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Article 1:

An Investigation of Properties of the Coronal Holes Producing HSSs

InProCH

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High speed streams (HSSs) in the solar wind that originates from coronal holes (CHs), are one of the important drivers of geomagnetic disturbances (such as geomagnetic storms – GSs). Any new scientific result that could contribute to a better understanding of the causal chain that leads to such associations is of great interest for solar, heliosphere and magnetosphere communities. In the frame of the Presto Pillar 1 – Sun, planetary space, and geospace – we have prepared a database that is available online at http://observer.astro.ro/inproch/. This database contains coronal holes (CHs) observed during the descending phase of solar cycle 24 (SC24), specifically the period from Apr 2015 to Jul 2017, extended by three months before and after this interval.

Our database is built on the CHs detections that are obtained using CHIMERA (https://github.com/

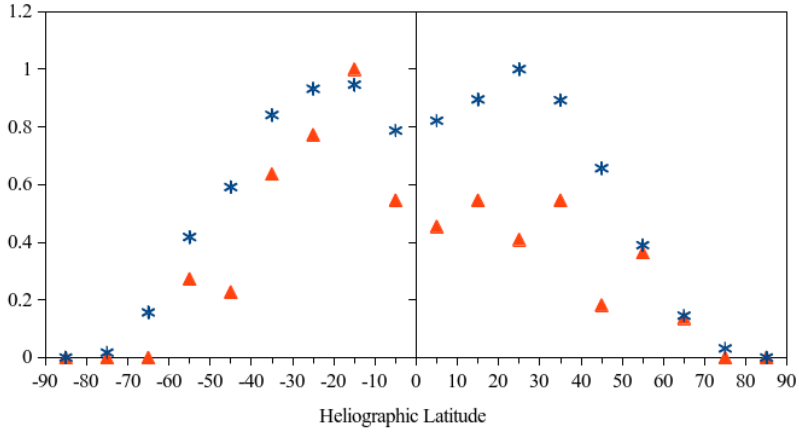
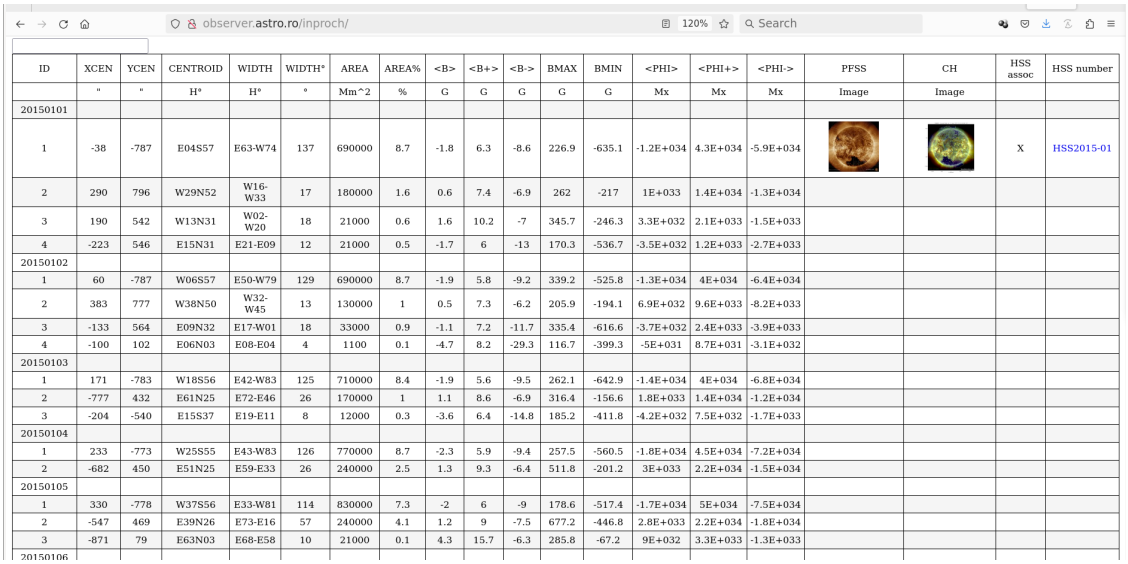


Figure 1. CHs histogram for bins of 10° latitudes. Blue stars – all CHs., red triangles – CHs with associated HSSs (normalised values).



