

Subject: Space Weather Nigerian Communication Network: SW-NICONET  
From: Space Weather <spaceweathernigeria@niggs.org>  
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To: Editor of the ISWI Newsletter

Space Weather Nigerian Communication Network Newsletter (SW-NICONET)  
Volume 1, Issue 004, May 2019

\*\* Dear Colleagues,

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\*\* Welcome on board SW-NICONET Newsletter!!!  
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\*\* Editorial  
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Welcome to the Welcome to the 2nd edition of the  
Space Weather Nigerian Communication Network:  
SW-NICONET Newsletter. A platform where all issues pertaining to Space weather  
and ionospheric research in Nigeria and UN-ISWI activities are made known to us.  
The objective of this initiative is to to build a stronger space weather and ionospheric  
research network in Nigeria. It is also intended to keep us abreast of new developments  
and research progress in Nigeria. The platform will also continually feature experiences  
of senior and mid career researchers in the field of Ionospheric and space weather  
research from Nigeria. This would help young researchers in the field build their  
research directions. It will also help reduce research repetition but rather help build up  
on existing works. SW-NICONET is in collaboration with the International Geophysical  
Research Group/Europe-Africa (IGRGEA).

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\*\* International Colloquium On Equatorial And Low-Latitude Ionosphere  
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Preamble:

Gaining better understanding of the dynamics of the equatorial and low latitude  
ionosphere has become an object of global concern more than ever. The past decades  
have witnessed deployment of observational facilities to equatorial region of the  
world courtesy of international communities coordinated by United Nations under  
the International Heliophysical Year IHY and more recently International Space  
Weather Initiative ISWI. Equatorial region, also known as the low latitude region  
refers to the region within 20 on either side of the geomagnetic equator.  
The region is characterized with much complexities and high level of dynamics  
which result in phenomena such as spread F, ionospheric anomaly, equatorial  
electrojet, equatorial plasma fountain, etc. The impact of such phenomena on  
telecommunications, navigation and other space-based technologies has made  
the region a point of international collaborative focus in scientific research.

Main features:

It is on this note that this biennial 'Colloquium on Equatorial and Low Latitude Ionosphere' is hereby introduced to take place in Nigeria starting from 2019. The event shall feature a composition of tutorials, seminars, conference and hands on training on every aspect of research and techniques bordering on the dynamics of equatorial and low latitude ionosphere as well as space weather.

The program of the

Colloquium includes discussions of the rather wide range of phenomena, such as equatorial ionosphere, equatorial electrojet, equatorial ionospheric anomaly, geomagnetic disturbances, geomagnetically induced currents, solar-terrestrial relations, stratospheric warming, space weather, theory and Modeling of Ionospheric Scintillation and Irregularities, presentation of results from different and novel techniques for probing the equatorial ionosphere etc.

This Colloquium shall offer:

opportunities for presentation of standard contributions (oral and poster), delivery of invited papers by distinguished scientists with the intention of educating young scientists, as well as exhibition of space-dependent technologies and measurement systems relevant to ionospheric studies. The forum shall serve as an effective meeting point for scientists, policy makers, students and designers of space-dependent technologies.

Working language:

The working language of the Colloquium is English.

Application Process:

Visit

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=96cb063423&e=56393be7dc>  
to apply

Fees (Payable only on-site at the point of registration)

National Participants from Nigeria:

Scientists: Fifteen Thousand Naira only

Students: Five thousand naira only

International participants:

Scientists: Fifty US dollars

Students: twenty five US dollars

Timelines:

Registration and abstract submission will close on June 15, 2019.

Acceptance notification: June 30, 2019.

Invitation letters distribution: July 5, 2019

Publication of presented papers:

Provision shall be made to publish papers presented at each Colloquium in peer-reviewed reputable journals with international acceptance. The publications shall thereafter be made available both in print and online.

International Advisory Board:

1. Professor Babatunde Rabi; Centre for Atmospheric Research, National Space Research and Development Agency, Nigeria
2. Professor Kazuo Shiokawa, Nagoya University, Japan
3. Christine Mazaudier, Sorbonne Universities, UPMC University, Laboratoire de Physique des Plasmas, Paris, France
4. Prof. Surja Sharma, University of Maryland, USA
5. Professor S. M. Radicella, Abdus Salam International Centre for theoretical Physics, Italy
6. Professor Pat Doherty, Boston College, USA
7. Professor George Maeda, Kyushu Institute of Technology, Japan
8. Dr. Bruno Nava, Abdus Salam International Centre for theoretical Physics, Italy
9. Dr. Fujimoto, Akiko; Kyushu Institute of Technology, Japan
10. Professor Victor Chukwuma, Olabisi Onabanjo University, Nigeria -
11. Professor Elijah Oyeyemi, University of Lagos, Nigeria
12. Dr. Elijah Falayi, Tai Solarin University, Nigeria
13. Dr. Rufus Fayose, Adekunle Ajasin University, Nigeria

