

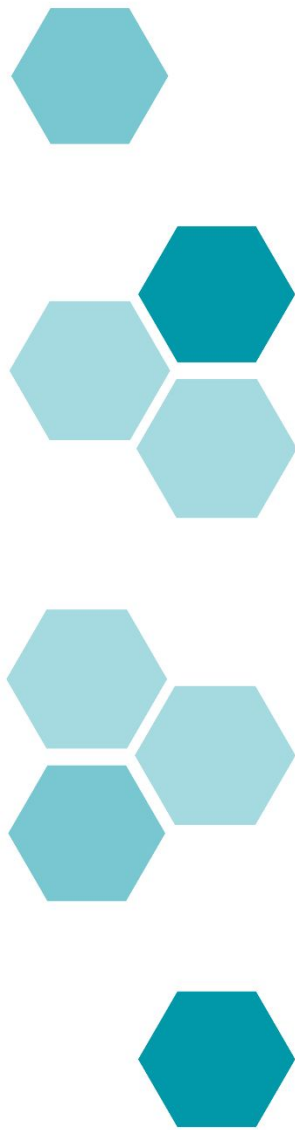


ACTRIS CCRES

HKDs service
M.-A. Drouin, M. Van Hove

CCRES/CLU Workshop, Matera – November 7th, 2024

Analysis of CHM15k housekeeping data



Grafana - Last 6 months - CHM15k

	Palaiseau	Payerne	Bucharest	Cabauw	Evora	Galati	Granada
Optical quality index (% > 90 %)	94	10	87	99	58	41	60
Laser quality index (% > 99 %)	100	100	100	100	100	15	100
Warning 'Window contaminated' (% > 0)	0	53	0	0	30	12	20

	Juelich	Lampedusa	Leipzig	Limassol	Lindenberg	Mace-Head	Munich
Optical quality index (% > 90 %)	53	64	0	54	98	50	90
Laser quality index (% > 99 %)	0	100	100	100	100	100	100
Warning 'Window contaminated' (% > 0)	2	11	95	17	0	0	0



Grafana - Examples

Optical quality index decreasing & 'Window contaminated' (& Warnings 'high noise level')

Laser quality index decreasing

Warning 'NTP' (3 % of data)

=> Wrong timestamps in the files in the long-term

Warnings 'laser ageing' & Errors 'signal recording', 'rs485', 'detector voltage'