observer.astro.ro/inproch/

ID	XCEN	YCEN	CENTROID	WIDTH	WIDTH°	AREA	AREA%	<B>	<B+>	<B->	BMAX	BMIN	<PHI>	<PHI+>	<PHI->	PFSS	CH	HSS assoc	HSS number
	"	"	H°	H°	°	Mm^2	%	G	G	G	G	G	Mx	Mx	Mx	Image	Image		
20150101																			
1	-38	-787	E04S57	E63-W74	137	690000	8.7	-1.8	6.3	-8.6	226.9	-635.1	-1.2E+034	4.3E+034	-5.9E+034			X	HSS2015-01
2	290	796	W29N52	W16-W33	17	180000	1.6	0.6	7.4	-6.9	262	-217	1E+033	1.4E+034	-1.3E+034				
3	190	542	W13N31	W02-W20	18	21000	0.6	1.6	10.2	-7	345.7	-246.3	3.3E+032	2.1E+033	-1.5E+033				
4	-223	546	E15N31	E21-E09	12	21000	0.5	-1.7	6	-13	170.3	-536.7	-3.5E+032	1.2E+033	-2.7E+033				
20150102																			
1	60	-787	W06S57	E50-W79	129	690000	8.7	-1.9	5.8	-9.2	339.2	-525.8	-1.3E+034	4E+034	-6.4E+034				
2	383	777	W38N50	W32-W45	13	130000	1	0.5	7.3	-6.2	205.9	-194.1	6.9E+032	9.6E+033	-8.2E+033				
3	-133	564	E09N32	E17-W01	18	33000	0.9	-1.1	7.2	-11.7	335.4	-616.6	-3.7E+032	2.4E+033	-3.9E+033				
4	-100	102	E06N03	E08-E04	4	1100	0.1	-4.7	8.2	-29.3	116.7	-399.3	-5E+031	8.7E+031	-3.1E+032				
20150103																			
1	171	-783	W18S56	E42-W83	125	710000	8.4	-1.9	5.6	-9.5	262.1	-642.9	-1.4E+034	4E+034	-6.8E+034				
2	-777	432	E61N25	E72-E46	26	170000	1	1.1	8.6	-6.9	316.4	-156.6	1.8E+033	1.4E+034	-1.2E+034				
3	-204	-540	E15S37	E19-E11	8	12000	0.3	-3.6	6.4	-14.8	185.2	-411.8	-4.2E+032	7.5E+032	-1.7E+033				
20150104																			
1	233	-773	W25S55	E43-W83	126	770000	8.7	-2.3	5.9	-9.4	257.5	-560.5	-1.8E+034	4.5E+034	-7.2E+034				
2	-682	450	E51N25	E59-E33	26	240000	2.5	1.3	9.3	-6.4	511.8	-201.2	3E+033	2.2E+034	-1.5E+034				
20150105																			
1	330	-778	W37S56	E33-W81	114	830000	7.3	-2	6	-9	178.6	-517.4	-1.7E+034	5E+034	-7.5E+034				
2	-547	469	E39N26	E73-E16	57	240000	4.1	1.2	9	-7.5	677.2	-446.8	2.8E+033	2.2E+034	-1.8E+034				
3	-871	79	E63N03	E68-E58	10	21000	0.1	4.3	15.7	-6.3	285.8	-67.2	9E+032	3.3E+033	-1.3E+033				
20150106																			

Figure 2. Screenshot of the webpage displaying the header of the database.

TCDSolar/CHIMERA) (Garton, Gallahher and Murray, 2018) and their listed properties, which are publicly available at solarmonitor.org. The database extends the current knowledge about CHs with their HSSs associated such as they were listed in the Complex HSSs Catalogue for SC24 (Besliu-Ionescu, Maris Munteanu and Dobrică, 2022). This catalogue is available online at http://www.geodin.ro/varsiti/ for SC24. Although the HSSs catalogue indicates the source, does not specify which day that source should be identified. We considered that in order to improve a possible prediction for a geoeffective HSS we need to better understand the source of the solar wind triggering that HSS.

The association of the HSS with CH(s) was realised using a time restriction and a position evaluation. The time restriction was computed as the duration in which solar wind would travel from the CH to 1 AU, in a raw approximation as a straight line trajectory, with the velocity equal to the maximum speed of the stream. The CH position was considered overlapping the information given by SOLEN (https://solen.info/solar/coronal_holes.html) and SpaceWeather (https://spaceweather.com/) with the CH computations from CHIMERA. Thus, during the period covered by this database (Jan 2015 – Oct 2017) there are 3722 detected CHs, out of which 134 have HSSs associated. Amongst these, there are 28 HSSs with multiple CHs sources (associated with two or three CHs).

Figure 1 shows the number of CHs, normalised values, for all CHs (blue stars) and CHs associated with HSSs (red triangles). One can see that CHs tend to have a maximum distribution around the ± 30° latitudes, but the maximum number of CHs associated with HSSs is around −15° latitude.

Our database uses the same designation of the column names for CHs properties as the list from Garton, Gallahher and Murray (2018) (columns 1 to 16 in our table), but missing a few measurements from the original database for readability reasons.

In order to have a better representation of the CHs we have added a couple of coronal images. In columns 17 and 18 the table displays coronal images with PFSS model (downloaded from https://suntoday.lmsal.com/) and the SolarMonitor's coronal hole segmentations performed by CHIMERA (https://solarmonitor.org/chimera.php).

Finally, the "HSS asoc" column (19) marks with an X the association with a specific HSS, then the ID of the HSS is listed (column 20) such as found in the Complex HSSs Catalogue for SC24 (Besliu-Ionescu, Maris Munteanu and Dobrică, 2022), formed using the year and the number of the HSSs. In this last column, on HSS ID hover, an image is displayed. This image represents the solar wind speed and density during the month corresponding to the HSS detected. Each HSSs is marked in the image with alternating vertical bars (straight and dashed lines).

This new database resulted from this coordinated investigation based on the complex HSSs catalogue for SC24 will be used to improve the logistic regression model proposed by Besliu-Ionescu and Maris Muntean (2020) helping us increase the prediction accuracy of the probability that a HSS will be associated with a geomagnetic storm or not. We mention that we already obtained a 61% success rate, not yet considering any properties of the CHs source. This database could improve our understanding of the causal chain CHs-HSSs-GSs.

Acknowledgements:

This work was supported by the SCOSTEP/PRESTO Database award 2023.

