EGSIEM

European Gravity Service for Improved Emergency Management

The EGSIEM Plotter
June 2016

Stéphane Bourgogne

Géode & Cie

HORIZON 2020

The EGSIEM Plotter

New features and current status, as presented at the June 2016 Progress Meeting (live demo)

June, 24th 2016

Summary

European Gravity Service for Improved Emergency Management

- New features since January 2016
- Future evolutions for the EGSIEM Plotter

News

- New features
  - Youtube demo video
  - Extension of the website with a 5-tab menu and 2 new visualization modules.

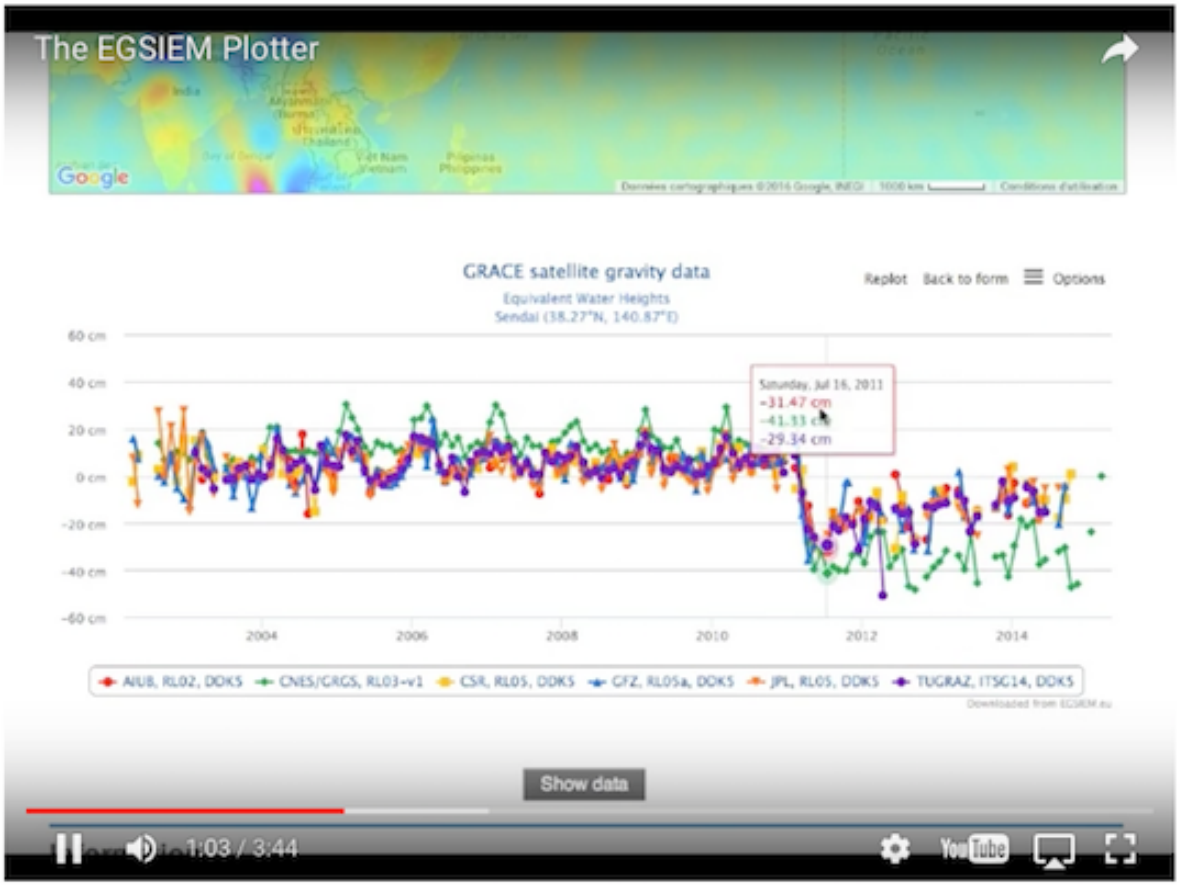
News

European Gravity Service for Improved Emergency Management

- Youtube video
  - A Youtube video has been produced in order to demonstrate the EGSIEM plotter features and possibilities (time-series module)
  - It has been used by members of the consortium at conferences and presentations
  - This video is available on the website at plot.egsiem.eu

News

EGSIEM
European Gravity Service for Improved Emergency Management



News

- New modules:
  - The EGSIEM Plotter page now has a 5-tab menu: home page (including video), time series, images, statistics, and link to main site.

