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* ISWI Newsletter - Vol. 17 No. 008 15 Aug 2025 *
* Editor: George Maeda, georgemaeda3[at]gmail.com
* Archive of back issues: ISWI Website https://iswi-secretariat.org/
* Send subscription request to: iswisupport@bc.edu
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Dear ISWI Newsletter Subscriber:

Please be reminded that this newsletter has two versions:

[1] Email version -- this gets distributed via email
directly to you but does not have the attachments.
[2] Web version -- this is the full version with attachments.

To view the Web version, go to this web page:
https://iswi-secretariat.org/
and click on "**NEWSLETTERS**".

If you have space-weather-related news or announcements,
please send them to me and I will distribute your
material through the ISWI NEWSLETTER.

Cordially,
George Maeda
Editor of the ISWI Newsletter, since 2009.

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. to Space Weather," 30 July 2025, by Dr. Bea Gallardo-Lacourt.

[07] The Early Career Leadership Advisory Committee (ECLAC) of
. the Space Physics and Aeronomy (SPA) Section of AGU would like to
. invite early career space physicists (defined as being within
. 10 years of obtaining a Ph.D.) to participate in a climatological
. survey of the state of the profession.

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[01]----------

FROM Dr. Magdi Elfadil Yousif Suliman; native of Sudan
DATE 03 August 2025
TO ISWI Newsletter

Dear ISWI Colleagues,

In light of our recent work, abstract is attached, I would like to share my current research work with the ISWI community, so that I may get help in terms of access to GIC data, measured at mid- low latitude stations, or even equatorial latitudes stations. Since the aim of the research is to evaluate the extend to which some parameters (solar wind parameters, mid-low latitude geomagnetic pulsations) influence GIC at mid-low latitudes, trying to understand mechanisms of GIC at these latitudes. We welcome any comments or suggestions and appreciate so much any kind of help.

Abstract

Electromagnetic coupling processes attributed to geomagnetic disturbances (GMDs) in the geospace explain the significant increase in geomagnetically induced currents (GICs), which makes sense that the space weather impact originates at high-latitude locations. Nevertheless, space weather impact has been observed occasionally in mid- to low-latitude locations. Notably, blackouts recur occasionally in the National Power Grid of Sudan (NPGS), which has recently undergone expansion. We aim to identify the vulnerability of NPGS to space weather. We have characterized blackout events by examining whether blackout events are synchronous with GMDs. For the storms, according to class, type, and phase:

severe ($\boldsymbol{Dst} \leq -\mathbf{150}\ \boldsymbol{nT}$), major ($-\mathbf{50}\ \boldsymbol{nT} \geq \boldsymbol{Dst} > -\mathbf{150}\ \boldsymbol{nT}$),
minor ($\boldsymbol{Dst} > -\mathbf{50}\ \boldsymbol{nT}$), driven by corotating interaction region (CIR),
driven by coronal mass ejections (CME), initial, main, or recovery, respectively.
Moreover, for blackout events related to GMDs, we have examined whether
they are synchronous with Pc5 pulsation activity observed
at mid- to low-latitude ground locations.

Results showed that 49 % of blackout events synchronized GMDs, that is,
interplanetary shock impulses (SI) and storms of all classes, types,
and phases. Results have revealed that blackout events synchronous with
GMDs are all associated with Pc5 pulsation activity observed
simultaneously in mid- to low-latitude locations. According to these
results, the NPGS is most likely vulnerable to space weather hazards.
We conclude that mid- to low-latitude Pc5 pulsations deserve to
undertake the role of indicators of space weather impact at
mid- to low-latitude locations.

The pre-print of my paper maybe accessed from here:
https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=7797281

The title of the paper is:

"Characterizing the Vulnerability of the National Power Grid of Sudan to Space Weather Impact"

Thanks once again.
Sincerely,
Title & Name: Dr. Magdi Elfadil Yousif Suliman
Job Title: Assistant Professor.
- Alahsa, AlMubarraz, Mahasin District,
  Eastern Province, Kingdom of Saudi Arabia.

[02]----------

TRACERS (Tandem Reconnection and Cusp Electrodynamics Reconnaissance Satellites), consisting of two identical satellites that will orbit Earth in tandem (one following the other), will help answer long-standing questions key to understanding space weather, particularly how the Sun transfers energy, mass, and momentum to near-Earth space.

