

Space Weather activities in Portugal (during 2018)

Teresa Barata



ACTIVITIES:

SPINLab - Space - Planetary Interactions Monitoring and Forecasting

Laboratory: digital platform dedicated to space weather studies is now public available, through public presentation to the media.

Space-Weather current conditions

X-Ray flux

GOES X-ray Flux (1-minute data) Begin: 2019 Jan 13 00:00 UTC

Wxcls m⁻²

GOES15 1.0-8.0 A GOES15 0.5-4.0 A GOES14 1.0-8.0 A GOES14 0.5-4.0 A

Updated: 2019 Jan 16 11:27:12 UTC NOAA/SWPC Boulder, CO USA

Proton flux

GOES15 Proton Flux (5 minute data) Begin: 2019 Jan 13 00:00 UTC

Protons cm⁻² s⁻¹ sr⁻¹

Updated: 2019 Jan 16 11:26:02 UTC NOAA/SWPC Boulder, CO USA

Local K index

Kcoi

Alerts:

- 19/11/18 16:30 UTC Between the 28th of October and the 8th of November SILSO (Sunspot Index and Long-Term Solar Observations) registered no sunspot. This has been the longest period of time of solar cycle 24 with a complete absence of sunspots. (Source: [STCE](#))
- 04/09/18 06:13 UTC This morning there was an earthquake in the Iberian abyssal zone, and it was felt with...
- 16/12/18 Warning: Electron 2MeV Integral Flux exceeded 1000pfu - Begin Time: 2018 Dec 10 2010 UTC - Potential Impacts: Satellite systems may experience significant charging resulting in increased risk to satellite systems. (source: [NOAA/SWPC](#))
- 21/11/18 Warning: Repairs at COI geomagnetic station's facilities make it difficult to access its...



SPINLab on public national TV

www.mat.uc.pt/~obsv/SPINLab/SPINLab_home.php

ACTIVITIES:

SWAIR - Space Weather and GNS monitoring services for Air Navigation

Project developed by a consortium of private companies and university were presented to the media.



OVERVIEW

Consortium members



<https://business.esa.int/projects/swair>

<https://swair.ptech.io/>

SWAIR on the media: radio and national TV

ACTIVITIES:

WORKSHOP “Space Weather and GNS monitoring services for Air Navigation”: organized for the air navigation Portuguese sector, with the presence of most important stockholders. During this event the impacts of space weather on aviation were presented and discussed.



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Official Project Partners

- ANAC (Portuguese Civil Aviation Authority)
- NAV Portugal (Portuguese ANSP)
- IPMA (Portuguese Meteorological Office)

Other:

- SATA International – Azores Airlines (Portuguese Airline)
- Azores Regional Government

OTHER ACTIVITIES:

RESEARCH PROJECTS:

SWAIR (ongoing): 2018 - 2020 .

Evolution of Solar Activity over a Solar Cycle - from Statistics to Physics (Slovakia and Portugal) - concluded in 2018.

SWANET Space Weather Awareness Training Network submitted to the H2020 program – under evaluation.

PhD Thesis:

Subject: Geomagnetic storm sudden commencement (concluded in 2018)

Subject: Comparative analysis of SWARM and ground-based observations pointed on South Atlantic anomaly (concluded in 2018).

Subject: Mathematical models to predict solar activity (ongoing).

Invited talks on the Space Weather subject:

Invited talks at the 21th National Conference of Physics.

Invited talk at the 28th Iberian Meeting for the Teaching of Physics.

Invited talk at the 4th Coimbra Summer Space School.

Others:

Proposal submitted to the ESWW2018, to organize the “European Space Weather Week” in 2020 in Portugal (under evaluation).

Thank You!