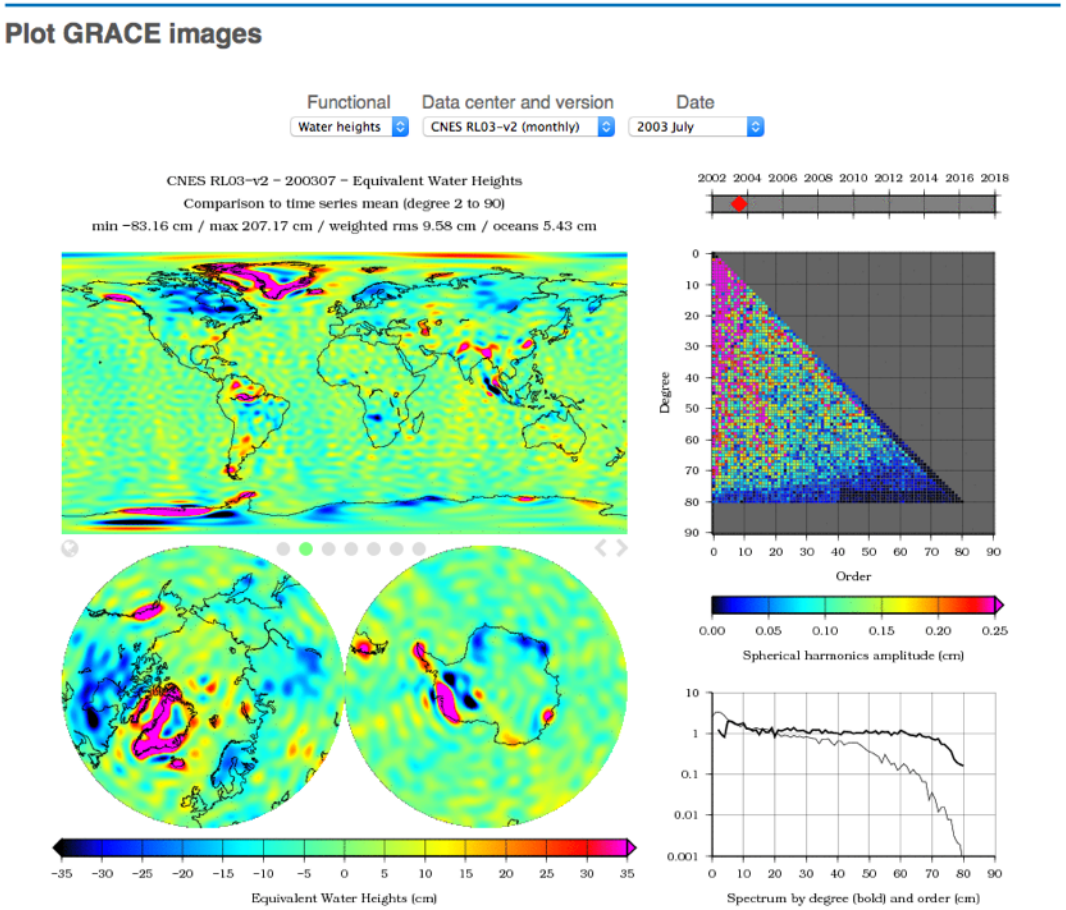
News

- New Image module
  - The grids of geoid heights and equivalent water heights of every group have been plotted and can be visualized interactively
  - The images offer a complete data visualization, including : rectangular projection grid, polar projection grid, spherical harmonics amplitude, spectrum in degree and order

