VirES for Aeolus

Virtual Workspaces for Earth Observation Scientists

Specification, Development, Maintenance & Pre-Operations

VirES for Aeolus
Online visual analysis of Aeolus data

EGU2020-22439
Session AS1.35
05 May 2020, 08:30-10:15

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Outlook

- Presentation of service
- Overview of webclient
- Examples of available products
  - L1B, L2A, L2B, L2C
  - AUX MRC, RRC, ISR, ZWC, MET
  - ADAM Albedo
- Conclusion

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VirES for Aeolus Service

- Web client accessible with any modern browser to directly visualize and interact with ESA's Earth Explorer Aeolus wind profiling mission

  https://aeolus.services

- Service provided by ESA, implemented and operated by EOX
- Highly interactive data exploitation and retrieval interface
- Collaboration between experts in the field and project partners DLR and DoRIT and service developer EOX to understand and provide functions relevant to users
- Service has been actively further developed and improved since the Aeolus launch August 2018 in close collaboration with its users and project partners
- Currently made available for Cal/Val users, will be open to the public when the data is made available publicly

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Webclient overview

- Workflow:
  - Interactive tutorial available to quickly get you introduced to the client features
  - Selection of desired product
  - Selection of time of interest
    - Timeline shows data availability
  - Analysis of displayed data on 3D globe and on analytics panel
  - Possibility to download selected data for further processing (netCDF and packaged original files)
- 3D globe:
  - Fully interactive 3D visualization
  - Provides 3 different projections (3D globe, 2.5D "columbus" and 2D)
  - Selection and styling of parameter to be shown in products settings
  - Possibility to import kml to display additional features
- Analytics panel:
  - Fully interactive plotting widget
    - Axis independent zoom, pan, information on every rendered point, and more
  - Customizable plot configuration
    - Any number of connected plots
    - Axis configuration
    - Extensive parameter configuration options
  - Interactive filters panel with histogram information on data distribution

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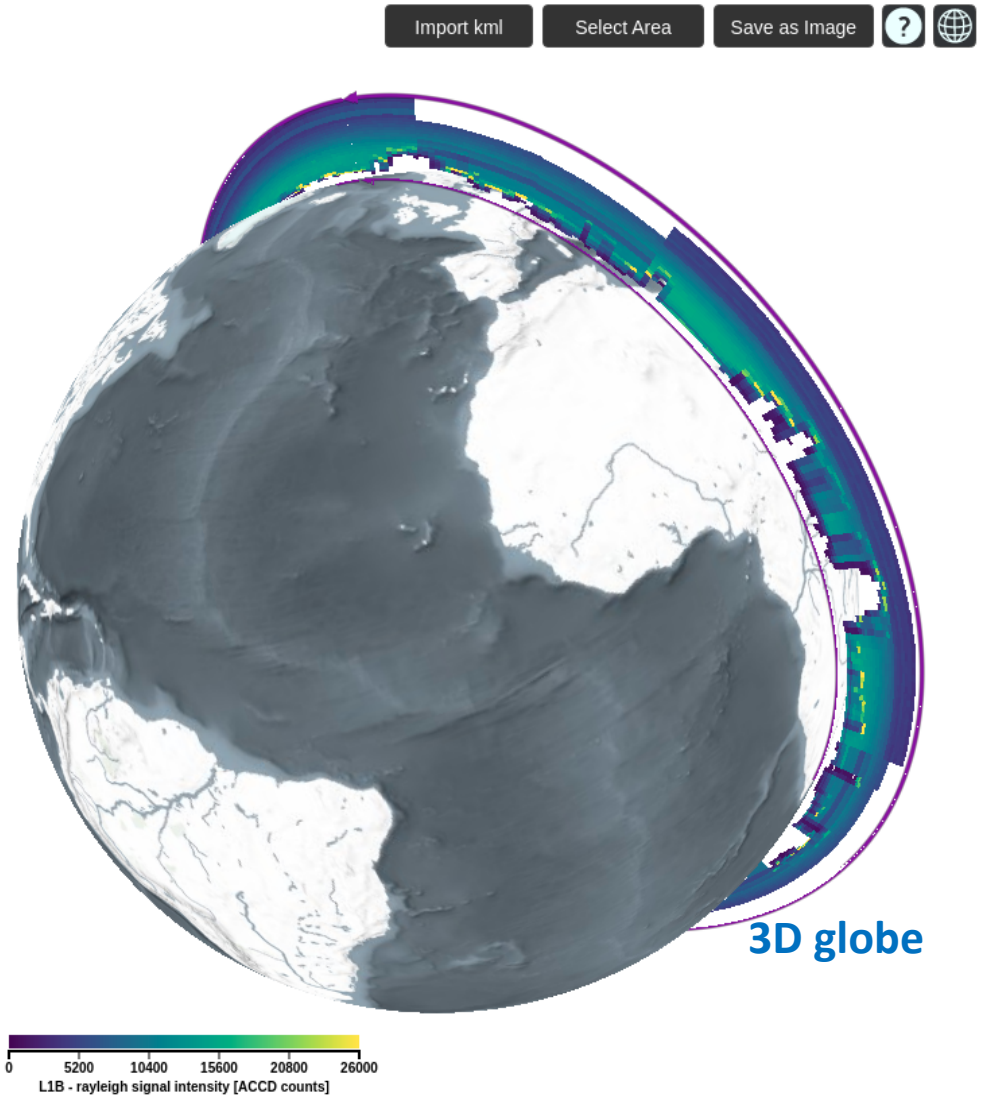
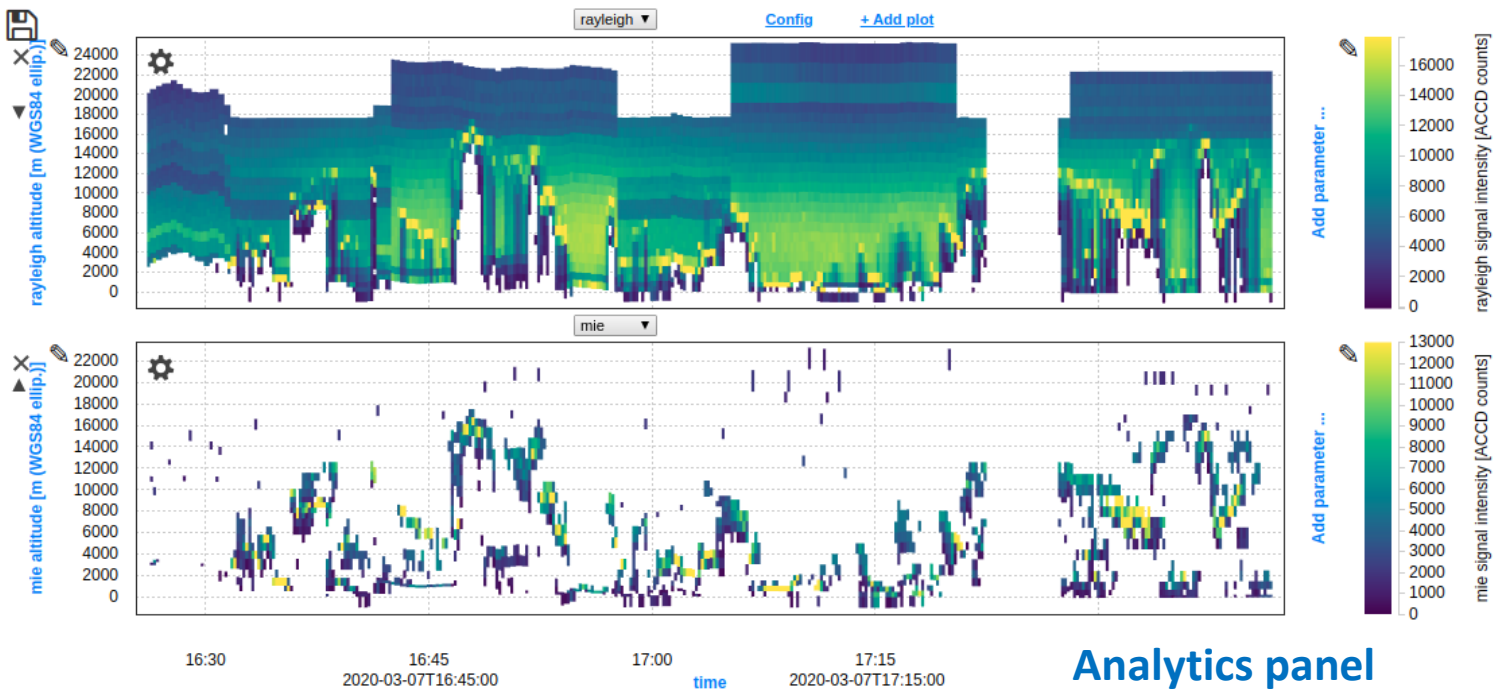
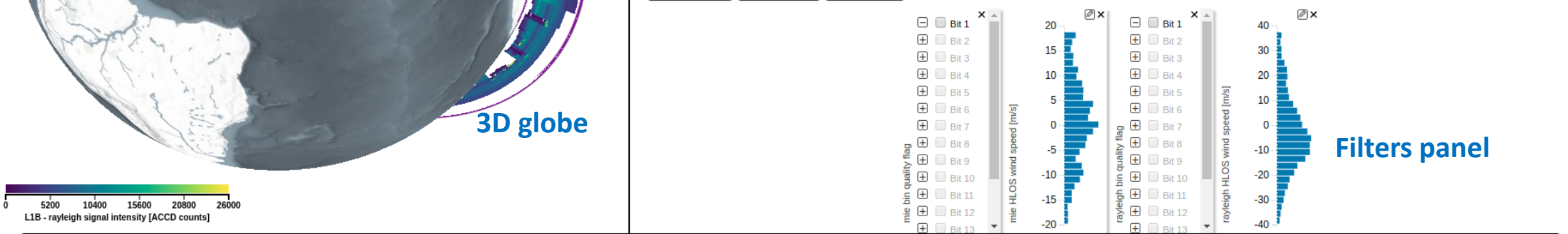
Web client overview (L1B)