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14. Dr. Olawale Bolaji, University of Lagos, Nigeria

Organised by:  
Network of Space-Earth Environmentalists

For more information, please contact  
colloq2019@carnasrda.com

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\*\* NASRDA Commissions New Space Institute,  
Space Environment Laboratory And Other Projects

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The Nigeria' s National Agency for Space Research and Development (NASRDA) commissioned and unveiled six state-of-the-art projects completed by the agency at its headquarters in Abuja on the 23rd of April, 2019.

Established on 5th of May 1999, the government-owned principal space agency is at the forefront of space science and policies in Nigeria. The newly commissioned projects include:

National Space Museum  
Planetarium Building  
Space Incubation Center  
Institute of Space Science and Engineering (ISS&E)  
Sports Complex  
Space Environment Laboratory

Currently located in Abuja, the Institute of Space Science & Engineering (ISSE) was established on June 2, 2015, in accordance with the National Space Research & Development Agency (NASRDA) Act 2010. It is a unique postgraduate Institute set to address the growing needs of space scientific knowledge and innovations in Nigeria and Africa continent at large. The Institute comprises of the Department of Space Science and Department of Aerospace Engineering Systems, with programmes drawn from the specialized studies in Space Sciences, Engineering, Mathematics, Computerization, and Technology Innovations leading to the award of Master of Science (MSc.) and Doctor of Philosophy (PhD) degree.

The programmes were strategically developed in response to the challenges faced by today' s scientific community that requires the ability to analyze and solve complex scientific and engineering design problems in space science and engineering. The institute involves interdisciplinary skills, expertise and approaches for proffering solutions to a better understanding of Earth-Sun systems and space technology for the purpose of improving socio-economic development and security. Some of the approved postgraduate programs at the Institute include:

MSc Space Physics  
MSc Systems Engineering  
MSc Aerospace Engineering  
MSc Geoinformatics and GIS  
PhD in Space Physics  
PhD of Systems Engineering  
PhD Aerospace Engineering  
PhD Geoinformatics and GIS

For more information on the Institute of Space Science and Engineering (ISS&E) Please visit [www.nasrda.org.ng/isse](http://www.nasrda.org.ng/isse)

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\*\* The African GNSS TEC (Afritec) Model

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The AfriTEC GNSS TEC is a model of the ionospheric GNSS TEC over the entire African region (Longitudes 25 degree West to 60 degree East, Latitudes 40 degree South to 40 degree North). The model can be used to obtain the ionospheric GNSS TEC at all locations over the African continent. Usage for this version of the model (version 1.1), is encouraged

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to be restricted between years 2000–2020. There is plan to update the model biennially.  
The year span of encouraged usage will be expanded in subsequent versions of the model.

**Development of the Program:**

The model is developed by the method of artificial neural networks. Details of full paper will be included shortly.

**Usage:**

The program comes in a folder which contains all associating files. The main program to run is named AfriTEC.m. It generates a graphical user interface which is simple and easy to use

Users can either produce diurnal profiles or spatial maps Users can also generate the diurnal profiles for all the days in a year by ticking the checkbox on the user interface

When the program runs, it creates the figure for the user specified details, and stores the corresponding data in a folder named Output (which is created within the same folder where the AfriTEC program is located)

**Terms and Conditions:**

For more information and terms and conditions on the usage of the model,

Please visit

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=c1d6970eb3&e=56393be7dc>

or contact Dr Daniel Okoh

Space Environment Research Laboratory

Centre for Atmospheric Research

National Space Research and Development Agency

Airport Road, Abuja, Nigeria

Email: okodan2003@gmail.com

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**\*\* The Nigerian GNSS TEC (Nigtec) Model**

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The NIGTEC is a model of the ionospheric GNSS TEC over Nigeria (Longitudes 2–15 degrees East, Latitudes 4–14 degrees North). The model can be used to obtain the ionospheric GNSS TEC at all locations over Nigeria.