News

EGSIEM
European Gravity Service for Improved Emergency Management

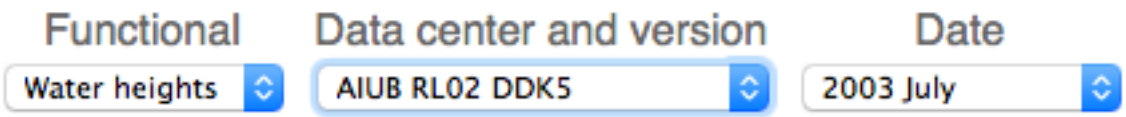
- Full picture



News

European Gravity Service for Improved Emergency Management

- Form
  - Geoid / Equivalent Water Heights
  - Data center and version
  - Date

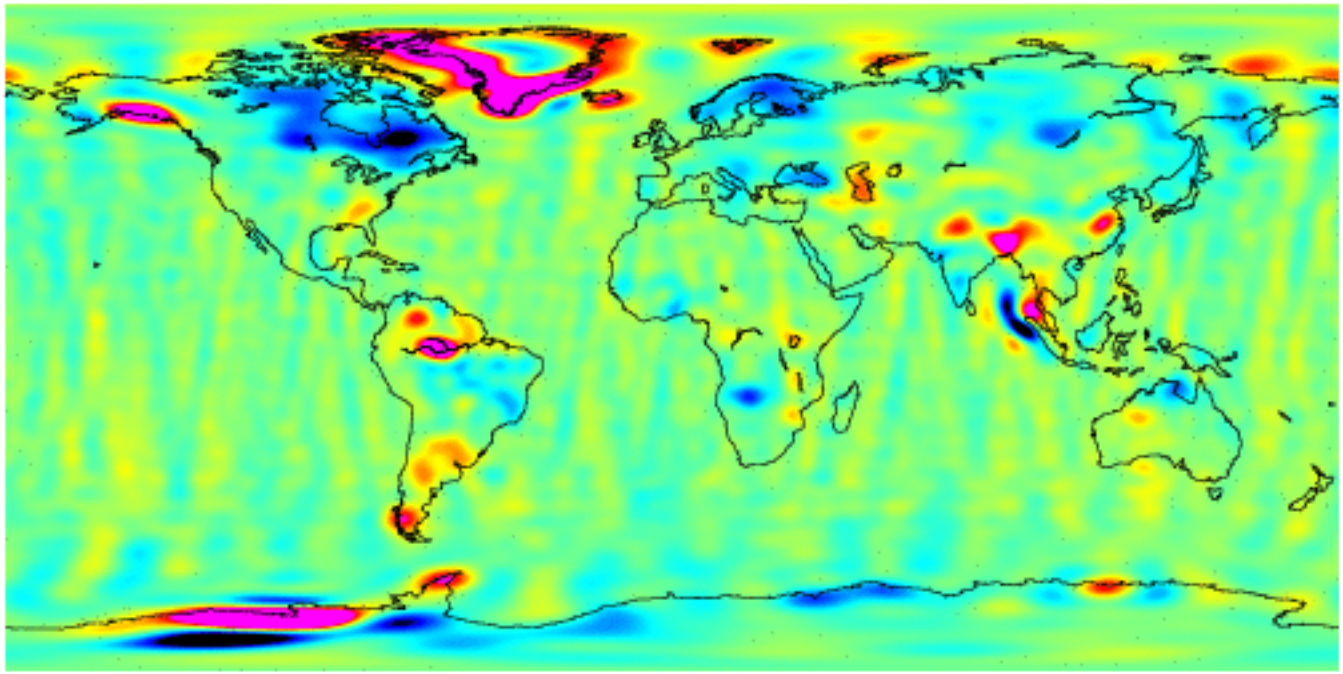