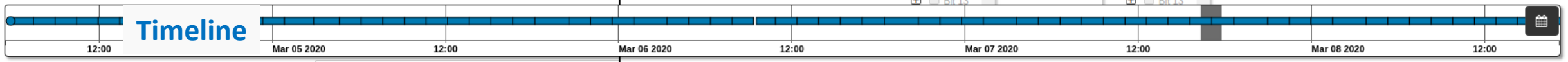
3D globe



Analytics panel



Filters panel



Timeline

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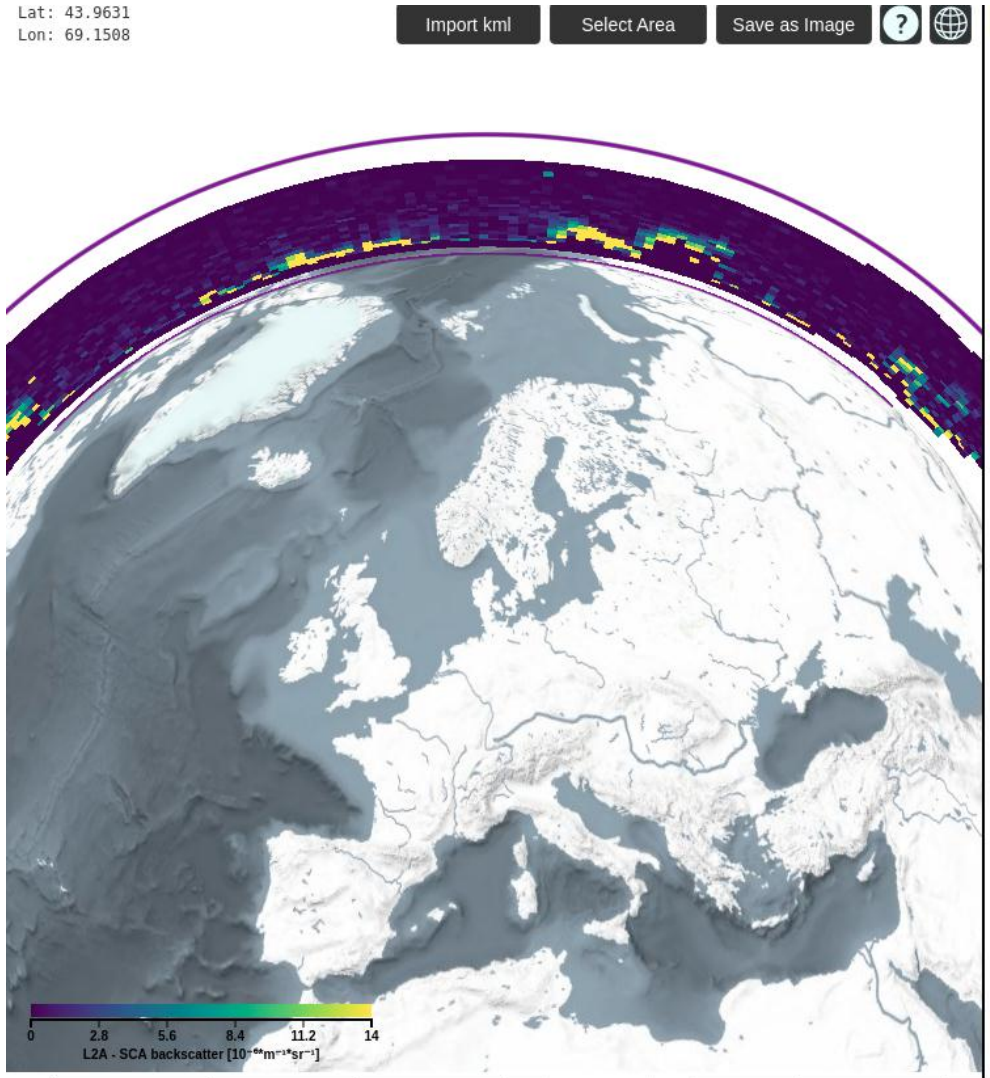
