

**Photo: NASA** 



www.tiems.org

THE INTERNATIONAL EMERGENCY MANAGEMENT SOCIETY - TIEMS

## **Call for Papers**

**International Conference on** 

## **Space Weather and Challenges for Modern Society**

Potential Damaging Consequences and Practical Protection for Industrial Operations and Critical Infrastructure like Electric Power Supply, Communication Systems, Positioning Systems, etc.

Oslo, Norway

22 - 24 October 2012

Supported by

Norwegian Water Resources and Energy Directorate; <a href="http://www.nve.no/en/">http://www.nve.no/en/</a>
The Norwegian Space Centre; <a href="http://www.spacecentre.no/english/">http://www.nve.no/en/</a>
The Swedish Institute of Space Physics: <a href="http://www.irf.se/">http://www.irf.se/</a>
Finnish Meteorological Institute: <a href="http://en.ilmatieteenlaitos.fi/">http://en.ilmatieteenlaitos.fi/</a>









Further Supporters, Exhibitors and Sponsors are Welcome!

#### **BACKGROUND**

2012 – 2013 is expected to be years with high solar activity. This can trigger larger solar storms which can generate geomagnetic induced currents (GIC) on the earth. GIC can affect the normal operation of specific industrial operations and critical infrastructure (e.g power grids, telecom, navigation systems, etc).

During space weather events, like solar storms, electric currents in the magnetosphere and ionosphere experience large variations, which manifest also in the earth's magnetic field. These variations induce currents (GIC) in conductors operated on the surface of the earth. Electric transmission grids and buried pipelines are common examples of such conductor systems. GIC can cause problems, such as increased corrosion of pipeline steel and may disturb and possible damaged high-voltage power transformers and it can also have damaging effects on communication systems, navigation systems and oil and gas operations.

Vulnerable industries are the oil and gas industry, railways, telecommunication industry, navigation industry and not at least the society, which is very vulnerable concerning short or long term interruption of critical infrastructure.

The conference will focus on increasing the general knowledge of solar storms, space weather and GIC and the possible consequences for different industries and critical infrastructure, and look into reasonable means of protection, and consider possible early warning solutions.

#### **Conference Focus**

The conference will focus on increasing the general knowledge of solar storms, space weather and GIC and the possible consequences for different industries and critical infrastructure, and look into reasonable means of protection, and consider possible early warning solutions.

The main topics which will be addressed at the conference are:

- Solar Storms and Space Weather History and Experiences
- Stormy Sun our Current Knowledge
- Effects on Space Infrastructure and Aviation
- Expectations and Effects on Electric Power Supply, Satellites, Telecommunication, Navigation and Oil and Gas Exploration Activity
- Industries Preparedness and Protection Measurers
- Predictions of Solar Storms, Warnings, Preparedness Measures and Response
- A Super Storm What can happen and how to prepare for and handle it?
- Industries and Authorities Handling Strategies and Contentious Level
- Future Expectations
- Other relevant topics related to Risk and Preparedness Measures

#### Who Should Attend

The topic is important for political and administrative decision makers, researchers in the field, risk management specialists, relevant vulnerable industry representatives, authorities, insurance industry and others who want to increase their general and specific knowledge on the subject.

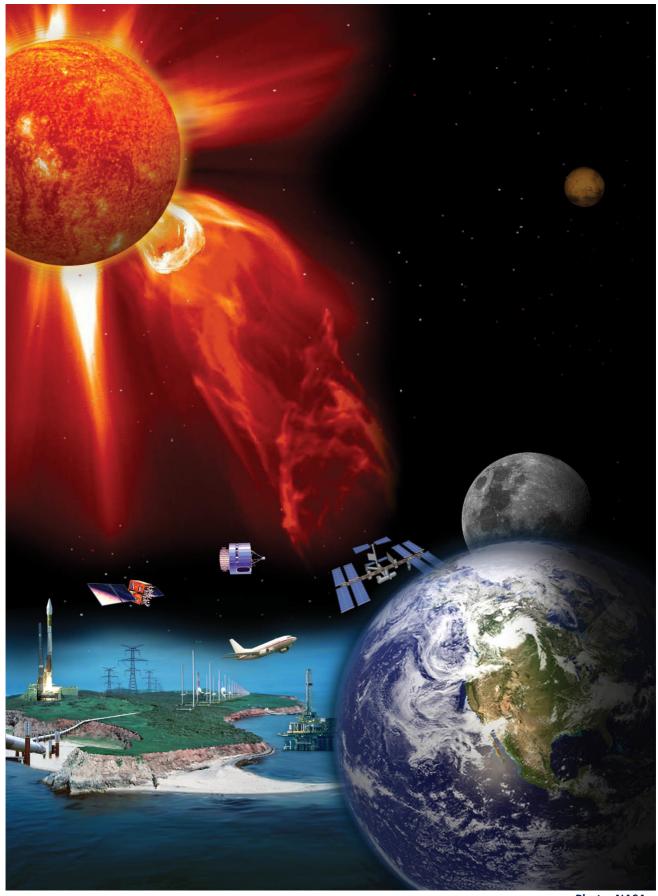


Photo: NASA

**Space Weather Perspectives** 

#### **Call for Papers and Posters**

We invite for submission of papers and posters to be presented at the three day conference on the above topics, which will contribute to increasing the general knowledge and risk of solar storms, space weather and GIC and the possible consequences for different industries and critical infrastructure, and presenting reasonable means of protection, and considering possible early warning solutions.

