

Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Sixty first session Vienna, Austria,
29 January to 9 February 2024

AGENDA ITEM 9
SPACE WEATHER

FEDERAL REPUBLIC OF NIGERIA
STATEMENT

BY

National Space Research and Development Agency
NASRDA, Abuja, Nigeria

February, 2024

Madam Chair,

Thank you for the privilege extended to my delegation to contribute to this agenda item.

Madam Chair and distinguished delegates, the teeming population of Nigerians have continued to enjoy the patronage of space-dependent technologies whose functionality and efficiency are prone to space weather hazards. The National Space Research and Development Agency of Nigeria, has become a regional hub for space weather education and research in Africa.

Madam Chair, Nigeria has an array of instrument monitoring the space weather, these includes the Fabry Perot interferometer, assorted GNSS receivers, HF Doppler Radar sounder, magnetometers, digisonde, etc. Our measurements have revealed some unique features of the space environment over equatorial Africa which has improved our understanding of equatorial ionosphere. Nigeria is privileged to contribute the "AfriTEC" ionospheric model to the space weather community. In the past 3 years, we have pioneered the use of low cost GNSS receiver in Africa in probing the ionosphere from our facility in Abuja.

Madam Chair, Nigeria will continue to play its role in space weather research in the equatorial region. A good progress is being recorded in the development of the VT-Nigerian Bowen Equatorial Aeronomy Radar system 'VT-NigerBEAR' at the Bowen University Campus in Nigeria. This is in partnership with the Virginia Tech, USA. The VT-NigerBEAR, at fruition, is expected to be a global infrastructure for space weather science capable of improving our understanding of the ionosphere.

Madam Chair and distinguished delegates, Nigeria also hosted the 5th edition of the annual International Colloquium on Equatorial and Low Latitude Ionosphere (ICELLI), at the University of Ilorin, Nigeria between 4th and 8th September 2023. A total of 126 participant from 21 countries participated in the Colloquium, which was jointly organized by the African Regional Centre for

Space Science and Technology Education in English; Network of Space-Earth Environmentalist; Scientific Committee on Solar Terrestrial Physics PRESTO/SCOSTEP; Boston College, USA; UN International Space Weather Initiative; Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Japan; University of Ilorin, Nigeria; University of Oslo, Norway; JSPS Program; Abdus Salam International Centre for Theoretical Physics, Italy; and African Geophysical Society.

Madam. Chair, **The 5th** edition of the colloquium , featured lectures, tutorials and hand on sessions on topics geared towards understanding of the Sun and its impact on space weather; the dynamics of the equatorial ionosphere, and how space weather impact on space-dependent technologies.

Madam Chair, my delegation is pleased to inform this meeting that Nigeria is planning and preparing to host the United Nations Workshop on the International Space Weather in 2025. Nigerian scientists are participating actively in various space weather related programmes such as activities of SCOSTEP, COSPAR, URSI, etc. We have continued to sustain and improve our space weather Nowcast and Forecast Programmes in a bid to reach out to patrons of space dependent operations in our region. We freely made our forecasts available via our webpage "<https://arcsstee.org.ng/space-weather/>"

We use this opportunity to express deep appreciation to our international partners and hope for continued collaboration for better space weather research for the benefit of humanity.

Thank you all for your kind attention