

SSBs comparison : 2012 versus GdrD

Study variable	2012
Reference variable	GdrD
Missions	Jason-2 (<i>j2</i>)
Period	[21377, 22815]

Creation date : 2012/12/17

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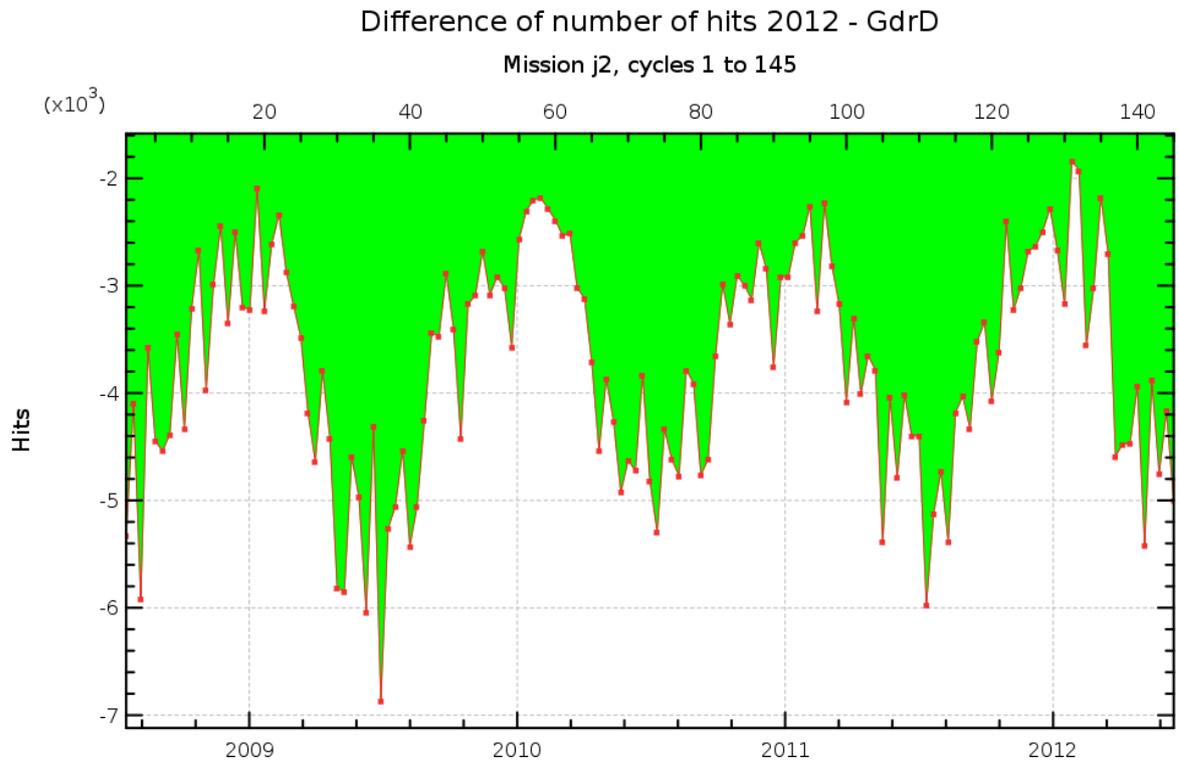
Diagnostic A000 (mission j2)

Name : Differences of number of hits between both altimetric components

Input data : Along-track altimetric components

Description : The difference of number of hits between both parameters.

Diagnostic type : Global internal analyses



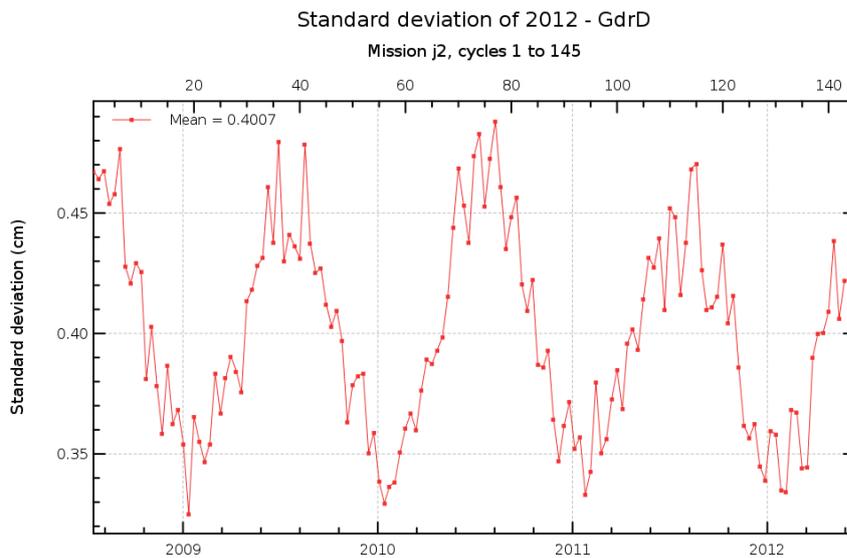
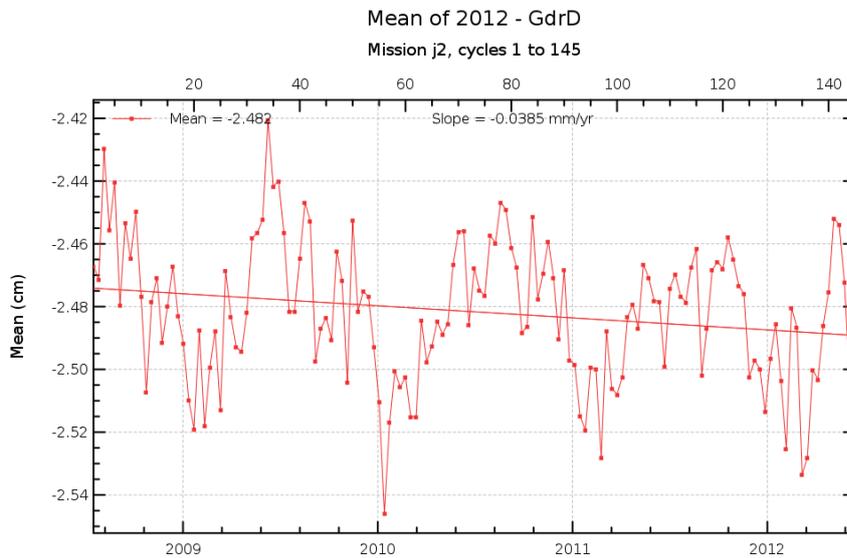
Diagnostic A001 (mission j2)

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



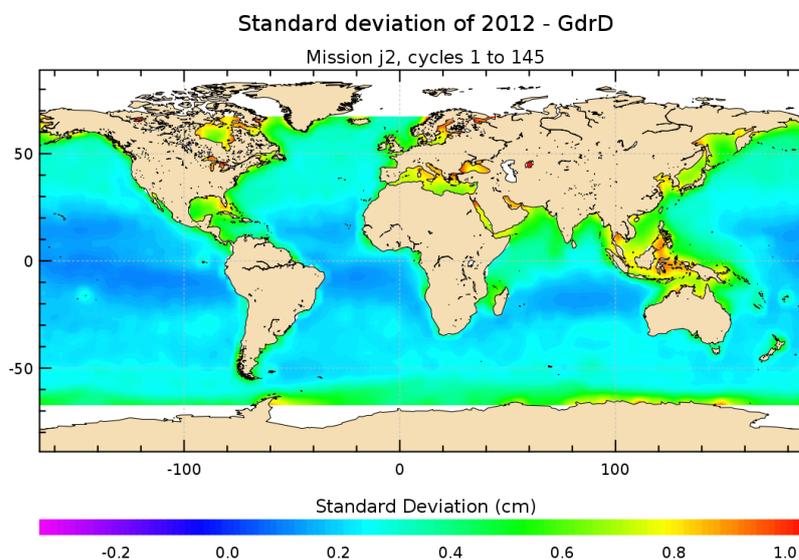
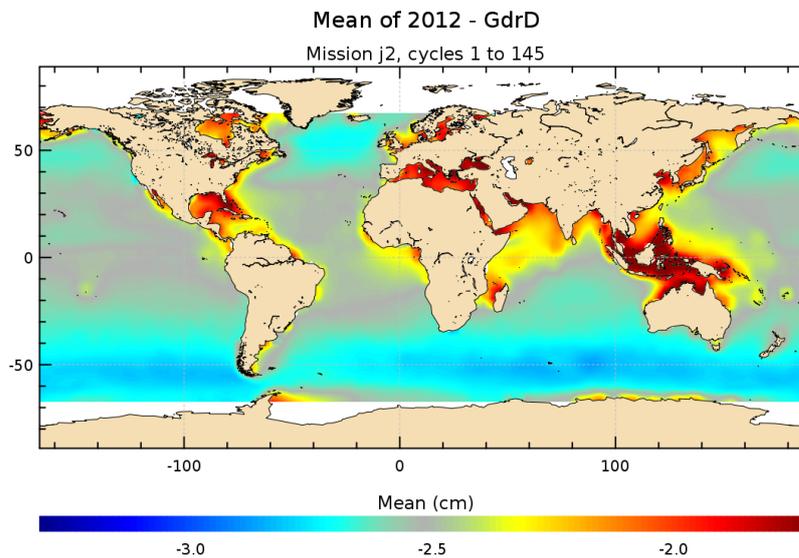
Diagnostic A002 (mission j2)

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

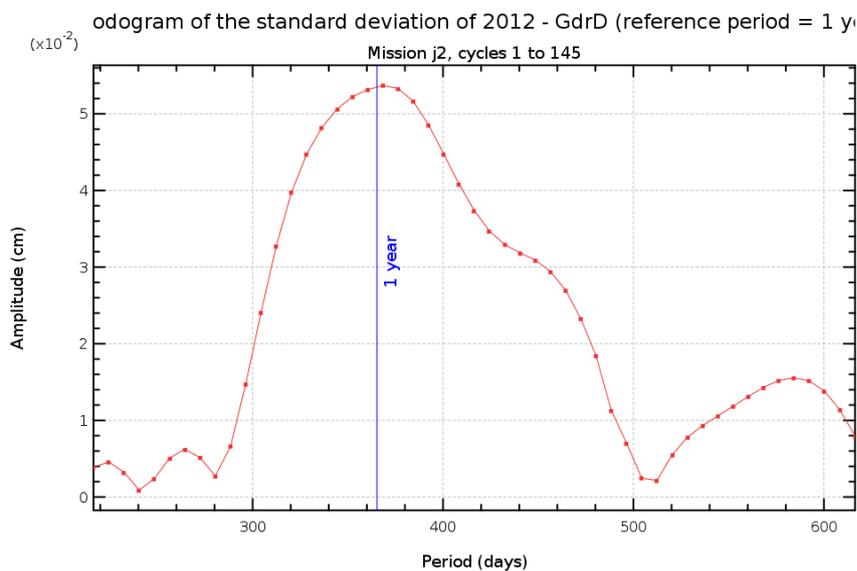
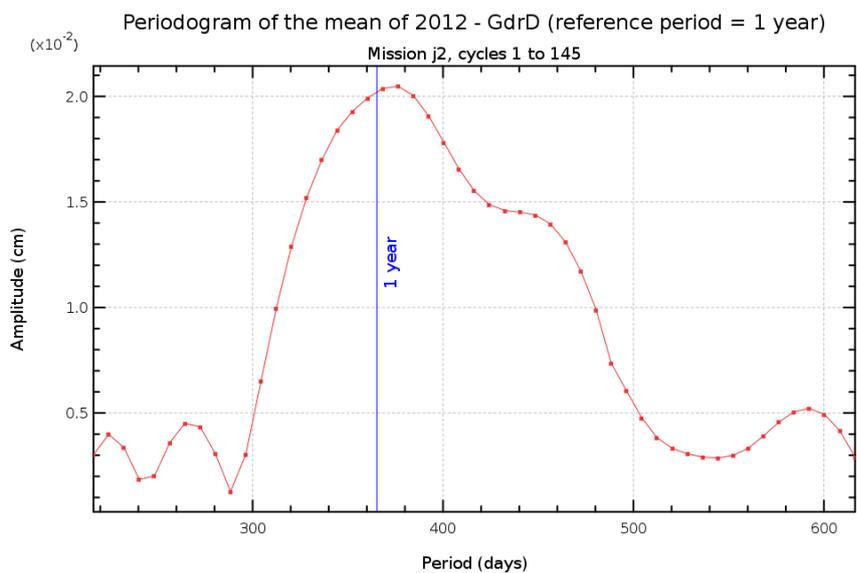


Diagnostic A003_a (mission j2)

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.



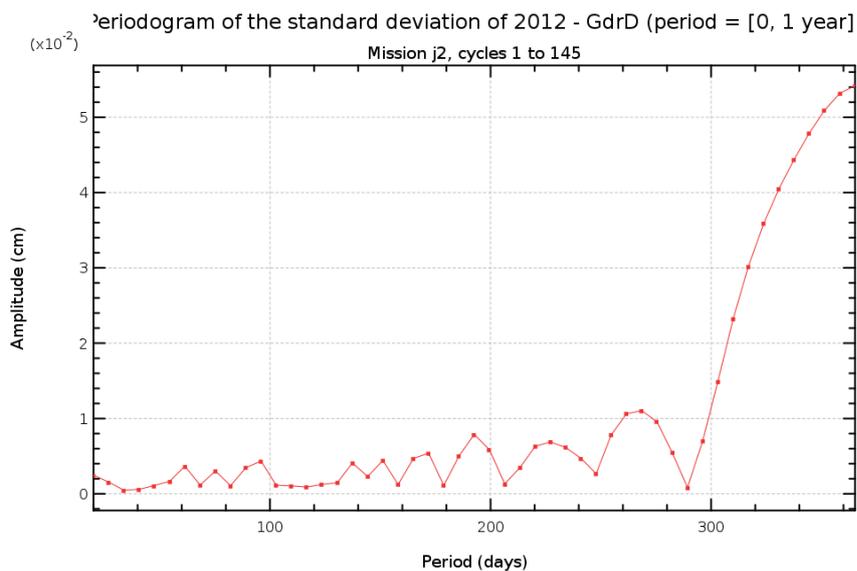
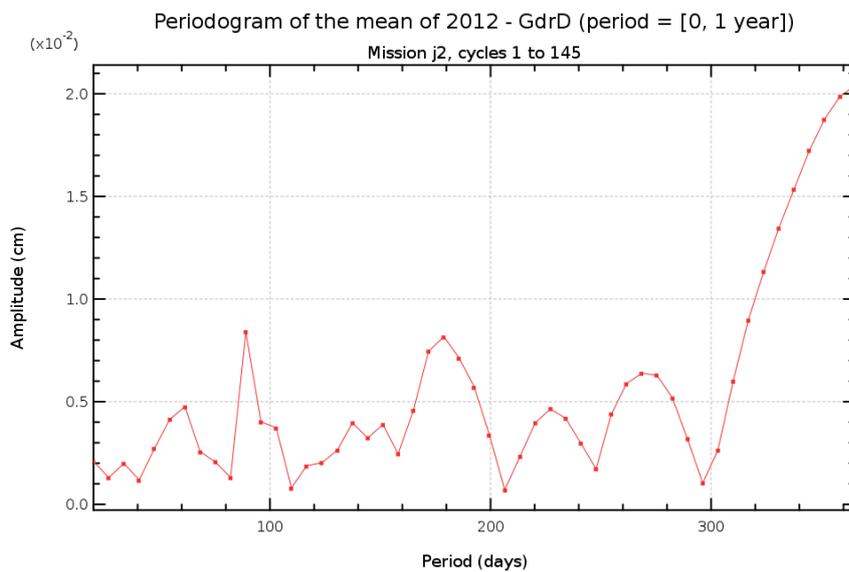
Diagnostic A003_b (mission j2)