TRACERS was launched on July 23, 2025.

https://tracers.physics.uiowa.edu/

[03]----------

NASA's "TRACERS" Studies Magnetic Explosions Above Earth
https://www.youtube.com/watch?v=-wwhK6OBfac
NASA Goddard 8,576 views Jul 16, 2025
NASA's TRACERS mission, or the Tandem Reconnection and Cusp Electrodynamics Reconnaissance Satellites, will fly in low Earth orbit through the polar cusps, funnel-shaped holes in the magnetic field, to study magnetic reconnection and its effects in Earth's atmosphere.

Magnetic reconnection is a mysterious process that happens when the solar wind, made of electrically charged particles and magnetic fields from the Sun, collides with Earth's magnetic shield, causing magnetic field lines to violently snap and explosively fling away particles at high speeds. This process has huge impacts on Earth, from causing breathtaking auroras to disrupting communications and power grids on Earth.

==========>>> TRACERS were launched on 23 July 2025

NASA launches twin TRACERS satellites to study space weather
https://www.youtube.com/watch?v=3nSzjM2RhAE
CBS News 8,419 views Jul 23, 2025
NASA's twin TRACERS satellites launched from the Vandenberg Space Force Base in California on Wednesday (23 July). The satellites will study how to protect Earth from the space weather surrounding the planet. CBS News space consultant Bill Harwood has more.

[04]----------

CALLISTO status report / newsletter #102

FROM: Christian Monstein; July 29, 2025

Dear all:
Attached the latest news about CALLISTO and e-Callisto
Best regards,

Christian Monstein
Monstein Radio Astronomy Support
PI e-Callisto network
Wiesenstrasse 13
CH-8807 Freienbach; Switzerland

See: status_102V01.pdf
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[05]----------

Meeting on Operational and Research Capabilities for
Better Understanding Solar-Terrestrial Interactions (Sep 29- Oct 3, 2025)

FROM: 'Nikola Veselinovic'
DATE: 30 July 2025

Dear ISWI Colleagues,

This is a gentle reminder that the abstract submission deadline for the upcoming Meeting on Operational and Research Capabilities for Better Understanding Solar-Terrestrial Interactions is fast approaching:

Abstract deadline: **1 September 2025**

We warmly invite you to submit your contributions to this international conference, which will bring together researchers and practitioners to explore the complex impacts of space weather on Earth and its systems, including satellite operations, power grids, communication, navigation, aviation, and human health. Topics will include solar radiation, solar wind, magnetic field variations, and their effects on Earth's magnetosphere, ionosphere, atmosphere, and climate.

Despite recent advances, predictive capabilities for solar-driven events remain limited. This inaugural event aims to bridge observational, theoretical, and operational efforts while promoting integrated approaches to improve forecasting and preparedness.
Conference goals include:

- Understanding space weather impacts on infrastructure and technology
- Promoting interdisciplinary collaboration
- Advancing real-time monitoring and forecasting tools
- Applying AI and innovative theoretical models
- Strengthening international cooperation

Participants will engage in research presentations, keynote lectures, and discussions on space weather science and practical solutions.
Important deadline:

Abstract submission and registration:
September 1, 2025

For more information about the workshop, registration, and abstract submission, please visit the official website:
https://www.cosmic.ipb.ac.rs/workshop-2025/

Please feel free to share this announcement with colleagues and collaborators who may be interested.

Sincerely,
Nikola Veselinović
on behalf of Organization Committee

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Low Background Laboratory for Nuclear Physics,
Institute of Physics Belgrade
Pregrevica 118, 11080 Zemun-Belgrade
www.cosmic.ipb.ac.rs

[06]----------

RE: **ISWI Webinar #25; 30 July 2025 - RECORDING AVAILABLE**
FROM: Patrick Gindler
DATE: 01 AUGUST 2025

Dear participants,

On behalf of the ISWI Steering Committee, we are pleased to inform you that the recording of the twenty-fifth webinar on the International Space Weather Initiative, Dr. Bea Gallardo-Lacourt :

"From Discovery to Insight: Understanding STEVE and Its Relevance to Space Weather," 30 July 2025, is now available in the archive of the ISWI Secretariat:
https://cdaw.gsfc.nasa.gov/webinars/ISWI/

Best regards,
Patrick

[07]----------

FROM: Bea Gallardo-Lacourt (GSFC-675.0) [CATHOLIC UNIV OF AMERICA]
TO: ISWI Newsletter
DATE: 23 July 2025

Dear George,

I hope this message finds you well. I'm reaching out to kindly ask if it would be possible to include the following announcement in the next ISWI Newsletter.