News

EGSIEM
European Gravity Service for Improved Emergency Management

- Rectangular grid

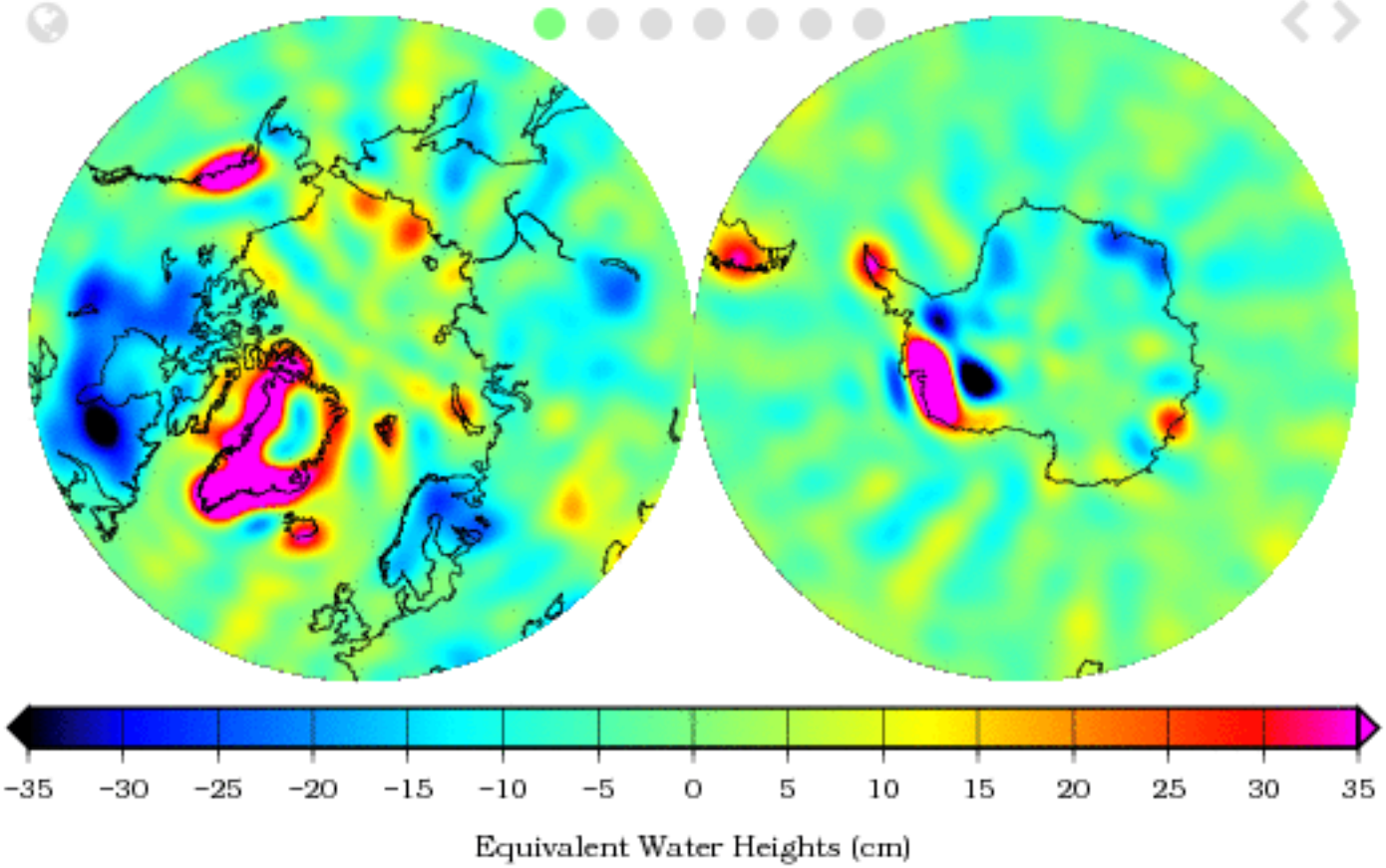
AIUB RL02 DDK5 – 200307 – Equivalent Water Heights
Comparison to time series mean (degree 2 to 90)
min −54.82 cm / max 152.46 cm / weighted rms 8.48 cm / oceans 4.62 cm



