



Space Weather Users Workshop 16-17 Nov. 2017

Program:

Thursday 16.11.2017

Time	Session	Presenter
08:00 - 08:55	Registration, Tea, Coffee	
08:55 - 09:00	Housekeeping by Program Organizing Committee Chair	Kirco Arsov , Bureau of Meteorology, Space Weather Services
09:00 - 10:40	Introduction to Space Weather	Chair: Brett Anderson , Bureau of Meteorology, GM Aviation, Land & Maritime Transport
09:00 - 09:10	Welcome and Workshop opening	Kirsten Garwood , Group Executive, Business Solutions Group, Bureau of Meteorology
09:10 - 09:20	University of Sydney welcome speech	Prof. Iver H. Cairns , University of Sydney
09:20 - 09:40	Ionospheric Aerodynamics for Improved Space Domain Awareness	Melrose Brown , University of New South Wales Canberra
09:40 - 10:00	Solar Origins of Space Weather	Mark CM Cheung , Lockheed Martin Solar & Astrophysics Lab, Palo Alto, CA, USA & Stanford University, CA, USA
10:00 - 10:20	Space Weather in Planetary Systems	Prof. Brad Carter , Astrophysics Group, Computational Engineering and Science Research Centre, University of Southern Queensland
10:20 - 10:40	Major Space Weather Events and their impact	Bill Murtagh , Space Weather Prediction Center, Boulder USA
10:40 - 11:10	Morning Tea	
11:10 - 13:00	Space Weather and Critical Infrastructure	Chair: Seth Jonas , Science and Technology Policy Institute, USA
11:10 - 11:20	Introductory talk on SW Policy	Seth Jonas , Science and Technology Policy Institute, USA
11:20 - 11:40	US National Space Weather Strategy	Christopher Cannizzaro , United States Department of State, USA
11:40 - 12:00	CIPMA for Extreme Space Weather Events	Sarah Chamberlain Wood , Critical Infrastructure Program for Modelling and Analysis (CIPMA), Attorney-General's Department
12:00 - 12:20	Risk Assessment on the impact of space weather on NSW Critical Infrastructure	Matthew Thompson , Office of Emergency Management, NSW Department of Justice
12:20 - 12:40	Space Weather and Water infrastructure - Do Solar Storms Pose a risk to the Australian Water Industry?	David Roser , Water Research Centre, School of Civil and Environmental Engineering, University of NSW
12:40 - 13:00	Space weather effects of a high altitude nuclear explosion (HANE)	John Kennewell , Australian Space Academy
13:00 - 14:00	Lunch	
14:00 - 15:40	Global Navigation Satellite Systems	Chair: Kirco Arsov , Bureau of Meteorology, Space Weather Services
14:00 - 14:20	Earth Observation from Space	John Le Marshall , Bureau of Meteorology
14:20 - 14:40	The future of satellite positioning in Australia	John Dawson , Geoscience Australia, Positioning Section Head
14:40 - 15:00	SBAS Testbed Demonstration Project Update	Julia Mitchell , CRCSI
15:00 - 15:20	AllDayRTK high accuracy positioning services	James Millner , Position Partners
15:20 - 15:40	Predicting ionospheric scintillation for users of Global Navigation Satellite System signals	Brett A. Carter , SPACE Research Centre, RMIT
15:40 - 16:10	Afternoon Tea	
16:10 - 17:30	Aurora	Chair: Rakesh Panwar , Bureau of Meteorology, Space Weather Services
16:10 - 16:30	Auroras: a user's guide	Prof. Fred Menk , University of Newcastle
16:30 - 16:50	The Aurora Chasers	Margaret Sonnemann , Author of <i>The Aurora Chaser's Handbook</i>
16:50 - 17:10	Auroras: How do we forecast them in reality?	Rakesh Panwar , Bureau of Meteorology, Space Weather Services
17:10 - 17:30	Space Weather Services' New Aurora Webpages	Jeanne Young , Bureau of Meteorology, Space Weather Services
18:30 - Open	Dinner at Thai Pothong, 294 King Street, Newtown	