The Conference International Program Committee will select 25 - 30 papers to be presented in the plenary sessions during the three day conference, and those papers not selected for the plenary sessions, will be welcomed to be presented as posters.

Title and Abstract (less than 300 words) to be submitted to TIEMS conference organizer, K. Harald Drager at <a href="mailto:khdrager@online.no">khdrager@online.no</a> before 1<sup>st</sup> April 2012. Both Power Point presentations only and Full Papers and Posters will be accepted, and presentation type needs to be specified in the submission.

The Conference Program Committee will approve papers and posters for presentation at the conference latest **15**<sup>th</sup> **April 2012**.

Full Papers and Posters must be submitted latest **15**<sup>th</sup> **August 2012**. Papers and Posters shall be no longer than 10 A4 pages. Instruction to Authors will be provided to the authors of approved papers and posters. Power Point Presentations only, need to be submitted latest **1**<sup>st</sup> **of October 2012**. Only papers and posters of authors registering for the conference before **15**<sup>th</sup> **June 2012** will be included in the Program and the Conference Proceedings.

Approved papers and posters, both full papers and power point presentations only, will be presented in the Conference Proceedings, and some of the papers and posters will be selected for publication in cooperating international journals.

## **Conference International Program Committee**

The Conference International Program Committee members are:

- Pål Brekke, The Norwegian Space Centre, Norway, Chairman;
   paal,brekke@spacecentre.no
- Roger Steen, Norwegian Water Resources and Energy Directorate, Norway
- Risto Pirjola, Finnish Meteorological Institute, Finland
- Peter Wintoft, Swedish Institute of Space Physics, Sweden
- Peter Stauning, Danish Meteorological Institute, Denmark
- Alf Olaussen, Statnett, Norway
- K. Harald Drager, TIEMS President, Program Organizer and Committee Secretary; khdrager@online.no

The International Program Committee will be supplemented with additional international members. Please, contact Committee Chairman or Secretary for interest to be a member of the International Program Committee. The International Program Committee will review papers and posters and approve which ones will be presented at the conference, and included in the Final Conference Program.

## **Conference Venue**



Photo: VisitOslo

The conference will take place in Oslo, Norway at Grand Hotel, <a href="www.grand.no">www.grand.no</a>, located in the centre of Oslo, with direct access to the main street, Carl Johan and opposite the Parliament building (Stortinget). Grand Hotel is amongst others famous for housing the Nobel Peace Prize Laureates during their stay in Oslo for the Peace Price Ceremony.



**Photo: Grand Hotel** 

## **Conference Tentative Program Concept**

## Monday October 22, 2012

08:00 - 10:00	Registration and Coffee		
10:00 - 10:45	Opening and Welcome		
10:45 - 1130	Introductory Keynote – Issues at Stake		
11:30 - 12:00	Solar Storms and Space Weather - History and Experiences		
12:00 - 13:30	Lunch		
13:30 - 15:00	Stormy Sun - our Current Knowledge		
15:00 - 15:30	Coffee and Poster Viewing		
15:30 – 17:00	Effects on Space Infrastructure and Aviation		
17:00 - 20:00	Reception with a popular Lecture on Northern Light Science		
	Tuesday October 23, 2012		
09:00 - 10:30	Expectations and Effects on Electric Power Supply, Satellites, Telecommunication Navigation and Oil and Gas Exploration Activity		
10:30 - 11:00	Coffee and Poster Viewing		
11:00 - 1300	Industries Preparedness and Protection Measurers		
13:00 - 14:30	Lunch		
14:30 - 16:00	Predictions of Solar Storms, Warnings, Preparedness Measures and Response		
16:00 - 16:30	Coffee and Poster Viewing		
16:30 - 18:00	A Super Storm - What can happen and how to prepare for and handle it?		
19:00 - 21:00	Reception Wednesday October 24, 2012		
09:00 - 10:30	Society's ability to withstand short and long term shut down of Critical Infrastructure		
10:30 - 11:00	Coffee and Poster Viewing		
11:00 - 1300	Industries and Authorities Handling Strategies and Contentious Level		
13:00 - 14:30	Lunch		
14:30 - 15:30	Future Expectations		
14:30 - 15:30 16:00	Summing Up and Conclusions End of Conference		

## **ATTENDANCE FORM**

Name & Surname:			
<u>Title:</u>			
Organization:			
E-mail address:			
Phone:			
Address:			
Title of paper:			
Type of Submission: Full Paper ( ), Poster ( ), Power Point only ( ) (tick off)			
Abstract (Maximum 300 words):			
(Fill in the Attendance Form and send to K. Harald Drager: <a href="mailto:khdrager@online.no">khdrager@online.no</a>			

#### **Exhibitors**

One of TIEMS goals with the conference is to establish a good dialogue between researchers, industry and authorities and "close the gap between theory and practice". We therefore welcome industry and others who like to expose their products, systems and solution within this field, to exhibit their solutions during the conference, and establish the necessary contacts to achieve practical results.