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Article 2:

STP (Solar Terrestrial Physics) activities in Senegal (Space Weather and GNSS)

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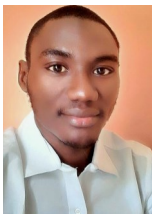
Idrissa Gaye


Modou Khabane Diouf


Amath Ndao


Diogoye Diouf

Introduction

In Senegal, the space sector is booming, with initiatives aimed at strengthening national capabilities and harnessing space applications for the country's economic, social and scientific development. Activities linked to space weather and GNSS (Global Navigation Satellite System) in Senegal play an important part in various fields such as navigation, cartography, environmental monitoring and natural resource management. Space science and technology activities in Senegal are essential for understanding, monitoring and exploiting space phenomena. This work provides an overview of the status of space-related activities in Senegal.

1. Senegalese Spatial Reference System (SSRS):

Managed by the National Agency for Regional Planning through the Geographic and Cartographic Works Department (GCWD), the SSRS is the basis of Senegal's geo-spatial data infrastructure, as embodied in the 2004 Senegal Geodetic Reference Network (RRS04). [1]

Most of GNSS stations which are designed to improve positioning accuracy and enable Senegal to participate actively in the International Terrestrial Reference System.

Table 1: Example of GNSS-CORS network mapping in Senegal.

Country: SENEGAL/Région	Ownership and/or management body	ID	E	N	Start date	Comments
Dakar	ANAT/DTGC	DAKR	237333	1628915	2011	CORS integrated in the IGS network, provides only raw data
Dakar	ANAT/DTGC and SOMEL	DATG	239337	1623907	2017	public, provides only raw data

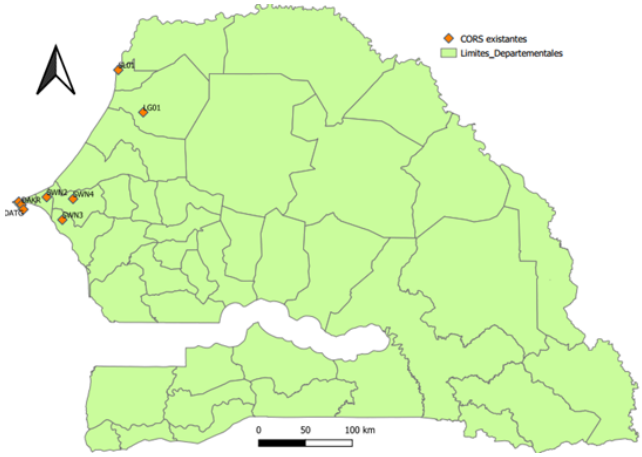


Figure 1. Distribution of existing GNSS-CORS stations

Concerning the situation of GNSS stations in Senegal, we can note: GPS station (DAKA) at UCAD; the second GNSS station, called DAKR, and a third GNSS station has been installed since 2017. [2]

2. Evolution of geodetic and altimetric systems in Senegal :

In the 20th century, Senegal carried out several geodetic operations, resulting in various geodetic systems with different parameters.

The first national, three-dimensional geodetic system of the 21st century is RRS04, characterized by centimetric accuracy and first- and second-order points.[3]

The National Civil Aviation and Meteorology Agency is the civil aviation authority in Senegal enshrined in law no. 2015-10 of May 04, 2015 on the civil aviation code. [4]

3. ISWI (International Space weather initiative) Project

Senegal is taking part in the ISWI project, which aims to deploy measuring instruments on the African continent.

The aim is to monitor space weather conditions, such as solar flares and geomagnetic storms, and their effects on communication and navigation systems. [5], [6]

4. Ground instrument network:

Senegal has set up networks of ground-based instruments, GPS stations and magnetometers to collect essential data for studying the ionosphere, magnetic disturbances and variations in the space environment.

5.1. Other major projects

- Creation of the Senegalese Space Studies Agency (Agence Sénégalaise d'études Spatiales, ASES);

- Nanosatellite launch project (scheduled for March 2024); This first satellite, called GAINDESAT-1, is dedicated to environmental data collection and spatial imaging. Senegalese technicians and engineers under the supervision of the Centre spatial university of Montpellier (CSUM) are building a partner in the project [7].

- The development of SBAS in Africa - ASECNA's ANGA (Augmented Navigation in Africa) supported by JPO SatNav. [3] - [8]

Figure 2. Project to launch Senegal's first nanosatellite.

5.2. Main research topics

- Studies of the ionosphere and troposphere with GNSS signals and consideration in the development of the ANGA system;

Figure 3. IMAO 2019 picture.

- Space weather contributes to ionospheric disturbances; this issue concerns the development team;

- Use of PPP (Precise Point Positioning) to redefine the reference system in Africa;

- Low-cost receiver used in reference frame and other applications.

The GIRGEA Group organizes high-level summer schools on space meteorology and GNSS every two years for African scientists (for example, IMAO 2019).

5.3. Partenariat:

Iba Der Thiam University of Thiès has signed a partnership agreement with JPO SatNav Africa. The JPO's mission is to coordinate and support the development of satellite navigation in key sectors in Africa. The specific objective is to consolidate the development of SBAS, as well as the adoption and use of GNSS services in Africa. [9]

Conclusion:

In short, Senegal continues to develop its capabilities in space weather and GNSS to improve the accuracy of geo-spatial measurements and support the country's sustainable development. The many initiatives noted over the past few years will further strengthen activities and opportunities in the space sector in Senegal.

