

Solar Extreme Events of 2003: Fundamental Science and Applied Aspects (SEE)

**International Symposium
Moscow, Russia
12-14 July, 2004**

The first circular

Date and Location

12-14, July 2004
Moscow State University, Moscow, Russia,

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- Russian Academy of Sciences,
- Rosaviacosmos (Russian Space Agency),
- Moscow State University,
- Russian Ministry of Sciences and Technology.
- COSPAR (tbc)
- National Science Foundation (USA)

Deadline for abstracts: April 15, 2004

Abstract submission: electronic submission on <http://see.magnetosphere.ru>

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Deadlines

- Abstracts: April 15, 2004
- Registration (electronic): June 1, 2004

Registration Fee

- 250 Euro for foreign participants
- The registration fee for Russian participants consists of two parts: 200 roubles, which the participant pays at registration, and contributing payments of the Russian Institutes, which are Symposium Organisers.

(The detailed information will be provided in the 2nd circular)

Abstract Format & Submission

(The information for electronic submission will be provided in the 2nd circular)

Publications

We hope to publish the proceedings in the “Space Weather” journal, edited by Dr. L. Lanzerotti (the detailed information will be provided in the 3rd circular)

Venue

Moscow State University, the Main building

Hotels & Accommodation

Some hotels around Moscow State University will be available (the detailed information will be provided in the 2nd circular)

Address

Moscow State University, Leninskie Gori, Moscow, 119992, Russia

Visas

The information will be provided in the 2nd circular

Scientific Rationale

Two years ago, solar cycle 23 entered its declining phase, following its maximum in 2000-2001. Nevertheless, the solar atmosphere and solar magnetic field exhibited numerous extremely strong energy releases in October and November 2003, with powerful solar flares and majestic coronal mass ejections. As a result of this rather unexpected solar activity enhancement, the heliospheric plasma, electromagnetic fields and energetic particle populations as well as cosmic rays were strongly perturbed. Many travelling shock waves, magnetic flux ropes and sporadic high speed solar wind streams were observed. The terrestrial magnetosphere responded to these perturbations with strong magnetic storms, broad aurora, radiation belt, and ionosphere variations. Moreover, significant upper atmosphere and ground disturbances were recorded.

The famous October and November 2003 events attracted the attention of scientists, engineers and the public worldwide. These events offer new scientific insights to help us better understand how our world and the surrounding space environment are connected. They are also of special interest because of their impacts on both technological and biological systems.

The extreme solar-terrestrial events of October and November 2003 were recorded by many ground-based and space-borne instruments. We propose to present and discuss observations made by SOHO, Cluster, CORONAS-F and “METEOR” spacecraft, the International Space Station, several geo-stationary satellites, as well as ground observatories located world-wide and especially in Russia.

The aim of the Symposium is twofold:

- 1.) to have a forum for discussing the recent October and November 2003 solar extreme events in context of the coupled solar-terrestrial system both from a scientific and a technological point of view,
- 2.) to create opportunities for new scientific contacts and collaborations.

The following topics will be covered at the Symposium:

1. Sun, heliosphere and solar wind properties/dynamics during the extreme events
2. Magnetospheric response to the solar extreme events in 2003
3. Space weather applications.

The dates of the Symposium are particularly suitable for the participants of the COSPAR Assembly. You are welcome!

Scientific program

- A. Events of October - November 2003 in retrospect of solar activity
- B. Solar and heliospheric activity
 - neutrons, gamma-ray and X-ray emissions
 - generation of solar energetic particles
 - solar images in different wavelengths
 - solar magnetic fields
 - coronal mass ejections and solar flares
 - solar wind and interplanetary magnetic field
 - galactic cosmic ray variations
- C. Magnetic storms
 - magnetic field and plasma dynamics in the disturbed magnetosphere
 - storm-time current systems
 - storm - substorm relationship
 - magnetospheric boundaries
 - dynamics of the magnetospheric tail
 - auroral phenomena
 - dynamics of energetic particles in the inner magnetosphere, radiation belts
 - sources and losses of magnetospheric particles
 - magnetosphere-ionosphere interaction
- D. Space weather
 - space weather monitoring and forecasting
 - terrestrial impact of magnetic storms
 - impact of magnetic storms on technological systems in space
 - satellite damages and effects of energetic particles
- E. Discussion (“Round Table”)

Sessions Schedule (preliminary)

We propose 4 lectures (overall retrospective, Sun and heliosphere, magnetosphere, space weather) before every morning sessions. 3 scientific sessions devoted to heliosphere, magnetosphere and space weather will be organized.

Monday, 12 July 2004

08:30 - 09:30 - Registration

09:30 - 10:00 - Opening

Morning session: Solar and heliospheric activity

10:00 - 10:40 - Invited Lecture A "Retrospective of solar extreme events
of October - November, 2003"

10:40 - 11:20 - Invited Lecture B

11:20 - 11:40 - Coffee Break

11:40 - 13:00 - Oral reports B (20 min each)

13:00 - 14:30 - Lunch

Afternoon session: Solar and Heliospheric Activity

14:30 - 15:50 - Oral reports B (20 min each)

15:50 - 16:50 - Coffee break and poster session B

16:50 - 18:30 - Oral reports B (20 min each)

18:30 - Icebreaker

Tuesday, 13 July 2004

Morning session: Magnetic Storms

09:00 - 10:00 - Invited Lecture C

10:00 - 11:00 - Oral reports C (20 min each)

11:00 - 12:00 - Coffee break and poster session C

12:00 - 13:00 - Oral reports C (20 min each)

13:00 - 14:30 - Lunch

Excursion

Conference Dinner

Wednesday, 14 July 2004

Morning session: Magnetic Storms and Space Weather

09:00 - 11:00 - Oral reports C (20 min each)

11:00 - 11:20 - Coffee Break

11:20 - 12:00 - Invited Lecture D

12:00 - 13:00 - Oral reports D (20 min each)

13:00 - 14:30 - Lunch

Afternoon session: Space Weather and Discussion

14:30 - 15:50 - Oral reports D (20 min each)

15:50 - 16:50 - Coffee break and poster session D

16:50 - 18:30 - Discussion (“Round Table”) E

18:30 - 19:00 - Closing of the conference

Poster Sessions

Every day ~1 hour

Round Table:

The last day, 2 – 3 hours duration

Social Programme

Monday, July 12: Icebreaker

Tuesday, July 13: Excursion. *More information will be provided in the 3rd circular*)

Tuesday, July 13: Conference dinner

(More information will be provided in the 3rd circular)

List of invited lecturers

The information will be provided in the 3rd circular