



## 17<sup>th</sup> International Space Conference

### The Impact of Space Weather and Space Exploitation on Modern Society: Hazards' Forecasting, Prevention, Mitigation and Insurance at International Level.

Rome – Hotel Parco dei Principi – 8th, 9th, 10th May, 2013

Man-made hazards such as space debris, jamming/hacking of signals, cyber terrorism, and their influence on satellites performance have been discussed at the previous 16 International Space Conferences. These issues and others will continue to be considered and monitored also in this year's Conference; however, the economic and social impact of 'Space Weather' on our modern society, massively dependant on technology and space systems, is attracting more and more attention and concern at various levels for its great and potentially catastrophic effects: this hazard will be the highlight of the 17th International Space Conference. The insurance industry, among other space actors and operators, have a great interest in understanding the economic implications of this phenomenon.

(spoken language: English)

## Wednesday, 8<sup>th</sup> May 2013

- 08:00-09:30**      **Registration**
- 09:30-09:45**      **Programme Presentation, Benito Pagnanelli**, President, Pagnanelli Risk Solutions Ltd
- 09:45-10:00**      **Opening address by International Public Authority**
- 10:00-11:00**      **Space Exploitation: yesterday, today, tomorrow**  
Coordinator: **Richard Hollingham**, Science Journalist & Space Correspondent  
**Giuseppe Viriglio**, Vice President, Telespazio  
**Mark Dickinson**, Senior Director Satellite Operations, Inmarsat  
**Jean-Yves Le Gall**, Chairman & CEO Arianespace (\*)  
**Luigi Pasquali**, CEO, Telespazio(\*) (TBC)

## SESSION A Natural Hazards

- 11:00-13:00**      **Scientists & Experts presentations on Space Weather Storms**  
Day Facilitator: **Ms Silvia Rosa-Brusin**, Editor in Chief, RAI Italian Radiotel.
- Solar and Interplanetary Weather***  
**Mauro Messerotti**, INAF (Astronomical Observatory of Trieste & Dept. of Physics, Univ. of Trieste)
- Effects of Space Weather Storms in Geospace***  
**Mike Hapgood**, Head of Space Environment Group RAL Space
- The ionospheric weather***  
**Bruno Zolesi**, INGV
- Space Weather Impacts at High Latitudes***  
**Paal Brekke**, Senior Advisor, Norwegian Space Centre (NSC)
- The Role of Space Observations in Space Weather Monitoring***  
**Michael Willis**, Head of Spectrum Policy and Space Weather Progr., UK Space Agency
- 13:00-14:15**      **Buffet Lunch**



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**14:15-14:30**

### **The Revolution of Long Interplanetary Trips: Living in the Solar System**

**Simonetta Di Pippo**, Responsible, European Space Policy Observatory, ASI

**14:30-16:00**

### **The Impact on Technology, Society & Economy**

#### *Opening remarks*

**by Walter Stahel**, Vice Secretary General and Head of Risk Management Programme,  
The Geneva Association

#### *Space Agencies: Ongoing and Forthcoming Projects for Space Weather*

**Juha-Pekka Luntama**, Space Weather, ESA

**Johann-Dietrich Woerner**, Chairman Executive Board, German Aerospace Centre (DLR)

**Paal Brekke**, Senior Advisor, Norwegian Space Centre (NSC)

**Fu Zhiheng**, Vice President, China Great Wall Industry Corporation (CGWIC)

ROSCOSMOS (TBC)

ASI (TBC)

CNES (\*) (TBC)

**16:00-16:30**

### **Coffee break**

**16:30-18:30**

### **The Impact on Technology, Society & Economy – (continues)**

#### **Space Weather Effects on:**

#### *Spaceborne, Airborne and Ground-Based Technological Systems (e.g. Satellites, Air and Maritime Navigation, Telecommunications)*

**John Monks**, British Airways

**Alessandro Fusco**, T. Col., Italian Air Force

**David Blanchard**, EGNOS and Galileo programmes, European Commission

**Mark Dickinson**, Senior Director Satellite Operations, Inmarsat

**Representative** of Thales Alenia Space

**Bryn Jones**, SolarMetrics (TBC)

**Paolo Rubini**, Risk Management - Director, Telecom Italia SpA (TBC)

#### *Spaceborne and Airborne Biological Systems*

#### *(e.g. Astronauts, Aircraft Pilots and Passengers)*

**Simonetta Di Pippo**, Responsible, European Space Policy Observatory, ASI

**Franco Malerba**, Astronaut

**Barry Matsumori**, SpaceX (TBC)

**Andrew Nelson**, XCOR (TBC)

#### *Ground systems*

#### *(e.g. on Electric Power Supply, Pipelines, Exploratory Drilling, Railways, Banks)*

**Unicredit Bank**, representative (TBC)

**Chris Train**, National Grid (UK) (TBC)

**Royal Academy of Engineering**, representative (TBC)

## **First day ends**



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### Thursday, 9<sup>th</sup> May 2013