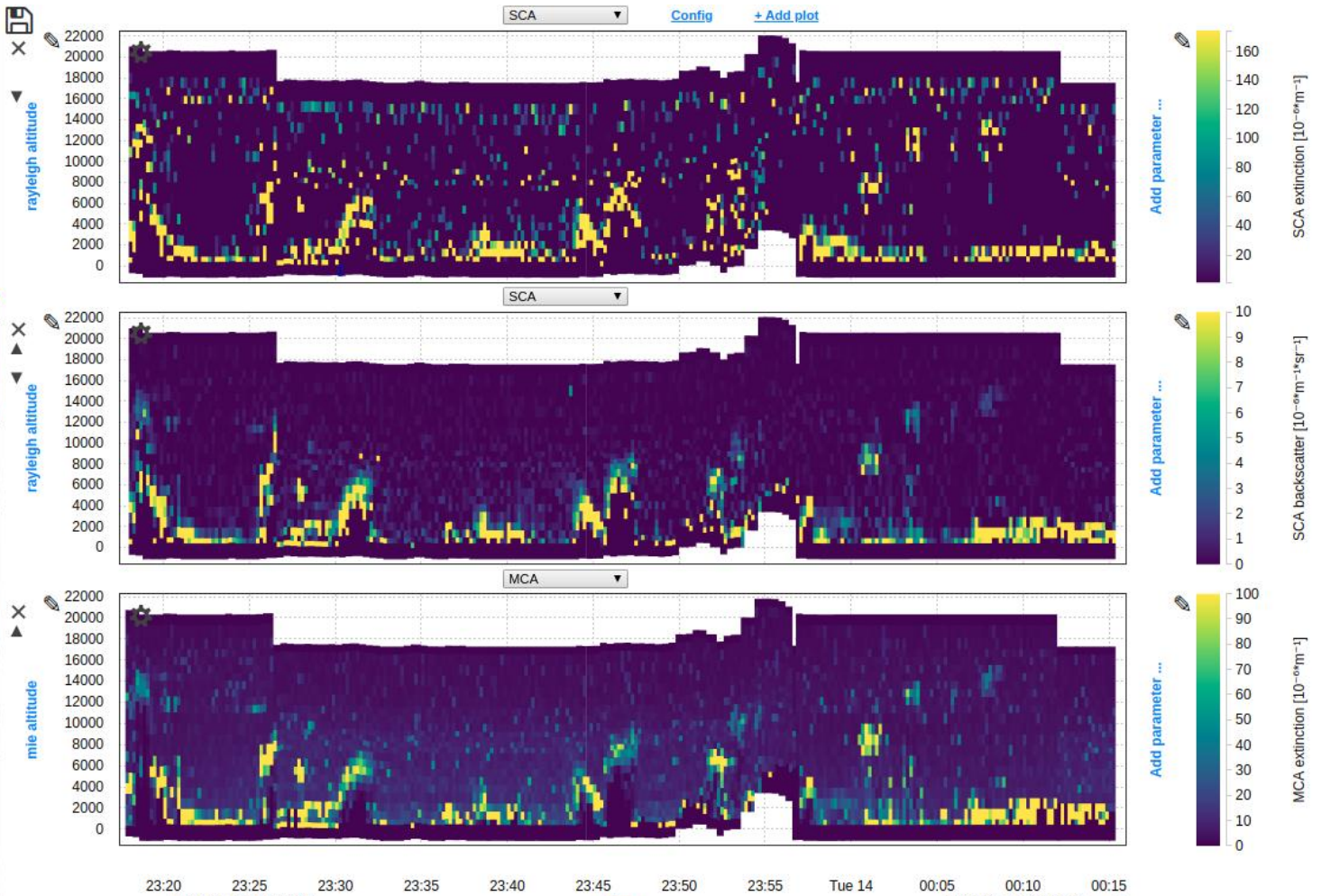
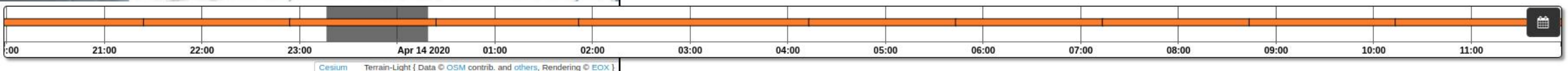
L2A Example





Multiple connected plots (e.g. SCA and MCA parameters)



