# Session Schedule

## Oct. 24, 2016 (Mon)

**10:00-10:30 Opening Ceremony**

Ceremony Chair : WI Gwansik (KSWC, Korea)

**Opening Address**

HAN Wonyong (President, Korea Space Science Society, Korea)

**Welcome Speech**

CHOI Jaeyou (The 2th Vice Minister, Ministry of Science ICT and Future Planning, Korea)

**Congratulatory Address**

Kazumasa Taira (General Director, AERI NICT, Japan)

**10:30-10:40 Photo Session**

**10:40-12:00 Special Session 1 : SWx Policy & Strategy**

Chair : HAN Jinwook (KSWC, Korea)

**S 1 - 1 KSWC Space Weather services & future plan**

WI Gwansik (KSWC, Korea)

**S 1 - 2 Japanese current status for space weather**

Mamoru Ishii (NICT, Japan)

**S 1 - 3 Development of Operational Space Environment Technology System**

Bingxian Luo (NSSC, China)

**S 1 - 4 Bureau of Meteorology's Space Weather Services**

Phillip Maher (SWS, Australia)

**12:00-13:30 Lunch Time**

**13:30-15:00 Special Session 2**

Chair : YOON Kichang (KSWC, Korea)

**Keynote 1 International Organization Activities on Space Weather**

Terrance Onsager (ISES/WMO)

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| **Keynote 2** | **ESA Space Weather**<br>Juha-Pekka Luntama (ESA) |
| **S 2 - 1** | **Mexican Space Weather Service**<br>Ernesto Aguilar-Rodriguez (SCIESMEX, Mexico) |
| **S 2 - 2** | **Space Weather Programme in Malaysia**<br>Farahana Kamarudin (National Space Agency of Malaysia, Malaysia) |
| **15:00-15:30** | **Coffee Break** |
| **15:30-18:00** | **Special Session 3**<br>Chair : LEE Dong-Hun (KHU, Korea) /<br>MOON Yong-Jae (KHU, Korea) |
| **S 3 - 1** | **Space Weather Information and Forecast Services in Indonesia**<br>Clara Yatini (Space Science Center LAPAN, Indonesia) |
| **S 3 - 2** | **UK space weather & L5 mission**<br>Suzzy Bingham (MET Office, UK) |
| **S 3 - 3** | **United States Space Weather Strategy and Action Plan**<br>Terrance Onsager (SWPC, USA) |
| **S 3 - 4** | **Space Weather Data Sharing Services in IGGCAS**<br>Xiukuan Zhao (IGGCAS, China) |
| **S 3 - 5** | **Space Weather Service and Products in Taiwan**<br>I-Te Lee (Central Weather Bureau, Taiwan) |
| **S 3 - 6** | **Overview of the Korea Meteorological Administration(KMA)'s Space Weather Service and R&D Program**<br>KIM Jiyoung (Korea Meteorological Administration, Korea) |
| **S 3 - 7** | **KASI's Contributions to Space Weather**<br>CHO kyungsuk (KASI, Korea) |
| **S 3 - 8** | **Observations for the polar space environment at Korea Polar Research Institute (KOPRI)**<br>JEE Geonhwa (Korea Polar Research Institute, Korea) |
| **S 3 - 9** | **Radio Heliophysics for Space Weather Applications**<br>Mario M. Bisi (STFC RAL Space, UK) |
| **S 3 - 1 0** | **Introduction of TEIN and TEIN*CC**<br>Patch Lee (Trans-Eurasia Information Network, Korea) |
| **18:30-** | **Welcome Dinner (Ice Break)** |

# Oct. 25, 2016 (Tue)

**09:00-11:00 General Session 1 : Solar Physics & Interplanetary Space**

Chair : Bernard Jackson (UCSD, USA) /
Mario M. Bisi (STFC RAL Space, UK)

**G 1 - 1** **Radio observations and Space Weather Research**
Jasmina Magdalenic (Royal Observatory of Belgium, Belgium)

**G 1 - 2** **Space Weather Study Using Interplanetary Scintillation Observations at ISEE**
Munetosh Tokumaru (ISEE Nagoya University, Japan)

