



Archive of the Science Data Centre

Leibniz Institute for Solar Physics (KIS)

CARL SCHAFFER NOVEMBER 2021

KIS Science Data Centre Archive

Brief Intro:

- Central Archive for data from GREGOR and VTT
- 260k datasets
- 4 instruments (GRIS, GRIS-IFU, LARS, ChroTel)
- Oldest data from 2014
- Most FITS data compliant with SOLARNET Metadata Recommendations [1]

Features:

- Data Storage with common data model
- archive.sdc.leibniz-kis.de: web interface for data preview and download

New:

- GRIS-IFU (integrated field unit) data supported now ~400 datasets
- ME inversions available for GRIS data ~1k datasets
- Prototype for Python API using sunpy
- Backend upgrade: Rucio for data storage, automated reduction of incoming data
- Dedicated tool for data inspection developed in-house

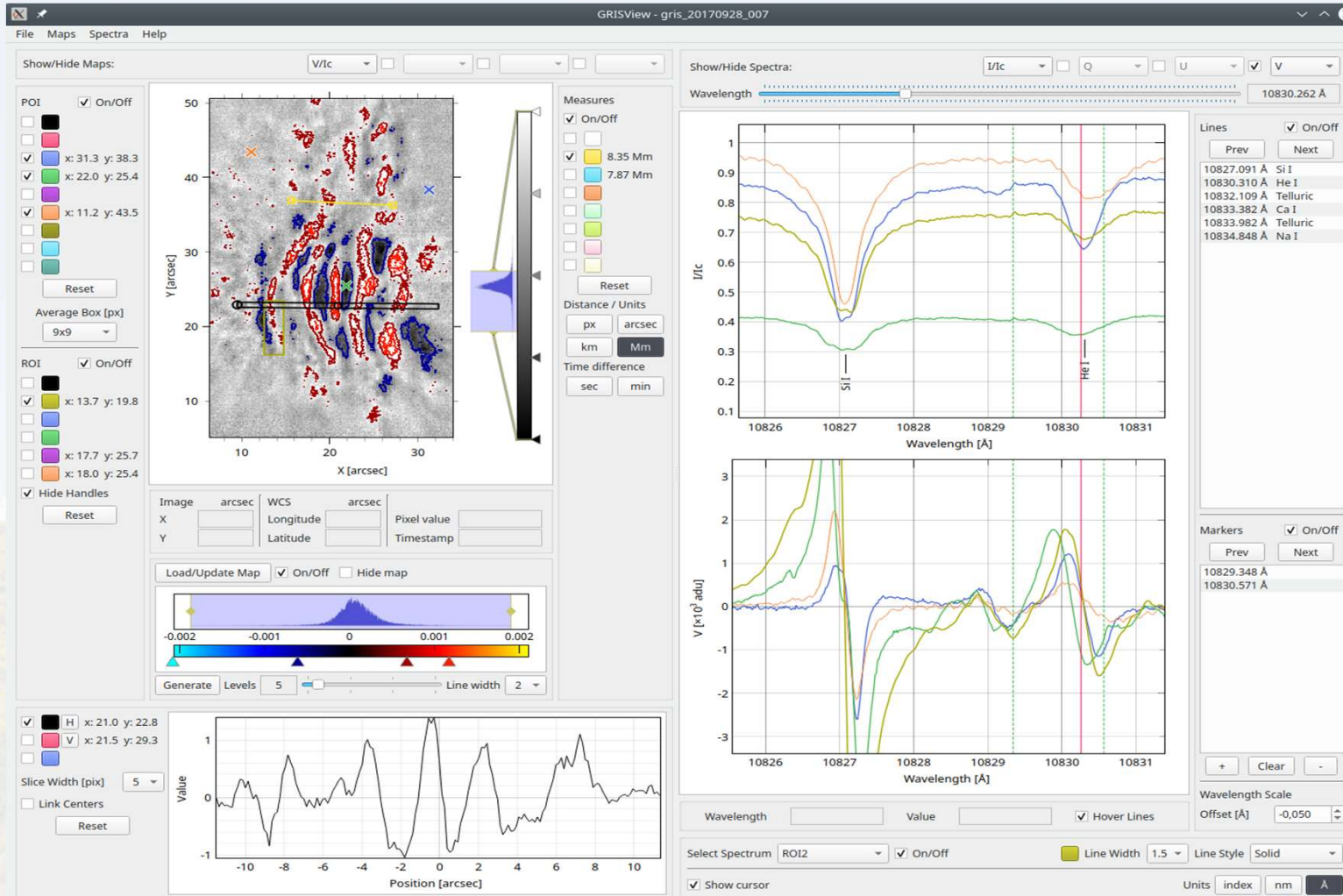
[1] Stein Vidar Hagfors Haugan, Terje Fredvik
SOLARNET Metadata Recommendations for Solar Observations
<https://arxiv.org/abs/2011.12139>