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[3] https://www.geometres-francophones.org/5e8sef5sdgf/uploads/2019/12/FGF2019-TR2-DIOGOYE.pdf

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[8] https://www.lepoint.fr/afrique/le-senegal-s-ouvre-l-espace-avec-un-premier-nanosatellite-19-12-2023-2547614_3826.php#11

[9] https://procasef.com/

Highlight on Young Scientists 1:

Atmospheric forcing and Ionospheric perturbations

Akshay Patil

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[2]Indian Institute of Tropical Meteorology, Pune, Maharashtra, India

Historically, variations in ionospheric plasma have been linked to solar energy and geomagnetic activity. Recent research suggests that extreme weather events such as tropical cyclones, thunderstorm, typhoons, tornadoes, deep convections, and tsunamis may contribute to the formation of Gravity Waves (GWs) which further produces perturbation in ionosphere [1], [2], [3]. Possible causes of the fluctuations in ionosphere also include Atmospheric Gravity Waves produced when convective thunderstorm activity overshoots the tropopause, electrical effects, density bubbles and thunderstorm-triggered Perkins instabilities [4], [5], [6], [7].

We have examined the impact of thunderstorms on ionospheric perturbation activities in the low-latitude Indian region, where ionospheric variability is more dynamic and complex than in midlatitudes. The first primary data set we employed is lightning flash count and magnitude, provided by Indian Institute of Tropical Metrology, Pune, India. The second primary data set used is the ionospheric TEC, computed from ground-based GPS observations at low latitude station located at India. This GPS station is operated by the International GNSS Service network (http://www.igs.org/network). We have used Savitzky-Golay filter to de-trend the extract the perturbation component from the measured VTEC.

Our results show that thunderstorm-induced variations in the ionosphere correlates positively with of

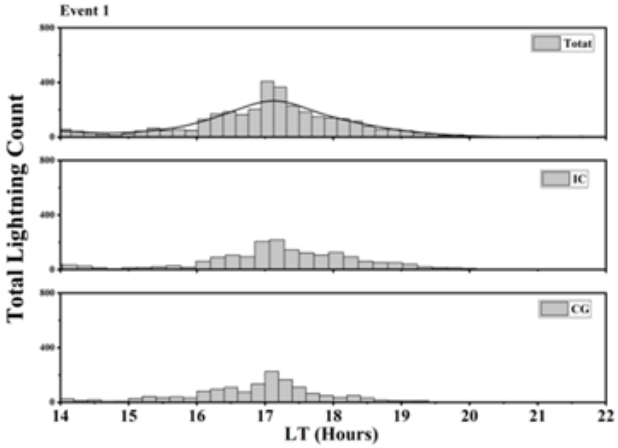

Figure 1. Histograms of lightning counts (Total, -Cloud to Ground (CG) and Intracloud (CG)) of 15 min interval are shown in graphs over IISC, Bangalore station on 18 April 2019.

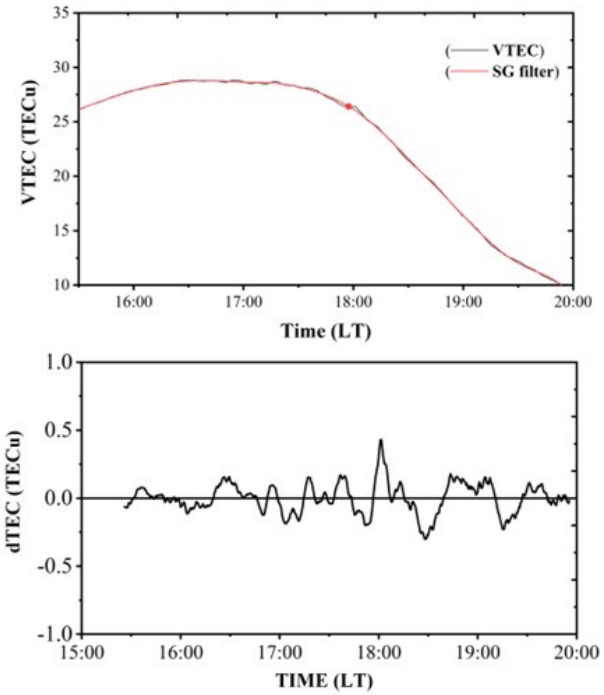

Figure 2. VTEC variation along with Savitzky-Golay filter and dTEC against LT hour for PRN 2 over IISC, Bangalore station on 18 April 2019.

enhanced TEC variations over that region. Our future work will focus the statistical study of correlation of these two parameters.

I thank the SCOSTEP Visiting Scholar Program for giving me the opportunity to work with Dr. Yuichi Otsuka and his team at Nagoya University, Japan.

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Highlight on Young Scientists 2:

Detecting TEC depletions using Random Forest Method

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Ionospheric irregularities like. equatorial plasma bubbles manifest as total electron content depletions (TECD). Traditional methods for detecting TECD based on GNSS TEC data have been studied. These are fourth-order polynomial fit, band-pass filter (FT), rolling barrel algorithm etc [1]. The efficacy of such methods depends upon the assumptions and thresholds used. To address this, machine learning (ML) technique, notably the Random Forest Method (RFM), is explored for TECD detection. Mumbai and Hyderabad stations from the GNSS network were chosen.