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



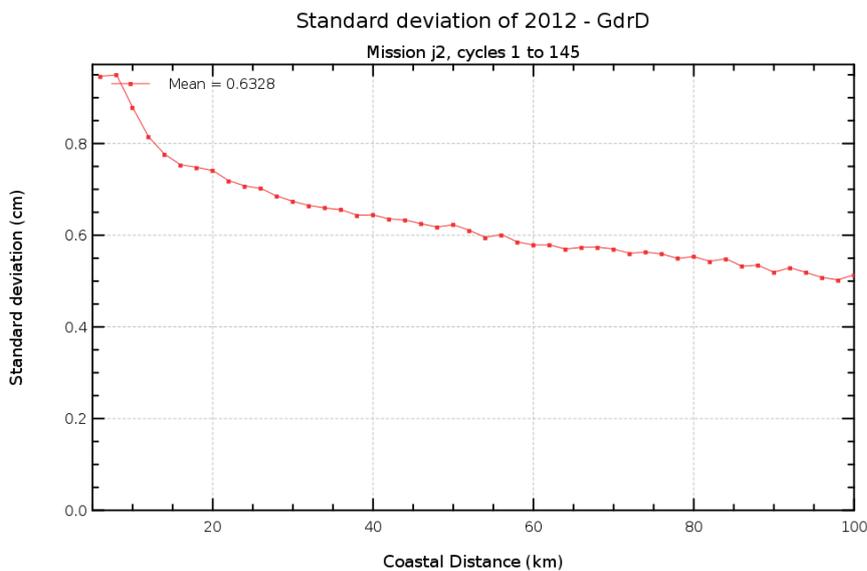
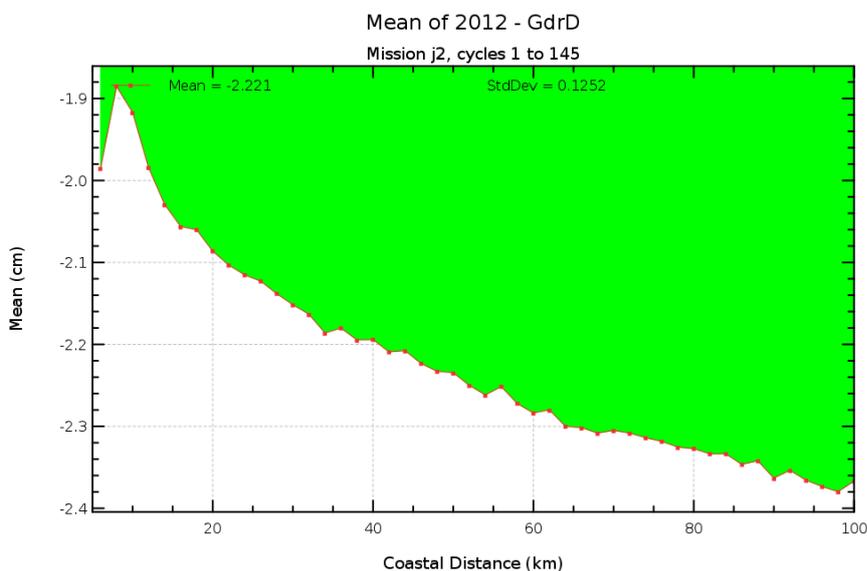
Diagnostic A004 (mission j2)

Name : Altimetric component differences versus coastal distances

Input data : Along-track altimetric components

Description : Mean and standard deviation of the differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are computed and plotted in function of coastal distances between 0 and 100 km.

Diagnostic type : Global internal analyses



Diagnostic A005_a (mission j2)

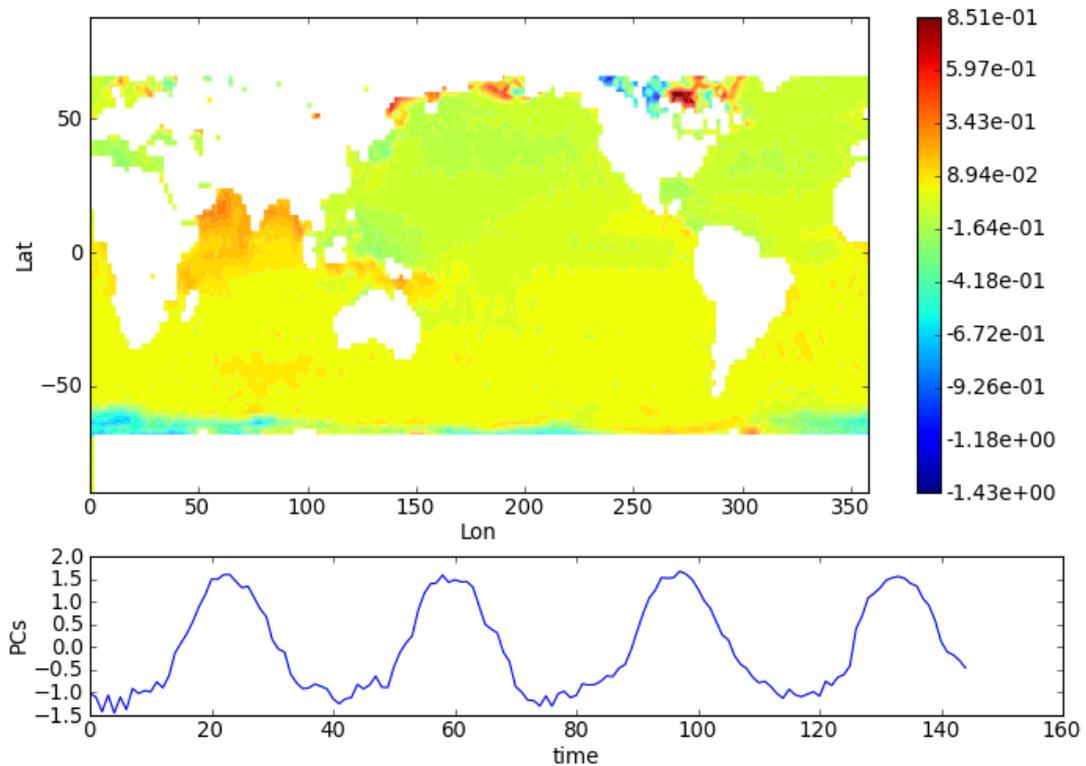
Name : EOF Decomposition of Differences

Input data : Along-track altimetric components

Description : The differences between map of SLA (mean) are calculated from the mean SLA maps (per cycle) using successively both altimetric components in the SLA calculation. The maps of the differences are analyzed through an Empirical Orthogonal Functions (EOF) decomposition.

Diagnostic type : Global internal analyses

EOF #1-Mean- Explained Variance=13.0%



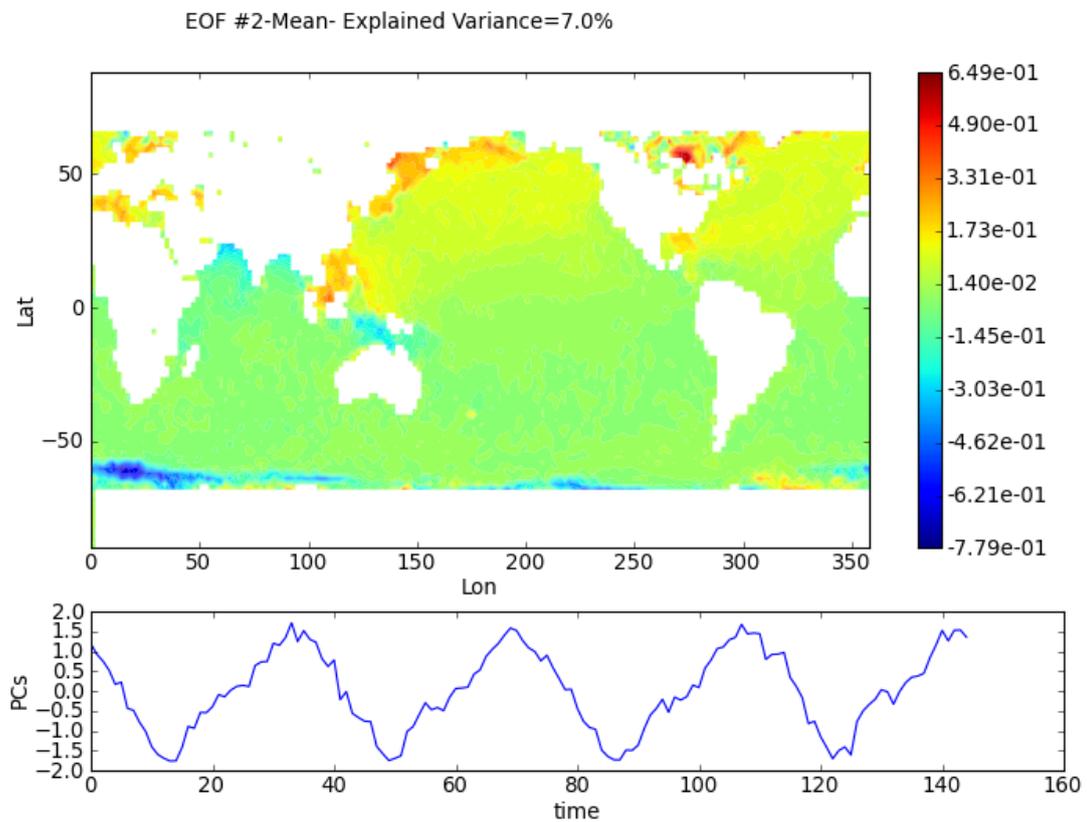
Diagnostic A005_b (mission j2)

Name : EOF Decomposition of Differences

Input data : Along-track altimetric components

Description : The differences between map of SLA (mean) are calculated from the mean SLA maps (per cycle) using successively both altimetric components in the SLA calculation. The maps of the differences are analyzed through an Empirical Orthogonal Functions (EOF) decomposition.

Diagnostic type : Global internal analyses



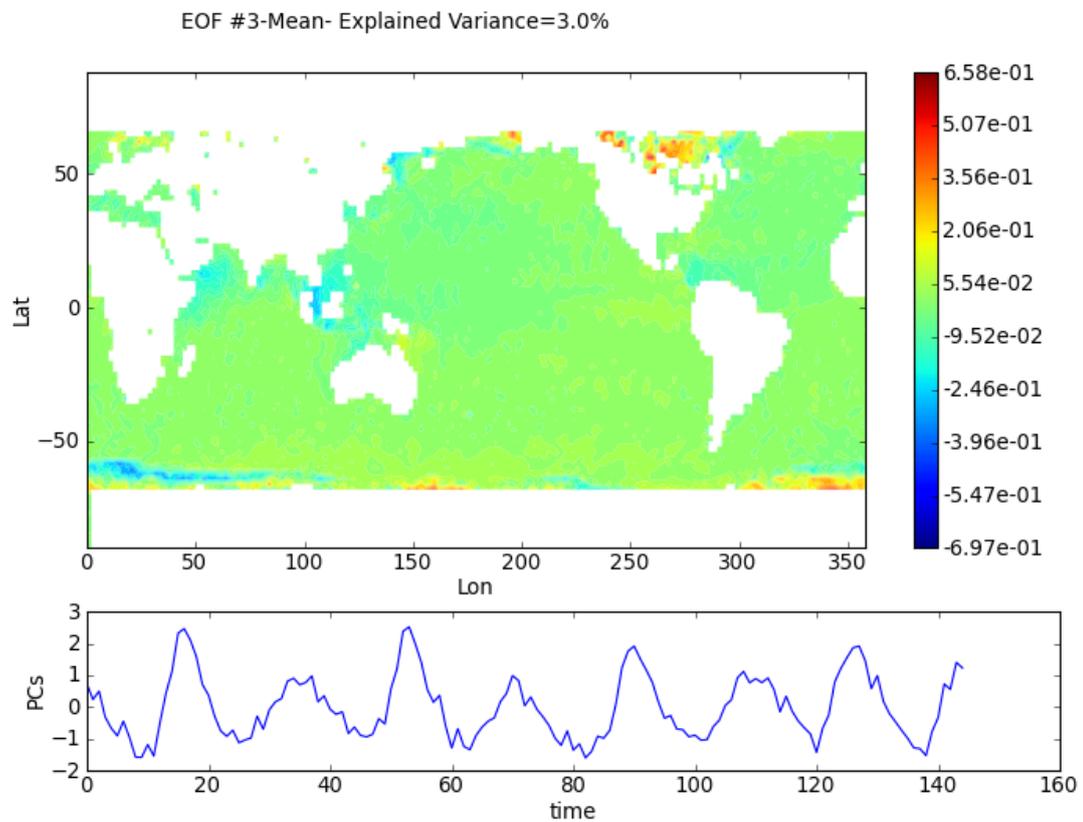
Diagnostic A005_c (mission j2)

Name : EOF Decomposition of Differences

Input data : Along-track altimetric components

Description : The differences between map of SLA (mean) are calculated from the mean SLA maps (per cycle) using successively both altimetric components in the SLA calculation. The maps of the differences are analyzed through an Empirical Orthogonal Functions (EOF) decomposition.