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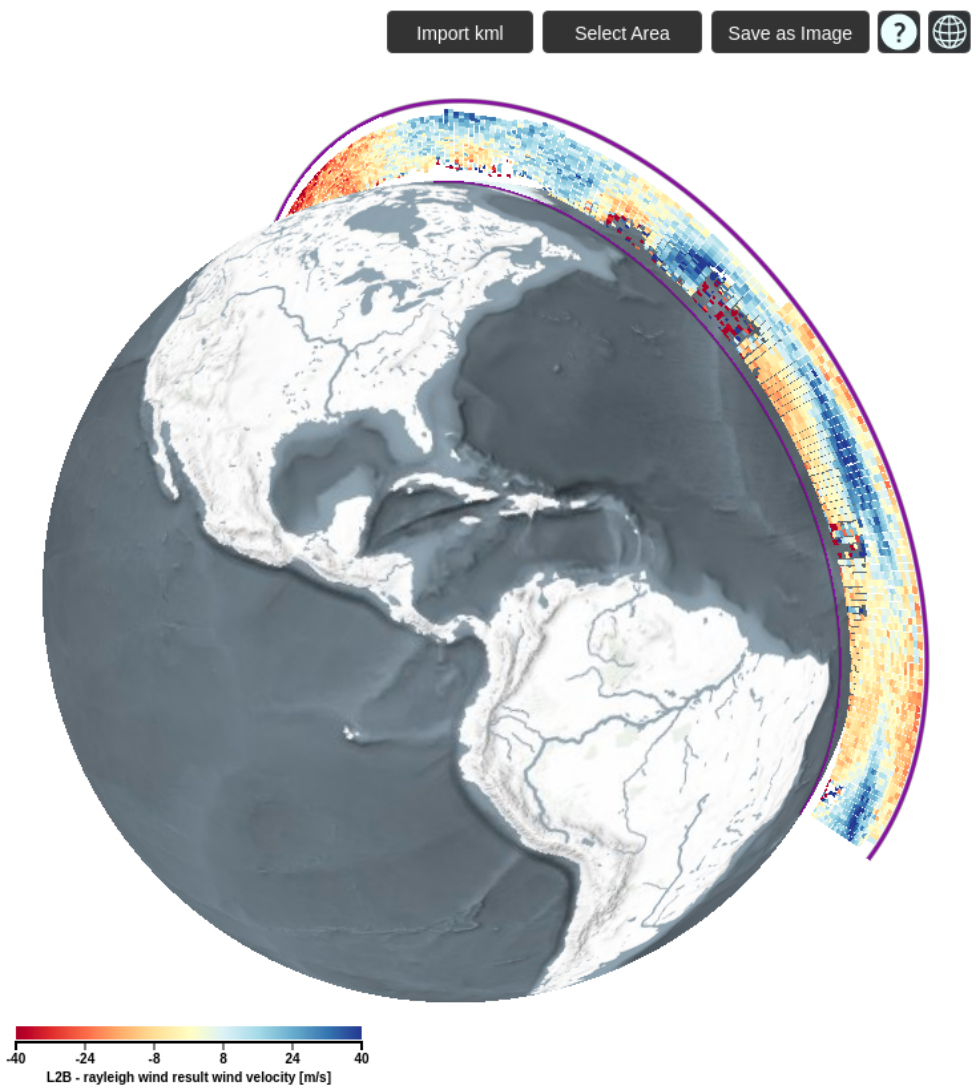
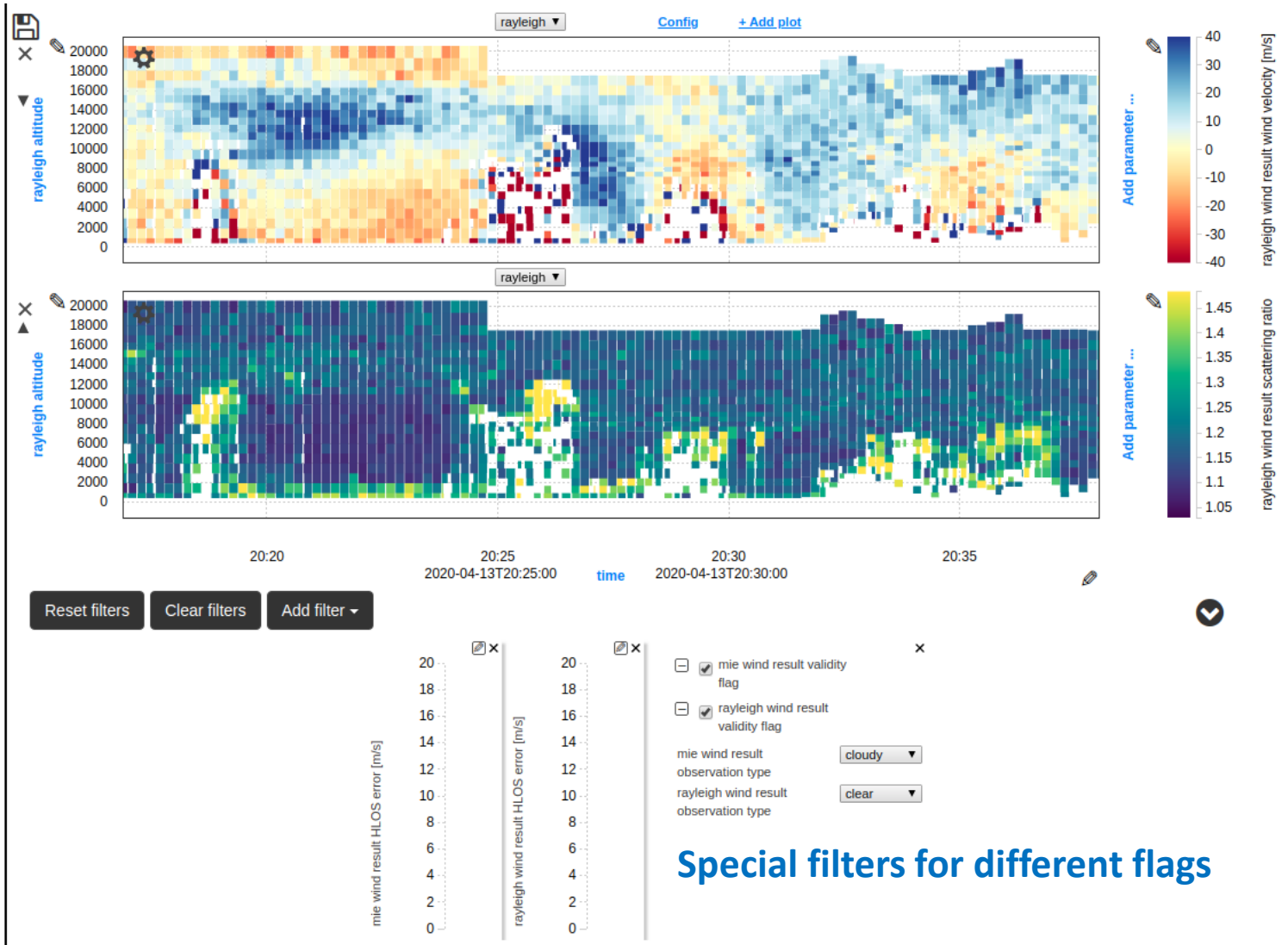
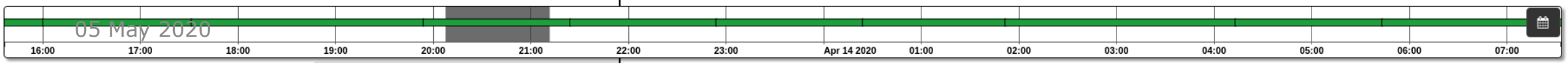
L2B Example