To prepare the training dataset, FT is used and assigned binary value 1 at the instances of TECD and 0 at no TECD. A cut off frequency of 3-20 and 10-50 minutes is used to detect narrower and wider depletions

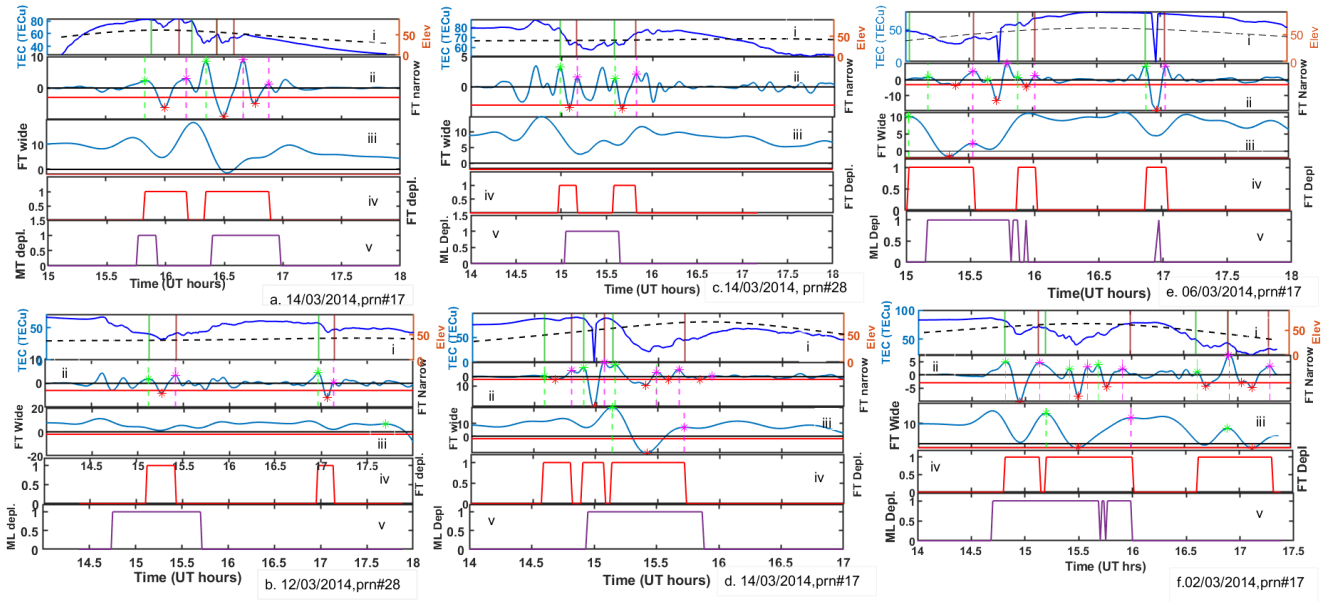

Figure 1. Comparison: TEC depletion detection via Filter (FT) versus ML. Sub-figures show TEC(i), narrow-band (ii), wide-band filter outputs(iii), and FT(iv)/ML(v)detected depletions.

as shown in panel two and three (figure 1). Seven features including latitude and longitude, day of year, DsT, F10.7, PRN, TEC, and labelled data (0/1) are utilized.

In case (e) ML outperforms FT as cycle slip detected similarly and not a TECD like FT. ML shows improvement over FT in approx. 85% cases with training accuracy of 97.6% and minimal classification error of 0.023%, also checked visually from plots (Figure 1).

Acknowledgement:

I express gratitude to the SCOSTEP committee and IAP for giving the chance to be a as SVS visiting scholar at IAP, Germany. I also acknowledge IIG, DST (India) for granting Ph.D. fellowship.

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Meeting Report 1:

Geomagnetic influence on climate at the Earth

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Ilya Usoskin


Kseniia Golubenko


Pekka Verronen

The workshop, held from March 5th to 8th, 2024, at the University of Oulu in Finland, brought together 20 international experts from 5 countries in solar, cosmic-ray, magnetospheric, and atmospheric physics. The primary goal was to deepen our understanding of how changes in the geomagnetic field influence Earth's climate. The event comprised key sections: a Theoretical Overview aimed at comprehensively understanding processes affected by geomagnetic field changes, and discussions on Climate Models and High-Performance Computing Resources. The collaborative atmosphere fostered by expert presentations and discussions significantly contributed to future developing models and methodologies exploring the intricate relationship between geomagnetic field changes and Earth's climate. The SCOSTEP/PRESTO Grant 2024 played a crucial role in the success of this workshop, and the insights gained are anticipated to significantly advance our knowledge in relevant scientific fields.


Figure 1. A photo of the workshop participants.

Meeting Report 2:

The International Space Weather Initiative School


Chigomezyo Ngwira

Chigomezyo Ngwira[1, 2] and the ISWI School Organizing Committee
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[2]NASA GSFC, Greenbelt, MD, USA

The International Space Weather Initiative (ISWI) School was successfully held in Lusaka, Zambia, from 26th to 30th September 2023. Participants mainly included MSc and PhD students, although a small number of undergraduates also attended. A total of 93 unique applications were received from 20 different countries, but only 32 were selected due to limited funding. The school program was composed of topical presentations and hands-on activities delivered by a carefully selected team of experts. Students appreciated the content of the school, as they may either not have taken a space weather course, or the content was not to the level of the ISWI school. Attendees had the opportunity to network and to attend and present at the AGS conference that immediately followed the school. The ISWI school was a good platform for capacity building through training, collaboration, research, and innovation that can transform the field of space weather.


Figure 1. Some of the ISWI School participants and lecturers attending a cultural event at the Show grounds in Lusaka, Zambia.

Meeting Report 3:

The AGS International Conference on Space Weather and Technology Applications


Chigomezyo Ngwira

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The African Geophysical Society (AGS) International Conference on Space Weather and Technology Applications was held in Lusaka, Zambia, from 2-4 October 2023. Around 70 participants that included scientists, students, and government representatives attended the conference in-person. A total of about 60 talks were delivered over 3 days and 11 student posters presented during the student poster session. The conference offered an opportunity for the AGS executive team to engage attendees and extend the membership base. Most of the attendees joined AGS officially and plans for future AGS conferences and engagements were discussed. A major outcome of the AGS conference was community engagement and development of new collaborations among participants, which will enhance capacity building efforts, especially in developing countries. The Organizing Committee is grateful to SCOSTEP/PRESTO, NASA Goddard Space Flight Center, and other sponsors/partner for supporting the conference activities.