Diagnostic type : Global internal analyses



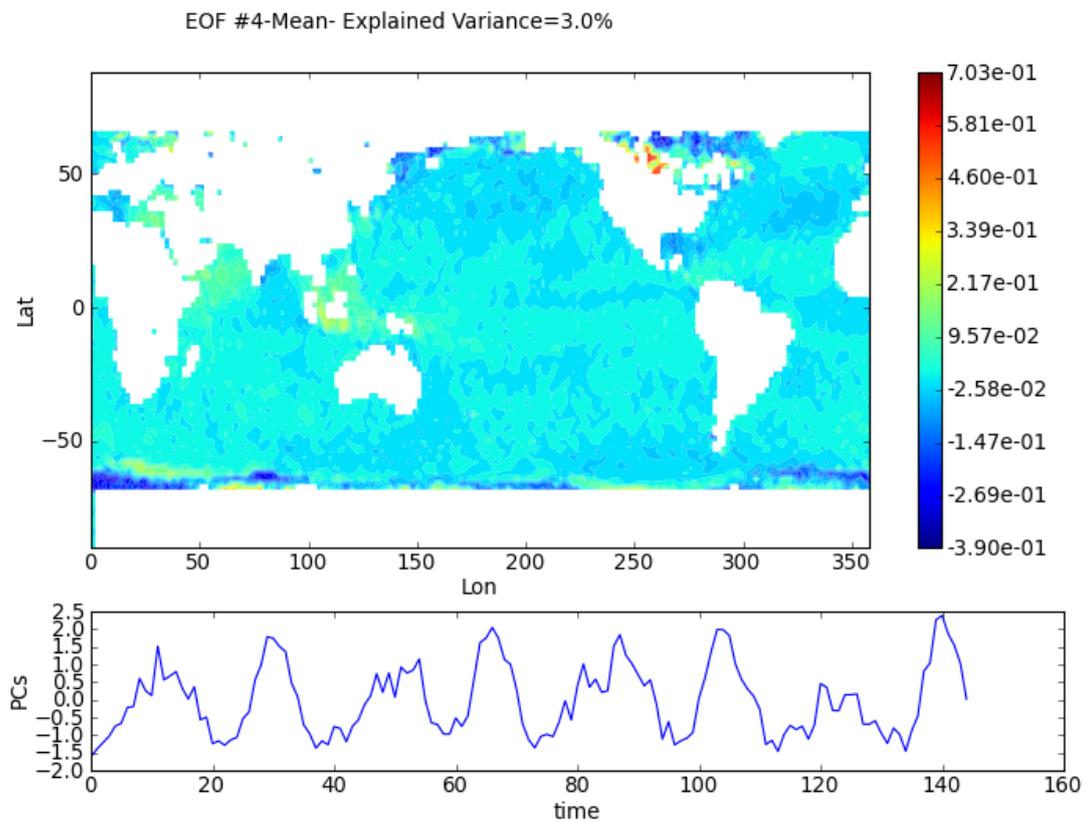
Diagnostic A005_d (mission j2)

Name : EOF Decomposition of Differences

Input data : Along-track altimetric components

Description : The differences between map of SLA (mean) are calculated from the mean SLA maps (per cycle) using successively both altimetric components in the SLA calculation. The maps of the differences are analyzed through an Empirical Orthogonal Functions (EOF) decomposition.

Diagnostic type : Global internal analyses



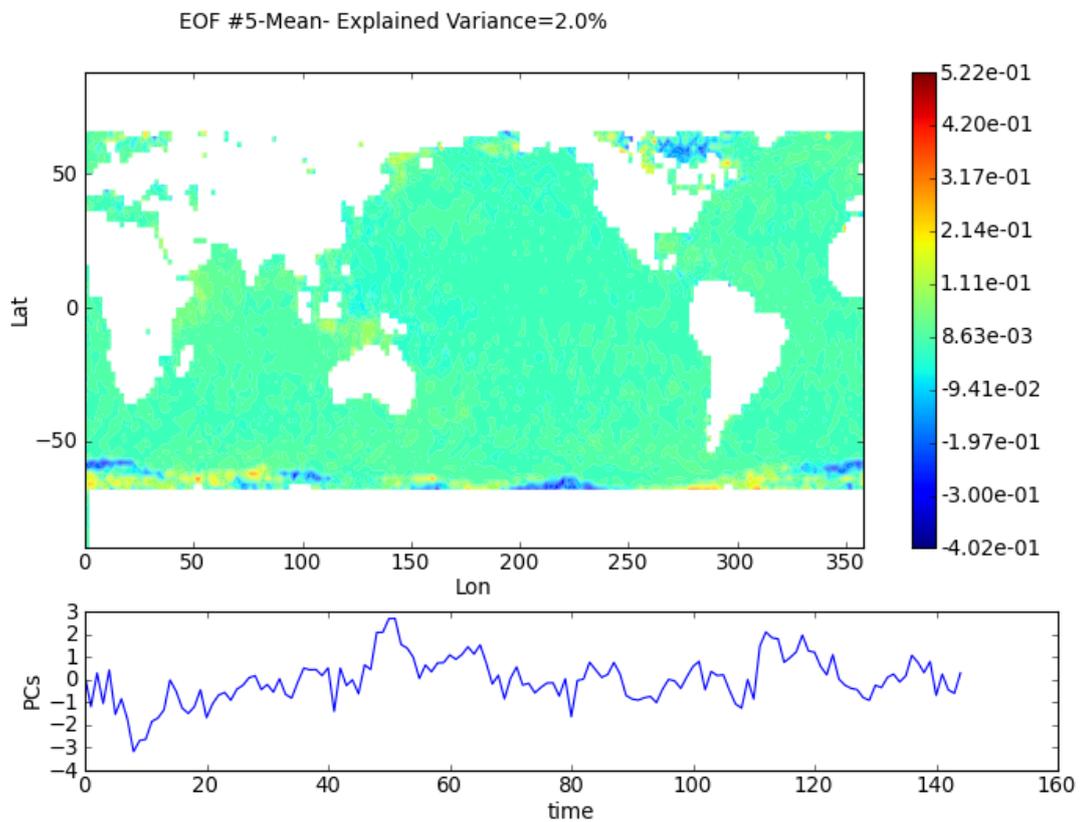
Diagnostic A005_e (mission j2)

Name : EOF Decomposition of Differences

Input data : Along-track altimetric components

Description : The differences between map of SLA (mean) are calculated from the mean SLA maps (per cycle) using successively both altimetric components in the SLA calculation. The maps of the differences are analyzed through an Empirical Orthogonal Functions (EOF) decomposition.

Diagnostic type : Global internal analyses



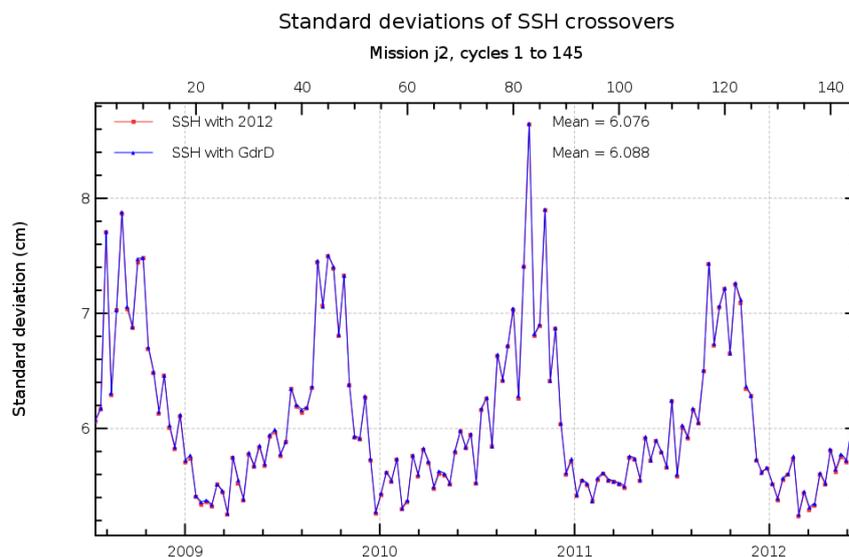
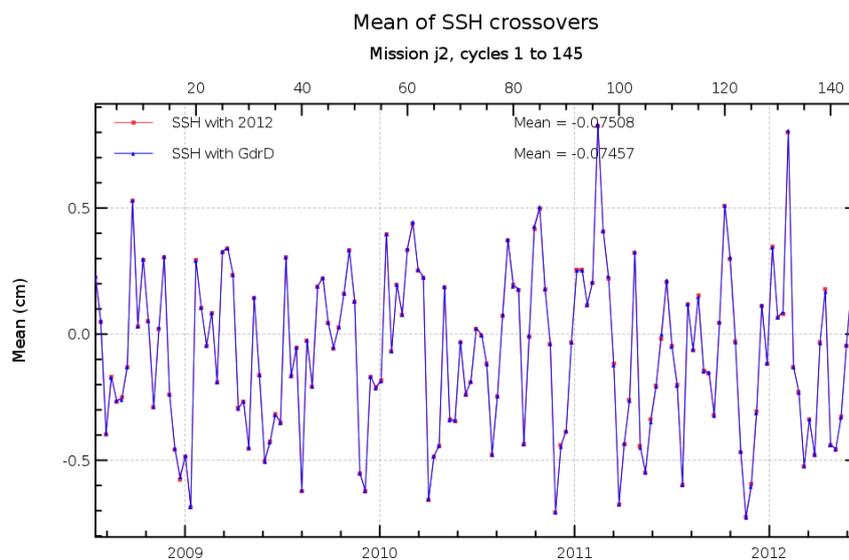
Diagnostic A101_a (mission j2)

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



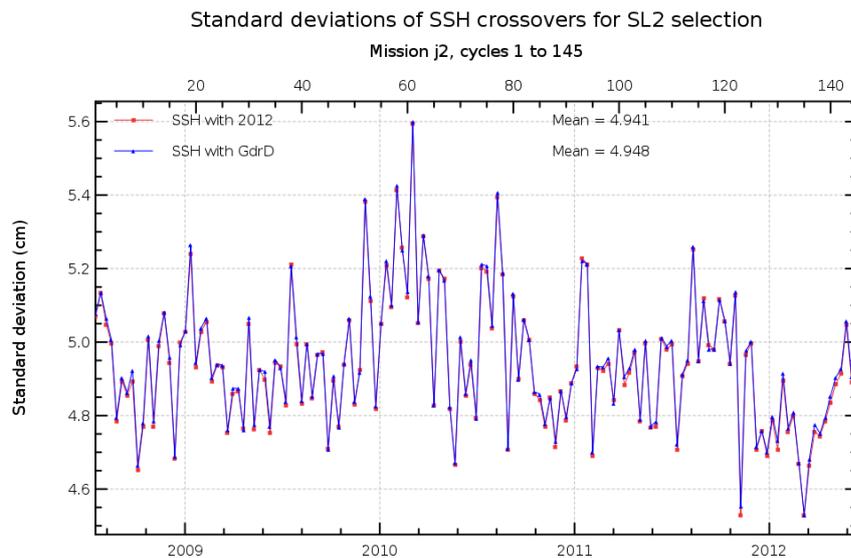
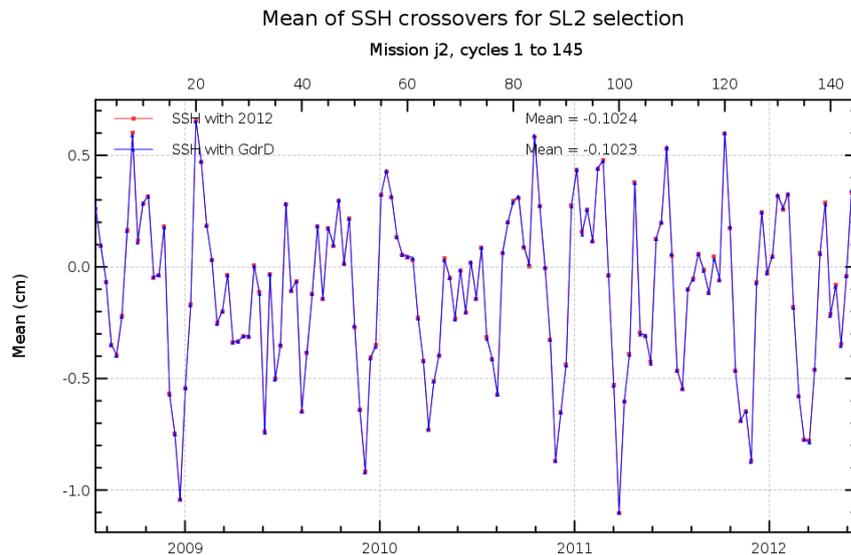
Diagnostic A101_b (mission j2)

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



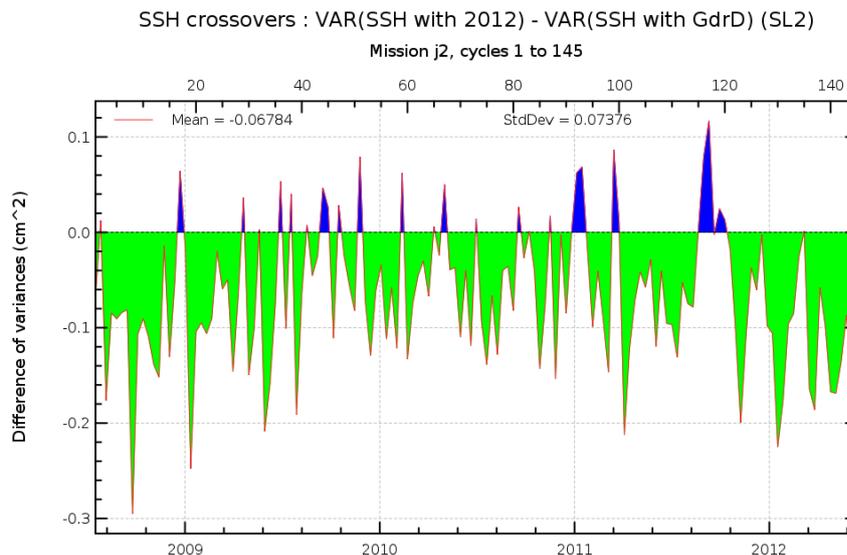
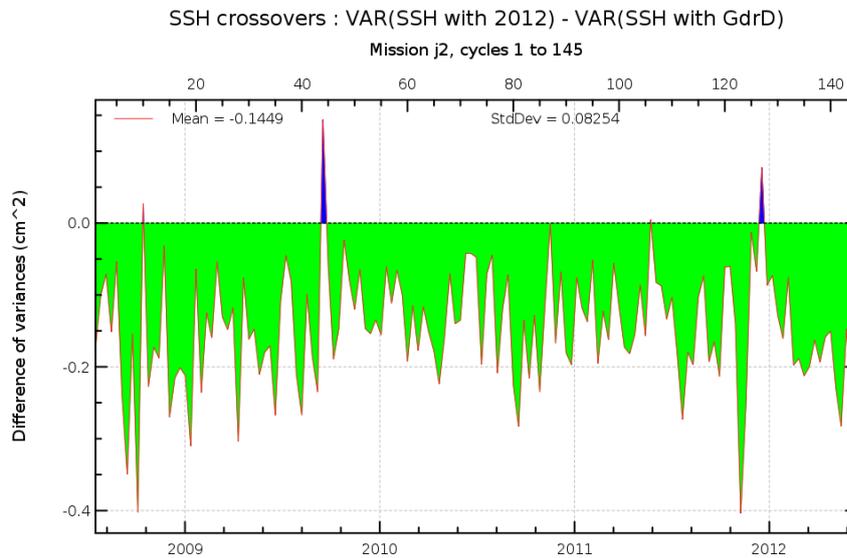
Diagnostic A102 (mission j2)