**G 1 - 3** **Interplanetary Scintillation and Space Weather Forecast**
P. K. Manoharan (NCRA, India)

**G 1 - 4** **IPS studies with the new generation of Radio Telescopes**
John Morgan (Curtin University, Australia)

**G 1 - 5** **Recent Improvements of the WSA-ENLIL Cone Modeling System and Using IPS Data for Opeational Space Weather Predictions**
Dusan Odstrcil (NASA-GSFC/GMU, USA)

**G 1 - 6** **Contributions of the Nobeyama Radioheliograph to space-weather science**
Satoshi Masuda (Nagoya University, Japan)

**G 1 - 7** **Accuracy Issues in Space Weather MHD Models**
LEE Dong-Hun (Kyung Hee University, Korea)

**G 1 - 8** **Deflected propagation of coronal mass ejections from the Sun to 1 AU**
Yuming Wang (USTC, China)

**11:00-12:00 Poster Session**

**12:00-13:30 Lunch Time**

**13:30-15:00 General Session 2 : Solar Physics & Interplanetary Space**

Chair : Cho Kyungsuk (KASI, Korea)

**G 2 - 1** **Project for Solar-Terrestrial Environment Prediction (PSTEP) in Japan**
Kanya Kusano (Nagoya University, Japan)

**G 2 - 2** **On Predicting Solar Activity**
CHAE Jongchul (Seoul National University, Korea)

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| G 2 - 3 | **Lessons Learned in transitioning CME auto-detection and interplanetary propagation tools into operational services**<br>Siqing Liu (NSSC, China) |
| G 2 - 4 | **Prospects for numerical solar activity forecasting**<br>Huaning Wang (NAO, China) |
| G 2 - 5 | **R&D for solar activity forecast in NICT**<br>Yuki Kubo (NICT, Japan) |
| G 2 - 6 | **Probing the maximum coronal mass ejection speed index as a potential indicator of geoeffectiveness of solar activity**<br>Vasyl Yurchyshyn (NJIT Big Bear Solar Observatory, USA) |

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| **15:00-15:15** | **Coffee Break** |
| **15:15-16:15** | **General Session 3 : Ionosphere**<br>Chair : RYU Kwangsun (KAIST, Korea) |

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| G 3 - 1 | **Prediction of plasma bubble occurrence using the atmosphere-ionosphere coupled model GAIA**<br>Hiroyuki Shinagawa (NICT, Japan) |
| G 3 - 2 | **Data Assimilation and Adjusted Spherical Harmonic Model of VTEC Map over Thailand**<br>Somjai Klinngam (KMITL, Thailand) |
| G 3 - 3 | **Global and regional ionospheric modeling to understand equatorial plasma bubble**<br>Tathuhiro Yokoyama (NICT, Japan) |
| G 3 - 4 | **Recent progress of NICT ionospheric observations in Japan**<br>Kakuya Tsugawa (NICT, Japan) |

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| **16:15-17:00** | **Trip to Sanghyowon Botanical Garden** |
| **17:00-17:30** | **Sanghyowon Botanical Garden Tour** |
| **17:30-19:30** | **Banquet** |
| **19:30-20:30** | **Back to Shine Ville Resort** |

# Oct. 26, 2016 (Wed)

**09:00-11:00 General Session 4 : Ionosphere**

Chair : KIM Yongha (Chungnam University, Korea) / KWAK Young-sil (KASI, Korea)

**G 4 - 1** **Space weather of the ionospheric S4 scintillation**
Jann-Yenq Liu (National Central University, Taiwan)

**G 4 - 2** **Tomographic Analysis of Ionosphere and Plasmasphere**
KIM Yongha (Chungnam National University, Korea)

**G 4 - 3** **Development of Korea GNSS CORS monitoring system**
MUN Juncheol (KSWC, Korea)

**G 4 - 4** **Ionospheric regional forecasting using statistical method for GPS application**
Mardina Abdullah (ANGKASA, Malaysia)

**G 4 - 5** **Development of Global Ionospheric Electron Density Monitoring System Using FORMOSAT-7/COSMIC-2**
Charles Lin (National Central University, Taiwan)