Figure 1. A group photo of some of the 2023 AGS Conference participants at Grand Palace Hotel in Lusaka, Zambia.

Upcoming meetings related to SCOSTEP

Conference	Date	Location	Contact Information
1st European solar physics division (ESPD) summerschool: Energisation and heating in the solar plasma	Apr. 29-May 3, 2024	Dubrovnik, Croatia	https://oh.geof.unizg.hr/index.php/en/meetings/espd-school-2024
IAU Symposium 388: Solar and Stellar Coronal Mass ejections	May 5-10, 2024	Krakow, Poland	https://iausymposium.zyrosite.com/
12th International Workshop on Long-Term Changes and Trends in the Atmosphere	May 6-10, 2024	Galicia, Spain	https://trends2024.uvigo.es/
The Combined VCAIS/ANGWIN Meeting	Jun. 2-7, 2024	New Brunswick, Canada	https://www.vcais2024.ca/
16th yearly Workshop "Solar Influences on the Magnetosphere, Ionosphere, and Atmosphere"	Jun. 3-7, 2024	Primorsko, Bulgaria	https://www.spaceclimate.bas.bg/ws-sozopol/
Space Weather and Upper Atmospheric Data analysis Training Workshop for East African Community	Jun. 10-14, 2024	Maseno, Kenya	
United Nations / Germany Workshop on the International Space Weather Initiative (ISWI)	Jun. 10-14, 2024	Neustrelitz, Germany	https://www.unoosa.org/oosa/en/ourwork/psa/schedule/2024/2024-iswi-workshop.html
45th COSPAR Scientific Assembly	Jul. 13-21, 2024	Busan, South Korea	https://www.cospar2024.org/
International Colloquium on Equatorial and Low Latitude Ionosphere (ICELLI) 2024	Jul. 29-Aug. 2, 2024	Ile-Ife, Nigeria	https://arcsstee.org.ng/international-colloquium/
XXXII IAU General Assembly	Aug. 6-15, 2024	Cape Town, South Africa	https://astronomy2024.org/
11th SCAR Open Science Conference	Aug. 19-23, 2024	Pucón, Chile	https://scar.org/scar-news/osc2024-draft-list
A COSPAR CAPACITY BUILDING WORKSHOP	Aug. 19-30, 2024	Samarkand, Uzbekistan	https://cospar2024samarkand.samdu.uz/index.php
THE ORGANISATION OF A SCIENTIFIC CONFERENCE: Second Solar MHD conference: Informing MHD simulations from observations	Aug or Sep, 2024	Spain	
2024 ISWI International School	Sep. 16-20, 2024	Lalitpur, Nepal	https://nps.org.np/
16th International Workshop on Technical and Scientific Aspects of iMST Radar and Lidar (MST16/iMST3)	Sep. 9-13, 2024	Kühlungsborn, Rostock, Germany	https://www.iap-kborn.de/en/news/events/mst16/
ESPM-17	Sep. 9-13, 2024	Turin, Italy	https://indico.ict.inaf.it/event/2553/
11th VERSIM Workshop	Sep. 30-Oct. 4, 2024	Breckenridge, Colorado, USA	https://aurora.troja.mff.cuni.cz/versim/index_sgo.html#info
Organization of the Ninth International Space Climate Symposium (SC9)	Oct. 1-4, 2024	Nagoya, Japan	https://www.isee.nagoya-u.ac.jp/~spaceclimate9/
Solar cycle variability: From understanding to making prediction	Oct. 14-18, 2024	Nainital, India	
European Space Weather Week	Nov. 4-8, 2024	Coimbra, Portugal	https://esww2024.org/

Please send the information of upcoming meetings to the newsletter editors.

Announcement 1:

2024 awardees of the SCOSTEP Visiting Scholar (SVS) program

Kazuo Shiokawa (SCOSTEP President)[1] and Keith Groves (SCOSTEP Scientific Secretary)[2]
[1]Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
[2]Boston College, Boston, MA, USA


Kazuo Shiokawa


Keith M. Groves

The SCOSTEP Visiting Scholar (SVS) program (https://scostep.org/svs/) is a capacity building activity of SCOSTEP, which complements its scientific program (PRESTO) and public outreach activities. The SVS program provides training to graduate students in well-established solar terrestrial physics institutes for periods of one to three months. The training will help the awardees advance in their career in solar-terrestrial physics using the skills they learned during their SVS experience. SCOSTEP provides the airfare for the necessary transportation, while the host institute provides living expenses and training facilities. The following 19 students are new awardees of the SVS program in 2024. We are grateful to all members of the SVS Selection Committee for their efforts of selecting these awardees.