News

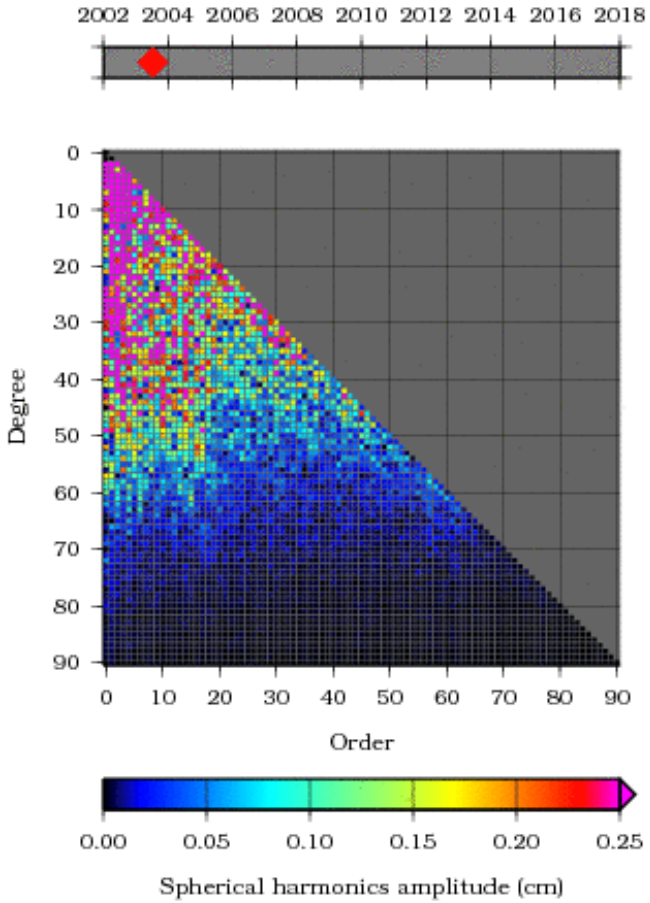
EGSIEM
European Gravity Service for Improved Emergency Management

- Polar grid



News

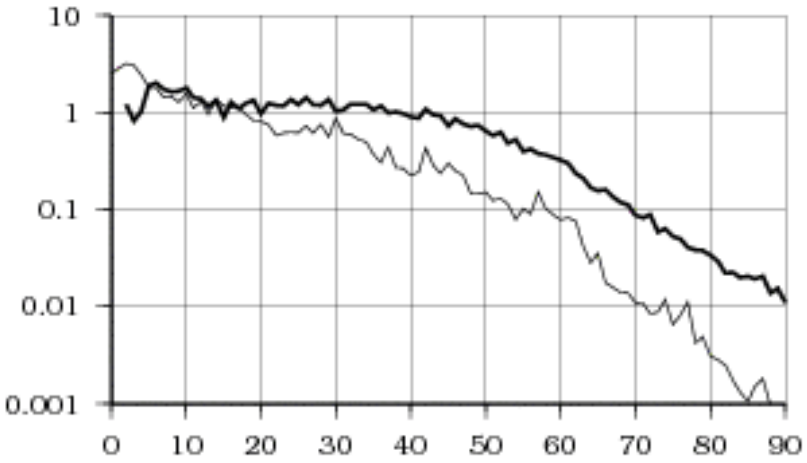
- Spherical harmonics amplitude



News

European Gravity Service for Improved Emergency Management

- Spectrum by degree and order

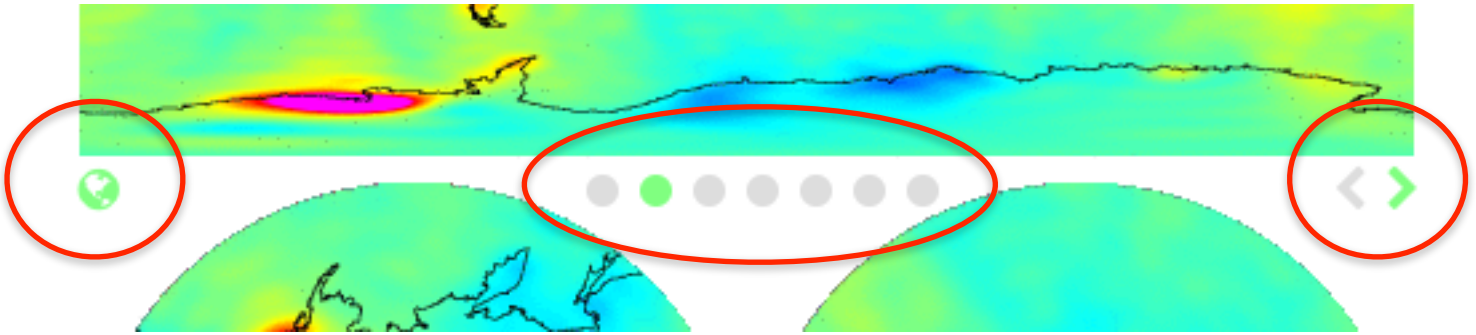


Spectrum by degree (bold) and order (cm)

News

EGSIEM
European Gravity Service for Improved Emergency Management

- Smart buttons
  - One can easily travel from geoid to water heights or from one group to another or from one date to another by control buttons located between the rectangular and the polar projections



News

- Dates
  - Dates are not identical for all data centers. When changing the datacenter, the closest date to the previous image date is calculated and displayed.

