## Tide models comparison: GOT4V8 versus GOT4V10

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Study overview

In this study, the tide model GOT 4.10 has been compared to the previous version of the model, GOT 4.8.

The impact of using these both GOT models on the SSH calculation has been analyzed for Envisat and Jason-1 missions.

- for Jason-1: from January 2002 (cycle 1) to June 2013 (Cycle 537)
- for Envisat: from May 2002 (cycle 6) to April 2012 (Cycle 113)


All the validation diagnostics displayed in this report have been performed in agreement with the Sea-Level CCI Product Validation Plan (PVP).
Diagnostic A000 (mission en)

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.

Difference of number of hits GOT4V10 - GOT4V8
Mission en, cycles 6 to 113

[Graph showing the difference of number of hits over time from 2004 to 2012]
**Diagnostic A000 (mission j1)**

**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.

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![Graph showing difference of number of hits between GOT4V10 and GOT4V8 for mission j1, cycles 1 to 537.](image-url)
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.

![Mean of GOT4V10 - GOT4V8](image1)

![Standard deviation of GOT4V10 - GOT4V8](image2)
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.
Name: Map of differences between both altimetric components over all the period

Input data: Along track altimetric components

Description: The map of global statistics (mean, standard deviation) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated over a given period which is the longer as possible to have obtain reliable statically results. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
Diagnostic A002 (mission 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.
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 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 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.

![Periodogram of the mean of GOT4V10 - GOT4V8 (reference period = 1 year)](image1)

![Periodogram of the standard deviation of GOT4V10 - GOT4V8 (reference period = 1 year)](image2)
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 A003_c (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.
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### Diagnostics complémentaires (mission j1)

**Name:** Map of residual signal (around period of 58.77 days)

**Input data:**

**Description:**

![Map of residual signal](image)

**Diagnostic type:**

- [GOT4V8 J1] 58.77d
- [GOT4V10 J1] 58.77d
Diagnostics complementaires (mission j1)

Name : Map of residual signal (around period of 58.77 days)

Input data : 

Description : 

![Map of residual signal](image-url)

Diagnostic type : 

- GOT4V10 J158.77d
- GOT4V8 J158.77d

58.77-day amplitude (cm)

-1 - 0 - 1
Diagnostic A101_a (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).
Name: Temporal evolution of SSH crossovers

Input data: Sea Surface Height (SSH) crossovers

Description: The temporal evolution of global statistics (mean, standard deviation) of SSH differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).
Diagnostic A101_a (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 A101_b (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).

![Mean of SSH crossovers for SL2 selection](image1)

![Standard deviations of SSH crossovers for SL2 selection](image2)
**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 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).
**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 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 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 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).

![VAR(SSH with GOT4V10) - VAR(SSH with GOT4V8)](image)
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.

![Global MSL](image)

Mission en, cycles 6 to 113

- SLA with GOT4V10
  - Slope = 2.28 mm/yr [L.S.R. = 0.13]

- SLA with GOT4V8
  - Slope = 2.28 mm/yr [L.S.R. = 0.13]
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.
**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.
**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 repetitivity, 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.
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.
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.
**Name**: Temporal evolution of Sea Level Anomaly (SLA)

**Input data**: Along track SLA

**Description**: The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids), or separating North and South hemispheres.
**Diagnostic A201.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.

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**Global MSL, selecting even pass numbers**

Mission J1, cycles 1 to 537

- SLA with GOT4V10  Slope = 2.83 mm/yr [L.S.R. = 0.0735]
- SLA with GOT4V8  Slope = 2.83 mm/yr [L.S.R. = 0.0765]

**Global MSL, selecting odd pass numbers**

Mission J1, cycles 1 to 537

- SLA with GOT4V10  Slope = 2.83 mm/yr [L.S.R. = 0.0744]
- SLA with GOT4V8  Slope = 2.83 mm/yr [L.S.R. = 0.0767]
**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.