- Karla Franchesca Lopez Araujo (Mackenzie Presbyterian University, São Paulo, Brazil) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
- Amadi Brians Chinonso (National Institute for Space Research (INPE), Brazil) Tenure: Goddard Space Flight Center, NASA, Greenbelt, MD, USA
- Huiting Feng (Tongji University, Shanghai, China) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Japan
- Lynne Githio (Egypt-Japan University of Science and Technology (E-JUST), Egypt) Tenure: Dept. of Earth and Planetary Science Faculty of Science, Kyushu University, Japan
- Dmitry Grankin (Department of Physics of the Earth, St. Petersburg State University, Saint Petersburg, Russia) Tenure: Mackenzie Presbyterian University, São Paulo, Brazil
- Pelin Iochem (German Aerospace Center, Institute for Solar-Terrestrial Physics, Neustrelitz, Germany) Tenure: University of Oulu, Oulu, Finland
- Ipsita Katual (Indian Institute of Geomagnetism (IIG), New Panvel, Navi Mumbai, India) Tenure: Goddard Space Flight Center, NASA, Greenbelt, MD, USA
- Akash Kumar (Department of Physics, Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, India) Tenure: Leibniz Institute of Atmospheric Physics (IAP) at the University of Rostock, Germany
- Samriddhi Sankar Maity (Joint Astronomy Programme (JAP), Indian Institute of Astrophysics and Indian Institute of Science, Bengaluru, India) Tenure: Goddard Space Flight Center, NASA, Greenbelt, MD, USA
- Ankita Manjrekar (Indian Institute of Geomagnetism (IIG), New Panvel, Navi Mumbai, India) Tenure: Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA
- Ryoma Matsuura (University of California, Los Angeles, LA, USA) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
- Ayushi Nema (Sardar Vallabhbhai National Institute of Technology Surat, Gujarat, India) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
- Justice Allotey Pappoe (Egypt-Japan University of Science and Technology (E-JUST), Egypt) Tenure: International Research Center for Space and Planetary Environmental Science (i-SPES), Kyushu University, Japan
- Ashutosh Pattnaik (Astronomical Observatory of the Jagiellonian University, Krakow, Poland) Tenure: Goddard Space Flight Center, NASA, Greenbelt, MD, USA
- Moheb Yacoub Saad (Egypt-Japan University of Science and Technology (E-JUST), Egypt) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
- Trunali Anil Shah (Indian Institute of Geomagnetism (IIG), New Panvel, Navi Mumbai, India) Tenure: Goddard Space Flight Center, NASA, Greenbelt, MD, USA

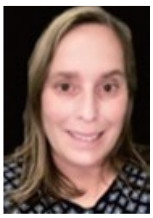
- Yusha'u Muhammad Sulaiman (Kebbi State University of Science and Technology, Aliero, Nigeria) Tenure: South African National Space Agency, Republic of South Africa
- Stephen Tete (Egypt-Japan University of Science and Technology (E-JUST), Egypt) Tenure: School of Earth and Space Sciences, University of Science and Technology of China
- Luiz Fillip Rodrigues Vital (National Institute for Space Research (INPE), Brazil) Tenure: Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan

Announcement 2:

Meetings and database constructions supported by the PRESTO grant 2024

Ramon E. Lopez (PRESTO chair)[1], Odele Coddington (PRESTO co-chair)[2] and Jie Zhang (PRESTO co-chair)[3]
[1]University of Texas at Arlington, TX, USA
[2]Boston University of Colorado Boulder, Boulder, CO, USA
[3]George Mason University, Fairfax, VA, USA


Ramon E. Lopez


Odele Coddington


Jie Zhang

SCOSTEP/PRESTO provides support for organizing international scientific meetings, campaign observations, and database constructions which are related to one or more PRESTO Pillars and contribute to PRESTO activities. The PRESTO Steering Committee (chair, co-chair and Pillar co-leaders of PRESTO) has decided to support the following 19 meetings and 4 database constructions in 2024 for the PRESTO program.

Meetings

title	location	country/ region	dates	website
European Space Weather Week	São Francisco Congress Centre, Coimbra	Portugal	2024 Nov 4-8	http://esww2024.org
Solar cycle variability: From understanding to making prediction	ARIES Nainital	India	2024 Oct 14-18	
Organization of the Ninth International Space Climate Symposium (SC9)	Nagoya University	Japan	2024 Oct 1-4	
11th VERSIM Workshop	Village at Breckenridge, Colorado (a resort and conference center)	USA	2024 Sep 30 - Oct 4	http://www.iugg.org/IAGA/iaga_ursi/versim/index.html
2024 ISWI International School	Nepal Academy of Science and Technology (NAST)	Nepal	2024 Sep 15-21	https://nps.org.np/
16th International Workshop on Technical and Scientific Aspects of iMST Radar and Lidar(MST16/	University of Rostock	Germany	2024 Sep 9-13	https://www.iap-kborn.de/mst16/

ESPM-17	Turin	Italy	2024 Sep 9-13	https://indico.ict.inaf.it/event/2553/
International Colloquium on Equatorial and Low Latitude Ionosphere (ICELLI) 2024	United Nations African Regional Centre for Space Science and Technology Education (UNARCSSTEE), Obafemi Awolowo University, Ile-Ife	Nigeria	2024 Sep 2-6	
THE ORGANISATION OF A SCIENTIFIC CONFERENCE: Second Solar MHD conference: Informing MHD simulations from observations	University of La Laguna	Spain	2024 Aug 25-29 or Sep 1-5	
A COSPAR CAPACITY BUILDING WORKSHOP	Samarkand State University, Samarkand City	Uzbekistan	2024 Aug 19-30	https://e-callisto.org/cospar2024/COSPAR2024workshopUzbekistan.html
Space Weather and Upper Atmospheric Data analysis Training Workshop for East African Community	Maseno University	Kenya	2024 Jun 10-14	
United Nations / Germany Workshop on the International Space Weather Initiative (ISWI)	German Aerospace Center e.V. (DLR), Institute for Solar-Terrestrial Physics	Germany	2024 Jun 10-14	https://www.unoosa.org/oosa/en/ourwork/psa/bssi/iswi.html
16th yearly Workshop "Solar Influences on the Magnetosphere, Ionosphere, and Atmosphere"	Primorsko	Bulgaria	2024 Jun 3-7	https://www.spaceclimate.bas.bg/ws-sozopol/
The Combined VCAIS/ANGWIN Meeting	University of New Brunswick, Fredericton, New Brunswick	Canada	2024 Jun 2-7	https://vcai-sangwin2024.flywheelsites.com/
12th International Workshop on Long-Term Changes and Trends in the Atmosphere	Universidade de Vigo, Ourense, Galicia	Spain	2024 May 6-10	https://trends2024.uvigo.es/
IAU Symposium 388: Solar and Stellar Coronal Mass Ejections	Jagiellonian University, Krakow, (Astronomical Observatory)	Poland	2024 May 5-10	
1st European solar physics division (ESPD) summerschool: Energisation and heating in the solar plasma	Dubrovnik	Croatia	2024 Apr 29 - May 3	https://oh.geof.unizg.hr/index.php/en/meetings/espd-school-2024
XIV COLAGE 2024	Autonomous University of Nuevo León (UANL)	Mexico	2024 Apr 8-13	https://www.rice.unam.mx/colage2024/
Geomagnetic influence on climate at the Earth	Helsinki	Finland	2024 Mar 5-7	https://cosmicrays.oulu.fi/geraclis2024/