Special filters for different flags



Cesium Terrain-Light { Data © OSM contrib. and others, Rendering © EOX }

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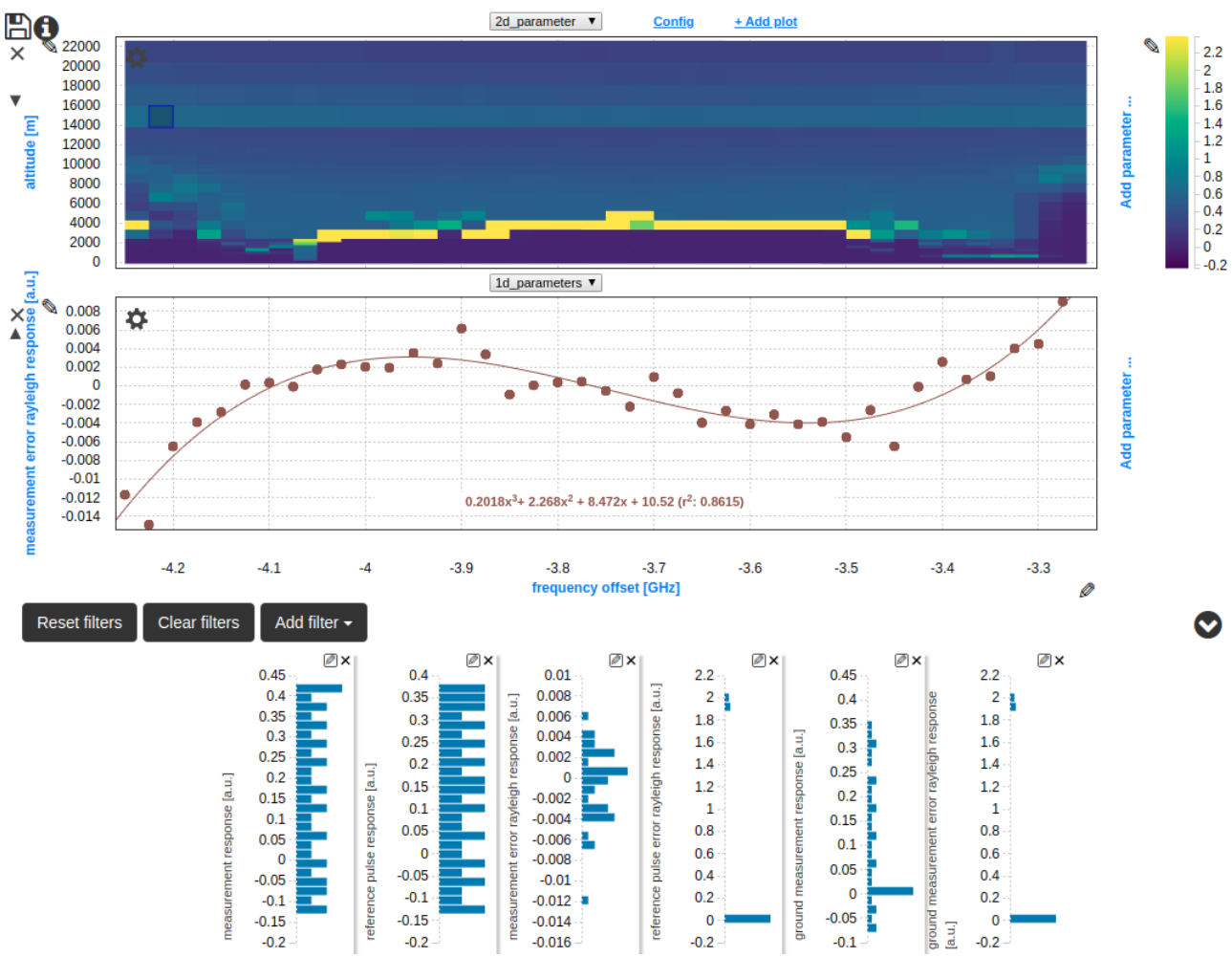
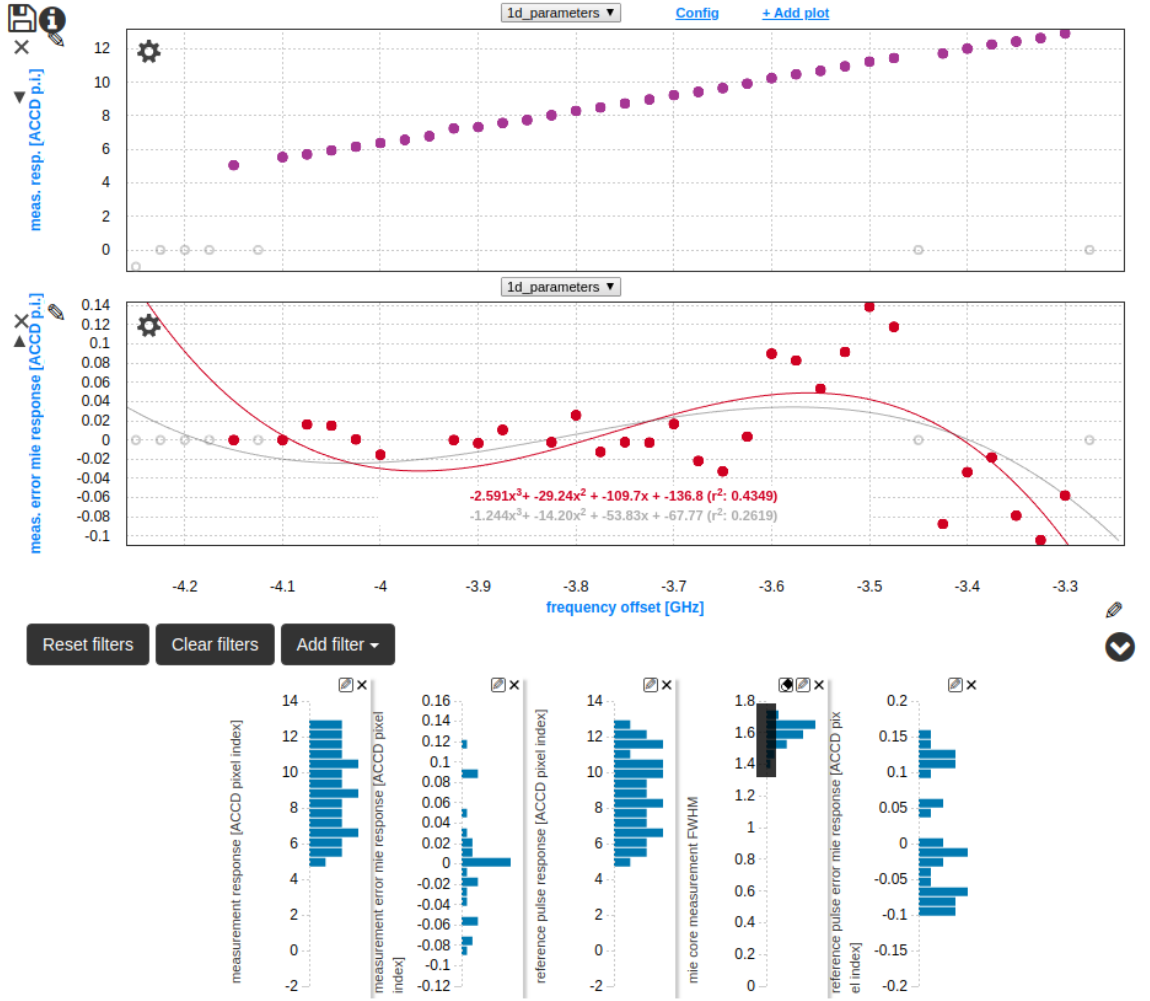
MRC/RRC Example