The screenshot displays the Science Data Centre web interface. The top section shows search filters for instruments (GRIS@GREGOR, LARS@VTT, ChroTel) and general search options (Observation Date, Observation Time, Position on Solar Disk). A 'Live Demo' button is visible. The main content area shows a data preview for observation 'gris_20140503_026', featuring a heatmap of 'GRIS Inversions: Fe 11566.017 Å' and an 'OBSERVATION DETAILS' table.

OBSERVATION DETAILS	
Observation Name:	gris_20140503_026
Observation Start [UTC]:	2014-05-03 17:17:35
Observation End [UTC]:	2014-05-03 17:34:09
Observation Target:	Sunspot(s)
Filter / Central Wavelength [nm]:	1.565um/1566.57
Exposure time [s]:	51
Field of View [arcsec x arcsec]:	71 x 66
Resolution [pixel x pixel]:	310 x 469
Scan Mode:	single map pol
Individual Files:	310
See on Helloviewer:	here

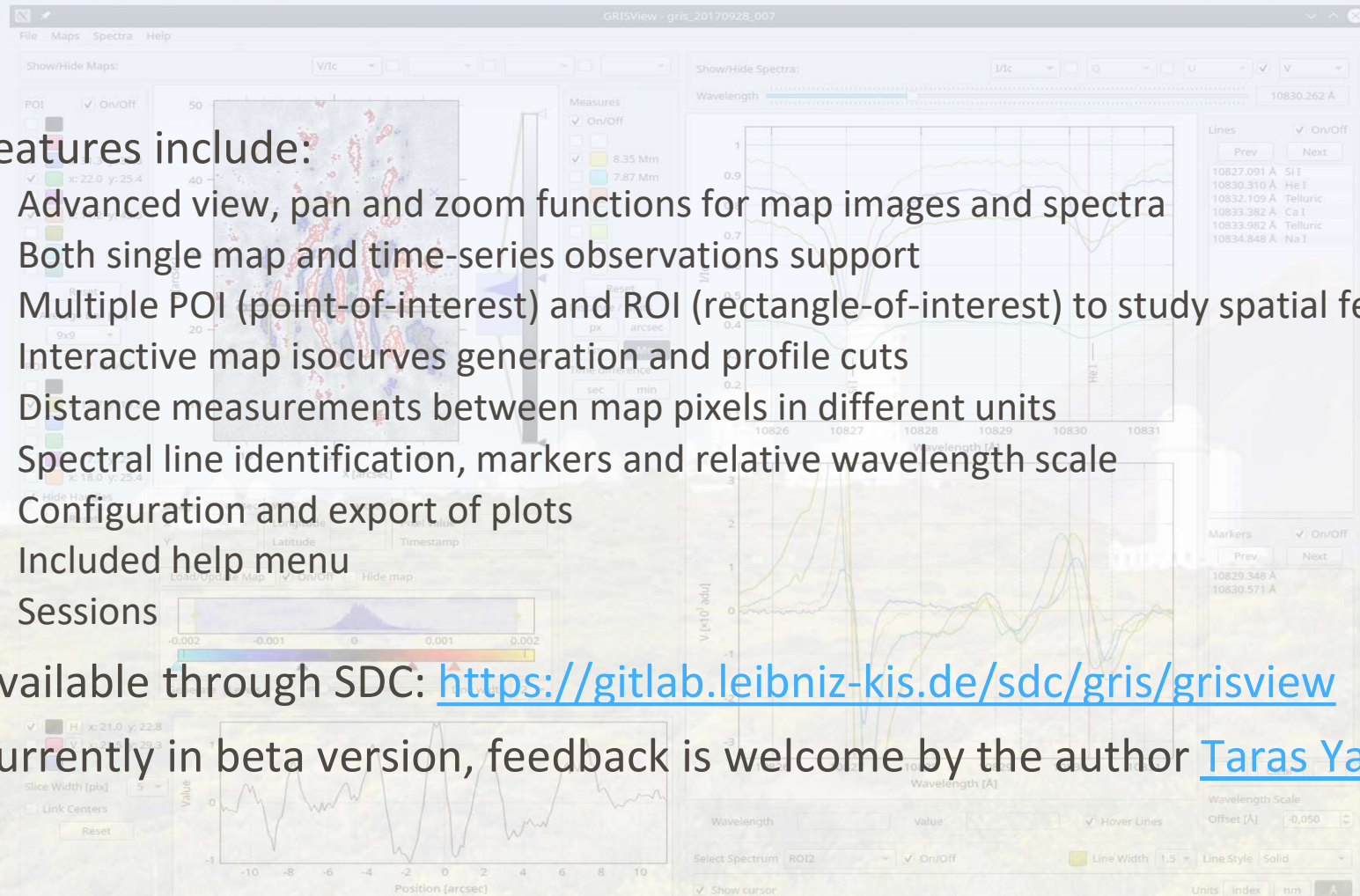
Below the heatmap, there are three smaller thumbnail images showing different views of the data. At the bottom, there are navigation links for 'Leibniz KIS', 'GREGOR', 'GRIS', 'VTT', 'LARS', 'Calibration Resources (gitlab)', 'Cite us', and 'Contact us'. A footer note states: 'All data is provided as-is and may change without notice. If you have questions or feedback, feel free to contact us.'

grisview – inspect spectropolarimetric data