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



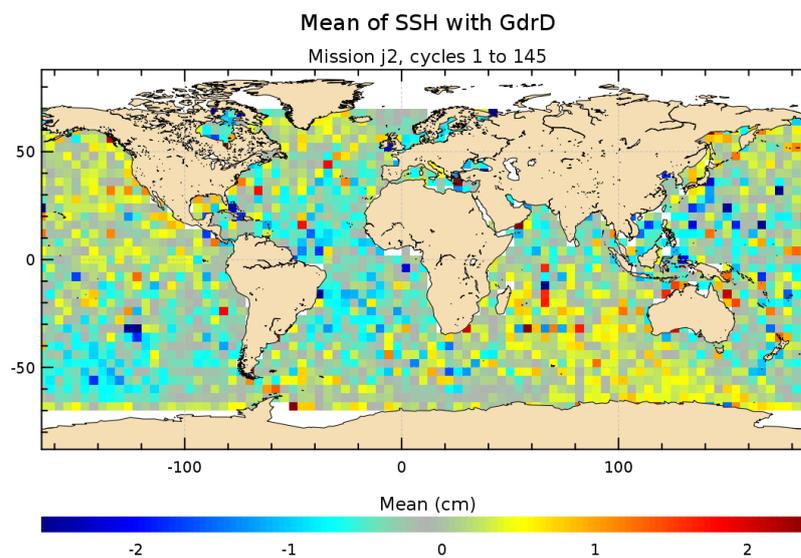
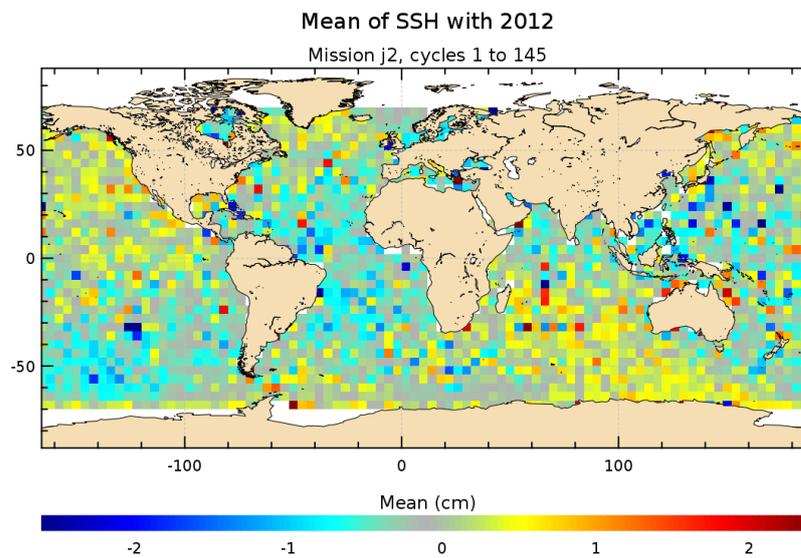
Diagnostic A103 (mission j2)

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



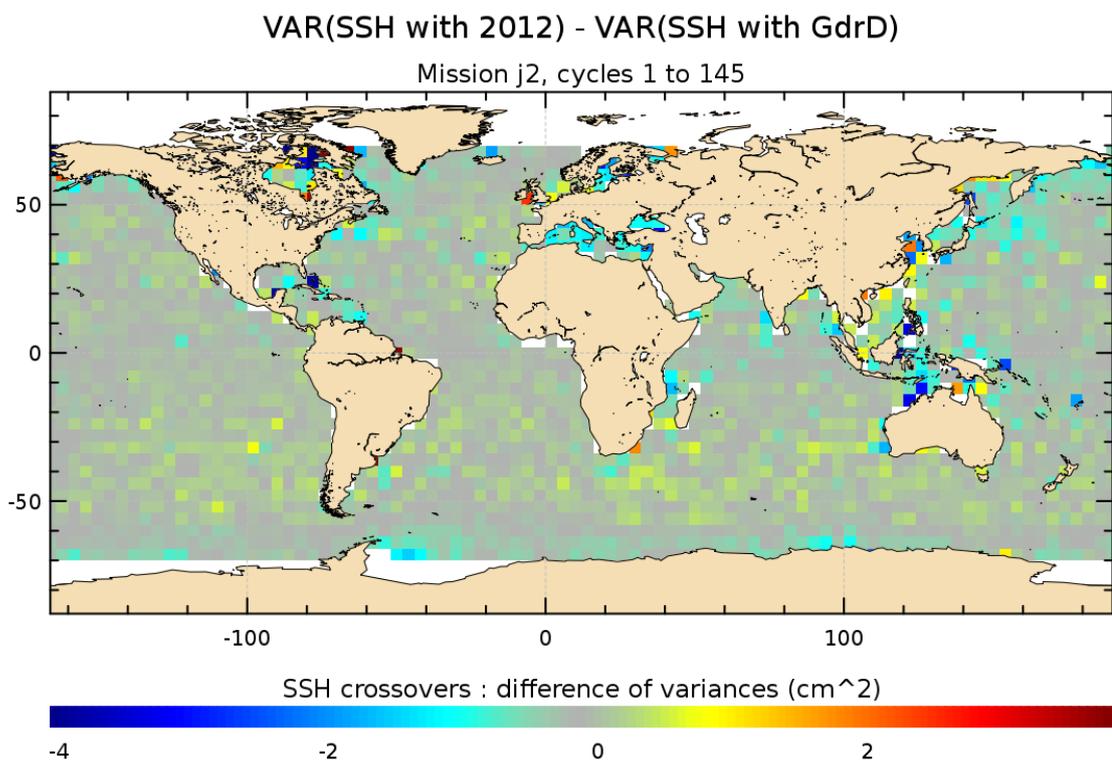
Diagnostic A104 (mission j2)

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



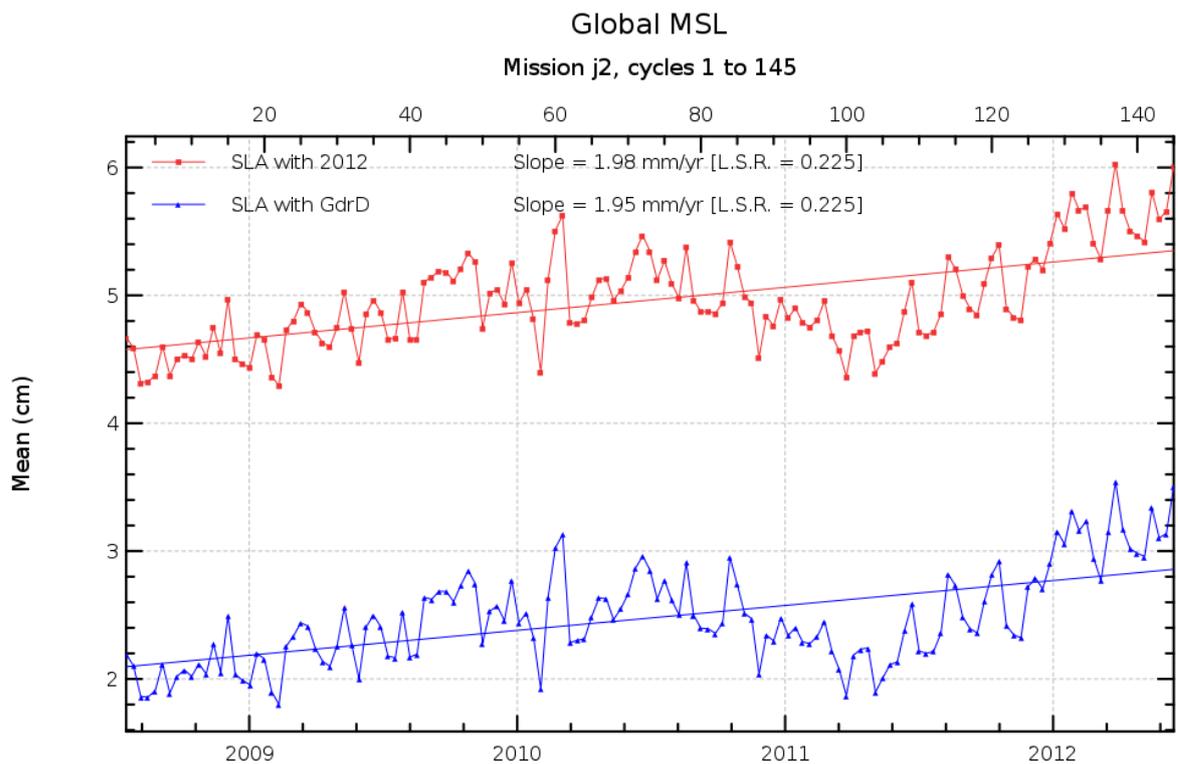
Diagnostic A201_a (mission j2)

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



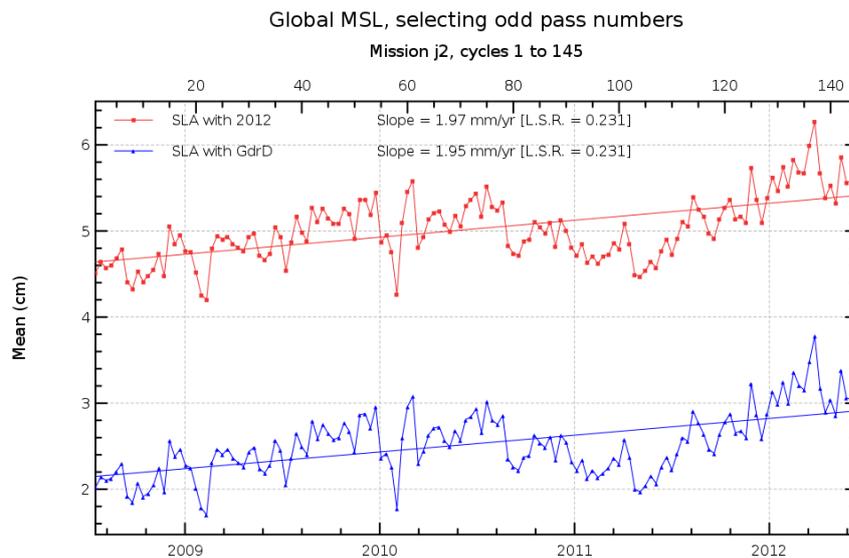
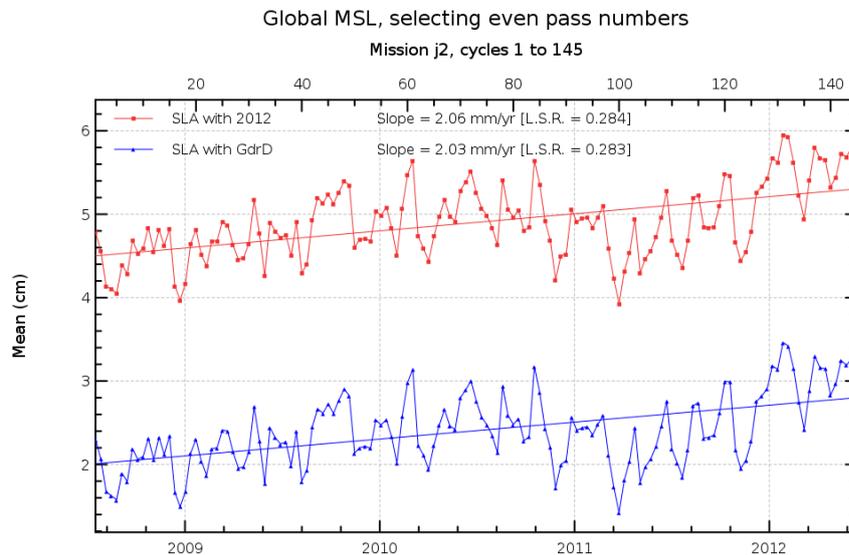
Diagnostic A201_b (mission j2)

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



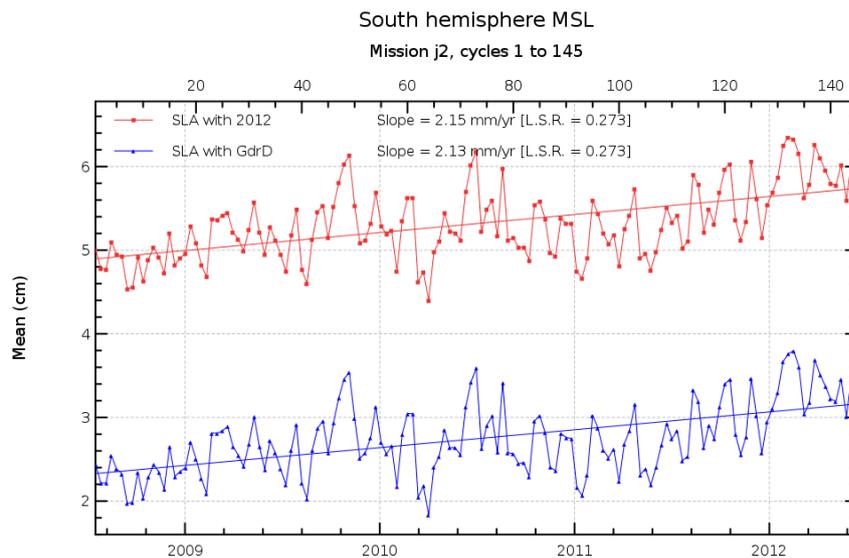
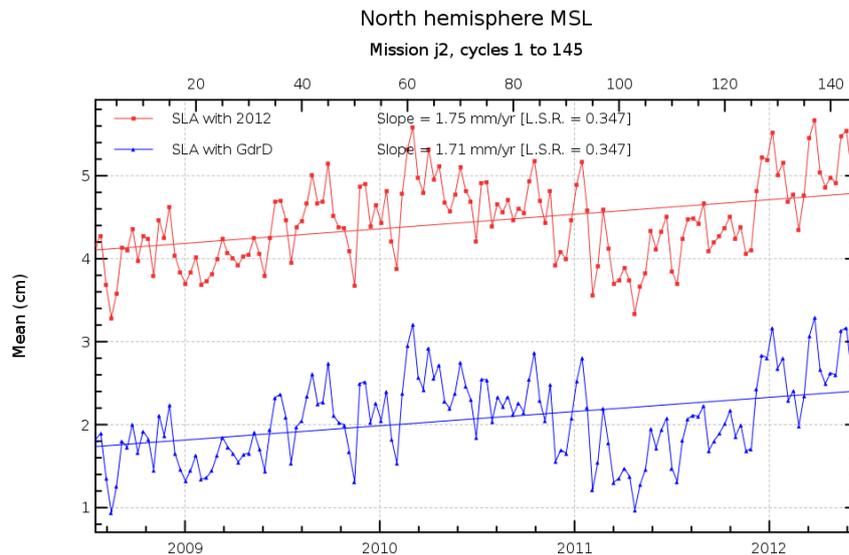
Diagnostic A201_c (mission j2)