![North hemisphere MSL](image1.png)
![South hemisphere MSL](image2.png)
Name: Temporal evolution of Sea Level Anomaly (SLA)

Input data: Along track SLA

Description: The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids), or separating North and South hemispheres.
**Diagnostic A201_e (mission 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.

![Global MSL](image)

*Mission j1, cycles 1 to 537*

- **SLA with GOT4V10**: Mean = 10.27
- **SLA with GOT4V8**: Mean = 10.27
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 A202.a (mission en)**

**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.

![Graph](image_url)
**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.

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**VAR(SLA with GOT4V10) - VAR(SLA with GOT4V8), even pass numbers**

Mission en, cycles 6 to 113

**VAR(SLA with GOT4V10) - VAR(SLA with GOT4V8), odd pass numbers**

Mission en, cycles 6 to 113
Diagnostic A202_a (mission j1)

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

**Input data**: Along track SLA

**Description**: The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes (except for SLA Grids) or separating North and South hemispheres.
**Diagnostic A202\_b (mission j1)**

**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.

![Graph 1](image1)

**Graph 1:** VAR(SLA with GOT4V10) - VAR(SLA with GOT4V8), even pass numbers

Mission j1, cycles 1 to 537

**Graph 2:** VAR(SLA with GOT4V10) - VAR(SLA with GOT4V8), odd pass numbers

Mission j1, cycles 1 to 537

![Graph 2](image2)
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.

[Diagrams showing SLA with GOT4V10 and GOT4V8 trends for mission en, cycles 6 to 113]
**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.
Name: Map of Sea Level Anomaly (SLA) over all the period

Input data: Along track SLA

Description: The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
Diagnostic A203_a (mission 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 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.

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**SLA with GOT4V10 trends : even pass numbers**

Mission 1, cycles 1 to 537

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**SLA with GOT4V8 trends : even pass numbers**

Mission 1, cycles 1 to 537
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.
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).
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 A204_a (mission j1)

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 A204_b (mission j1)

**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).
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 A205_b (mission en)

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 A205_a (mission j1)

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 A205_b (mission j1)

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).
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.
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, semiannual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
**Name**: Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

**Input data**: Along track SLA

**Description**: The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi-annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
**Diagnostic A206_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 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.
Name: Periodogram derived from temporal evolution of Sea Level Anomaly (SLA)

Input data: Along track SLA

Description: The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
**Diagnostic A206_d (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 A209 (mission en)**

**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 A209 (mission j1)

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.
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 yr < T < 3 yrs) and low-frequency (T > 3 yrs) signals.
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 ($1$ yr $< T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.
Diagnostic A210_c (mission en)

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 ($1$ yr $< T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.
Diagnostic A210_a (mission j1)

**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 yr < T < 3 yrs) and low-frequency (T > 3 yrs) signals.
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 ($1$ yr < $T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.

VAR(SLA with GOT4V10) - VAR(SLA with GOT4V8) for FILTER MF
Mission j1, cycles 1 to 537

Difference of variances MF (cm$^2$)
**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 yr < T < 3 yrs) and low-frequency (T > 3 yrs) signals.

**Diagnostic type**: Mono-mission analyses
**Annex**

### Diagnostics complémentaires (mission j1)

**Name**: Map of residual signal for SLA (around period of 58.74 days)

**Input data**:

**Description**:

#### Diagnostic type:

- **Map of residual signal for SLA (around period of 58.74 days)**
  - **SLA(GOT4V8 J1)58.74days**
    - 58.74-day amplitude (cm)
    - Color scale: 0.0 to 1.0
  - **SLA(GOT4V10 J1)58.74days**
    - 58.74-day amplitude (cm)
    - Color scale: 0.0 to 1.0
Name: Map of residual signal for SLA (around period of 58.74 days)

Input data:

Description:

![Map of residual signal for SLA (around period of 58.74 days)](image1)

![Map of residual signal for SLA (around period of 58.74 days)](image2)