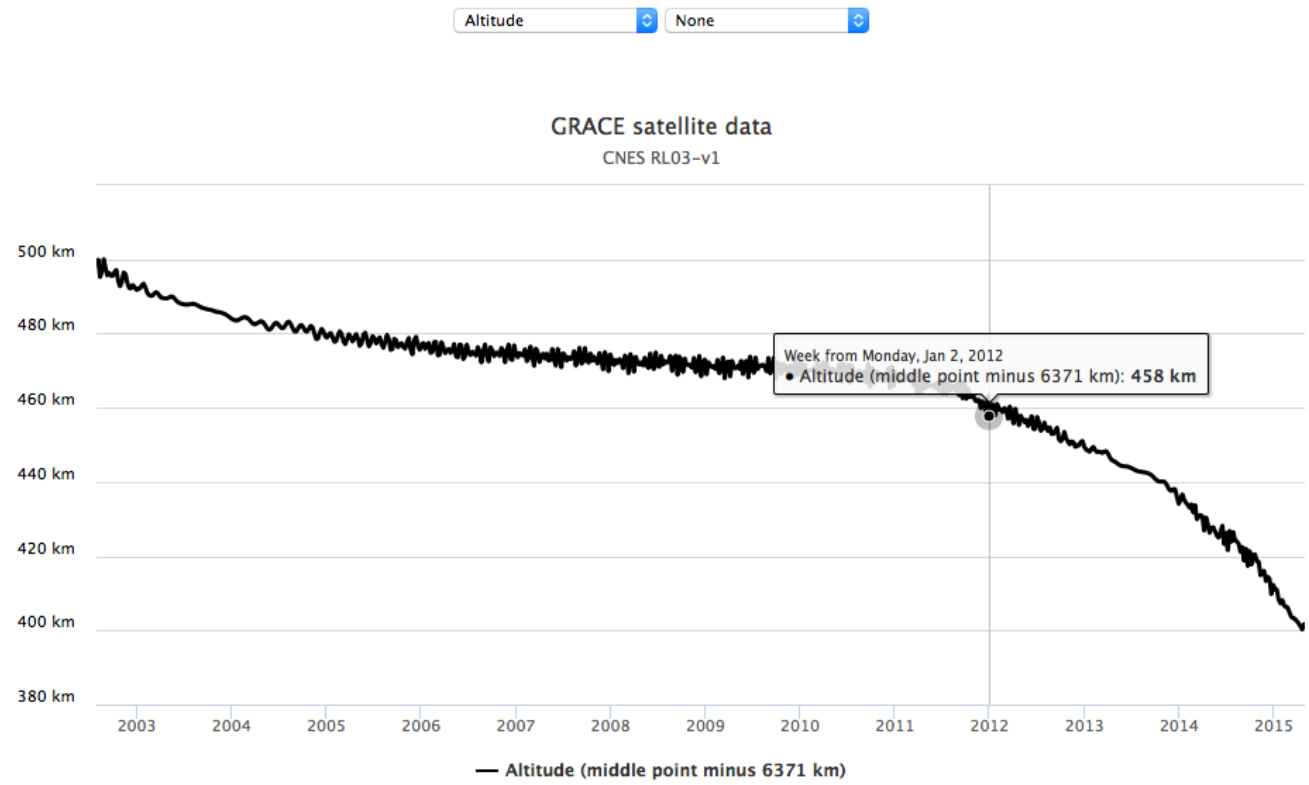
News

- Statistics module
  - This page allows to plot any time series of interest to the project.
  - For example, the GRACE altitude, the GRACE inter satellite distance and the number of revolutions per day are currently implemented