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



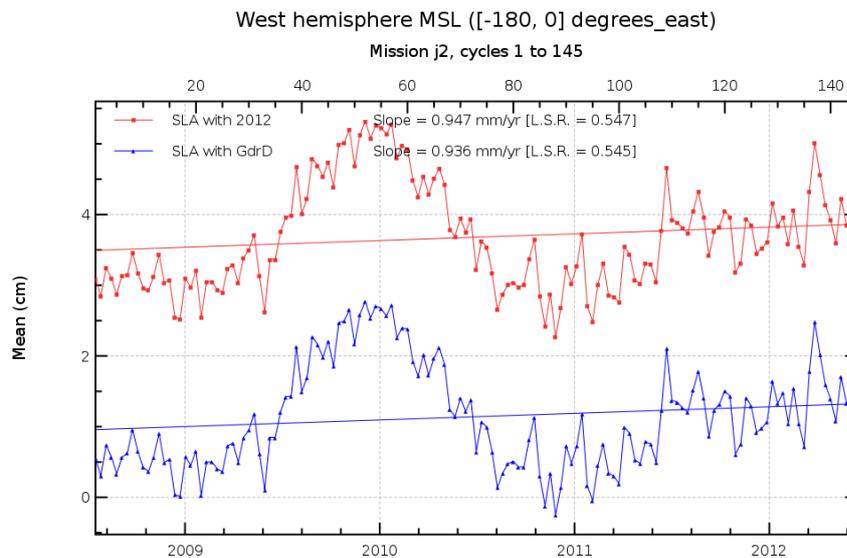
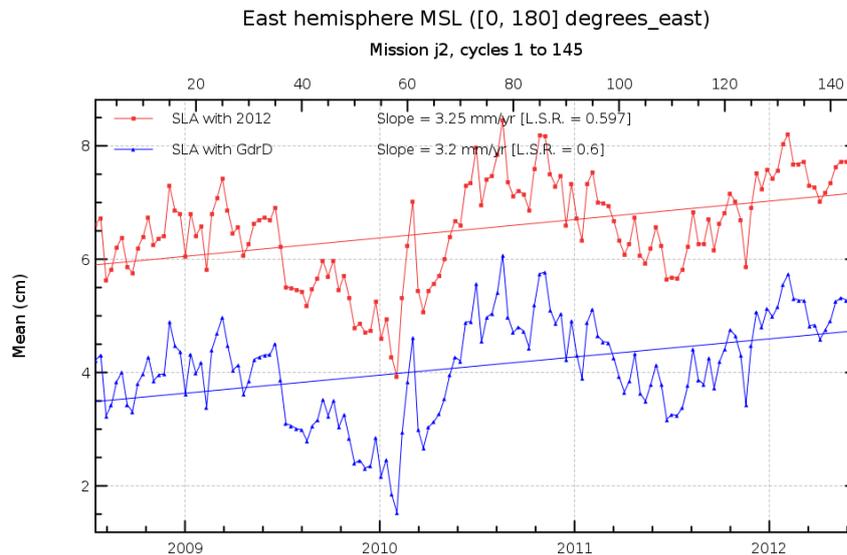
Diagnostic A201_d (mission j2)

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



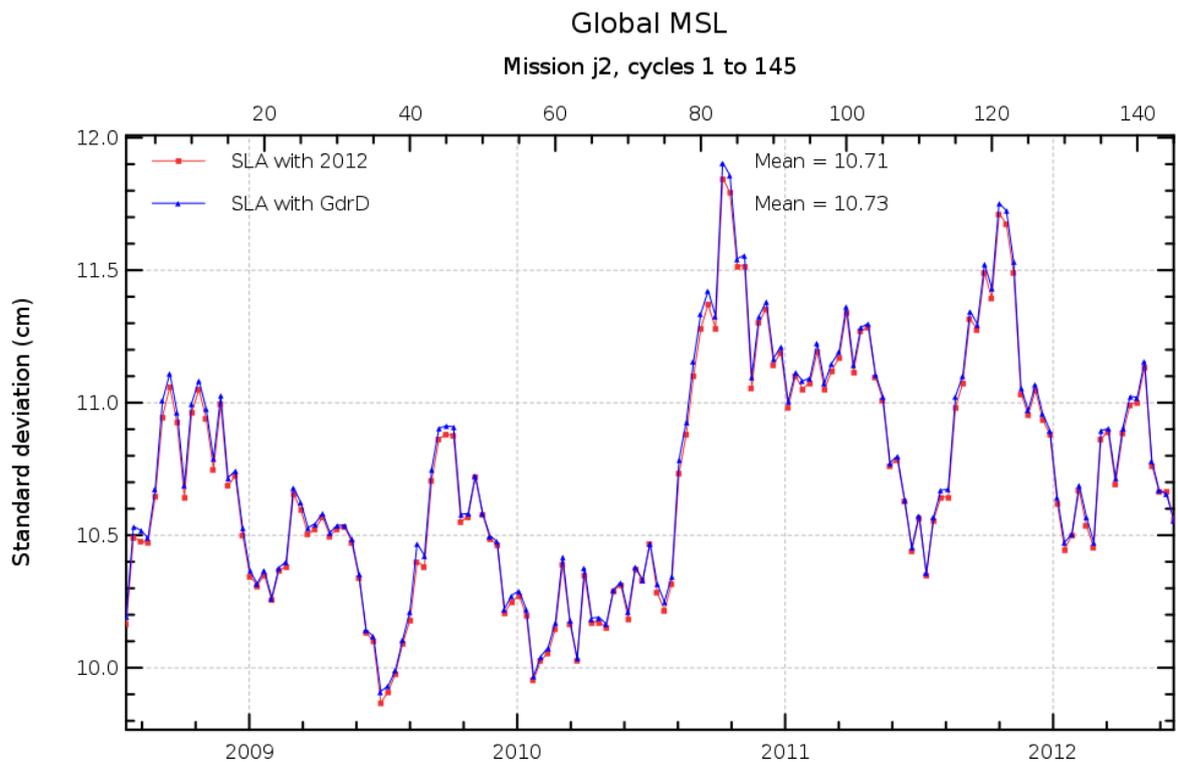
Diagnostic A201_e (mission j2)

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



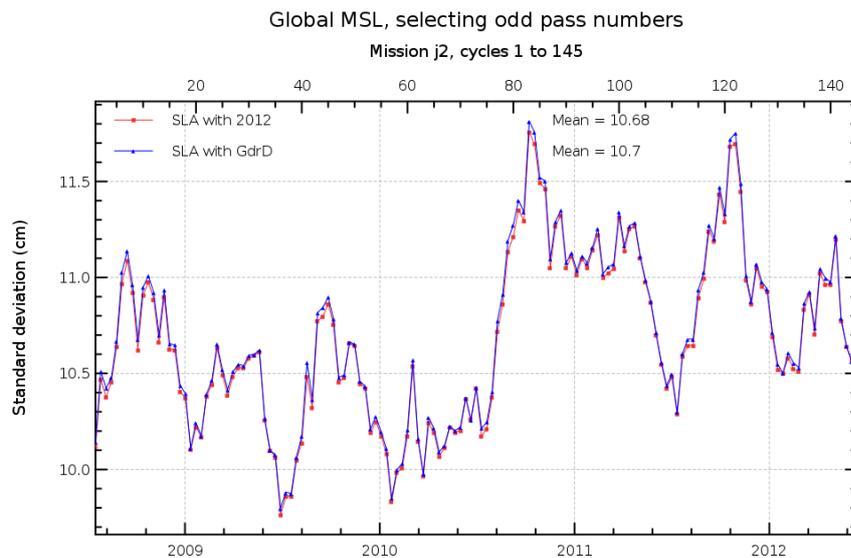
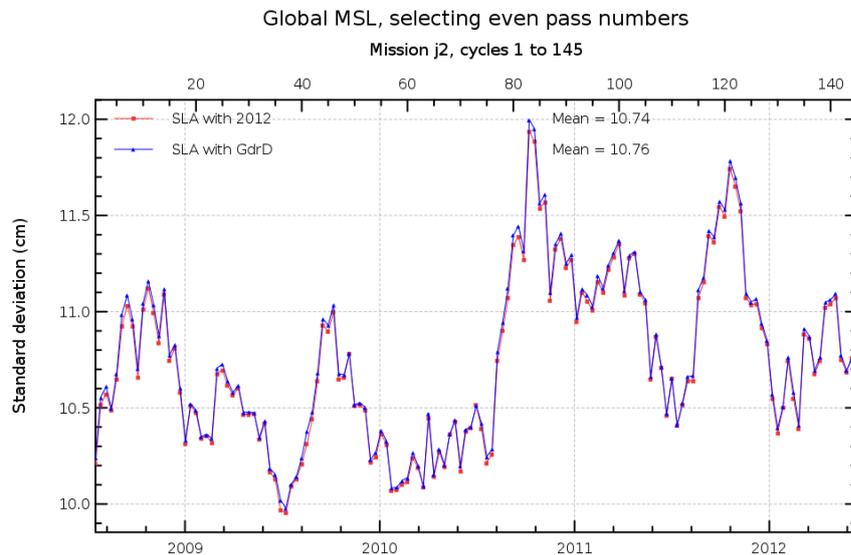
Diagnostic A201_f (mission j2)

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



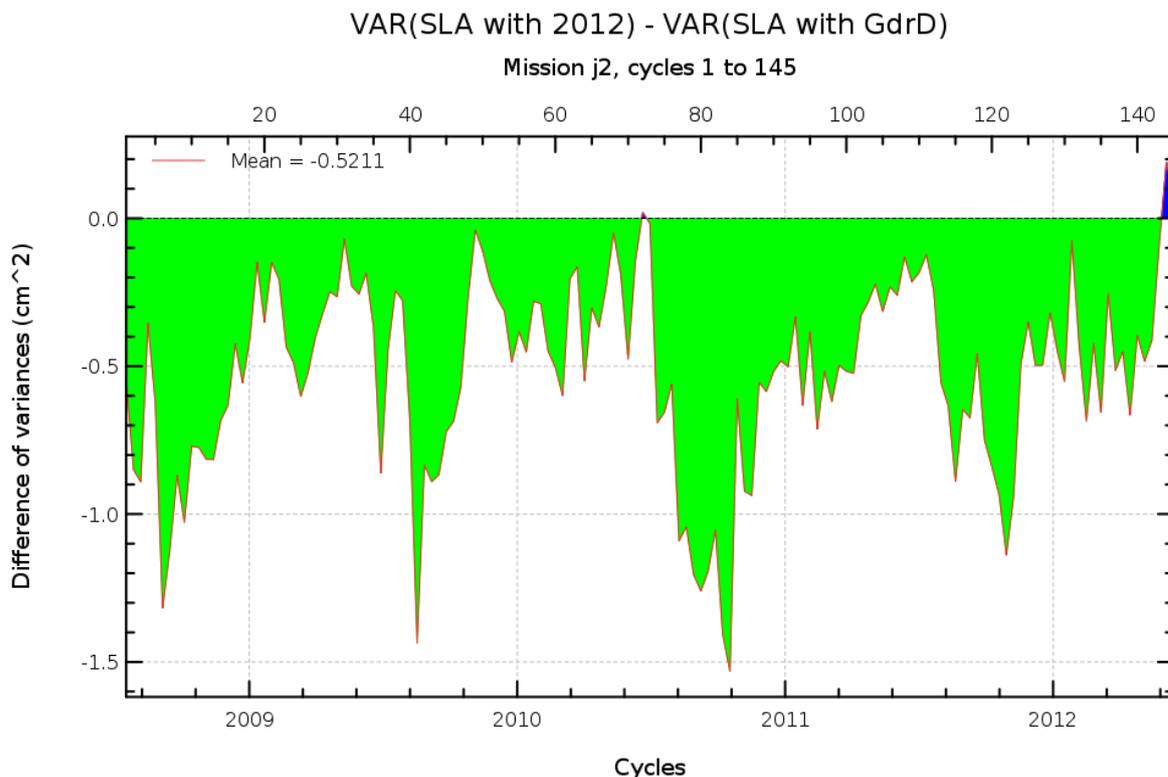
Diagnostic A202_a (mission j2)

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



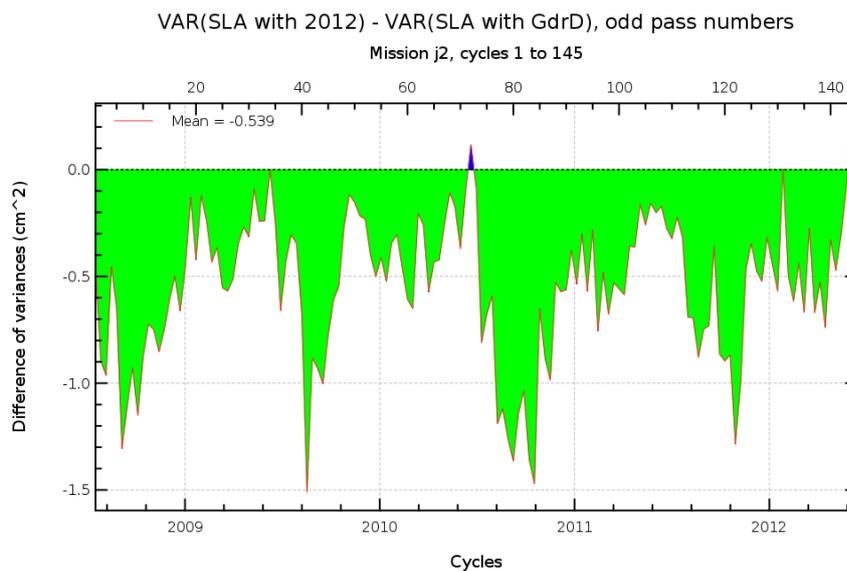
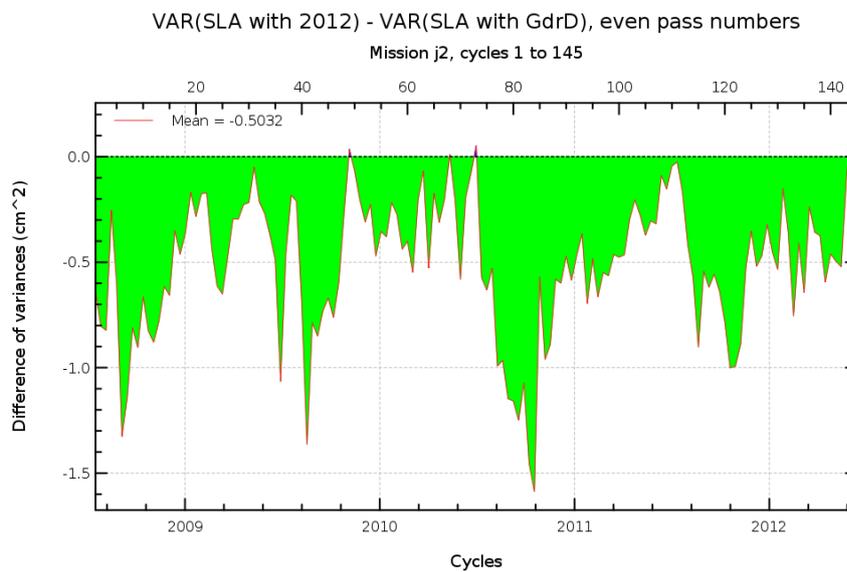
Diagnostic A202_b (mission j2)

