**Wet Troposphere atmospheric corrections comparison : GPD V2.0 versus GPD V1.1**

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<th>Study variable</th>
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Creation date : 2015/09/23
Study overview

In this study, the Wet Troposphere Corrections (WTC) GPD V2.0, computed by UP (University of Porto) have been compared to their previous versions, GPD V1.1, used in the SL_cci V1.

The impact of using these WTC solutions on the SSH calculation has been analyzed for ERS-1, ERS-2, Envisat, TOPEX/Poseidon, Jason-1 and Jason-2 missions.

- for ERS-1: from October 1992 (cycle 15) to April 1996 (Cycle 53)
- for ERS-2: from May 1995 (cycle 1) to July 2003 (Cycle 85)
- for Envisat: from May 2002 (cycle 6) to April 2012 (Cycle 113)
- for TOPEX/Poseidon: from October 1992 (cycle 2) to October 2005 (Cycle 480)
- for Jason-1: from January 2002 (cycle 1) to June 2013 (Cycle 529)
- for Jason-2: from July 2008 (cycle 1) to December 2014 (Cycle 239)

The GPD V2.0 solution corresponds to the latest version of the GPD WTC solutions produced by J. Fernandes (2015). The main difference with V1.1 comes from the intercalibration of input data with SSM/I data.

All the validation diagnostics displayed in this report have been performed in agreement with the Sea-Level CCI Product Validation Plan (PVP).
**Diagnostic A002 (mission e1)**

**Name**: Temporal evolution of differences between both altimetric components

**Input data**: Along track altimetric components

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

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**Mean of GPD_V2.0 - GPD_V1.1**

Mission e1, cycles 15 to 53

- Mean = -0.4849
- Slope = 0.212 mm/yr

**Standard deviation of GPD_V2.0 - GPD_V1.1**

Mission e1, cycles 15 to 53

- Mean = 0.6448
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.
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Diagnostic A002 (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.

![Mean of GPD_V2.0 - GPD_V1.1](chart)

Mean = -0.3682
Slope = -0.15 mm/yr

![Standard deviation of GPD_V2.0 - GPD_V1.1](chart)

Mean = 0.2386
**Diagnostic A002 (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.

![Mean of GPD_V2.0 - GPD_V1.1](chart1.png)

![Standard deviation of GPD_V2.0 - GPD_V1.1](chart2.png)
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.

![Graph of mean differences between GPD_V2.0 and GPD_V1.1](image1)

- Mean = -0.2876
- Slope = 0.153 mm/yr

![Graph of standard deviation between GPD_V2.0 and GPD_V1.1](image2)

- Mean = 0.2948
Diagnostic A003 (mission e1)

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

Input data: Along track altimetric components

Description: The map of global statistics (mean, standard deviation) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated over a given period which is the longer as possible to have obtain reliable statically results. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
**Diagnostic A003 (mission e2)**

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

**Input data:** Along track altimetric components

**Description:** The map of global statistics (mean, standard deviation) of differences between 2 different standards of a same altimetric component (sea surface height correction, altimeter parameter, orbit) are calculated over a given period which is the longer as possible to have obtain reliable statically results. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
Diagnostic A003 (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 A003 (mission j1)

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Input data: Along track altimetric components

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**Diagnostic A003 (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.
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 A004_a (mission e1)**

**Name**: Periodogram derived from temporal evolution of altimetric component differences

**Input data**: Along track altimetric components

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

![Graph of amplitude against period for diagnostic A004_a](image1.png)

![Graph of standard deviation against period for diagnostic A004_a](image2.png)
Diagnostic A004_b (mission e1)

Name: Periodogram derived from temporal evolution of altimetric component differences

Input data: Along track altimetric components

Description: The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.
Diagnostic A004_a (mission e2)

Name: Periodogram derived from temporal evolution of altimetric component differences

Input data: Along track altimetric components

Description: The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.
Diagnostic A004.b (mission e2)

**Name**: Periodogram derived from temporal evolution of altimetric component differences

**Input data**: Along track altimetric components

**Description**: The periodogram derived from temporal and global altimetric component differences is calculated from cycle by cycle monitoring of altimetric component differences (derived from diagnostic A001). It is calculated from the mean or the variance differences. The Periodogram can be calculated for all the periods, but it can be focused on a dedicated period.
**Diagnostic A004.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.
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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**Diagnostic A004_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.