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08:30 - 09:00	Tea, Coffee	
09:00 - 10:30	The Impact of Geomagnetically induced Currents on Power Networks and Pipelines	Chair: Richard Marshall , Bureau of Meteorology, Space Weather Services
09:00 - 09:15	Space Weather activities within the national Energy Market	Alan Honecker , Australian Energy Market Operator
09:15 - 09:30	GIC monitoring equipment within the Queensland Transmission network	Chuanli Zhang , Powerlink, Queensland
09:30 - 09:45	New Zealand Long term Geomagnetically Induced Current Observations: Peak Current Estimates and Mitigation Approaches for Extreme Geomagnetic Storms	Michael Dalzell , Transpower New Zealand Limited, Wellington, New Zealand
09:45 - 10:00	Modelling GICs in Australian power network	Richard Marshall , Bureau of Meteorology, Space Weather Services
10:00 - 10:15	The impact of GICs on long pipelines	Layton Manuel , Jemena
10:15 - 10:30	Space Weather Services' GIC products	Jeanne Young , Bureau of Meteorology, Space Weather Services
10:30 - 11:00	Morning Tea	
11:00 - 12:20	Defence	Chair: Shannon Symons , Manager, Defence Services, Bureau of Meteorology
11:00 - 11:20	Defence space activities.	FLTLT Carl CL Clancy , A/Deputy Chief, Australian Space Operations Centre, Headquarters - Joint Operations Command, Bungendore, NSW
11:20 - 11:40	JP9101 PROJECT PHOENIX, Enhanced Defence High Frequency Communication System.	LTCOL James Brownlie and Mr Milan Koprek , Joint Capabilities Group
11:40 - 12:00	The effects of Space Weather on Number 1, Remote Sensor Unit's mission	CPL William Luong , Royal Australian Air Force
12:00 - 12:20	JORN and the Ionosphere	Dr Trevor Harris , Defence Science and Technology (DST) Group, Australia
12:20 - 13:20	Lunch	
13:20 - 15:00	HF and Aviation	Chair: Zahra Bouya and Vickal Kumar , Bureau of Meteorology, Space Weather Services
13:20 - 13:40	HF ICAO requirements	Sue O' Rourke , Bureau of Meteorology
13:40 - 14:00	Detection and characterisation of travelling ionospheric disturbances in support of HF sky-wave radar	Andrew Heitmann , Manuel Cervera, Andrew Cool, Robert Gardiner-Garden, Trevor Harris, David Holdsworth, David Netherway, Brett Northey, Lenard Pederick, Anne Unewisse & Bruce Ward, Defence Science & Technology (DST) Group, Australia
14:00 - 14:20	A real time model of Sporadic E in the Australian region.	Robert Gardiner Garden , DST Group
14:20 - 14:40	Recent Initiatives in Oblique HF at SWS	Philip Maher , Bureau of Meteorology, Space Weather Services
14:40 - 15:00	On the variability of peak electron density of the ionosphere.	Vickal Kumar , Bureau of Meteorology, Space Weather Services
15:00 - 15:30	Afternoon Tea	
15:30 - 16:50	SW Impact on Satellites and SATCOM	Chair: David Neudegg , Bureau of Meteorology, Space Weather Services
15:30 - 15:50	The Australian INSPIRE-2 / AU03 CubeSat for the QB50 Project	Prof. Iver H. Cairns , University of Sydney and the INSPIRE-2 team
15:50 - 16:10	Radiation effects on spacecraft in Earth orbits	David Neudegg , Bureau of Meteorology, Space Weather Services
16:10 - 16:30	Satellite Diagnostics, Space Weather, and Machine Learning	Jason Held , Saber Astronautics USA/Australia
16:30 - 16:50	Optus SATCOM	Warren Cole , Optus satellite operations
16:50 - 16:55	Closing Remarks	Andrew Kelly , Bureau of Meteorology, Space Weather Services