News

European Gravity Service for Improved Emergency Management

Plot GRACE statistics

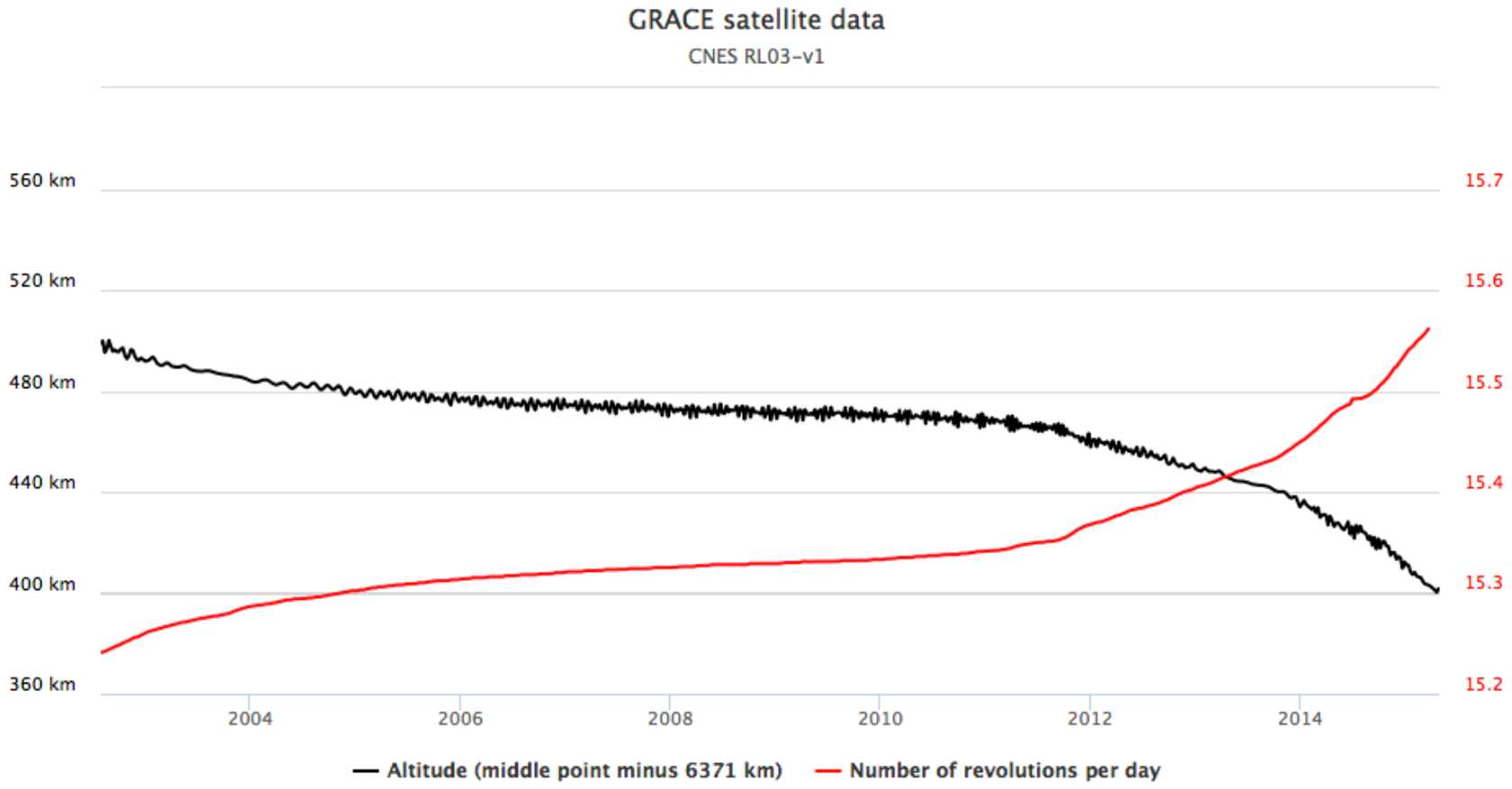


News

- Statistics module
  - It is possible to plot 2 time-series at the same time for comparison purposes (black and red)
  - If units are different, there will be two automatic unit scales: on the left and on the right
  - Example: altitude and number of revolutions per day

