



UNITED NATIONS  
Office for Outer Space Affairs

## INFORMATION NOTE

### **United Nations/United States of America Workshop on The International Space Weather Initiative: The Decade after the International Heliophysical Year 2007**

**Organized jointly by the United Nations Office for Outer Space Affairs, the  
National Aeronautics and Space Administration, and the Boston College**

**Co-sponsored by the International Committee on Global Navigation  
Satellite Systems (ICG) and the Scientific Committee on Solar-Terrestrial  
Physics (SCOSTEP)**

**Boston College  
Chestnut Hill, Massachusetts, United States of America  
31 July – 4 August, 2017**

#### **1. Introduction**

The International Heliophysical Year 2007 (IHY) drew scientists and engineers from around the globe in a coordinated observation campaign of the heliosphere and its effects on planet Earth. Building on these activities, the United Nations Committee on the Peaceful Uses of Outer Space launched the International Space Weather Initiative (ISWI) in 2009.

ISWI is a program of international cooperation to advance space weather science by a combination of instrument deployment, analysis and interpretation of space weather data from these instruments in conjunction with space data, and the communication of the results to the public. While the ISWI was formally concluded as an agenda item of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space in 2012, its activities continue under the framework of a new agenda item on Space Weather and under the Expert Group on Space Weather, established by the Scientific and Technical Subcommittee.

The present Workshop marks the 10<sup>th</sup> anniversary of IHY, and will consider future international cooperation in space weather activities linked to the preparations for the 50<sup>th</sup> anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) under its thematic priority 4. “International framework for space weather services”, which has the following objectives:

- Strengthen the reliability of space systems and their ability to respond to the impact of adverse space weather;

- Develop a space weather road map for international coordination and information exchange on space weather events and their mitigation, through risk analysis and assessment of user needs;
- Recognize space weather as a global challenge and the need to address the vulnerability of society as a whole;
- Increase awareness through developed communication, capacity-building and outreach;
- Identify governance and cooperation mechanisms to support this objective.

Regarding the Sustainable Development Goals (SDGs), the workshop will contribute to *SDG 9: Industry, Innovation and Infrastructure*, in the area of protecting infrastructure from space weather - Efforts on the ground can include damage and disruption to power distribution networks, increased pipeline corrosion, and degradation of radio communications.

#### **UNISPACE+50**

The year 2018 will mark the 50<sup>th</sup> anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space - UNISPACE+50. The Committee on the Peaceful Uses of Outer Space (COPUOS) at its fifty-eighth session in June 2015 endorsed the plan of work for UNISPACE+50. UNISPACE+50 will review the contributions that the three UNISPACE conferences (UNISPACE I, held in 1968, UNISPACE II, held in 1982, and UNISPACE III, held in 1999) have made to global space governance. In line with the 2030 Agenda for Development and sustainable development goals, UNISPACE+50 aims to chart the future role of COPUOS, its subsidiary bodies and the United Nations Office of Outer Space Affairs, at a time of an evolving and more complex space agenda when more participants, both governmental and non-governmental, are increasingly involved in ventures to explore space and carry out space activities. The activities of the United Nations Programme on Space Applications are an integral part of the UNISPACE+50 thematic cycle and are aimed at contributing to outputs under the four pillars space economy, space society, space accessibility and space diplomacy. For additional information on UNISPACE+50 see <http://www.unoosa.org/oosa/en/ourwork/hlf/hlf.html>.

## **2. Objectives and Expected Outcomes**

The United Nations workshops on ISWI, held from 2010 through 2012, have been aimed at providing a global forum for space weather experts from both developed and developing nations, including representatives of the major instrument operators and data providers.

In particular, the main focus of this workshop will be on recent advances made in scientific research by utilizing ISWI instrument data in conjunction with space mission data in adding significant new knowledge on space weather phenomena near Earth and interplanetary space. It is to highlight achievements made over the past ten years and to show-case the worldwide development of science, capacity building, and outreach

In order to strengthen the ongoing processes in the lead up to UNISPACE+50, the specific objectives of the workshop will be to:

- Strengthen international coordination and cooperation on space weather products and services, indirectly contributing to the thematic priorities: Global partnership in space exploration and innovation; International framework for space weather services and Capacity-building for the twenty-first century;
- Continue efforts in space weather education, especially also for students from developing nations. IHY and ISWI have contributed to significant progress in the development of space science schools that encourage students to consider a career in space science;
- Develop a coherent international policy towards an appropriate response to space weather.

