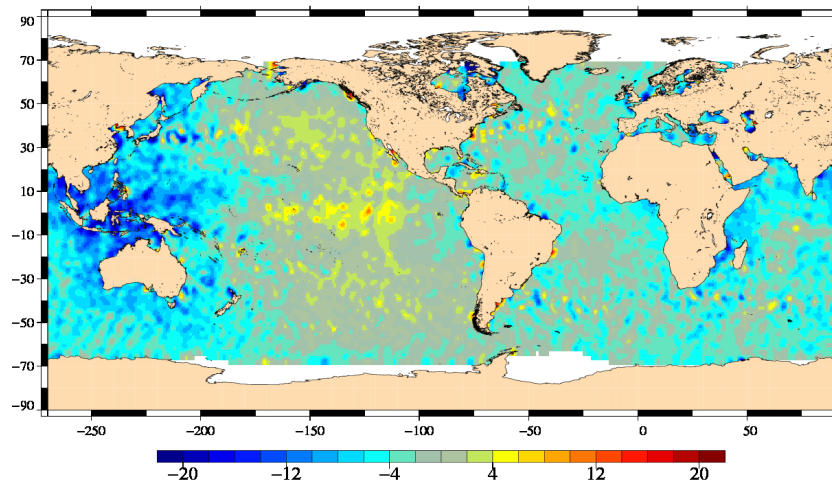
Diagnostic B002_a (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period
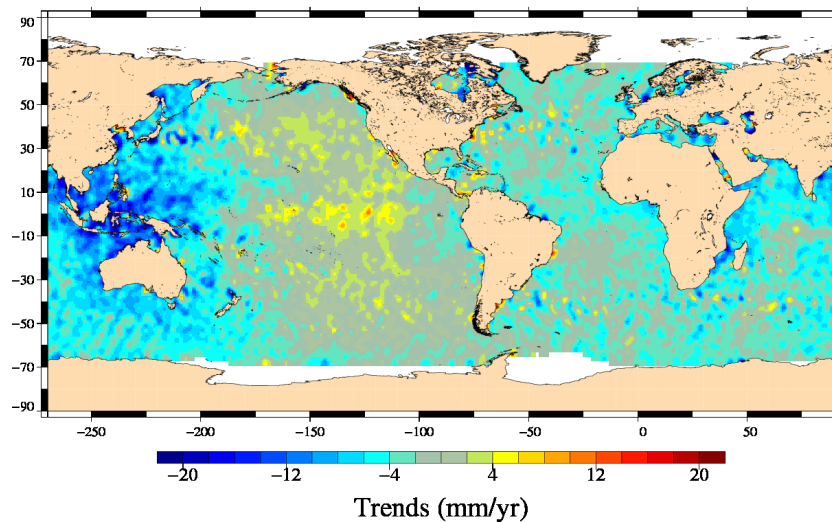
Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

Diagnostic type : Global multi-mission comparaisons

SLA with IB_ERA_INT differences : en − j1
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Trends (mm/yr)

SLA with IB_Ref differences : en − j1
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

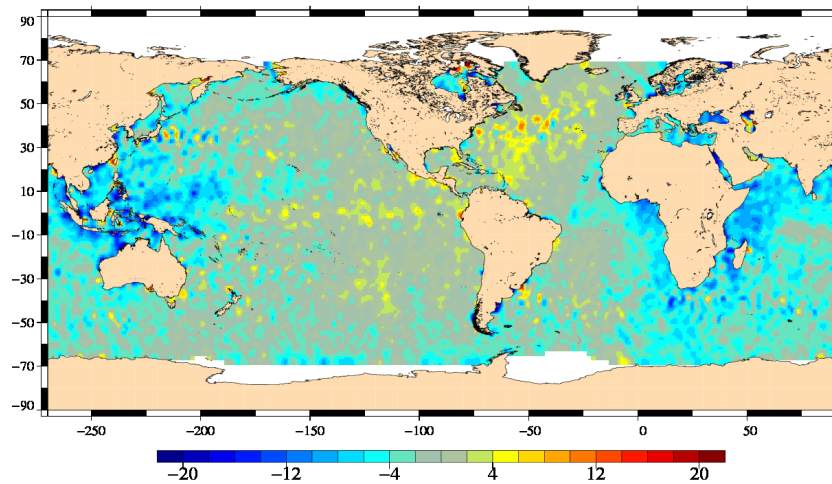Trends (mm/yr)

Diagnostic B002_b (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

SLA with IB_ERA_INT differences : en − j1, even pass numbers
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Trends (mm/yr)

SLA with IB_Ref differences : en − j1, even pass numbers
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Trends (mm/yr)