Thank you very much in advance for your help.

Warm regards,
Bea

Title: **Invitation: SPA Early Career Climate Survey**

The Early Career Leadership Advisory Committee (ECLAC) of the Space Physics and Aeronomy (SPA) Section of the American Geophysical Union (AGU) would like to invite early career space physicists (defined as being within 10 years of obtaining a Ph.D.) to participate in a climatological survey of the state of the profession.

> The survey should take less than 10 minutes and can be found at https://forms.gle/92mZHuAaYyeYAJye7.

Responses will be welcome through August 31st. Please feel free to share this survey with other early career scientists in your network—---your help spreading the word is greatly appreciated!

**********[End of this issue of the ISWI Newsletter]**********

CALLISTO status report/newsletter #102

New station in Mexico

Fig. 1: Team from left to right: Cruz Fernando Ramírez Mendoza, José Valentín Ramírez Sustaita, Eleazar Ramírez Mendoza, Ernesto Andrade Mascote, Landy Roxana Gómez López, Iván Peralta Mendoza, Ernesto Aguilar Rodriguez, Pablo Villanueva Hernández, Photo: Julio Ruiz

Contact : Dr. Ernesto Aguilar Rodríguez, Instituto de Geofísica, Unidad Michoacán, Antigua Carretera a Pátzcuaro #8701, Ex-Hacienda San José de la Huerta, C.P. 58343, Morelia, Michoacán, Tel: (443)147 78 74, Ext. UNAM 37874, ernesto@igeofisica.unam.mx, https://igum.geofisica.unam.mx/

Welcome on board of e-Callisto!

New station in Baldy, Poland

Fig. 2: LWA next to LOFAR a single antenna for CALLISTO in dual circular polarization.