![Periodogram of the mean of GPD_V2.0 - GPD_V1.1 (reference period = 1 year)](image1)

![Periodogram of the standard deviation of GPD_V2.0 - GPD_V1.1 (reference period = 1 year)](image2)
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 A004_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.
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.
**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 e1)**

**Name**: Temporal evolution of SSH crossovers

**Input data**: Sea Surface Height (SSH) crossovers

**Description**: The temporal evolution of global statistics (mean, standard deviation) of SSH differences are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).
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**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).
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Diagnostic A101_b (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 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).
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**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 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).
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**Diagnostic A101_b (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 A102 (mission e1)**

**Name:** Differences between temporal evolution of SSH crossovers

**Input data:** Sea Surface Height (SSH) crossovers

**Description:** The difference of temporal evolution between the global statistics (mean, standard deviation) of SSH differences are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).
Diagnostic A102 (mission e2)

**Name:** Differences between temporal evolution of SSH crossovers

**Input data:** Sea Surface Height (SSH) crossovers

**Description:** The difference of temporal evolution between the global statistics (mean, standard deviation) of SSH differences are calculated using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).
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).
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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 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 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).
**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).
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 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).
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).
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).
**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 e1)**

**Name**: Differences between maps of SSH crossovers

**Input data**: Sea Surface Height (SSH) crossovers

**Description**: The differences between maps of SSH crossovers (derived from diagnostic A103) are calculated from the SSH crossover differences (mean, standard deviation) using successively both altimetric components in the SSH calculation. SSH crossovers are the differences between ascending and descending passes for time differences between both passes lower than 10 days (in order to reduce the effect of the oceanic variability).
**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 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).
**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).
**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).
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).
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, or separating North and South hemispheres.
**Diagnostic A201.b (mission e1)**

**Name**: Temporal evolution of Sea Level Anomaly (SLA)

**Input data**: Along track SLA

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

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*Graphs showing temporal evolution of SLA for even and odd pass numbers.*
Diagnostic A201_c (mission e1)

Name: Temporal evolution of Sea Level Anomaly (SLA)

Input data: Along track SLA

Description: The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter 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, 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, or separating North and South hemispheres.
**Diagnostic A201_e (mission e1)**

**Name** : Temporal evolution of Sea Level Anomaly (SLA)

**Input data** : Along track SLA

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

![Global MSL](chart.png)

Mission e1, cycles 15 to 53

- SLA with GPD_V2.0
  - Mean = 10.94
- SLA with GPD_V1.1
  - Mean = 10.94

Chart showing the temporal evolution of SLA statistics (mean, standard deviation) from 1993 to 1996.
**Diagnostic A201.f (mission e1)**

**Name**: Temporal evolution of Sea Level Anomaly (SLA)

**Input data**: Along track SLA

**Description**: The temporal evolution of SLA statistics (mean, standard deviation) are calculated from a cyclic way (altimeter repetivity, daily, weekly, monthly) using successively both altimetric components in the SLA calculation. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements. They are calculated globally, but also separating ascending and descending passes, or separating North and South hemispheres.
**Diagnostic A201_a (mission e2)**

**Name:** Temporal evolution of Sea Level Anomaly (SLA)

**Input data:** Along track SLA

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

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**Graph:**

- **Global MSL**
- **Mission e2, cycles 1 to 85**

![Graph showing mean sea level changes over time](image)

- **SLA with GPD_V2.0**  
  Slope = 2.4 mm/yr [L.S.R. = 0.169]

- **SLA with GPD_V1.1**  
  Slope = 2.51 mm/yr [L.S.R. = 0.169]
**Diagnostic A201.b (mission e2)**

**Name:** Temporal evolution of Sea Level Anomaly (SLA)

**Input data:** Along track SLA

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

![Graphs showing temporal evolution of SLA](image-url)
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, 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, or separating North and South hemispheres.

![Graph 1](image1.png)

**East hemisphere MSL ([0, 180] degrees_east)**
Mission e2, cycles 1 to 85

- SLA with GPD_V2.0: Slope = 2.89 mm/yr (L5.R = 0.44)
- SLA with GPD_V1.1: Slope = 3.01 mm/yr (L5.R = 0.443)

![Graph 2](image2.png)

**West hemisphere MSL ([180, 0] degrees_east)**
Mission e2, cycles 1 to 85

- SLA with GPD_V2.0: Slope = 1.99 mm/yr (L5.R = 0.433)
- SLA with GPD_V1.1: Slope = 2.09 mm/yr (L5.R = 0.438)
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, or separating North and South hemispheres.
**Diagnostic A201_f (mission e2)**

**Name**: Temporal evolution of Sea Level Anomaly (SLA)

**Input data**: Along track SLA

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

![Graph](image)

**Global MSL, selecting even pass numbers**

Mission e2, cycles 1 to 85

Mean = 11.32

**Global MSL, selecting odd pass numbers**

Mission e2, cycles 1 to 85

Mean = 11.39
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, 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, 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, or separating North and South hemispheres.