Diagnostic type : Global multi-mission comparaisons

Diagnostic B002_c (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period
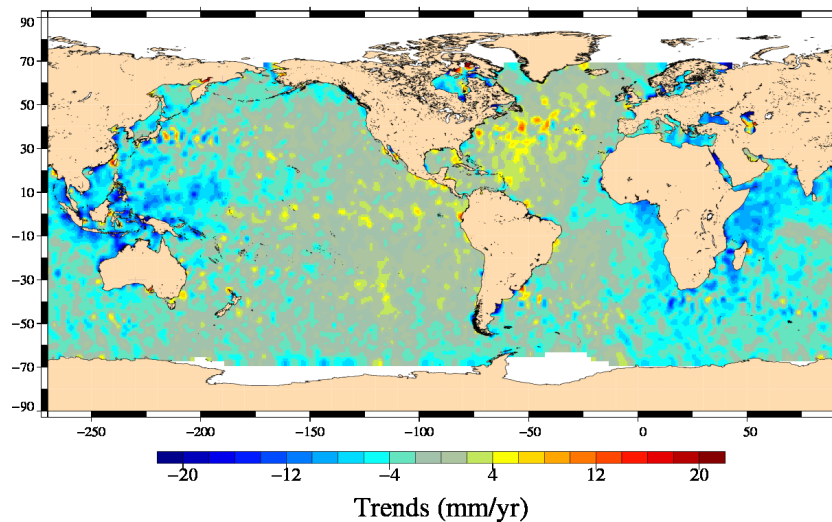
Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

Diagnostic type : Global multi-mission comparaisons

SLA with IB_ERA_INT differences : en − j1, odd pass numbers
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Trends (mm/yr)

SLA with IB_Ref differences : en − j1, odd pass numbers
Missions en (cycles 11 to 92) and j1 (cycles 28 to 323)

Trends (mm/yr)

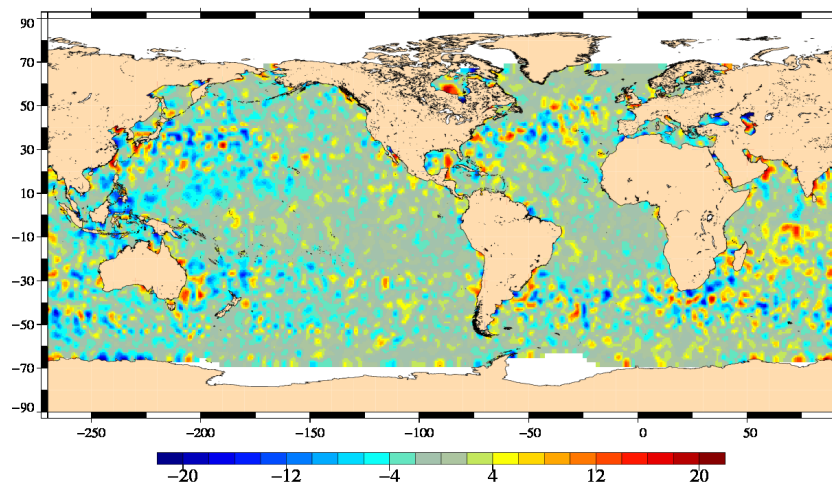# Diagnostic B002_a (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period
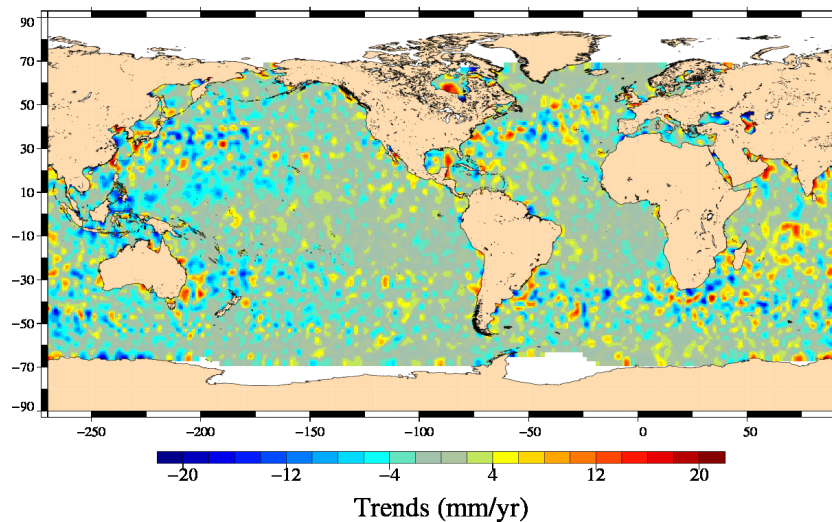
Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

SLA with IB_ERA_INT differences : j1 − tp
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)

SLA with IB_Ref differences : j1 − tp
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)