Visualization of parameters with different dimensions with shared x Axis



Real time rendering of regression after filters applied

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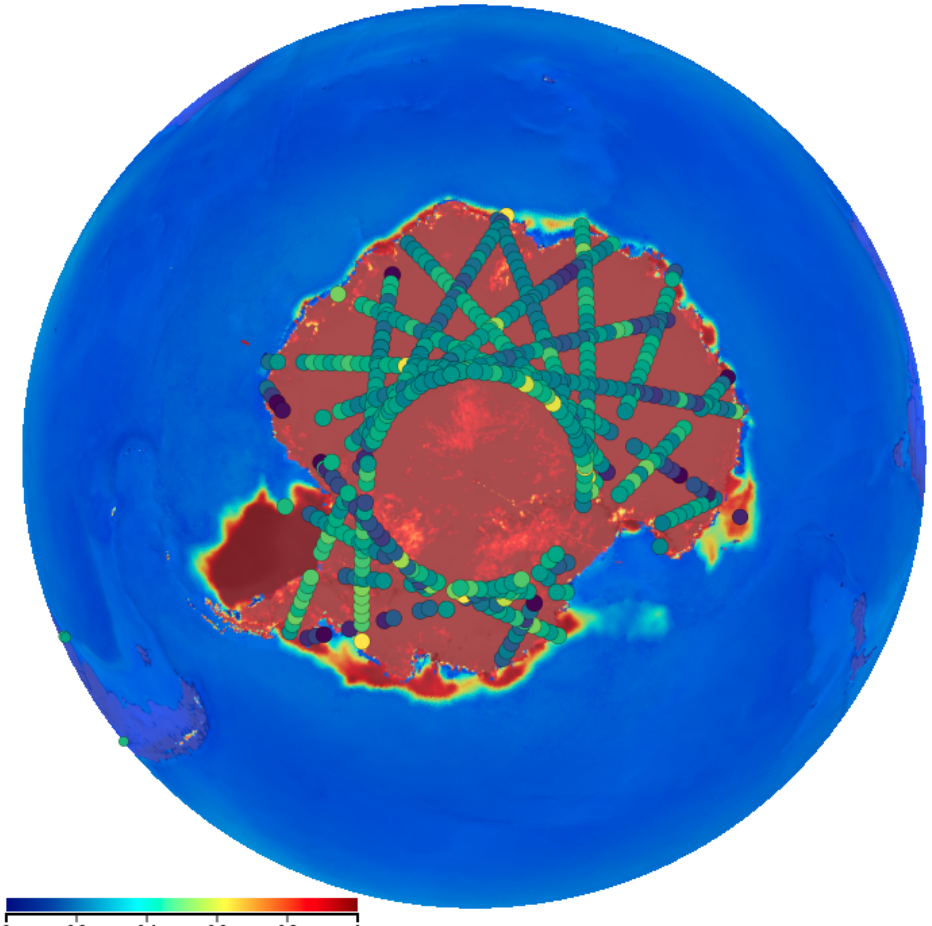
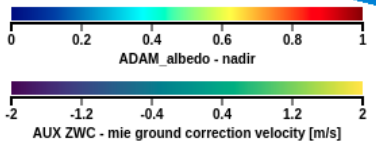
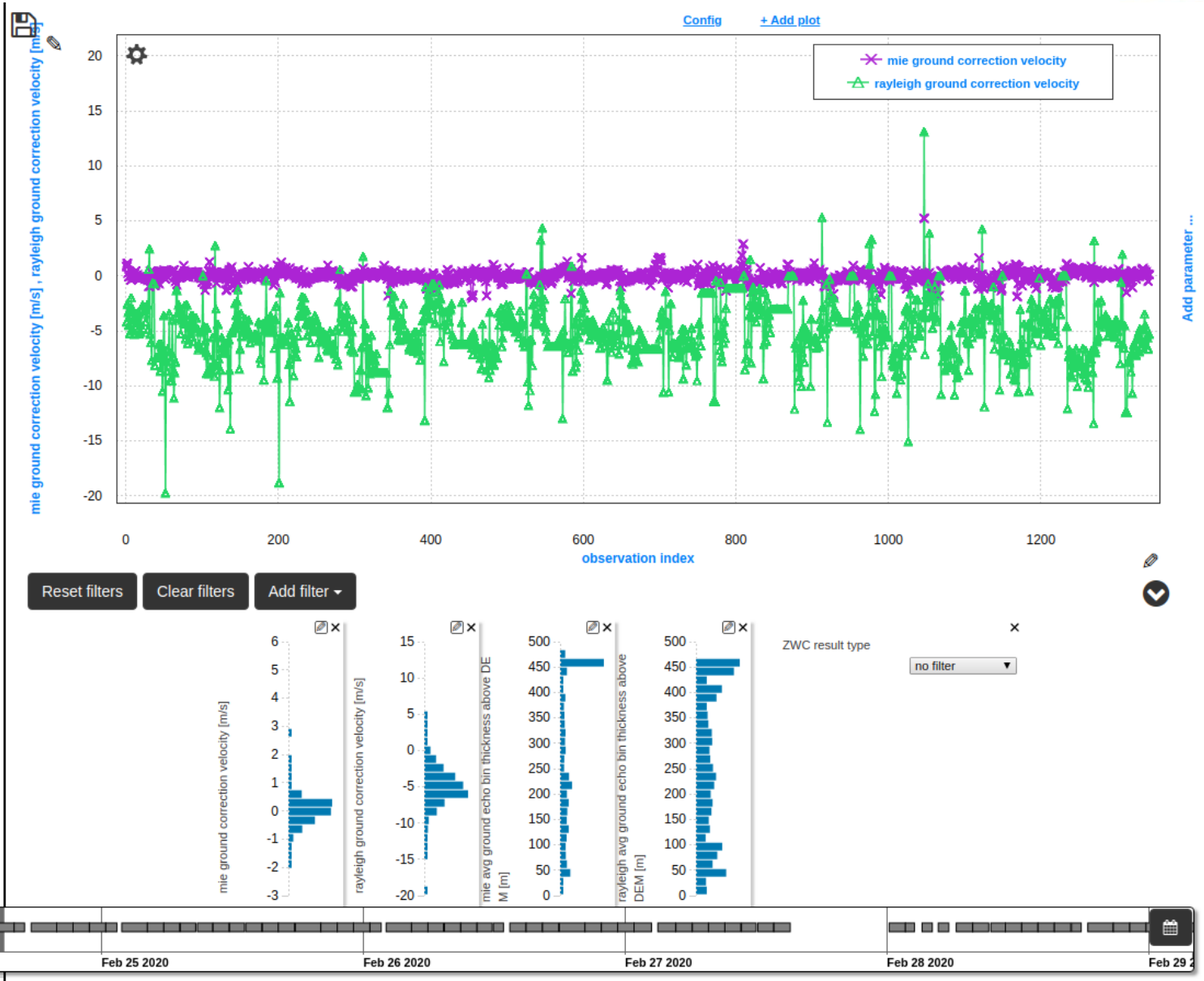
ZWC Example

