Workshop on Space Weather Effects on GNSS Operations at Low Latitudes

23 April – 4 May 2018
Trieste, Italy

Further information:
http://indico.ictp.it/event/8306/
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Space weather is the variation in Sun energy emissions, solar wind, magnetosphere, ionosphere and thermosphere, which can influence the performance and reliability of a variety of space borne and ground-based technological systems. As such, space weather is recognised as the cause of significant errors experienced by Global Satellite Navigation Systems (GNSS), Satellite Based Augmentation Systems (SBAS) and their users.

Directors:

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Description:

GNSS or SBAS signals, propagating from a satellite to the user receiver, pass through the ionosphere where they are subject to the damaging effects of space weather. Under these conditions pseudorange errors and signals scintillations at user receiver level are present. The effects are critical at low latitudes where most of the developing countries are located.

The workshop will give theoretical and practical training on the physics of space weather and its main effects on the GNSS operations, with particular emphasis on the low latitudes ionospheric processes related to space weather.

Topics:

- Impact of the ICTP T/ICT4D Boston College ISR joint training activities on GNSS science and applications in developing countries (including Nigeria, Cote d'Ivoire, Ethiopia, Argentina and Malaysia);
- Introduction to satellite navigation and positioning, and the importance of satellite navigation for developing countries;
- GNSS: systems and operations;
- Introduction to space weather;
- Continuous and transient transport of energy from the Sun to the Earth;
- Ionosphere and its response to space weather, with particular attention to low latitudes;
- Space weather effects on GNSS operations;
- Computer laboratory exercises on the use of space weather data for GNSS research and applications.

Local Organizer:

B. NAVA, ICTP

How to apply:

Online application:
http://indico.ictp.it/event/8306/

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Deadline:

1 February 2018

ION INSTITUTE OF NAVIGATION

ICG International Committee on Global Navigation Satellite Systems

The Abdus Salam International Centre for Theoretical Physics
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