grisview – inspect spectropolarimetric data

- Features include:
 - Advanced view, pan and zoom functions for map images and spectra
 - Both single map and time-series observations support
 - Multiple POI (point-of-interest) and ROI (rectangle-of-interest) to study spatial features
 - Interactive map isocurves generation and profile cuts
 - Distance measurements between map pixels in different units
 - Spectral line identification, markers and relative wavelength scale
 - Configuration and export of plots
 - Included help menu
 - Sessions
- Available through SDC: <https://gitlab.leibniz-kis.de/sdc/gris/grisview>
- Currently in beta version, feedback is welcome by the author [Taras Yakobchuk](#)



Resources

Feel free to be one of the first to browse our freshly launched Data Center resources:

CS3

- SDC landing page: <https://sdc.leibniz-kis.de>
- Web archive: <https://archive.sdc.leibniz-kis.de>
- Helpdesk link: <https://sdc.leibniz-kis.de/en/support>
- Python api prototype: <https://sdc.leibniz-kis.de/en/software-tools/translate-to-english-python-api-prototype>
- Public tools: <https://gitlab.leibniz-kis.de/sdc>
- Data inspection tool grisview: <https://gitlab.leibniz-kis.de/sdc/gris/grisview>

Slide 5

CS3 Final links are unclear until the website has been moved
Carl Schaffer; 09.11.2021