



Access to CBK PAN node

WP7: Access to PITHIA-NRF facilities

Description of the infrastructure



Centrum Badań Kosmicznych PAN (CBK PAN or Space Research Centre PAS - SRC PAS) will offer the instrumental infrastructure, historical and near real time depositories of observable data, models and procedures for multi-instruments space plasma diagnostics.

This includes access to LOFAR PL610 station measurements, RELEC RFA, ionosonde, riometers and GPS measurements. Complementary data from satellite databases are also used for diagnostic and modelling purposes (e.g. COSMIC, DEMETER).



Operating Sites:

Warsaw

- Ionosonde
- H2PT Europe TEC model
- H2PT Europe ROTI

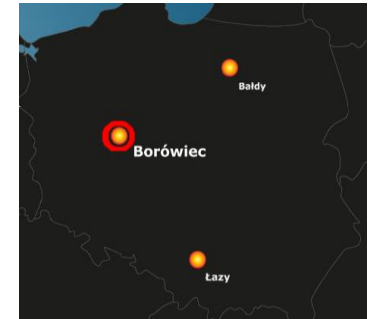
Borowiec

- Low Frequency radio telescope - station PL610
- Borówiec Riometer Data

Polish Polar Station - Spitsbergen

- GNSS ground based receivers
- Ionosonde

PL610 LOFAR station in Borowiec





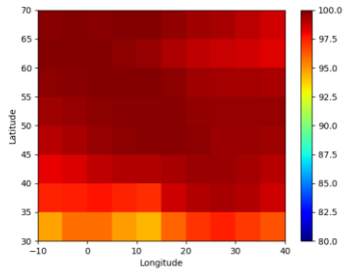
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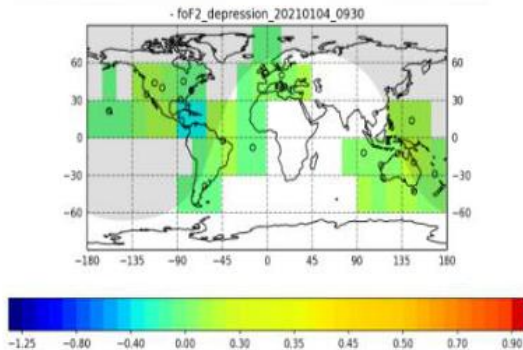
Products/models

Ionosphere model Helgeo2PT (H2PT):



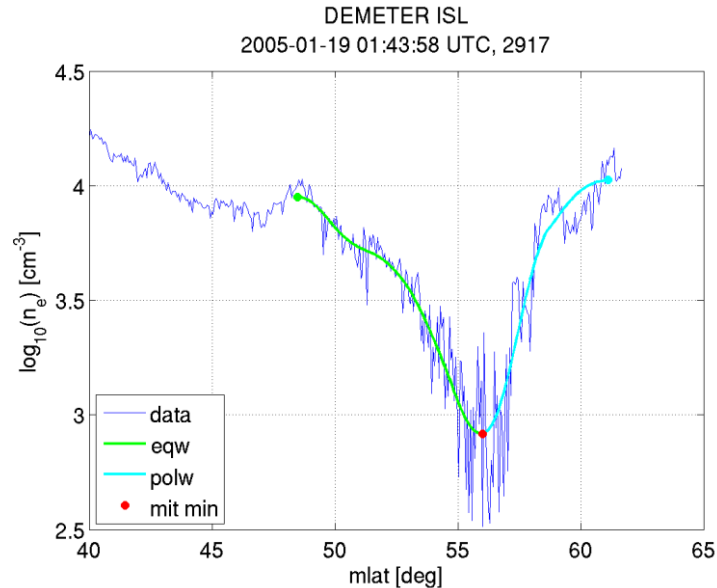
Spatial data availability plot for H2PT model (time period from 2020-07-01 to 2020-09-30)

Post-storm foF2 depression

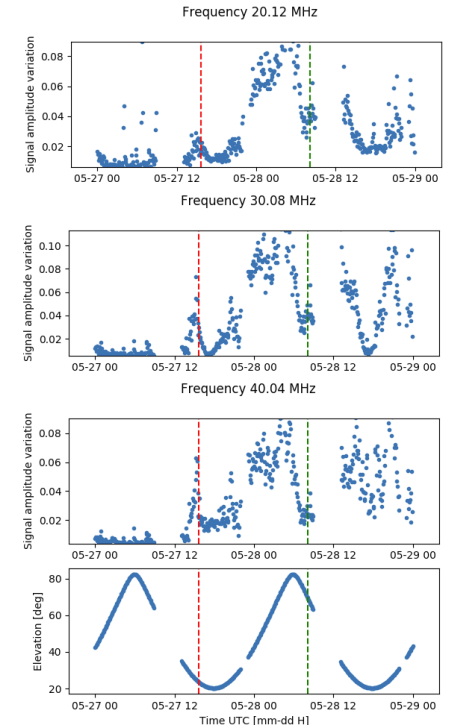


Main Ionospheric Trough parametrization:

MIT position, borders and slope of the equatorial and polar walls



Scintillation index from LOFAR PL610 :





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CBK PAN node is open to experiment proposals in the following fields:

- Quantification of the impact of magnetosphere–ionosphere coupling on auroral region boundary layers behaviour using satellite in situ measurements from DEMETER, Relec, COSMIC, as well as measurements from ground-based infrastructures
- Implementation of novel techniques based on LOFAR diagnostics for determining the characteristics of small and middle scales ionospheric irregularities



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Commitments for granted TNA projects

Node commitments:

- Physical access
 - Offer travel to the site location and one week of accommodation
- Remote access
 - Weekly scheduled interactions during one month
- Hands-on support and training at site for running experiments, analysing, database searching, etc.
- Remote support during the whole project

User commitments:

- Present scientific results and findings in a written report at the end of the project, maximum 6 months
- Submit an evaluation of the project experience.