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



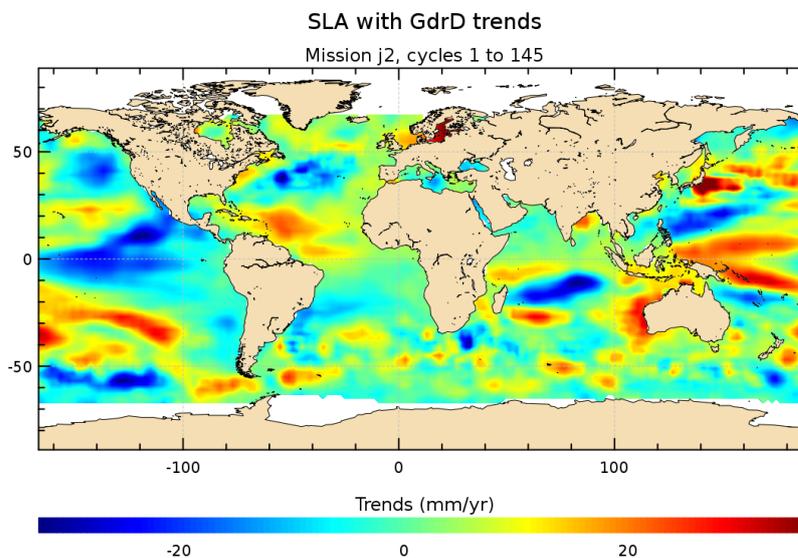
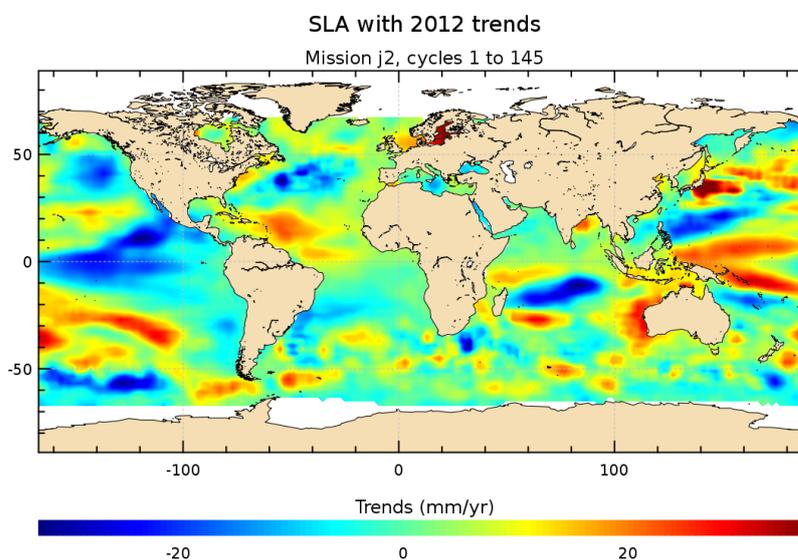
Diagnostic A203_a (mission j2)

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



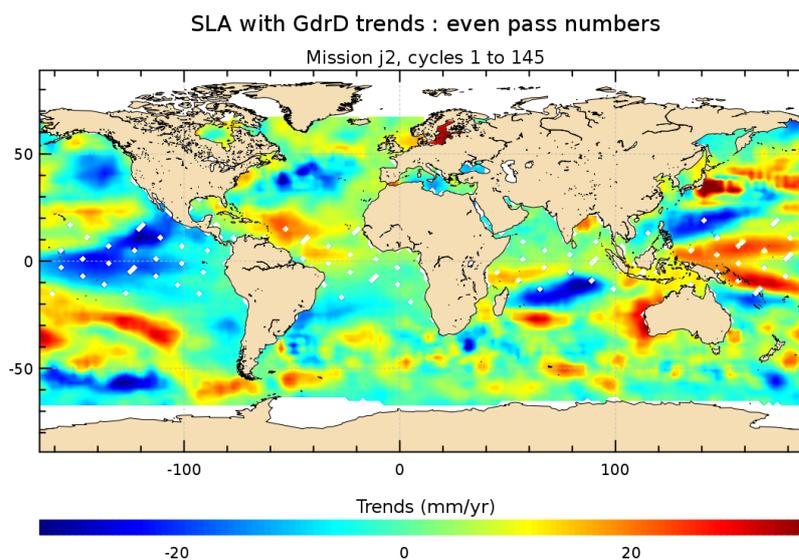
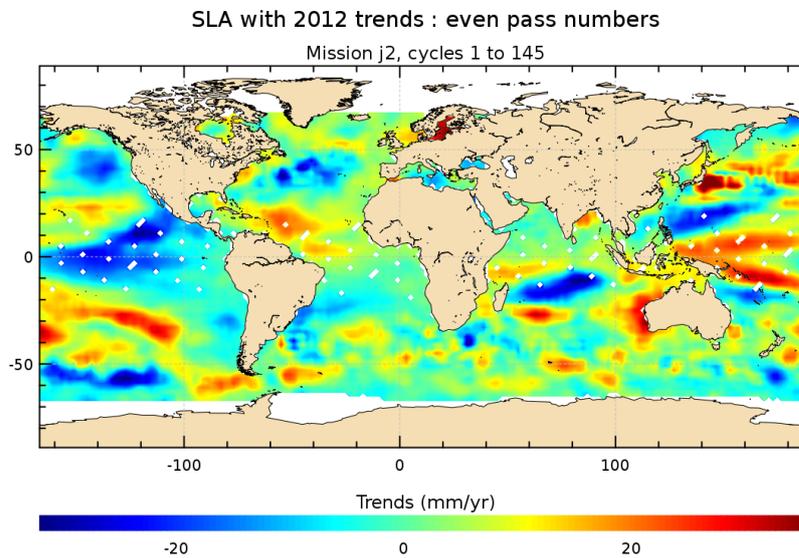
Diagnostic A203_b (mission j2)

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



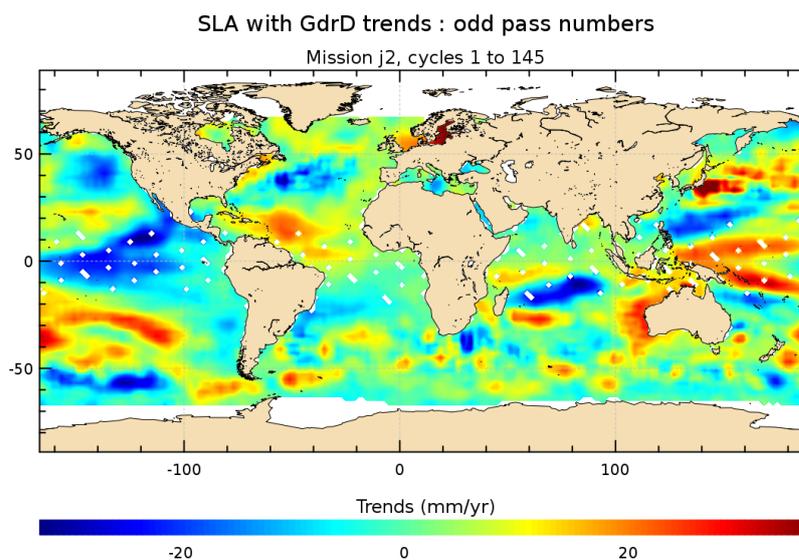
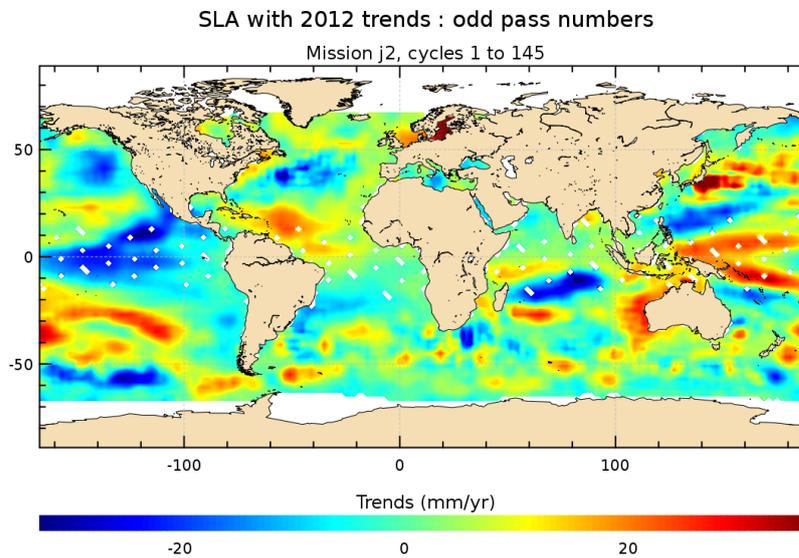
Diagnostic A203_c (mission j2)

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



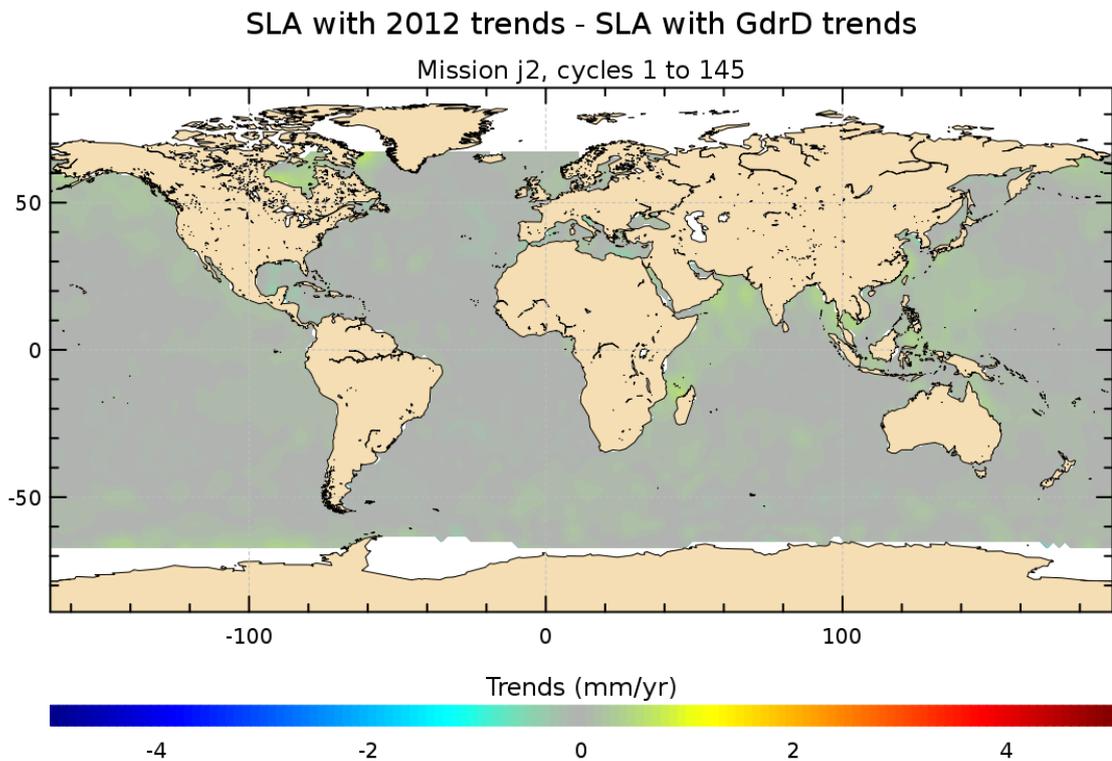
Diagnostic A204_a (mission j2)

Name : Differences between maps of SLA trends

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 j2)

Name : Differences between maps of SLA trends

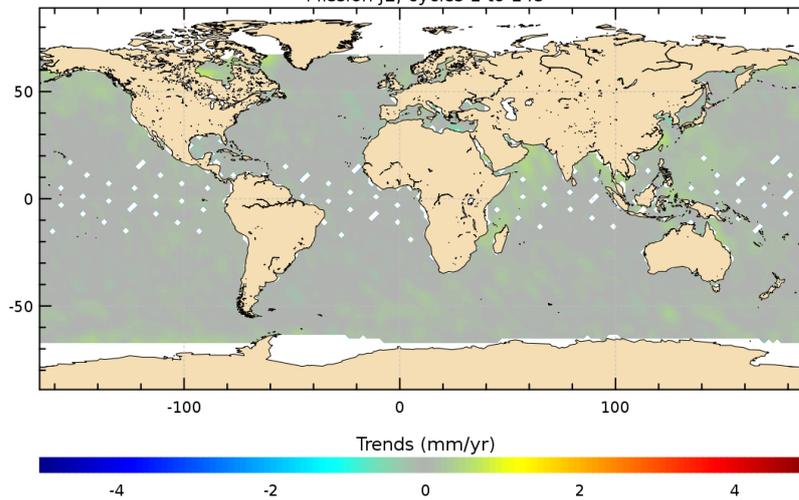
Input data : Along track SLA

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

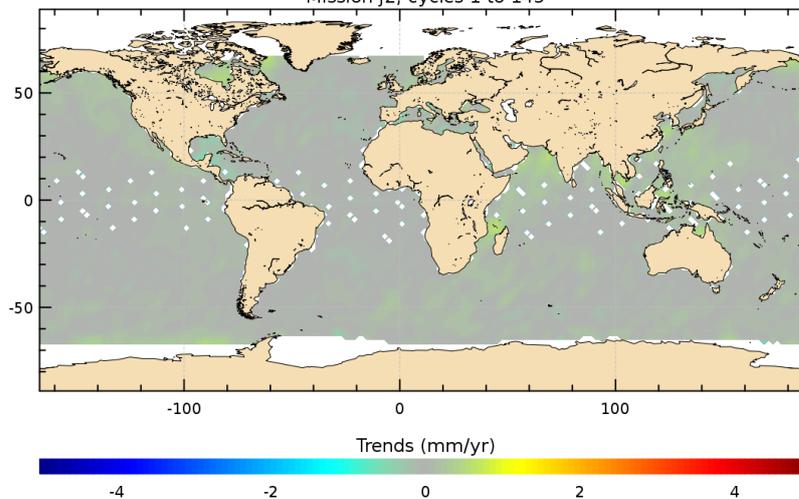
SLA with 2012 trends - SLA with GdrD trends : even pass numbers

Mission j2, cycles 1 to 145



SLA with 2012 trends - SLA with GdrD trends : odd pass numbers

Mission j2, cycles 1 to 145



Diagnostic A205_a (mission j2)

Name : Differences between maps of SLA amplitude and phase

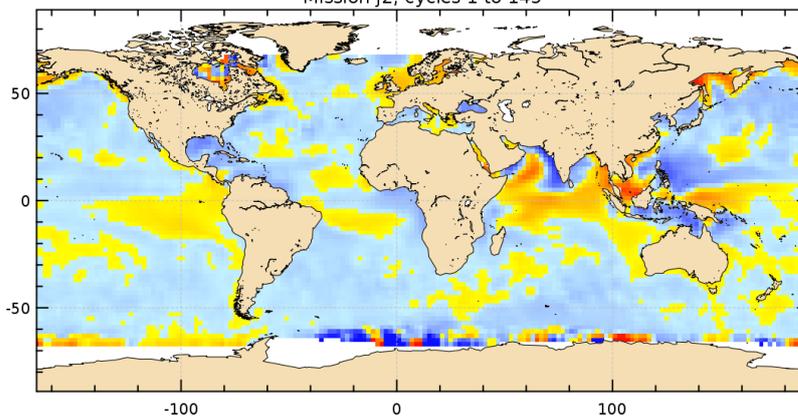
Input data : Along track SLA

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 2012 amplitude - SLA with GdrD amplitude : annual signal

Mission j2, cycles 1 to 145

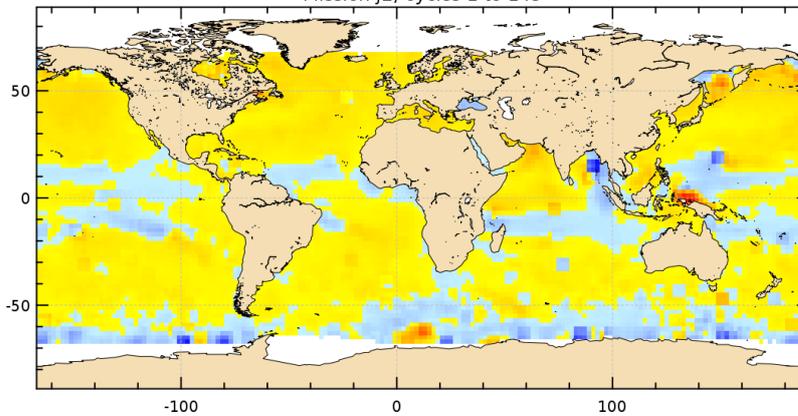


Amplitude (cm)