News

EGSIEM
European Gravity Service for Improved Emergency Management



News

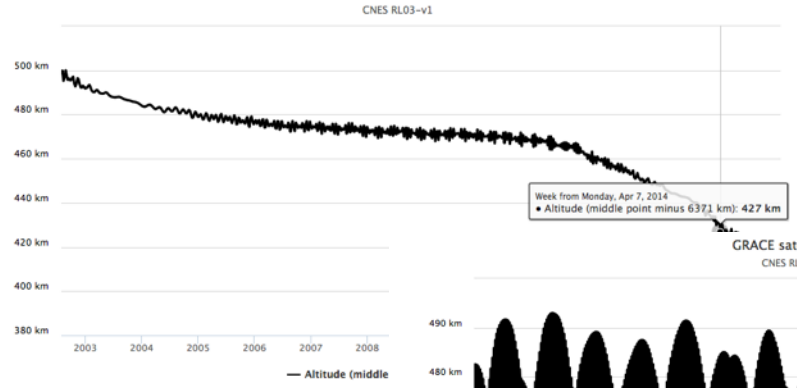
EGSIEM
European Gravity Service for Improved Emergency Management

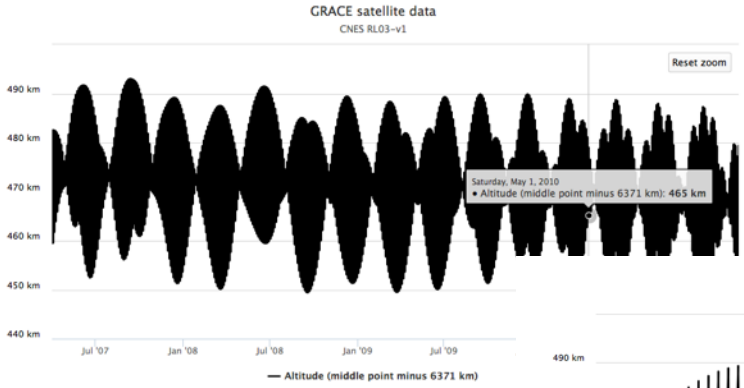
- Statistics module
  - Contrary to the time-series page where the number of points is limited (monthly values over 10 years), this module allows to deal with very long time-series (daily values)
  - Depending on the zoom level, the program automatically averages values on the appropriate time-scale. This process makes it possible to display very long time-series

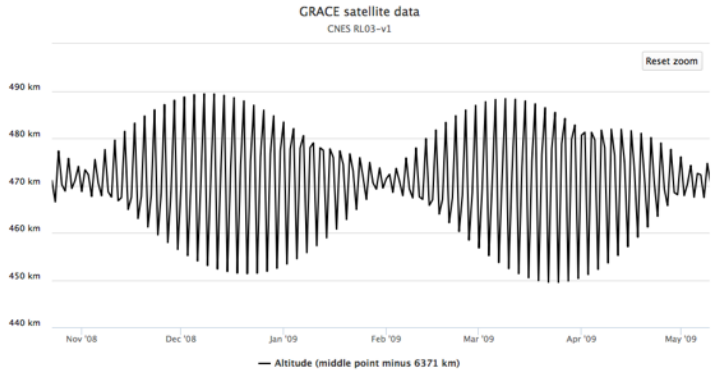
News

European Gravity Service for Improved Emergency Management

- Zoom on altitude







géode&cie

HORIZON 2020

Future evolutions

- Future evolutions
  - The tool is presently a generic tool focusing on GRACE time-series in general. As results of the project come along, it will be possible to focus specifically on the results of the project.
  - The time-series page can host 1°x1° gridded series given by partners (the required format will be provided to the partners).

Future evolutions

- Future evolutions
  - Adding the images of a new grid series is also possible.
  - The statistics page is also ready to host any dedicated time-series that a member would think useful to display: GRACE residuals, etc.

Future evolutions

- Future evolutions
  - Another useful improvement for the time-series module would be to propose a way for users to easily save and share their analysis configurations. This possibility is currently being studied.
  - Any ideas welcome, we will study the possibilities to make them possible.

Future evolutions

- Thank you for your attention.
- The EGSIEM Plotter is available at plot.egsiem.eu