![North hemisphere MSL](image1)

![South hemisphere MSL](image2)
**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, or separating North and South hemispheres.
**Diagnostic A201_e (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, or separating North and South hemispheres.

![Global MSL](image)

**Global MSL**

Mission en, cycles 10 to 113

- SLA with GPD_V2.0 Mean = 10.55
- SLA with GPD_V1.1 Mean = 10.6

**Standard deviation (cm)**

2004 - 2012
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, or separating North and South hemispheres.
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, 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, or separating North and South hemispheres.
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 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, or separating North and South hemispheres.

![North hemisphere MSL](https://example.com/north_hemisphere.png)

![South hemisphere MSL](https://example.com/south_hemisphere.png)
Diagnostic A201_d (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, 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, 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, or separating North and South hemispheres.
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, or separating North and South hemispheres.

![Graph showing Global MSL](image)

**Global MSL**
Mission j2, cycles 2 to 244

- SLA with GPD_V2.0
  - Slope = 3.72 mm/yr [L.S.R. = 0.107]

- SLA with GPD_V1.1
  - Slope = 3.49 mm/yr [L.S.R. = 0.107]
**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, or separating North and South hemispheres.
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, 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, or separating North and South hemispheres.

![Graphs showing the temporal evolution of Sea Level Anomaly in the East and West hemispheres.](image-url)
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, 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, 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, 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, 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, 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, or separating North and South hemispheres.

![Graph showing the temporal evolution of SLA statistics](image)

- **East hemisphere MSL ([0, 180] degrees_east)**
  - Mission tp, cycles 11 to 481
  - Graph showing the mean sea level with linear fit for SLA with GPD_V2.0 and SLA with GPD_V1.1.
  - Slope = 3.67 mm/yr (L.S.R = 0.115)
  - Slope = 3.62 mm/yr (L.S.R = 0.116)

- **West hemisphere MSL ([−180, 0] degrees_east)**
  - Mission tp, cycles 11 to 481
  - Graph showing the mean sea level with linear fit for SLA with GPD_V2.0 and SLA with GPD_V1.1.
  - Slope = 2.66 mm/yr (L.S.R = 0.103)
  - Slope = 2.62 mm/yr (L.S.R = 0.104)
Diagnostic A201_e (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, 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, or separating North and South hemispheres.
**Diagnostic A202_a (mission e1)**

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

**Input data**: Along track SLA

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

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**MEAN(SLA with GPD_V2.0) - MEAN(SLA with GPD_V1.1)**

Mission e1, cycles 15 to 53

Slope = -0.216 mm/yr [L.S.R. = 0.0199]

**VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1)**

Mission e1, cycles 15 to 53

Mean = 0.02592
**Diagnostic A202_b (mission e1)**

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

**Input data**: Along track SLA

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

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**VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1), even pass numbers**

Mission e1, cycles 15 to 53

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**VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1), odd pass numbers**

Mission e1, cycles 15 to 53
**Diagnostic A202_a (mission e2)**

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

**Input data**: Along track SLA

**Description**: The differences between temporal evolution of SLA are calculated from statistics derived from diagnostic A201 (mean, variance) using 2 different components in the SLA calculation. They are calculated globally, but also separating ascending and descending passes or separating North and South hemispheres.
Diagnostic A202.b (mission e2)

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

Input data: Along track SLA

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

![Graphs showing differences in variances](image)
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 or separating North and South hemispheres.
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 or separating North and South hemispheres.
Diagnostic A203_a (mission e1)

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

**Input data**: Along track SLA

**Description**: The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
Diagnostic A203_b (mission e1)

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

**Input data**: Along track SLA

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

![Map of Sea Level Anomaly (SLA) over all the period](image)
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_b (mission e2)**

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

**Input data**: Along track SLA

**Description**: The map of global statistics (mean, standard deviation) of SLA are calculated using successively both altimetric components in the SLA calculation over a large period. These statistics are calculated from 1 Hz altimetric measurements after removing spurious sea level measurements.
Diagnostic A203_c (mission e2)

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

**Input data**: Along track SLA

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

![SLA with GPD V2.0 trends](image1)

![SLA with GPD V1.1 trends](image2)
# 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.