Database constructions

title	location	country/ region	website
Creation of an open database of original and annotated sunspot drawings of the seventeenth and eighteenth centuries, accompanied by a catalog of sunspot data extracted from these historical observations	Saint-Petersburg State University	Russia	https://geo.phys.spbu.ru/~ned/History.html
Upgrade of the international GLE database by including records from non-standard detectors	University of Oulu	Finland	https://gle.oulu.fi/
InnerShock: A comprehensive database of shock waves observed in the inner heliosphere	University of Helsinki	Finland	
An Active Region Database for Solar Cycle Variability and Prediction	School of Space and Environment, Beihang University	China	

Announcement 3:

SCOSTEP's Next Scientific Program Committee

Kazuo Shiokawa (SCOSTEP President)[1] and Bernd Funke (Vice President)[2]
[1]Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Nagoya, Japan
[2]Instituto de Astrofísica de Andalucía (CSIC), Granada, Spain


Kazuo Shiokawa


Bernd Funke

The Scientific Committee on Solar Terrestrial Physics (SCOSTEP) is an Affiliated Body of the International Science Council (ISC). SCOSTEP runs long-term (4-5 years) international interdisciplinary scientific programs of solar-terrestrial physics relevant to ISC scientific bodies. Recent examples of SCOSTEP scientific programs are CAWSES-I and -II (2004-2013), VarSITI (2014-2018), and PRESTO (2020-2024). In order to define the next scientific program (NSP) after PRESTO, SCOSTEP has formed the NSP committee on February 2024.

The NSP committee members are:

- Carine Briand, Paris Observatory, LESIA, France
- John Bosco Habarulema, SANSA, South Africa
- Natalie Krivova, Max Planck Institute for Solar System Research, Germany
- Kanya Kusano, ISEE, Nagoya University, Japan
- Monica Laurenza (chair), INAF, Italy
- Hanli Liu, NCAR, USA
- Maria Graciela Molina, FACET – UNT, Argentina
- Hilde Nesse, University of Bergen, Norway
- Jana Šafránková, Charles University, Czech Republic
- Jie Zhang, George Mason University, USA
- Qiugang Zong, Macau University of Science and Technology & Peking University, China

The committee will have two face-to-face meetings in June and October 2024 to discuss the next scientific program. We urgently need input from the solar terrestrial physics community to help shape the next scientific program. Please send your ideas and/or concise white papers via the following Google Form, or any other way that may be convenient to you. Please share information of new/current space missions, observing facilities, and modeling efforts planned for 2025-2030, which should be addressed in the next program. All ideas received by the end of May 2024 will receive full consideration by the committee.

Link to the Google Form:

for text input: https://forms.gle/C9ivpCUZBXP8ZHNx7

for uploading white papers (Google login needed): https://forms.gle/DAQyszEXjs4Vz6XJ9

The purpose of the SCOSTEP/PRESTO newsletter is to promote communication among scientists related to solar-terrestrial physics and the SCOSTEP's PRESTO program.

The editors would like to ask you to submit the following articles to the SCOSTEP/PRESTO newsletter.

Our newsletter has five categories of the articles:

1. Articles— Each article has a maximum of 500 words length and four figures/photos (at least two figures/photos).
   With the writer's approval, the small face photo will be also added.
   On campaign, ground observations, satellite observations, modeling, etc.
2. Meeting reports—Each meeting report has a maximum of 150 words length and one photo from the meeting.
   With the writer's approval, the small face photo will be also added.
   On workshop/conference/ symposium report related to SCOSTEP/PRESTO
3. Highlights on young scientists— Each highlight has a maximum of 300 words length and two figures.
   With the writer's approval, the small face photo will be also added.
   On the young scientist's own work related to SCOSTEP/PRESTO
4. Announcement— Each announcement has a maximum of 200 words length.
   Announcements of campaign, workshop, etc.
5. Meeting schedule

Category 3 (Highlights on young scientists) helps both young scientists and SCOSTEP/PRESTO members to know each other. Please contact the editors if you know any recommended young scientists who are willing to write an article on this category.

TO SUBMIT AN ARTICLE

Articles/figures/photos can be emailed to the Newsletter Secretary, Ms. Mai Asakura (asakura_at_isee.nagoya-u.ac.jp). If you have any questions or problem, please do not hesitate to ask us.

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website: https://scostep.org.