



SCIENTIFIC PROGRAM

of COSPAR Capacity Building Workshop (CBW) “Impact of Space Weather on Earth” and Training Course

Kamchatka 15-26 August, 2016

Monday 15 August, 2016

Time	Name	Organization	Lecture/Training
9.30-10.00	LOC		Registration
10.00-10.30	Boris Shevtsov	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Opening Ceremony
10.30-11.00	Vladimir Kuznetsov	Institute of Terrestrial magnetism, Ionosphere and Radio Wave Propagation RAS, Russia	Lecture Sun sources of space weather Investigations of the Sun and the solar-terrestrial relations according to the data of satellite observations
11.00-12.30	Kazuo Shiokawa	Institute for Space-Earth Environmental Research, Nagoya University, Japan	Lecture Solar-Terrestrial Physics: Introduction
12.30-14.00	Lunch		
14.00-15.30	Clezio de Nardin	INPE, Brazil World Meteorological Organization	Lecture Research to Operation in Space Weather
15.30-16.00	Coffee break		
16.00-17.00	Vladimir Kuznetsov	Institute of Terrestrial magnetism, Ionosphere and Radio Wave Propagation RAS, Russia	The solar activity and its impact on the Earth
17.00-17.30	Round table for lectures to discuss training and project work		
17.30-19.00	"Ice-breaker" Dinner		





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Tuesday 16 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Jan Lastovicka	Institute of Atmospheric Physics CAS, Czech	Lecture Impact of global change on the upper atmosphere-ionosphere system (with special emphasis on space weather and modifications of space weather impact).
10.30-10.50	Coffee break		
10.50-12.20	Kazuo Shiokawa	Institute for Space-Earth Environmental Research, Nagoya University, Japan	Lecture Ionosphere: Measurements and origin of disturbances
12.20-13.30	Lunch		
13.30-15.00	Kazuo Shiokawa	Institute for Space-Earth Environmental Research, Nagoya University, Japan	Lecture A review of nighttime medium-scale traveling ionospheric disturbances (MSTIDs) at middle latitudes
15.00-15.30	Coffee break		
15.30-17.00	Akimasa Yoshikawa	International Centre for Space Weather Science and Education Kyushu University, Japan	Lecture Magnetosphere-Ionosphere Coupling
17.00-18.30	Jan Lastovicka	Institute of Atmospheric Physics CAS, Czech	Lecture How to get published
18.30-19.00	Dinner		





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Wednesday 17 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Tsutomu Nagatsuma	National Institute of Information and Communications Technology (NICT), Japan	Lecture Geospace dynamics and its effect to space assets
10.30-10.50	Coffee break		
10.50-12.20	Wojciech Miloch	University of Oslo, Norway	Lecture Ionosphere at high geomagnetic latitudes such aspects as aurora, auroral substorms, polar cap and cusp phenomena.
12.20-13.30	Lunch		
13.30-15.00	Wojciech Miloch	University of Oslo, Norway	Lecture Experimental facilities for space research in the Scandinavian Arctic sector
15.00-15.30	Coffee break		
15.30-17.00	Wojciech Miloch	University of Oslo, Norway	Lecture Sounding rocket experiments for the space weather studies
17.00-18.30	Wojciech Miloch	University of Oslo, Norway	Training Experimental facilities for space research in the Scandinavian Arctic sector
18.30-19.00	Dinner		





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Thursday 18 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Boris Shevtsov	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Lecture/Training Laser diagnostics and modification of the ionosphere
10.30-10.50	Coffee break		
10.50-12.20	Vladimir Kalegaev	Scientific Institute of Nuclear Physics Moscow State University, Russia	Lecture Structure and dynamics of the Earth magnetosphere: fields, currents and particles
12.20-13.30	Lunch		
13.30-15.00	Sergey Khomutov	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training INTERMAGNET magnetic data: step by step from measurements to definitive values
15.00-15.30	Coffee break		
15.30-16.30	Sergey Khomutov Boris Shevtsov	Excursion to Lidar station and magnetic observatory	
16.30-18.30	Work on individual projects		
18.30-19.00	Dinner		





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Friday 19 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Oksana Mandrikova	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Lecture Analysis methods of cosmic rays and data of geomagnetic field in the mission of space weather
10.30-10.50	Coffee break		
10.50-12.20	Oksana Mandrikova	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Lecture Simulation and analysis of time variations in ionospheric parameters during higher solar activity and magnetic storms
12.20-13.30	Lunch		
13.30-15.00	Vladimir Kalegaev	Scientific Institute of Nuclear Physics Moscow State University, Russia	Lecture Solar activity and its influence on the Earth's magnetosphere
15.00-15.30	Coffee break		
15.30-16.30	Oksana Mandrikova	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training Analysis methods of cosmic rays and data of geomagnetic field in the mission of space weather
16.30-17.30	Oksana Mandrikova	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training Simulation and analysis of time variations in ionospheric parameters during higher solar activity and magnetic storms
17.30-18.30	Work on individual projects		
18.30-19.00	Dinner		