-0.4 -0.2 0.0 0.2 0.4

SLA with 2012 phase - SLA with GdrD phase : annual signal

Mission j2, cycles 1 to 145



Phase (degree)

-20 -10 0 10 20

Diagnostic A205_b (mission j2)

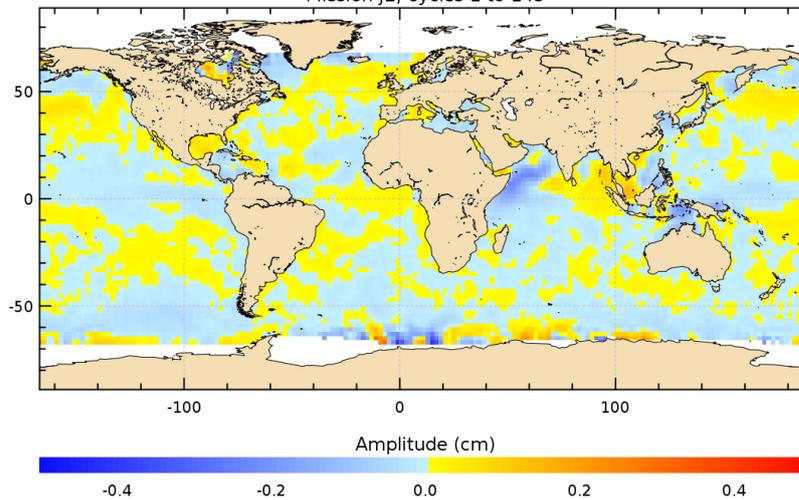
Name : Differences between maps of SLA amplitude and phase

Input data : Along track SLA

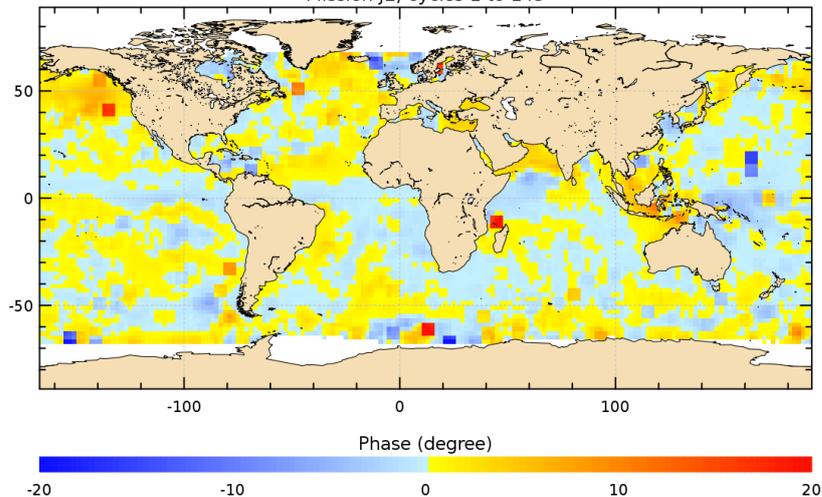
Description : The difference of SLA maps (mean, standard deviation, slope) is calculated from maps derived from diagnostic A203 using successively both altimetric components in the SLA calculation over a given period. This can be done globally, or separating in ascending and descending passes (except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

Diagnostic type : Global internal analyses

LA with 2012 amplitude - SLA with GdrD amplitude : semi-annual signal
Mission j2, cycles 1 to 145



SLA with 2012 phase - SLA with GdrD phase : semi-annual signal
Mission j2, cycles 1 to 145



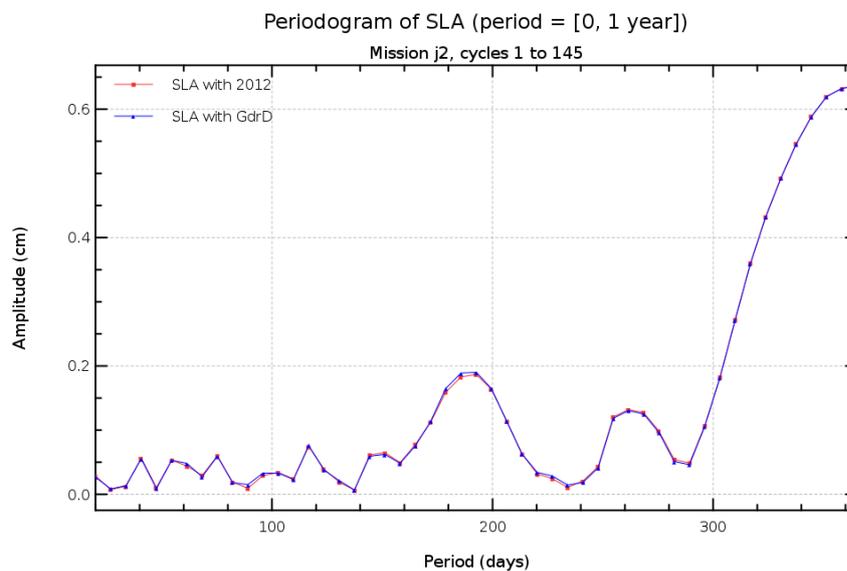
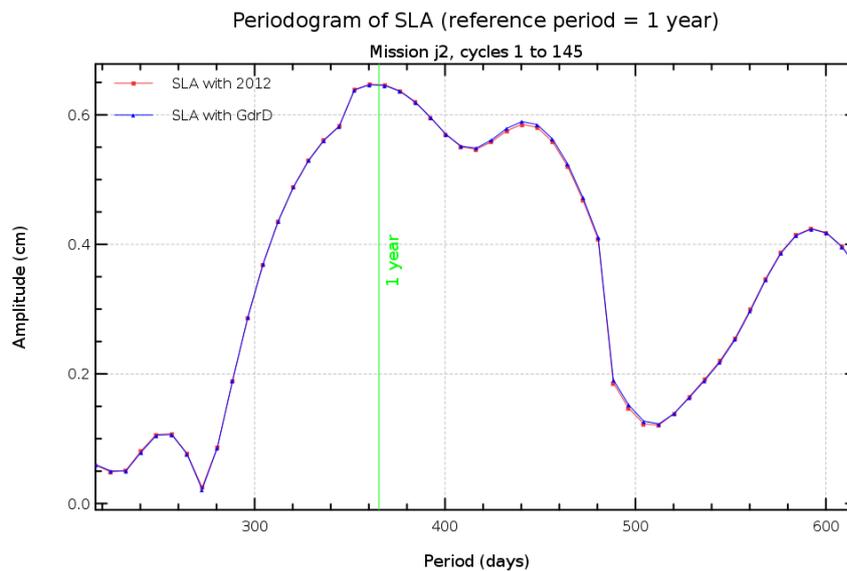
Diagnostic A206_a (mission j2)

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



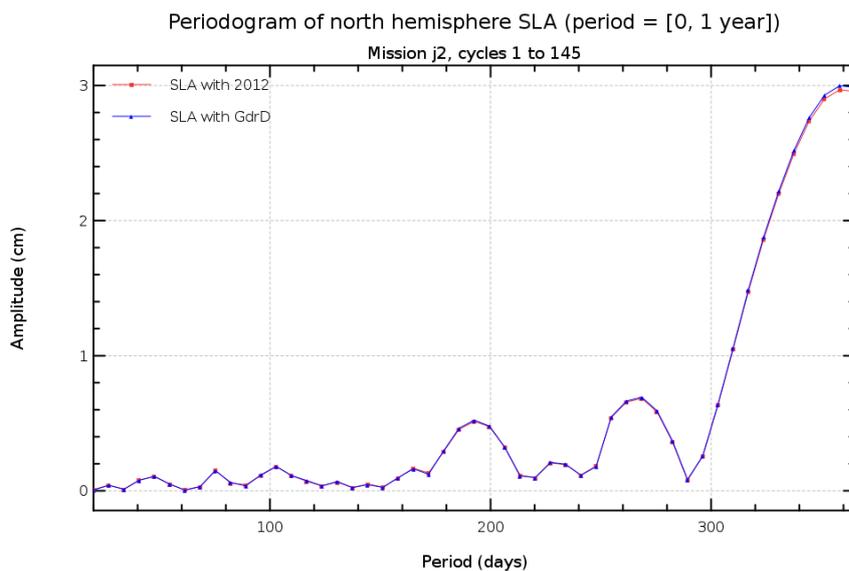
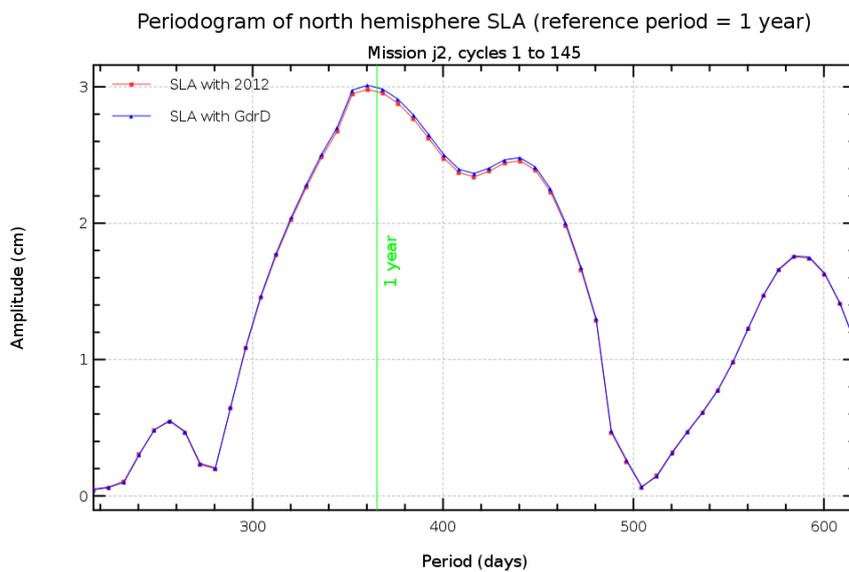
Diagnostic A206_b (mission j2)

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



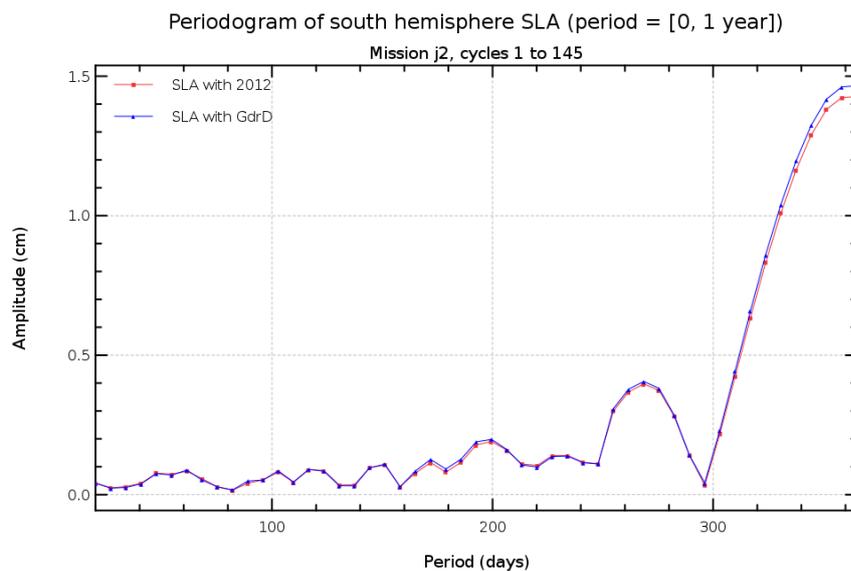
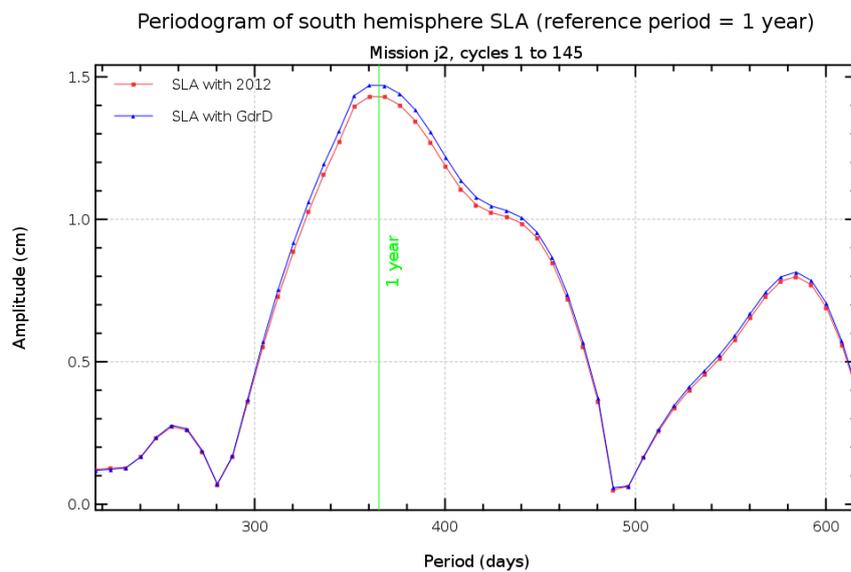
Diagnostic A206_c (mission j2)

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



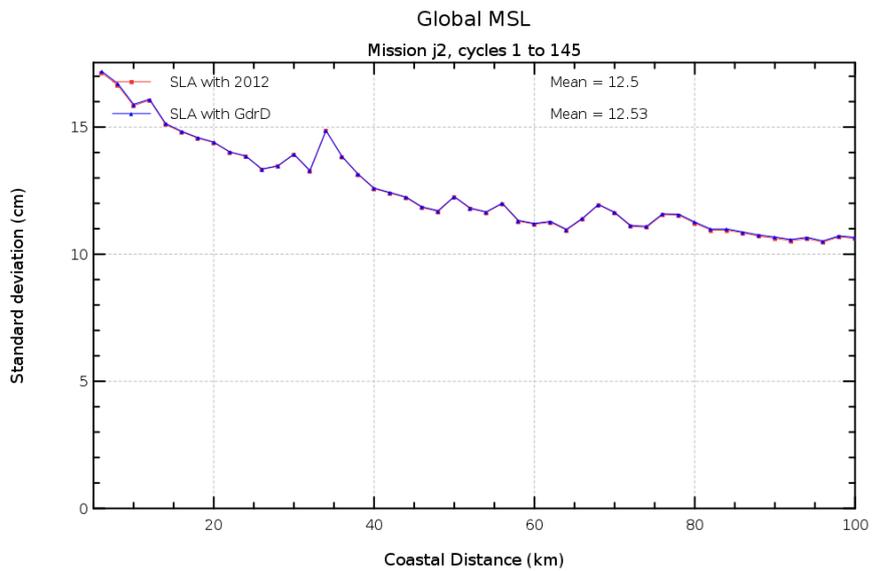
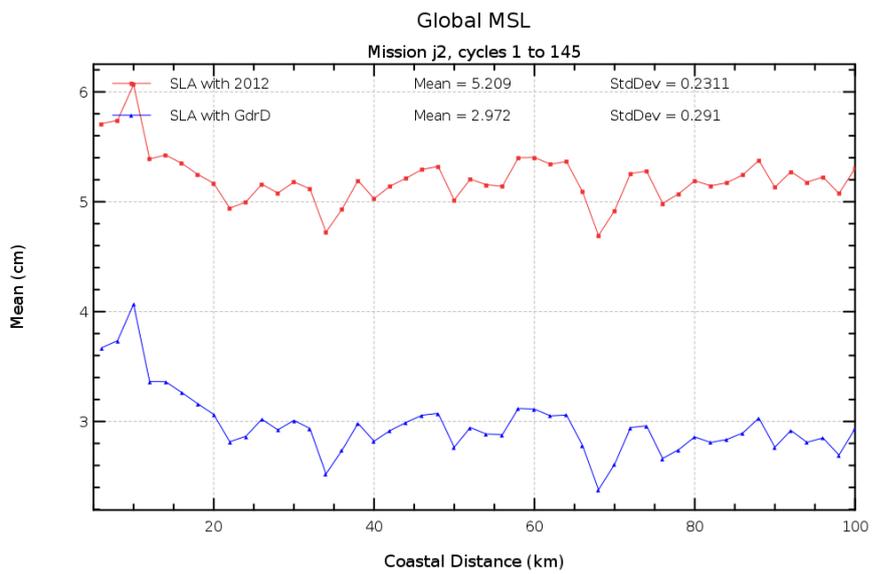
Diagnostic A207 (mission j2)

Name : Sea Level Anomaly (SLA) versus coastal distance

Input data : Along track SLA

Description : Mean and standard deviation of SLA - computed by using successively both altimetric components - are plotted in function of coastal distances between 0 and 100 km.