#### **Conference Fee**

The conference fee has to be paid prior to arrival at the conference. TIEMS web-site will open up for registration and payment, either by credit cards or bank transfer. The conference fee will include one year membership in TIEMS, and there will be a special "early bird" rate, regular rate and a late rate, as shown below. The conference fee includes 1 copy of the proceedings and all social events.

Conference fee depending on time of payment:

Time of Payment	Conference Fee
Early Bird Rate — until 1 <sup>st</sup> May 2012	Euro 400
Regular Rate – from 2 <sup>nd</sup> May – 1st September 2012	Euro 450
Late Rate – After 2 <sup>nd</sup> September 2012	Euro 500
Exhibition space (incl. table, chair and electricity)	Contact khdrager@online.no

### The International Emergency Management Society - TIEMS

TIEMS was founded in 1993 in Washington, USA, and is today registered as an international, independent, non-profit NGO in Belgium. TIEMS is an International Network of Users, Planners, Researchers, Industry, Managers, Response Personnel, Practitioners, Social Scientists, and other Interested Parties and individuals concerned with Emergency and Disaster Management.

TIEMS stimulates the exchange of information regarding the use of innovative methods and technologies within emergency and disaster management to improve societiy's ability to avoid, mitigate, respond to, and speedily recover from natural and technological disasters. TIEMS is building a network of experts through local TIEMS Chapters all over the world, with the aim of "think globally and act locally".

TIEMS believes in a global dialogue to learn from exchange of expert information and experience. This year TIEMS plans to arrange 13 conferences and workshops around the world. The planned locations are: Norway, Japan, Nepal, Russia, Tunisia, Philippines, Romania, Finland, Korea, China, France, BeNeLux and India. TIEMS also initiates and takes part in research & development projects which aim at developing and/or improving methods and technologies within emergency and disaster management.

TIEMS also is developing an International Education Training and Certification Program in Emergency and Disaster Management. The International Education Program comprises TIEMS Chapter Training and TIEMS QIEDM Certification. More details are found on TIEMS web-site: <a href="https://www.tiems.org">www.tiems.org</a>.

## The Beauty of Northern Lights



Photo: Pål Brekke

## **Picture Comments by the Photographer**

The picture shows the Northern lights over Tromsø, Norway on 23 January 2012. The aurora is a visual manifestation on space weather and has amazed people for thousands of years.

## **Hotel Registration**

The conference hotel will be Grand Hotel, where 100 rooms are booked for conference delegates and accompanying persons. In addition it is booked 50 rooms at Rica Hotel adjacent to Grand Hotel. The reserved hotel rooms will be available for booking at special conference rates up to the given dates below for each hotel. Beyond those dates, the conference organizer cannot guarantee availability and the special rates. The conference delegates are responsible for their own booking and payment of hotel, see registration forms in the following for both hotels.

#### **Grand Hotel**



(Availability and Special Rates available until 21st July 2012)

## Room reservations made through Grand Hotel's homepage: www.grand.no

In order to get the special rate for this event: <u>TIEMS Conference</u>, log on to <u>www.grand.no</u> and choose from the following:

-Room reservation (– select dates)

-choose: "Select accounts"

Under "Select Accounts":

-Account Code: wwoslgr3

-Promotional Code: \*g3k (star + g3k)

The agreed rates for this event will then appear, please continue your reservation as normal.



# RICA VICTORIA HOTEL REGISTRATION Tiems 22. – 24. October 2012 Reference #11262780

## Please return this form by 10. September, 2012, to RICA VICTORIA HOTEL Fax: 47 24 14 70 01/booking.victoria@rica.no

Address:			
Tel:	Fax:	e-mail:	
I wish to reserve for: Arrival date:		Departure date:	
Please select re	oom category;		
O Standard room 1 pax		NOK 1285,-	
O Standard room 1 pax		NOK 1535,-	
It is also possik the best availa		r higher room categories, please contact the hotel for	
internet systen	n. Reservation and rooms a	ding buffet breakfast, taxes and access to our wireless allocation will be default on a first-com first-served basis on on date of arrival, and departure time is noon.	
Request for acondotel.	commodation received 10.	September 2012, will be subject to the availability at th	
I guarantee my	arrival with the following	credit card:	
Card Holder na	me:		
Card type:	Card No:	Exp:	
Signature		Date:	
Please he advis	ed that your reservation c	an only be processed if the credit card details are	

provided. You can cancel your reservation in writing without charge 24 hours before arrival at the latest. After this date, the hotel will charge you for the first night of the reservation.

In the case of no-show the hotel will charge you for the entire stay and release the remainder of your reservation. Thank you for choosing Rica Victoria Hotel for your stay in Oslo.