=> Frequent rebooting of the device

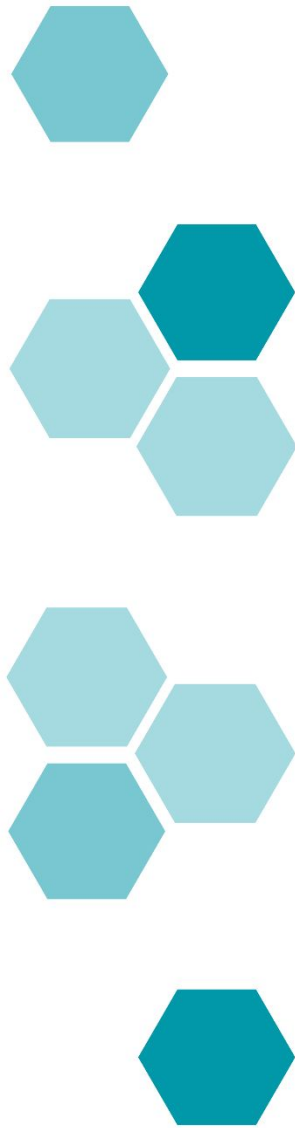
Grafana - Overview 6 months CHM15k

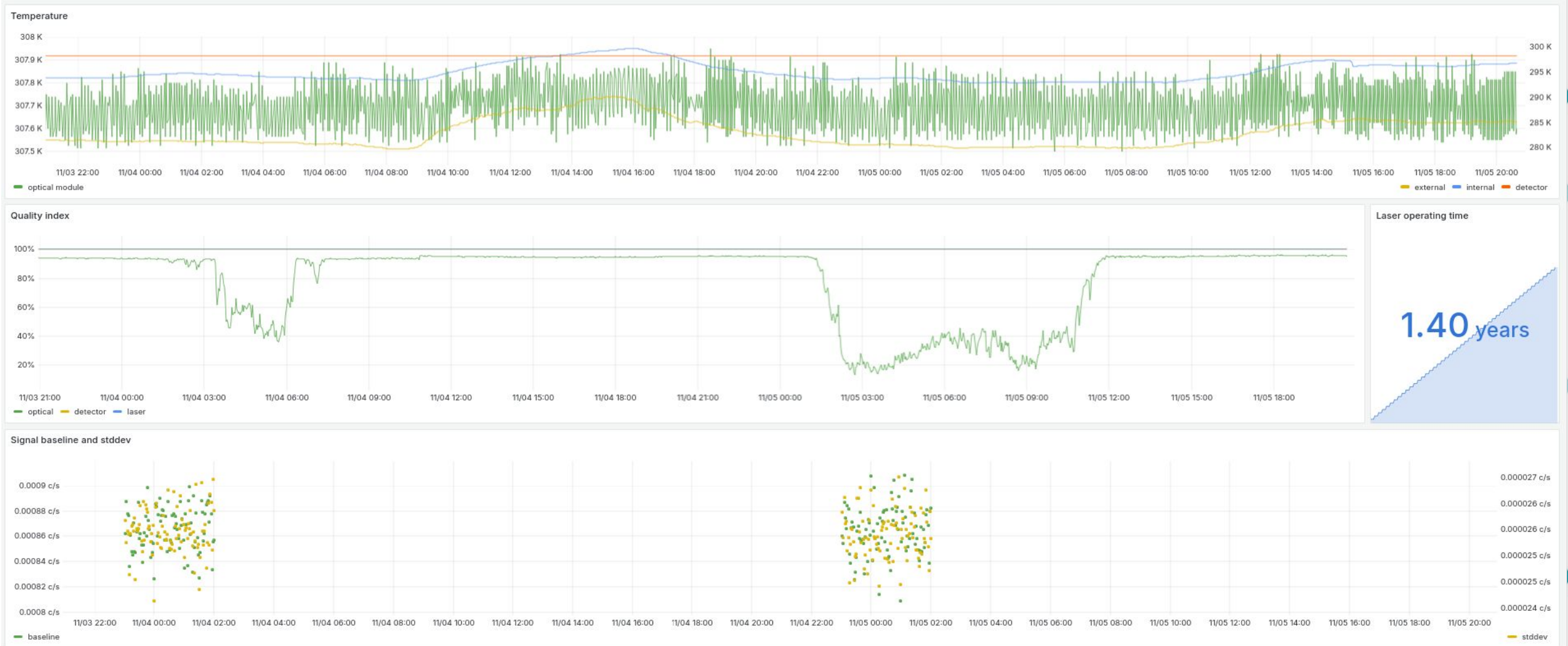
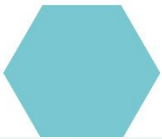
Importance of Grafana to monitor instruments HKD in the long-term

New variables : laser_pulses, laser_shots, stddev, baseline

PI & managers to be contacted by CCRES

Next step : automation of the monitoring (M.-A. Drouin)



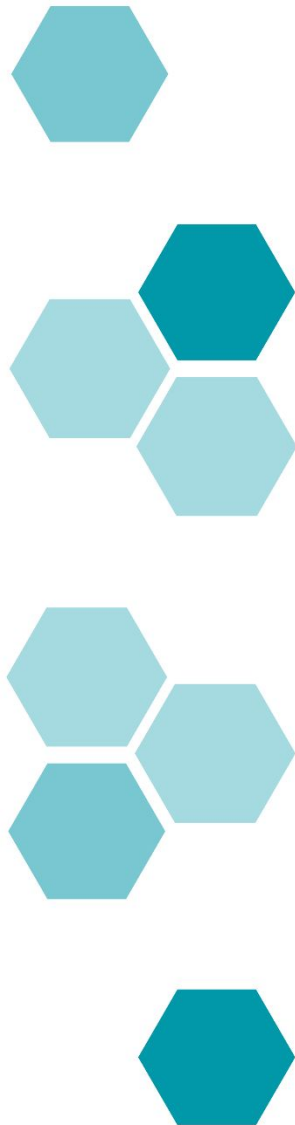
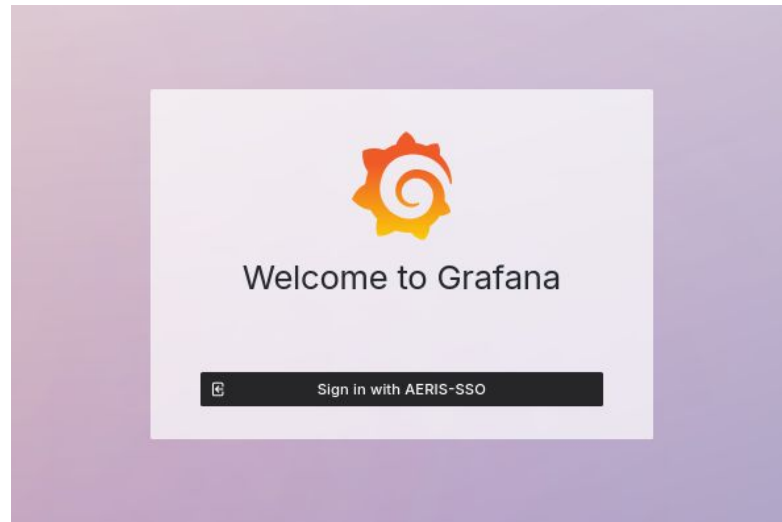