Diagnostic type : Global internal analyses



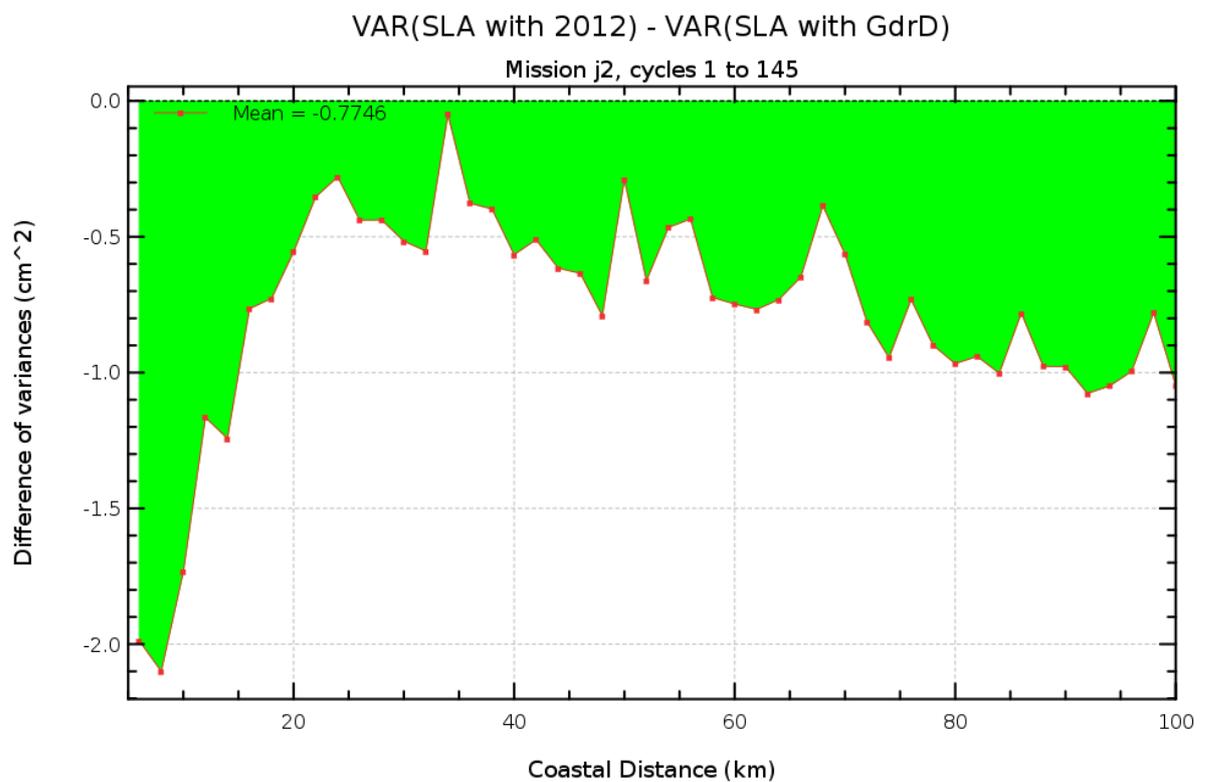
Diagnostic A208 (mission j2)

Name : Sea Level Anomaly (SLA) differences versus coastal distance

Input data : Along track SLA

Description : The differences of SLA variances - computed by using successively both altimetric components - are plotted in function of coastal distances between 0 and 100 km.

Diagnostic type : Global internal analyses



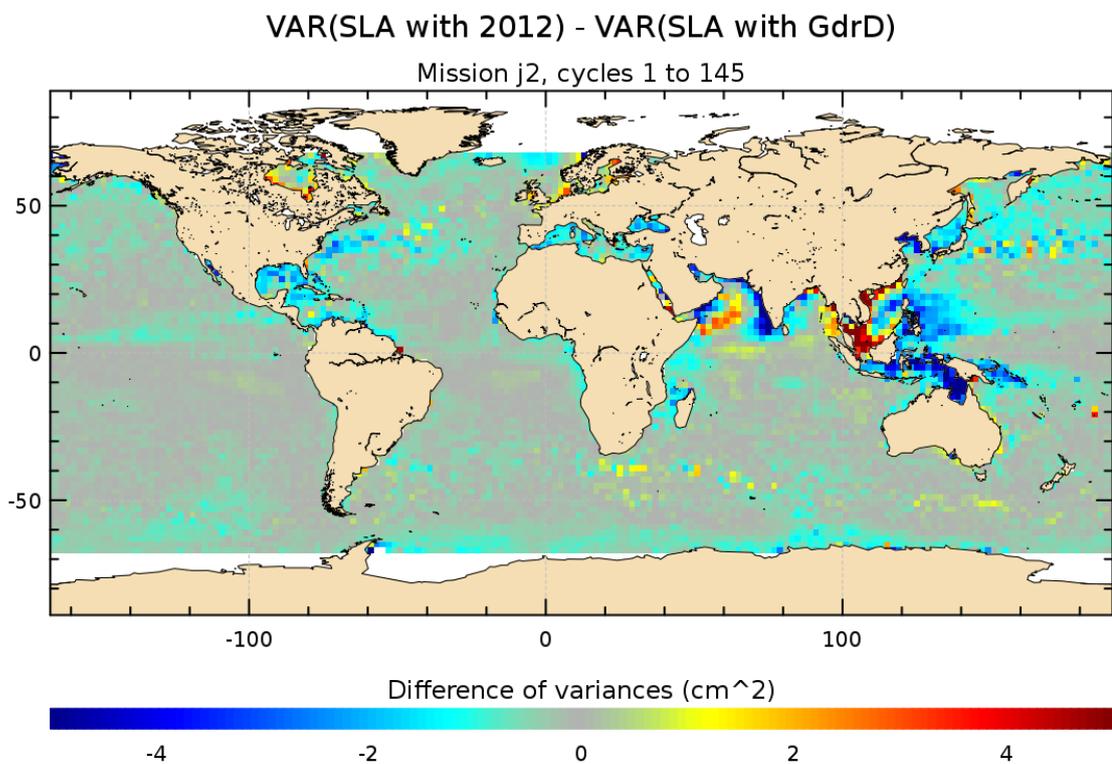
Diagnostic A209 (mission j2)

Name : Differences between maps of SLA variance

Input data : Along track SLA

Description : The differences between maps of SLA are calculated from the SLA differences (mean, standard deviation) using successively both altimetric components in the SLA calculation.

Diagnostic type : Global internal analyses



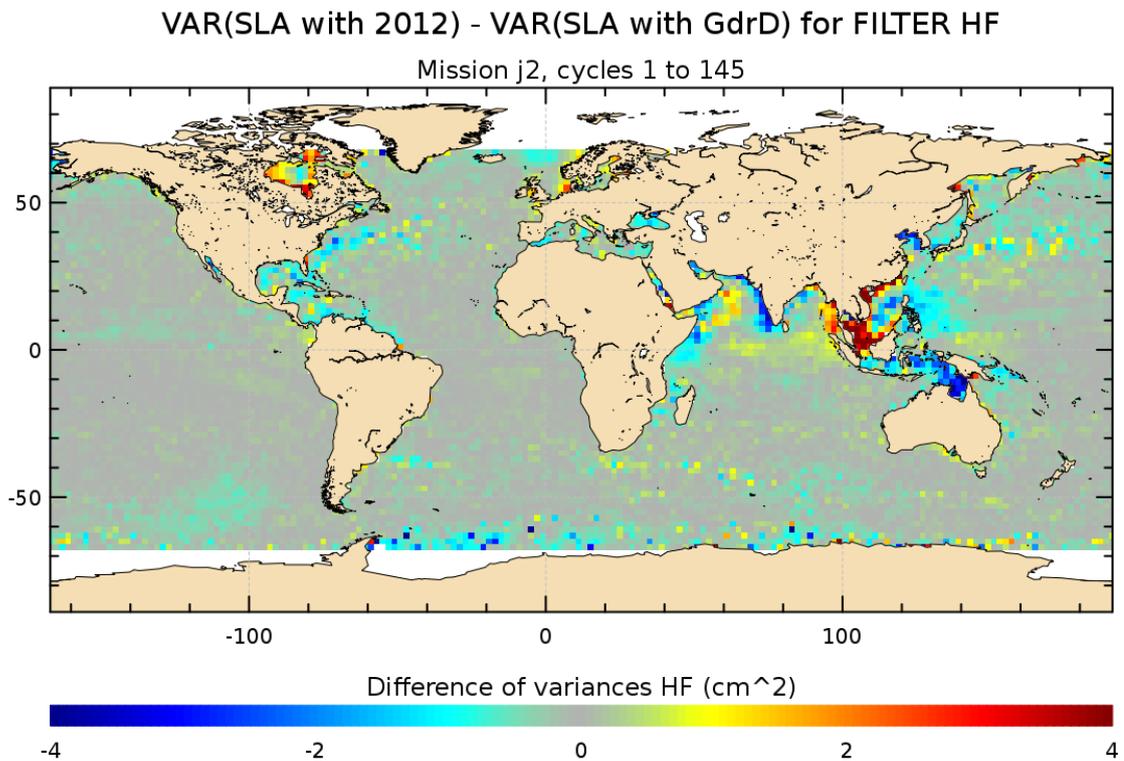
Diagnostic A210_a (mission j2)

Name : Differences between maps of SLA variance for different frequency bands

Input data : Along track SLA

Description : The differences between maps of SLA (variance) are calculated from the mean SLA maps using successively both altimetric components in the SLA calculation filtered to separate high-frequency ($T < 1$ yr), mid-frequency ($1 \text{ yr} < T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.

Diagnostic type : Global internal analyses



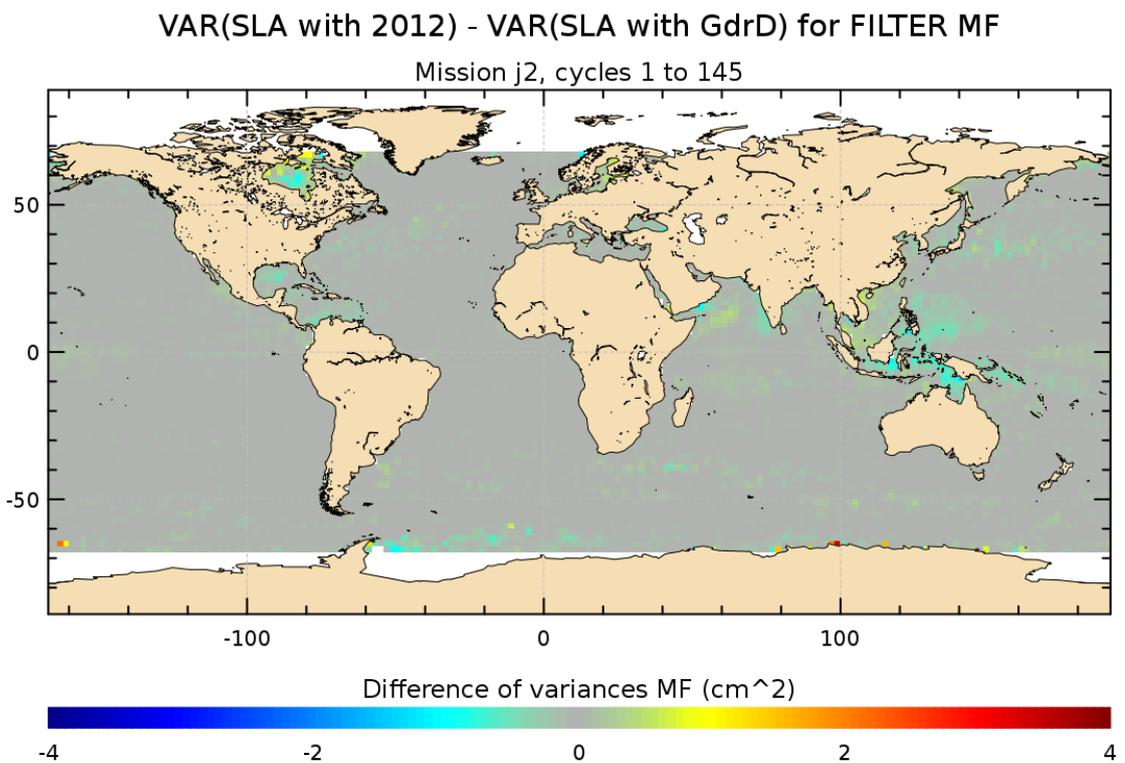
Diagnostic A210_b (mission j2)

Name : Differences between maps of SLA variance for different frequency bands

Input data : Along track SLA

Description : The differences between maps of SLA (variance) are calculated from the mean SLA maps using successively both altimetric components in the SLA calculation filtered to separate high-frequency ($T < 1$ yr), mid-frequency ($1 \text{ yr} < T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.

Diagnostic type : Global internal analyses



Diagnostic A210_c (mission j2)

Name : Differences between maps of SLA variance for different frequency bands

Input data : Along track SLA

Description : The differences between maps of SLA (variance) are calculated from the mean SLA maps using successively both altimetric components in the SLA calculation filtered to separate high-frequency ($T < 1$ yr), mid-frequency ($1 \text{ yr} < T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.

Diagnostic type : Global internal analyses

