



Documentation

The Abuja ISWI Resolution

The following Resolution was unanimously adopted by the participants in the UN/Nigeria Workshop on the International Space Weather Initiative (ISWI), hosted by Nigeria in October 2011. First results of the implementation of the following Resolution will be reported at the UN/Ecuador Workshop on ISWI, to be hosted by Ecuador in 2012.

Abuja ISWI Resolution

1. The United Nations should lead, with the active support of Japan and relevant scientific organizations, an international effort to establish an International Center for Space Weather Science and Education in an existing national educational and research institution. The Space Environment Research Center (SERC) at Kyushu University (http://www.serc.kyushu-u.ac.jp/index_e.html), Japan, has offered to host this Center.
2. This space weather center should grow into a network of national and regional centers, focusing on space weather, around the world – all dedicated to advancement of space weather research and education.
3. The center will provide capacity building and technical guidance to nations that wish to engage in space weather science and education. Capacity building consists of three main components:
 - (i) Training/deployment on instrumentation. Space weather monitoring, for either operations or research, requires continuous data recording. These data come from precision instruments, either on the ground or in space. Such instruments require proper maintenance. Recent reviews have shown that the number of individuals skilled in operating and maintaining these specialized instruments is declining on a global scale.
 - (ii) Training on data analysis. Raw data must be inspected, corrected, calibrated, interpreted, transformed, and archived. Most of these activities require sophisticated software and long-term experience handling such data. Using software demands advanced training for users of the data.
 - (iii) Education/training on space weather science. With processed and archived data available, the final process is to perform scientific investigations based on these data, and

to publish the research findings in the international scientific literature. The ability to perform this final process generally requires a PhD/MSc level education, which can only be provided by supervisors who are experts in the space sciences at the university level.

4. Space weather work is roughly divided into two spheres:
 - (1) Operational activities;
 - (2) Research and educational activities.

Operational work can be handled by already existing national space related institutions.

Research and education is the domain of advanced research institutions and universities. The center recommended in this “Abuja ISWI Resolution” must be part of such an advanced research institution or university. Moreover, a proven record of capacity building is an essential prerequisite for this center.

5. The center must be an institution with a proven record in organizing international activities. These activities include space weather schools, space weather workshops, observation campaigns, installation of instruments in different regions of the world, training of instrument host staff and students, and international outreach programs. The center must possess experience in promoting and supporting international programs such as ISWI.

The centre will cooperate with the UN-affiliated Regional Centres for Space Science and Technology Education, located in India, Mexico/Brazil, Morocco, and Nigeria (<http://www.unoosa.org/oosa/en/SAP/centres/index.html>), and other centers of excellence in space science and technology education.

The Centre for Basic Space Science at the University of Nigeria (<http://www.cbssonline.com/>), Nsukka, has offered to act as a regional center for space weather science and education.

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