The expected outcomes of the workshop will be:

- Creation of an international coordination mechanisms of operational space weather services, including monitoring, forecasting, awareness raising, with the overall goal to protect life, property and critical infrastructure;
- Recommendations for improved collection, exchange and delivery of space weather data, as well as improved operational analysis, modelling and forecasting methods through the promotion of best practices, suggestions of means to improve accuracy, reliability and interoperability.

The observations and recommendations emanating from the workshop will be disseminated in form of report of the Committee on the Peaceful Uses of Outer Space to the United Nations General Assembly.

### **3. Preliminary Programme of the Workshop**

The workshop will consist of a series of technical presentations, panel discussions and working group meetings. A half day technical tour will be arranged by the Local Organizing Committee during the workshop. As a preliminary suggestions the following are the topics of the three components of the workshop:

**Part 1:** A high level international forum on the economic and societal effects of extreme space weather. This forum will include keynote speakers from major international organizations followed by a panel session to discuss issues and policies for acknowledging space weather as a global challenge.

**Part 2:** International Space Weather Initiative session focusing on, but not limited to:

- Instrumentation;
- Solar Effects;
- Magnetosphere, Ionosphere, and Thermosphere;
- Coupling;
- Modelling;
- Space Weather and its effects on global navigation satellite systems (GNSS)
- Capacity-Building, Education and Outreach.

**Part 3:** A flagship event for UNISPACE+50 will be focusing on international framework for space weather services.

The three components of the workshop will help develop a coherent international policy towards an appropriate response to space weather.

### **4. Working Methods**

Participants of the workshop are requested to deliver a presentation paper in a field related to the theme of the workshop. Each speaker will be allocated 20 minutes for the presentation. It is also necessary to submit an abstract of presentation with a maximum of 600 words including the following details: Paper Title, Author (s) Name(s), Affiliation(s), and e-mail address for the presenting author.

A poster exhibit will also be organized to allow speakers and participants to present their ideas and to share them with the other participants.

### **5. Expected Participants**

Applicants should be involved in space weather research activities in national or international organizations, research centres, academic institutions or industry. Applications from qualified female applicants are particularly encouraged. The co-sponsors of the workshop will jointly select participants

on a competitive basis. Successful applicants will be notified of the outcome within two weeks after the deadline.

## **6. Language of the Workshop**

Applicants must have a working knowledge of English, which will be the only language of the workshop.

## **7. Financial Support**

Within the limited financial resources available, a limited number of selected participants will be offered financial support to attend the workshop. This financial support will defray the cost of travel (a round trip airticket – most economic fare – between the airport of international departure in their home country and Boston, the United States) and/or the room and board expenses for the duration of the workshop.

## **8. Deadline for Submission of Applications and Abstracts**

The completed application form together with the presentation abstract should be submitted on-line, to the Office for Outer Space Affairs, **no later than Sunday, 23 April 2017**. Only complete applications with all the requested information and signatures will be considered by the workshop organizing committee. Please note that on-line application form is available on the website of the Office for Outer Space Affairs at the following address:

<https://register.unoosa.org/civcrm/event/register?id=73>

All candidates are strongly encouraged to apply for the workshop online, as it helps to streamline the processing of applications as well as helps applicants to save their time.

## **9. Life and Health Insurance**

Life and major health insurance is the responsibility of each selected participant or his/her nominating institution or government. The co-sponsors will neither assume any responsibility for life and major health insurance, nor for any other expenses related to medical treatment or accidental events.

## **10. Further Information and Points of Contact**

For questions related to the application process, please contact Mr. Ahmed OSMAN, United Nations Office for Outer Space Affairs at: ([ahmed.osman@unoosa.org](mailto:ahmed.osman@unoosa.org)).

For questions related to the workshop programme and to co-sponsorship opportunities, please contact Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs at: ([sharafat.gadimova@unoosa.org](mailto:sharafat.gadimova@unoosa.org)) and Ms. Patricia DOHERTY, Boston College, the United States ([patricia.doherty@bc.edu](mailto:patricia.doherty@bc.edu)).

The focal points for the United States: Ms. Patricia DOHERTY, Boston College ([patricia.doherty@bc.edu](mailto:patricia.doherty@bc.edu)) and Mr. Nat GOPALSWAMY, National Aeronautics and Space Administration ([nat.gopalswamy@nasa.gov](mailto:nat.gopalswamy@nasa.gov)).

For the latest information on the workshop, please frequently check the website: <http://www.unoosa.org/oosa/en/ourwork/psa/schedule/2017/2017-un-usa-workshop-on-international-space-weather-initiative.html>