For this version of the model (version 1.2), usage is encouraged to be restricted between years 2010–2018. There is plan to update the model biennially. The year span of encouraged usage will be expanded in subsequent versions of the model. The model is developed by the method of artificial neural networks as detailed in the full paper which is on open access at

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=db45b7e383&e=56393be7dc>

**Usage:**

The program comes in a folder which contains all associating files. The main program to run is named NIGTEC.m. It generates a graphical user interface which is simple and easy to use. Users can either produce diurnal profiles or spatial maps. Users can also generate the diurnal profiles for all the days in a year by ticking the checkbox on the user interface. When the program runs, it creates the figure for the user specified details, and stores the corresponding data in a folder named Output (which is created within the same folder where the NIGTEC program is located)

**Terms and Conditions:**

For more information on terms and conditions on the usage of the model,

Please visit

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or contact

Dr Daniel Oooh

Space Environment Research Laboratory

Centre for Atmospheric Research

National Space Research and Development Agency

Airport Road, Abuja, Nigeria

Email: okodan2003@gmail.com

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\*\* Post Doctoral Announcements

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(A) Post Doctoral Positions At ISEE, Nagoya University, Japan

The institute for Space-Earth Environmental Research (ISEE), Nagoya University is seeking a highly motivated postdoctoral researcher with a strong background of magnetospheric physics, and data analysis. The successful candidate will work in a research for understanding dynamics of the inner magnetosphere through comparative studies between data analysis of Arase and ground instruments and the inner magnetosphere kinetic model RAM-SCB.

The deadline is May 31.

For more information on the position, please visit:

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=293e2f817c&e=56393be7dc>

(B) Postdoc Opportunity: Space Weather Forecasting and Data/Model Analytics at Georgia Tech

The Georgia Institute of Technology seeking a postdoctoral scholar in the field of space weather forecasting. The project combines significant data analytics, including machine learning and high performance computing, taking a broad view of dynamics of the space weather environment. We will be working with a large team including collaborators at several other institutions. We want you to publish papers, present at conferences, & work with PhD students.

The position can begin as early as 01-June but we have some flexibility. We expect this will last 18 months with a possible additional year. Benefits will be competitive - salary is significantly higher than the national average for postdocs. Employee and health care benefits are provided.

Application Method:

Send a CV, letter of interest, and names of two references to the address below.

Morris B. Cohen, Ph.D.  
Associate Professor, Electrical and Computer Engineering  
Georgia Institute of Technology  
LF Radio Lab.

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\*\* Iri - Workshop - Nicosia/Cyprus - September 2-13, 2019

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The 2019 International Reference Ionosphere (IRI) Workshop will take place at Frederick University in Nicosia, Cyprus from September 2 to 13, 2019. The 2-week workshop is supported under the COSPAR Capacity-Building Workshop program and consists of student-oriented lectures and tutorials during the first week followed by the regular IRI science meeting in the second week. Presentations on general IRI-related topics are also welcome including new data sources and improvements and new additions for the IRI model. Of special interest are applications of the IRI model in all areas of technology and science.

Notable Dates:

DEADLINE for submission of ABSTRACTS is May 15, 2019.

Students and Young Researchers are encouraged to apply for financial support. Living expenses and partial travel support will be provided.

For more information, please visit

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=570b3b4906&e=56393be7dc>.

The IRI homepage is at

<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=1c58e370b5&e=56393be7dc>

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\*\* xxxiii General Assembly And Scientific Symposium Of The International Union Of Radio Science: Preliminary Call For Papers

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The XXXIII General Assembly and Scientific Symposium (GASS) of the International Union of Radio Science (URSI, [www.ursi.org](http://www.ursi.org)) will take place in Rome, Italy from August 29 to September 5, 2020. The scientific programme will be organized around the ten URSI Commissions (see below) and will comprise oral sessions, poster sessions, plenary and public lectures, and tutorials, with both invited and contributed papers. In addition, there will be workshops, short courses, special programmes for young scientists, a student paper competition, programmes for accompanying persons, and an industrial exhibition. Scientists and researchers are invited to submit papers as well as proposals for sessions (that may include both invited and contributed papers), workshops and short courses.

Detailed information will be posted on the GASS 2020 web site [www.URSI2020.org](http://www.URSI2020.org).  
August 29 – September 5, 2020 – Rome, Italy

Paper Submission

All papers should be submitted electronically via the link provided on the GASS 2020 web site, to be checked prior to submission regarding latest instructions, templates, and sample formats. Accepted papers presented at the GASS 2020 may be submitted for posting on IEEE Xplore, if the author chooses so.

Important Deadlines:

Session, workshop and short course proposals: August 31, 2019  
Paper submission opening: October 15, 2019  
Paper submission closing: January 31, 2020  
Notification of acceptance: March 15, 2020

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Header Image is an artist illustration of events on the sun changing the conditions in Near-Earth space.

Credits: NASA

(<https://niggs.us20.list-manage.com/track/click?u=6444fef62afb8ddf44ae305c7&id=71a9742d50&e=56393be7dc>)

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Please feel free to share any information that may be of benefit for all.

For more on the network,

Please contact

Bola R. Abdulrahim

The Editor, SW-NICONET

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