



## The 2<sup>nd</sup> APSCO & ISSI-BJ Space Science School with EISCAT

### « *Study Space Weather Effects* »

#### « *From the Sun to the Ground* »

This is the first announcement for the international 10-days school on « *Study Space Weather Effects; From the Sun to the Ground* ». The school will be held at the China Remote Sensing Satellite Ground Station - RAD/CAS - in Sanya, China from October 10 to 19, 2018. Full information is available at the official website: [2nd Space Science School](#)

Please download the poster for advertising the School: [Poster](#)

### Introduction to the School

This is the second joint space science school organized between the Asia-Pacific Space Cooperation Organization ([APSCO](#)) and the International Space Science Institute in Beijing ([ISSI-BJ](#)). The 2018 school is also co-organized with the EISCAT Scientific Association ([EISCAT](#)). It is intended to promote a biennial School on space sciences for Master's and Ph.D. students, as well as post-doctoral and early career scientists or engineers. This school will provide the participants with the in-depth knowledge of the science of Space Weather, observational methods and its relevance to applications from the Sun to the ground. While there are many different ground-based measurements of space weather and its effects, in this school we will focus on the use of incoherent scatter radars as operated by EISCAT. The school will build links between participants, and between teachers and participants in order to facilitate future collaboration in Space Weather.

The school starts with two days and a half of invited speakers giving introductory lectures about various elements of Space Weather. After each lecture, there will be plenty of time for questions and discussion. The speakers will be chosen among experts and well-recognized scientists and engineers with an excellent reputation in teaching and supervising participants. The lecturers are expected to cover some of the general themes reported in the Table below; however, the full school program will be available very soon on the school webpage.

The participants will be divided in four groups to analyze in parallel one well-observed extreme Space Weather event. Each group will have its own theme and agenda using actual observations, as well as computer models. Each group will produce a report, and all group reports will be merged and published after the school (see below). The different groups will be supported and guided by expert tutors. At the end of each day, a joint dinner is planned where the students, teachers, tutors, and organizers reflect on the day and interact with each other on a more social level. The school will finish with the presentations of the groups' results to which feedback will be given from the other groups, as well as the teachers and tutors.

<i>Students working group</i>	<i>Research Topics</i>	
Sun/ Heliosphere	Coronal mass ejections, Sun-Spot, Solar-flare, ICME, Solar energetic particles, Shock, Solar-wind	Theory Simulations Observations with data
Impact and Magnetosphere-Ionosphere-Thermosphere Coupling	Magnetosphere/Ionosphere/Thermosphere, radiation belts, current systems	Theory Simulations Observations with data
Ionosphere / EISCAT Incoherent Scatter Radars	Ionosphere – radar data examples, Data analysis and fitting, Incoherent scatter radar theory	Theory Simulations Observations with data
Effects on Satellites and Ground-based infrastructures	Spacecraft charging, electronic upsets, biological and soft matter systems, electrical power grids, current systems	Mitigation strategies

The School will teach the students to work on observational Space Weather space and ground data, theory and modelling. Ionosphere / Incoherent Scatter Radars group will be organized on the model of an EISCAT school to give an introduction to and a practice of the ground-based facilities (principally the incoherent scatter radar systems) to observe and study space-weather effects. It will also introduce the International Meridian Circle Project (IMCP), to which several APSCO member states participate, and the different generic categories of instruments used to monitor space weather from the ground. The School will also facilitate and initiate different discussions in an international and multi-disciplinary way; it will encourage creativity and provide the contacts for the participants to develop a professional network. International collaboration will also be an important theme at the school.

The School is open to 60 selected science and engineering participants. The participants are requested in the registration form, to select the working group they wish to join.

**The working language of the School is English.** Students need to bring their laptops in order to have access to all necessary experimental data, models, and literature through the Internet. The tutors will provide/indicate the data and models on-site to the students.

## Location & Local arrangement

The school will take place at China Remote Sensing Satellite Ground Station - RAD/CAS - in Sanya, China.

## Duration, Date

This is a 10 days School (Wednesday, October 10 - Friday, October 19, 2018)

The number of participants will be limited to 60, and the participants will be hosted at the Centre, in double rooms (two students sharing a room).

## Deadlines and Announcements

Terms	Dates
First announcement	May 15, 2018
First circular	August 30, 2018
Second circular	September 19, 2018
School	October 10- 19, 2018

## Registration and registration fee

The registration to the school is now open, and will be closed on July 31st 2018. If you are interested to participate, please register online at the official website: [Registration Form](#)

At the same time, due to the limited number of places, we ask the participants to provide their short CV (including the names of two reference persons). The CVs should be provided by email, in reply to the confirmation email received after successfully submitting the registration form online. Note, however, that priority will also be given on the basis of the registration date. Selected participants will be informed soon after July 31<sup>st</sup>, 2018.

Applicants under APSCO are fully supported. For all other participants, the registration fee is 350\$ (US Dollars) or 2300 CNY (Chinese RMB), which includes 10 days of housing at the school, meals, social dinner, coffee breaks, and the transport from the airport to the school. The payment of the fee will be done upon arrival to the school in cash only.

## Publications

The presentations given by the different lecturers will be stored electronically on the School webpage and will be accessible to the School participants.

The final report will be published jointly with APSCO and EISCAT in the TAIKONG ISSI-BJ magazine. After the School, this TAIKONG publication will be provided to all the School participants, sponsors, and will be widely distributed to the media.

## Contact persons:

### **Ms. EN Lijuan**

Assistant to Executive Director  
International Space Science Institute-Beijing  
E-mail: [enlijuan@issibj.ac.cn](mailto:enlijuan@issibj.ac.cn)

### **Mr. BAI Yu**

Assistant of Department of Education, Training and Database Management (DET&DM)  
Asia-Pacific Space Cooperation Organization (APSCO)  
E-mail: [baiyu@apsco.int](mailto:baiyu@apsco.int)

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