Visualization of albedo on globe



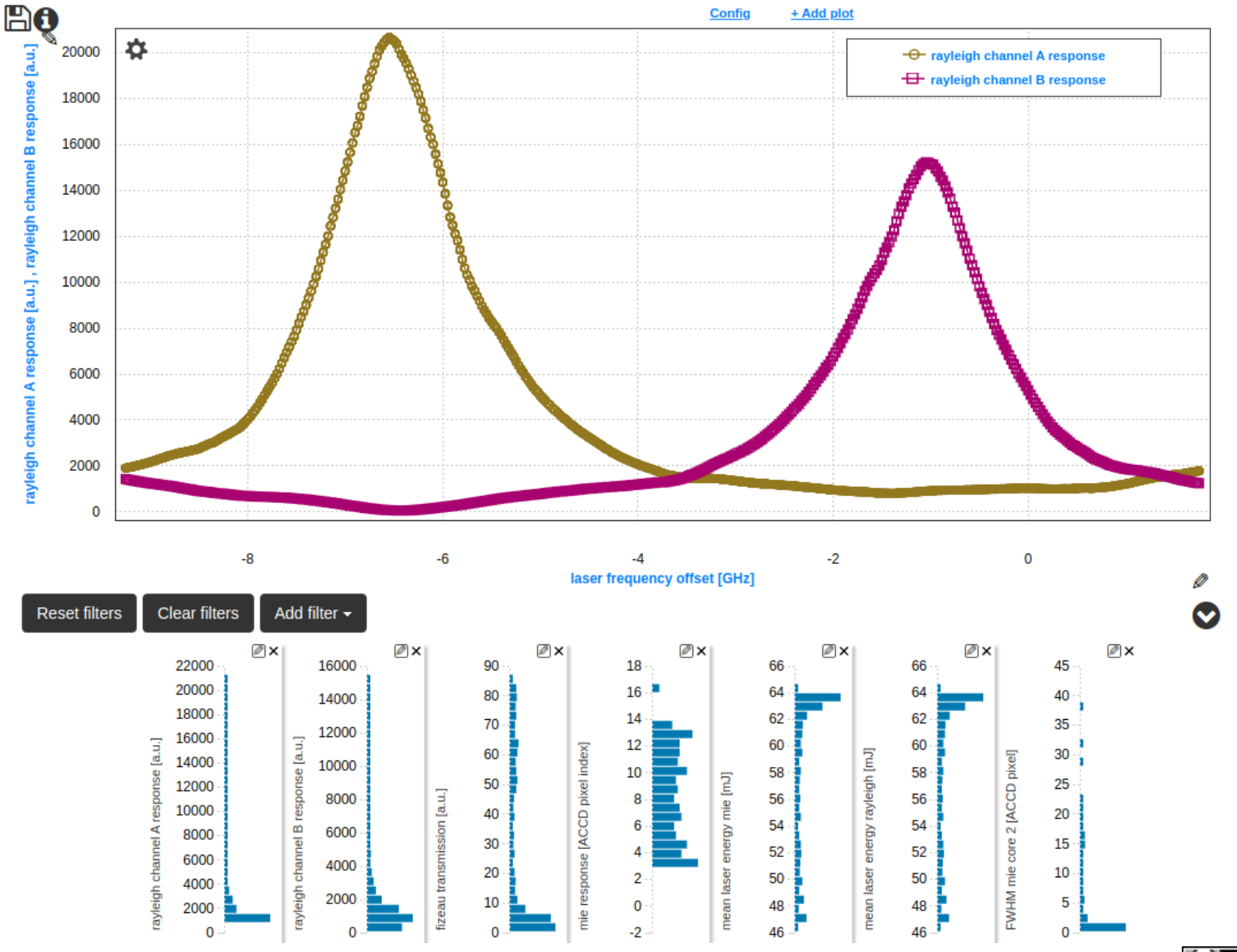


Visualization of 1D data



ISR Example

Visualization of 1D on plots, customization of symbol, colour, line connection, …



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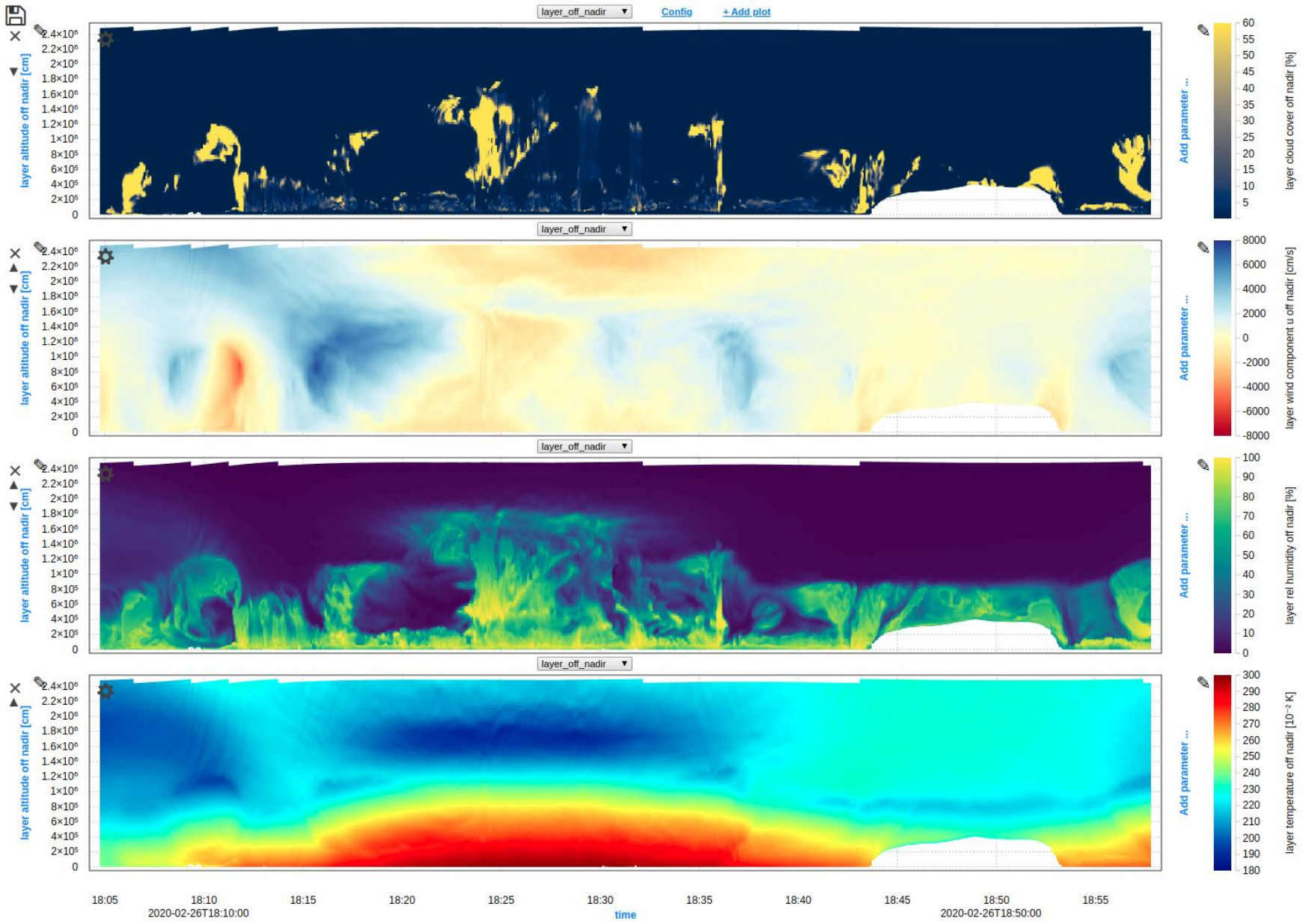
AUX MET Example

Customization of rendering style for individual parameters



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Conclusion

- VirES for Aeolus will be made available to the general public synchronized with the NRT wind data release planned on the **12 May 2020**

  Web service access currently only granted by ESA (Contact EO Help desk to request account)
- Service in continuous development, all feedback, questions and feature suggestions are welcome!

https://aeolus.services

Contact

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