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Saturday, 20 August 2016

Bus excursion to «Dachnye» Geothermal Springs organized by IKIR





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Sunday, 21 August 2016

**Bus Excursion to Petropavlovsk-Kamchatskiy and «Halatyrskiy» Beach
(Pacific Ocean coast) organized by IKIR**





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Monday 22 August, 2016

Time	Name	Organization	Lecture/Training
09.00-10.00	Robert Holzworth	Departments of Earth and Space Sciences, and Physics, Director, World Wide Lightning Location Network University of Washington	Lecture Global electric circuit studies
10.00-10.30	Coffee break		
10.30-12.00	Vladimir Kalegaev	Scientific Institute of Nuclear Physics Moscow State University, Russia	Training Real-time monitoring of radiation conditions in near-Earth space and radiation safety of space satellites
12.00-13.30	Lunch		
13.30-15.00	Vladimir Kalegaev	Scientific Institute of Nuclear Physics Moscow State University, Russia	Training Long-term and short-term forecasting of the radiation and geomagnetic conditions in the near-Earth space
15.00-15.30	Coffee break		
15.30-16.20	Robert Holzworth	Departments of Earth and Space Sciences, and Physics, Director, World Wide Lightning Location Network University of Washington	Lecture Whistler wave propagation effects
16.20-17.20	Vladimir Mochalov	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training Information technologies used for lightning and whistler analysis and monitoring
17.20-18.30	Work on individual projects		
18.30-19.30	Dinner		





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Tuesday 23 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Alexey Krivolutsky	Central Aerological Observatory, Roshydromet, Russia	Training Access to Internet resources on factors of space weather. Use of space weather factors in numerical models
10.30-10.50	Coffee break		
10.50-12.20	Alexi Glover	ESA& RHEA	Space Weather Science and Applications at the European Space Agency
12.20-13.30	Lunch		
13.30-15.00	Vladimir Kuznetsov	Institute of Terrestrial magnetism, Ionosphere and Radio Wave Propagation RAS, Russia	Lecture Space project “Intelhelioprobe” to study the Sun and Space Weather
15.00-15.30	Coffee break		
15.30-16.30	Alexey Krivolutsky	Central Aerological Observatory (Roshydromet), Russia	Training Solar activity forcing on ozonosphere and lower ionosphere of the Earth (3D numerical simulations)
16:30-18:30	Work on individual projects		
18.30-19.30	Dinner		





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Wednesday 24 August, 2016

Time	Name	Organization	Lecture/Training
09.00-10.30	Jan Lastovicka	Institute of Atmospheric Physics CAS, Czech	Lecture On ionospheric effects of weak magnetic storms in the last solar minimum
10.30-10.50	Coffee break		
10.50-12.20	Lev Pustil'nik	GeoSciences Department of Tel Aviv University and Israel Space Agency, Israel	Lecture On non-universality of solar-terrestrial connections
12.20-13.30	Lunch		
13.30-15.00	Alexey Krivolutsky	Central Aerological Observatory, Roshydromet, Russia	Training The global circulation of the atmosphere to the maximum and minimum solar activity
15.00-15.30	Coffee break		
15.30-17.00	Alexey Krivolutsky	Central Aerological Observatory, Roshydromet, Russia	Training 3D simulation of atmospheric response to cosmic influences
17.00-18.30	Work on individual projects		
18.30-19.00	Dinner		





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Thursday 25 August, 2016

Time	Name	Organization	Lecture/Training
9.00-10.30	Lev Pustil'nik	GeoSciences Department of Tel Aviv University and Israel Space Agency, Israel	Lecture Solar Flares Energy Release – inner contradictions, conflict with observations -possible solutions
10.30-10.50	Coffee break		
10.50-12.20	Il'ya Zhivet'ev	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Lecture Study of displacement of ionospheric disturbances based on GPS-systems
12.20-13.30	Lunch		
13.30-14.30	Sergey Smirnov	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Lecture Induction effects of magnetic storms in the atmospheric electric field of the Earth
14.30-15.30	Oksana Mandrikova	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training Methods of analysis of ionospheric and geomagnetic data in the problems of space weather and their realization in software environment
15.30-16.00	Coffee break		
16.00-17.00	Andrey Perezhogin	Institute of Cosmophysical Research and Radio Wave Propagation FEB RAS, Russia	Training Complex investigations of geoacoustic and atmospheric-electric fields at the background of increased seismic activity during magnetic storms confirmed by satellite observations of deformations
17.00-18.30	Work on individual projects		
18.30-19.00	Dinner		

Friday 26 August, 2016

9.00 - 14.00 Student presentations

14.00 Picnic by Mikizha Lake

Saturday 27, 2016

Departure