![SLA with GPD_V2.0 trends](image1)

Mission 1, cycles 2 to 529

-20 -10 0 10 20

Trends (mm/yr)

![SLA with GPD_V1.1 trends](image2)

Mission 1, cycles 2 to 529

-20 -10 0 10 20

Trends (mm/yr)
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_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.
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 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 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.

![Map of SLA with GPD V2.0 trends](image1)

![Map of SLA with GPD V1.1 trends](image2)
**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 A204_a (mission e1)**

**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).

![SLA with GPD_V2.0 trends - SLA with GPD_V1.1 trends](image)

*Mission e1, cycles 15 to 53*
Diagnostic A204_b (mission e1)

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 e2)

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 e2)

**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).
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_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).
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).

![SLA with GPD_V2.0 trends - SLA with GPD_V1.1 trends](image_url)
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 tp)**

**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).

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**Diagamma type:** Mono-mission analyses

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![SLA with GPD_V2.0 trends - SLA with GPD_V1.1 trends](image)

Mission tp, cycles 11 to 481

<table>
<thead>
<tr>
<th>Trends (mm/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.2</td>
</tr>
</tbody>
</table>

---
**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 A205_a (mission e1)**

**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).

![Amplitude Difference](image1)

![Phase Difference](image2)
Diagnostic A205_b (mission e1)

**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).

![Amplitude and Phase Maps](image-url)
Diagnostic A205_a (mission e2)

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 e2)

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 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_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: 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 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).
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 tp)**

**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 A206_a (mission e1)

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

Input data: Along track SLA

Description: The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
Diagnostic A206.b (mission e1)

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

**Input data**: Along track SLA

**Description**: The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
**Diagnostic A206_c (mission e1)**

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

**Input data**: Along track SLA

**Description**: The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, 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.

![Periodogram of south hemisphere SLA (reference period = 1 year)](image1)

![Periodogram of south hemisphere SLA (period = [0, 1 year])](image2)
Diagnostic A206_a (mission e2)

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

**Input data:** Along track SLA

**Description:** The periodogram derived from temporal evolution of SLA (global, northern or southern hemisphere) can be done over all periods or focusing on particular periods, such as annual, semi annual or 60 day signal. Therefore mean of SLA differences are computed (every day or cycle), and time data series are plotted as a periodogram.
**Diagnostic A206.b (mission e2)**

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

**Input data**: Along track SLA

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

![Periodogram of north hemisphere SLA (reference period = 1 year)](image1)

![Periodogram of north hemisphere SLA (period = [0, 1 year])] (image2)
**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_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 A206_c (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.
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_c (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_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.
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.
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 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 A206_c (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 A209 (mission e1)

**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.

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**VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1)**

Mission e1, cycles 15 to 53

![Difference of variances map](image)
Diagnostic A209 (mission e2)

**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 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.

![Map of SLA variance differences](image-url)

VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1)

Mission en, cycles 10 to 113

Difference of variances (cm^2)
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 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.
**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 A210_a (mission e1)**

**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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER HF](image)

*Mission e1, cycles 15 to 53*

**Diagnostic type**: Mono-mission analyses
**Diagnostic A210_b (mission e1)**

**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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER MF](image)
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 e2)**

**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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER HF](image)
Diagnostic A210_b (mission e2)

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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER MF
Mission e2, cycles 1 to 85

Difference of variances MF (cm^2)
### Diagnostic A210_c (mission e2)

**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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER BF](image_url)

Mission e2, cycles 1 to 85

Differences of variances BF (cm^2)
Diagnostic A210_a (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.
**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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER BF](image_url)
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 GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER HF
Mission j1, cycles 2 to 529

Difference of variances HF (cm^2)

-2  0  2
### Diagnostic A210_b (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.

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![Image of map showing variance differences](image)

**VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER MF**

*Mission j1, cycles 2 to 529*

**Difference of variances MF (cm^2)**

-1.0 — 0.0 — 0.5 — 1.0
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 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 yr < T < 3 yrs) and low-frequency (T > 3 yrs) signals.

VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER HF

Mission j2, cycles 2 to 244

Difference of variances HF (cm^2)

![Map showing differences in SLA variance](image)
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 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 ($1$ yr $< T < 3$ yrs) and low-frequency ($T > 3$ yrs) signals.