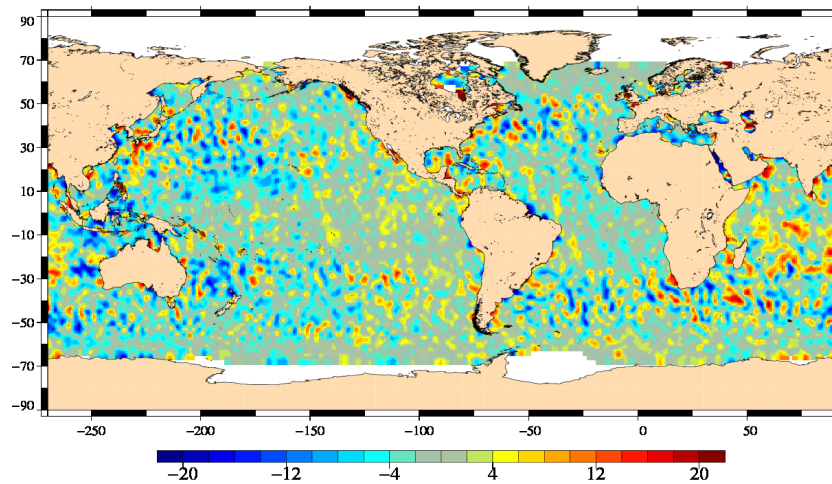## Diagnostic B002_b (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period
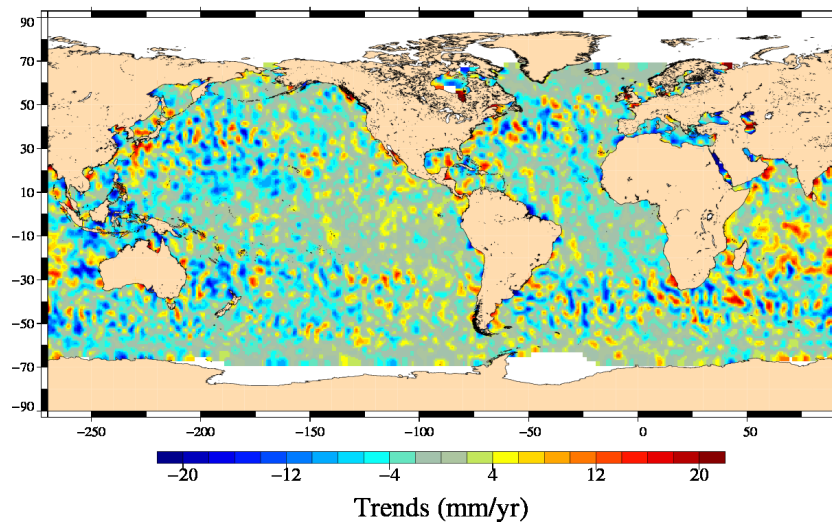
Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

SLA with IB_ERA_INT differences : j1 − tp, even pass numbers
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)

SLA with IB_Ref differences : j1 − tp, even pass numbers
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)

Diagnostic type : Global multi-mission comparaisons
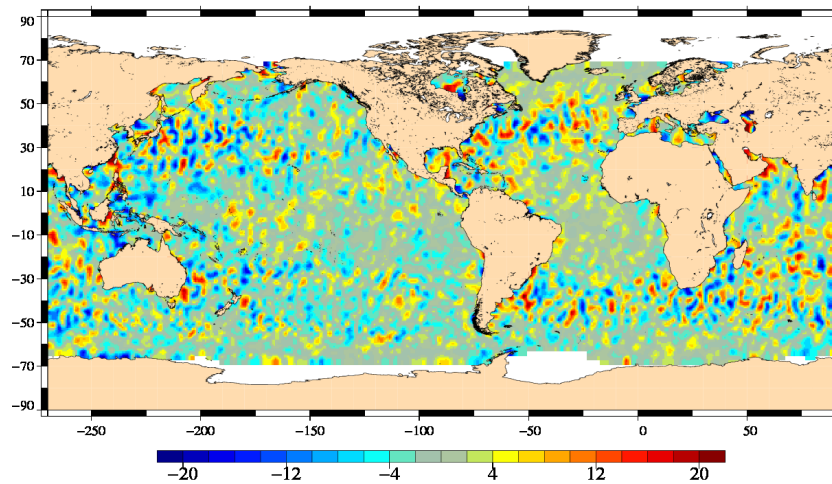
Diagnostic B002_c (mission)

Name : Difference between maps of Sea Level Anomaly (SLA) for 2 missions over the same period

Input data : Along track SLA

Description : The differences between maps of SLA (mean, variance or slope) derived from 2 altimetric missions are computed over the same period (as long as possible) using successively both altimetric components in the SLA calculation. Maps are calculated globally, they can be also calculated separating ascending and descending passes.

Diagnostic type : Global multi-mission comparaisons

SLA with IB_ERA_INT differences : j1 − tp, odd pass numbers
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)

SLA with IB_Ref differences : j1 − tp, odd pass numbers
Missions j1 (cycles 3 to 136) and tp (cycles 346 to 479)

Trends (mm/yr)