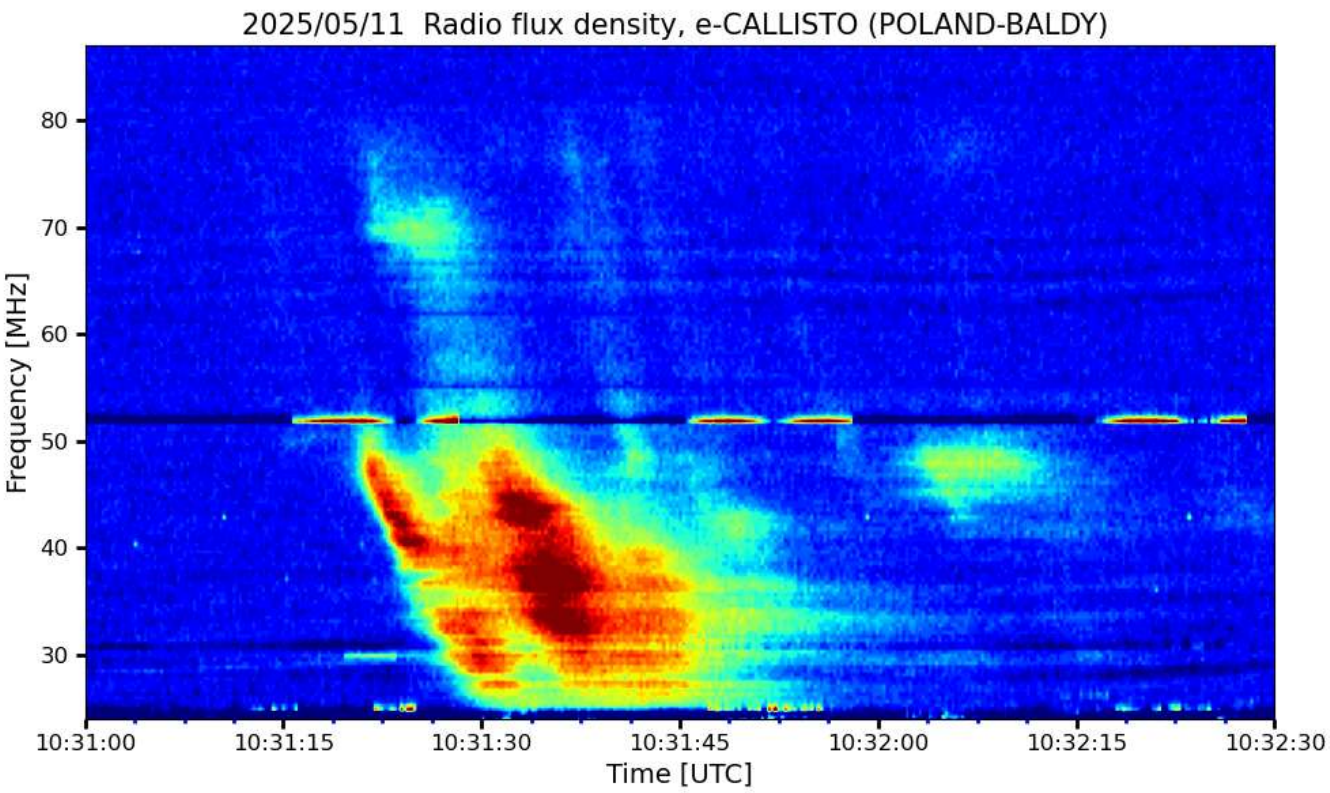

Fig. 3: First light Baldy, Poland

Welcome on board of e-Callisto!

CESRA NEWS

https://heliowiki.smce.nasa.gov/wiki/index.php/SolarNuggets

CESRA nuggets:
Magnetic Field Geometry and Anisotropic Scattering Effects to Explain Puzzling LOFAR Solar Radio Burst Observations
by D. L. Clarkson et al.
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3950

Spectral Characteristics of Fundamental–Harmonic Pairs of Interplanetary Type III Radio Bursts Observed by PSP,
by Ling Chen et al.
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3957

X-ray/Radio Quasi-periodic Pulsations Associated with Plasmoids in Solar Flare Current Sheets
by Kumar, Karpen, and Dahlin
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3968

Synchrotron or not – analysis of two-part type II bursts
by Silja Pohjolainen
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=4001

http://solar.physics.montana.edu/cgi-bin/eprint/default_page.pl
X-Ray/Radio Quasiperiodic Pulsations Associated with Plasmoids
in Solar Flare Current Sheets
-- Pankaj Kumar, Judith T. Karpen, Joel T. Dahlin

Spectral Characteristics of Fundamental–Harmonic Pairs of Interplanetary Type III Radio Bursts Observed by PSP,
by Ling Chen et al.
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3957

ALMA Observations of Solar Spicules in a Coronal Hole
by T. S. Bastian et al.
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=3984

The CESRA highlights can be followed, discussed etc at
https://twitter.com/CESRA_community
https://www.facebook.com/solarcesra/

Connecting energetic electrons at the Sun and in the heliosphere through X-ray and radio diagnostics
by D. Paipa-Leon et al.
https://www.astro.gla.ac.uk/users/eduard/cesra/?p=4013

AOB

- If you have some stuff to present to the Callisto community, please let me know
- CALLISTO or Callisto denotes to the spectrometer itself while e-Callisto denotes to the worldwide network.
- General information and data access here: https://e-callisto.org/

- e-Callisto data are hosted at University of Applied Sciences, Institute for Data Science FHNW in Brugg/Windisch, Switzerland. Additionally, data are available at ESA site here: ESA Space Weather Portal (https://swe.ssa.esa.int/).
- Backup server of FHNW in Spain active as: https://astrodoncel.uah.es/dashboard/index.php
- Meteo Swiss provides daily flux measurements, based on a satellite dish in X-band and CALLISTO: https://meteoswiss.github.io/callisto/
- IRSOL improved sensitivity by inserting a bandpass filter and an LNA
- Mexico new station at 3125 m asl MEXICO-UANL-INFIERNILLO
- Current data storage size at FHNW for solar radio data 4.1TB
- GLASGOW strong rfi, most probably due to nearby LED-lamp which is always on.
- 28.05.2025 First time 90 instruments on-line
- 08.06.2025 CALLISTO Snr 200 manufactured!
- 18.06.2025 1st light from Turkey, congratulations!
- 22.07.2025 Regular data from Paraguay, congratulations!
- Starting in June, data upload to NextCloud at FHNW is working fine. Alternative method to FTP or SFTP data upload.
- In case you (as the responsible person for operating and maintenance of Callisto) are leaving the institute or, if you are retiring, please send me name and email address of the successor.

Please do **NOT** respond to the email-address of the list-server where you have got this document from, it is a computer/robot. This computer will not give you any useful answer…
Respond instead directly to me at: cmonstein(at)swissonline.ch and to the Co-PI javier.bussons(at)uah.es

If you do not want to receive this newsletter, please send me an email and we will take your address out of the database. On the other hand, if you think someone else might be interested in this kind of info, please let me know his/her email-address to be added to the database.

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