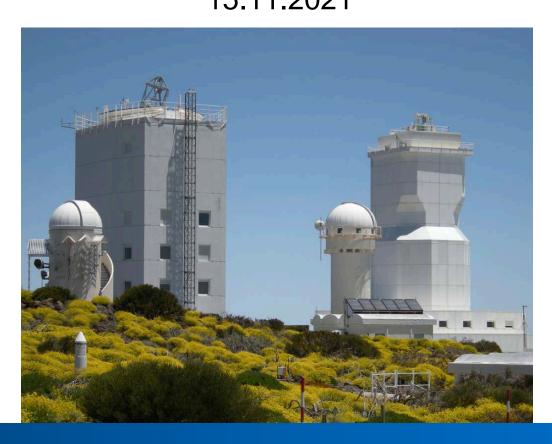


Leibniz-Institut für Sonnenphysik (KIS) GREGOR and VTT @ Solarnet

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Introduction

- In 2021 general difficult situation due to Covid-19 pandemic travel restrictions. At the begin of the year only limited maintenance and no assistant on site.
- GREGOR observations were only possible from Monday to Friday, which reduced the available number of observing days. Most observations were performed remotely with support from KIS on site-staff (Thanks).
- Situation improved from September on, but then already long planned GREGOR maintenance started in October
- In total 133 observing days (until now + planned for rest of the year), SOLARNET with 28 days.





GREGOR Status

- Dome membrane refurbished
- Primary mirror re-coated in October, improved alignment of telescope optics
- GREGOR Slow polarimeter modulator (IRSOL / KIS): first tests on site were successful.
- GRIS upgrade (IAC) started (two more channels 770nm + 854nm). Available from 2022B
- HiFI upgrade (AIP) started (6 wavelength channels, broad band and small band). Available 2022A







- VTT control system is very unstable and works not reliable
- Tried to improve with low success
- Entrance window has bad quality, investigations were done, but reason unclear. New window needed
- General a lack of maintenance because of reduced available resources (Covid, other projects)
- Plan established to refurbish VTT (entrance window, control system, AO, maintenance) until September 2022, but with uncertainties
- Resources and money needed







GREGOR (available instruments):

- GRIS spectro-polarimetry in near infrared (old configuration): 1.0µm 2.3µm, polarization 1-1.3µ and 1.5-1.8µm; slit-scanner (64"x0.26" simultaneously, 64" x 60" scanned) or IFU (FOV: 3" x 6" simultaneously, 60"x60" scanned)
- BBI (broad band imager): two independent wavelength channels, 30fps, 59"x50", 0.023"/pix
- HiFI/M-Lite: 6 fix spectral windows: G-Band (430.7nm,71"x60", 0.027arc/pix, 25fps,), blue continuum (450.6nm,71"x60", 0.049"/pix, 25fps), narrow and broadband @ H-Halpha (77"x61", 100fps), Ca-H (396.8, 48"x31", 0.031"/pix,100fps) and TiO (705.7nm,77"x61", 0.049"/pix,100fps)

2022A observation campaign April 4th until August 3rd,2020. Available observation days depends if remote or on-site observations are possible (Covid-19 pandemic dependence). For 1st half year conservative planning, only remote observations and now weekends.





Perspective

GREGOR

- LEAP (KIS, Univ. Geneva, IRSOL, Univ. Stockholm): High resolution Spectro-polarimeter with FPI
- BBI upgrade (KIS), FOV 74"x 51", 0.023"/pix, 130fps.

VTT

- IBIS (INAF): High resolution Spectro-Polarimeter with FPI
- HELLRIDE (KIS,): Helioseismic Spectro-Polarimeter with FPI
- FaMuLUS (AIP): Spectrograph with fast cameras
- LARS (KIS): a laser-frequency reference comb for the measurement of line positions on an absolute wavelength scale.
- Supported observations from September 2022, but depending on status of refurbishments