![VAR(SLA with GPD_V2.0) - VAR(SLA with GPD_V1.1) for FILTER BF](image)

Mission j2, cycles 2 to 244

**Difference of variances BF (cm^2)**

-1.0 -0.5 0.0 0.5 1.0
Diagnostic A210_a (mission tp)

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_b (mission tp)

**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 tp)

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 C001 (mission j2)**

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

**Input data**: Tide gauges SSH measurements

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

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**SLA differences : altimetry measurements - tide gauges**

*Mission j2, cycles 2 to 244*

- SLA with GPD_V2.0 - TG
- SLA with GPD_V1.1 - TG

Slope = -0.153 mm/yr
Slope = -0.359 mm/yr
**Diagnostic C001 (mission tp)**

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

**Input data:** Tide gauges SSH measurements  

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

![SLA differences: altimetry measurements - tide gauges](image)

Mission tp, cycles 11 to 481

Slope = 0.162 mm/yr  
Slope = 0.275 mm/yr
Diagnostic C002 (mission j2)

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

**Input data**: Tide gauges SSH measurements

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

![Difference of variances: VAR(SLA with GPD_V2.0 - TG) - VAR(SLA with GPD_V1.1 - TG)]
**Diagnostic C002 (mission tp)**

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

**Input data:** Tide gauges SSH measurements

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

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**Difference of variances:** $\text{VAR(SLA with GPD_V2.0 - TG)} - \text{VAR(SLA with GPD_V1.1 - TG)}$

*Mission tp, cycles 11 to 481*

Mean = 0.1054

StdDev = 0.913
Diagnostic C004 (mission j2)

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

Input data: Tide gauges SSH measurements

Description: The difference of histograms between altimeter and tide gauge SSH differences is computed from the elementary statistics at each tide gauge using successively both altimetric components in the altimetry SSH.
Name: Histograms of differences between tide gauges and altimeter SSH differences

Input data: Tide gauges SSH measurements

Description: The difference of histograms between altimeter and tide gauge SSH differences is computed from the elementary statistics at each tide gauge using successively both altimetric components in the altimetry SSH.
Diagnostic C005 (mission j2)

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

Input data: Tide gauges SSH measurements

Description: The map of global statistics of differences between altimeter and tide gauge SSH differences is computed from the statistics at each tide gauge location using successively both altimetric components in the altimetry SSH.
Diagnostic C005 (mission tp)

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

Input data: Tide gauges SSH measurements

Description: The map of global statistics of differences between altimeter and tide gauge SSH differences is computed from the statistics at each tide gauge location using successively both altimetric components in the altimetry SSH.
C101

Diagnostic C101 (mission j2)

Name: Taylor diagram of sea level differences between altimetry and Argo+GRACE measurements

Input data: Argo sea level measurements

Description: The coherence (correlation and standard deviation) is computed between altimeter and the sum of Argo and mass (GRACE) data. The gray dot corresponds to the Argo and mass reference value. Statistics obtained with the studied (reference) altimeter standard are represented by triangles (circles), separating different temporal scales: global detrended (black), annual signal (green), high frequencies detrended ($\leq 1$y., red) and low frequencies detrended ($\geq 1$y., blue).
Diagnostic C101 (mission tp)

Name: Taylor diagram of sea level differences between altimetry and Argo+GRACE measurements

Input data: Argo sea level measurements

Description: The coherence (correlation and standard deviation) is computed between altimeter and the sum of Argo and mass (GRACE) data. The gray dot corresponds to the Argo and mass reference value. Statistics obtained with the studied (reference) altimeter standard are represented by triangles (circles), separating different temporal scales: global detrended (black), annual signal (green), high frequencies detrended ($\leq 1$ y., red) and low frequencies detrended ($\geq 1$ y., blue).
Diagnostic C102_a (mission j2)

**Name**: Temporal evolution of sea level differences between altimetry and Argo measurements

**Input data**: Argo sea level measurements

**Description**: The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.
Name: Temporal evolution of sea level differences between altimetry and Argo measurements

Input data: Argo sea level measurements

Description: The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.
**Diagnostic C102_c (mission j2)**

**Name**: Temporal evolution of sea level differences between altimetry and Argo measurements

**Input data**: Argo sea level measurements

**Description**: The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.

[Graphs showing the temporal evolution of sea level differences for ETU and REF hemispheres]
Name: Temporal evolution of sea level differences between altimetry and Argo measurements

Input data: Argo sea level measurements

Description: The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.
**Diagnostic C102.b (mission tp)**

**Name:** Temporal evolution of sea level differences between altimetry and Argo measurements

**Input data:** Argo sea level measurements

**Description:** The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.
Name: Temporal evolution of sea level differences between altimetry and Argo measurements

Input data: Argo sea level measurements

Description: The temporal evolution of the differences between altimetry and Argo measurements are computed by colocating altimeter data at the position and date of each Argo profiles. This is computed with both altimeter standards with and without the annual and semi-annual signals, for the North/South and East/West hemispheres.