Updates on grafana



Reminder on access

- Server available at <https://ccres.ipsl.fr/grafana/>
- Documentations on how to connect
 - <https://ccres.ipsl.fr/docs/>
 - Once you connected for the first time don't forget to send an email to ccres-dev@listes.ipsl.fr



Status on grafana

- Monitoring for 3 types of instruments
 - RPG HATPRO
 - RPG FMCW 35/94 GHz
 - Lufft CHM15k
- At least 1 dashboard for 18 NFs
- Oldest data 01-01-2023
- Users
 - More than 30 registered users
 - 18 users logged in in the last 15 days

- > bucharest
- > cabauw
- > cluj
- > galati
- > granada
- > hyytiala
- > juelich
- > lampedusa
- ▼ leipzig
 - ☰ hatpro leipzig <https://hdl.handle.net/21.12132/3.a217d3ec6e6b47dd>
 - ☰ RPG FMCW 94 leipzig <https://hdl.handle.net/21.12132/3.fa39ba9928544aae>
- > limassol
- > lindenberg
- > mindelo
- > munich
- > palaiseau
- > payerne
- > potenza
- > rzecin
- > warsaw

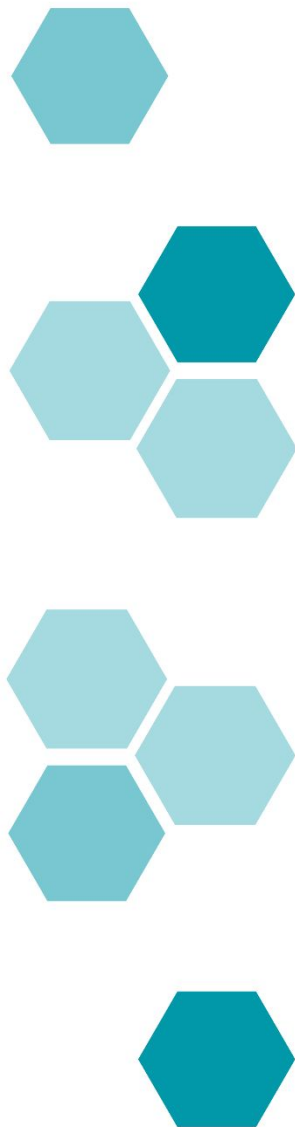
Automatic Alerting

- Goals :
 - Detect HKD parameters that are outside of a defined range
 - Send alerts to define contact(s) for each instrument
 - Create dashboards showing all status
- Units have identified parameters of interests to monitor and range to check
 - For most instruments
 - Tables with HKD parameters are available [here](#)
- Developments are started
 - Create contacts for each each instrument of each stations
 - Create all alerts based on defined parameters
 - First tests will be done for HATPRO of Jülich and Palaiseau
- You **don't need** and **can't** create your own alert on grafana
 - “National facilities” organisation is read only
 - Allows to have coherent rules per instrument/NF
 - Write access to create dashboards and alerts is possible in “sandbox” organisation: request access to ccres-dev@listes.ipsl.fr



Next steps

- Dashboards for METEK radars
 - Most present in the network
 - Each instruments has its own parameters and range
 - Jean-Charles collected example HKD file for several stations
 - Need to find common parameters and ranges for all instruments
- Define a more human-readable name for dashboard title
 - Use name in [instrumentdb](#) instead of instrument PID
 - Code is ready to deploy
- Add others instruments
 - CL61 is probably the easiest





Thank you