**08:30-09:00**      **Registration**

**09:00-11:00**      **The Impact on Technology, Society & Economy (continues)**  
Day Facilitator: **Richard Hollingham**, Science Journalist & Space Correspondent

*Space Weather Storms observation: prediction, warning, preparedness measures and response*

**William Murtagh**, Program Coordinator, Space Weather Prediction Center, NOAA

**Ian Clark**, Head of Unit, European Commission, Directorate General For Humanitarian Aid and Civil Protection

**Daniele Biron**, Major, Italian Air Force Meteorological Service

*Asteroid detection and tracking*

**Claudio Portelli**, Italian Delegate for ESA SSA program, ASI

*Emergency management in Super Space Storm scenario*

**Chris Felton**, Head of High Impact Hazards Team, (CCS), UK Cabinet Office

**Italian Civil Protection**, representative

**11:00-11:30**      **Coffee break**

**11:30-13:00**      **Space Weather disaster modeling, insurance and reinsurance**

*The Role of space technologies in the surveillance of major threats, including space weather*

**Claire Jolly**, Sr. Policy Analyst OECD and Directorate DSTI

**Reto Schneider**, Head Emerging Risk Management, Swiss Reinsurance co. Ltd

**Marcel Fok**, Vice President, Swiss Re corporate Solution

**Achim Enzian**, Senior Underwriter, Munich Reinsurance

**Jason Reeves**, Attorney at Law, Zelle Hofmann

**13:00-14:30**      **Buffet Lunch**

**14:30-15:30**      **Legal Aspects**

*GNSS Interference Monitoring System: a new approach*

**Anna Masutti**, Partner LS LexJus Sinacta

*Criminal Responsibility for Wrongful Death: is this an issue for science and the space industry?*

**Sean Gates**, Senior Partner, Gates & Partners LLP

**15:30-17:00**      **The Impact on Technology, Society & Economy (continues)**

*Roundtable on: Critical infrastructure failures: a Global Management Perspective*

List of participants to be determined

**QUESTIONS AND ANSWERS on  
Session A - Natural Hazards**

**Second day ends**



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### Friday, 10<sup>th</sup> May 2013

08:00-08:30 Registration

#### SESSION B

#### Man-made Hazards

#### Space Technology Risks and Insurance

08:30-10:15

Day Facilitator:

#### Space Insurance Market Trend and New Threats

**Richard Hollingham**, Science Journalist & Space Correspondent

#### *Space Debris: growing phenomenon, technical-industrial and legal aspects*

**Claudio Portelli**, Italian Delegate for ESA SSA program, ASI

**Sa'id Mosteshar**, Director, London Institute of Space Policy and Law

#### *Space & the Cyber Threat*

##### *The Cyber threat to Space*

**Mark Roberts**, Management Consultants, Atkins

##### *Insurance Perspective*

**Jamie Bouloux**, AIG Europe Ltd

##### *Cyber Terrorism & Security – Connections with Space*

**Giuseppe Morsillo**, ESA

##### *The accelerating Universe of Cyber Risks - Are you protected?*

**Stephen Tucker**, Equity Partner, Fitzpatrick: Hunt, Tucker, Collier, Pagano, Aubert, LLP

#### *Dispute Resolution in Space Insurance*

**Steve Koh**, Chair, International Arbitration, Perkins Coie LLP

**Peter Leaver**, Arbitrator, One Essex Court

**John Dillow**, Chair National Products Group, Perkins Coie LLP

**Cecile Gaubert**, Vice President, Head of Legal and Claims, Avn & Space Dpt, Marsh

**Sean Gates**, Senior Partner, Gates & Partners

10:15-10:35

#### Coffee break

10:35-12:00

#### Space Insurance Market Trend and New Threats (continues)

##### *International Traffic in Arms Regulations*

**John Ordway**, Partner, Berliner, Corcoran & Rowe, LLP

##### *The Changing Workforce affecting Aerospace*

**David Wade**, Space Underwriter, Atrium Space Insurance Consortium

##### *Is Space Tourism definitely an Aviation Risk?*

**Tim Wakeman**, Executive Vice President, AON International Space Brokers

**Marcel Fok**, Vice President, Space Insurance, Swiss Re corporate Solution





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### *Insurance Market Status and Innovations*

*Emerging risks and product innovation; what does the insurance industry need to do to survive and grow?*

Peter Elson, CEO Aerospace JLT Specialty Ltd

David Wade, Space Underwriter, Atrium Space Insurance Consortium

### *Space Insurance Statistics*

Chris Kunstadter, Senior VP Aerospace, XL Insurance Group

**12:00-12:30**

Moderator:

### **Roundtable on the Conference**

**Richard Hollingham**, Science Journalist & Space Correspondent

Various selected participants to be determined

**12:30-13:00**

### **Conclusions of the Conference**

**Vittorio Prodi**, Chairman of “Sky & Space Intergroup”, European Parliament

**13:00**

### **Farewell Cocktail**

## **End of Conference**

(spoken language: Italian)

**15:00-18:00**

### **Public Session**

### **“BEYOND THE EARTH’S BOUNDARIES”**

### **Living and Travelling in the Solar System**