**G 4 - 6** **Ionospheric and magnetic signatures of the magnetic storm on March 2015 observed in the Southeast Asian region**
Minh Le Hyu (HIG, Vietnam)

**G 4 - 7** **F2 region response to meteorological phenomena and geomagnetic disturbances**
A. K. Upadhayaya (CSIR-NPL, India)

**G 4 - 8** **Space Weather monitoring by GNSS Radio Occultation Technique**
Xinan Yue (IGGCAS, China)

**11:00-12:00 Poster Session**

**12:00-13:30 Lunch Time**

**13:30-15:00 General Session 5 : Magnetosphere**

Chair : Hwang Junga (KASI, Korea)

**Keynote 3** **Current state of Radiation belt Modeling: Successes and Challenges**
H. Reiner (Los Alamos, USA)

**Keynote 4** **NASA Space Weather**
Alex Young (NASA, USA)

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| G 5 - 1 | **Magnetosphere/Ionosphere study with formation flying nanosats**<br>LEE Jaejin (KASI, Korea) |
| G 5 - 2 | **Space weather effects on meteorological and atmospheric electrical parameters**<br>Sergey Smirnov (IKIR, Russia) |
| **15:00-15:30** | **Coffee Break** |
| **15:30-17:00** | **General Session 6 : Magnetosphere**<br>Chair : LEE Daeyoung (Chungbuk University, Korea) |
| G 6 - 1 | **Support Vector Machine combined with Distance Correlation learning for Dst forecasting during intense geomagnetic storms**<br>Jianyong Lu (Nanjing University, China) |
| G 6 - 2 | **Magnetosphere Research Activity in NICT: Observation and Modeling**<br>Aoi Nakamizo (NICT, Japan) |
| G 6 - 3 | **Relativistic electron flux forecast at geostationary orbit using multiple linear regression model**<br>HWANG Junga (KASI, Korea) |
| G 6 - 4 | **Forecasting Geomagnetic Disturbances at NOAA with Michigan's Geospace Model**<br>Howard Singer (SWPC, USA) |
| G 6 - 5 | **Establishment of Abdus Salam Geomagnetic Observatory, Pakistan: From Site Selection to INTERMAGNET Certification**<br>Murtaza Ghulam (SUPARCO, Pakistan) |
| G 6 - 6 | **NICT's Geospace Monitoring and Forecasting**<br>Tsutomu Nagathuma (NICT, Japan) |
| **17:00-18:00** | **Break** |
| **18:00-** | **Dinner (BBQ)** |

# Oct. 27, 2016 (Thur)

**09:00-09:30** **Summary of AOSWA-4**

YOON Kichang (KSWC, Korea)

**Closing Ceremony**

Ceremony Chair : WI Gwansik (KSWC, Korea)

**09:30-18:00** **Excursion Tour**

# Poster Presentation

**11:00-12:00 Poster Session**

**Oct. 25-26**

## Solar Physics & Interplanetary Space

**P – 01** **A statistical relationship between high speed solar wind streams and lightning rate over South Korea**

LEE Dong-Hee (KMA, Korea)

**P – 02** **Brief Review on KSEM: The first space-based magnetometer on eastern geostationary orbit**

OH Daehyeon (KMA, Korea)

**P – 03** **Current status of KMA's operational space weather service**

YI Wonhyeong (KMA, Korea)

**P – 04** **The 1st Korea Space Weather mission from Geostationary orbit : Current status and Plans**

LEE Hyesook (KMA, Korea)

**P – 05** **Progress on Heliospheric Faraday Rotation for Space Weather Purposes**

Mario M. Bisi (STFC RAL Space, UK)

**P – 06** **Analysis of observations of IPS at 140 MHz by the Mexican Array Radio Telescope for space weather applications**

E. Aguilar-Rodriguez (UNAM/MEXART/SCiESMEX, Mexico)

**P – 07** **Coronal Mass Ejections' Automatic Forecast System**

Bin Zhuang (Department of Earth and Space Science, USTC, China)

**P – 08** **Learning Solar Flare Forecasting Model From Magnetogram Pixels**

Xin Huang (NAO/CAS, China)

**P – 09** **Flare Prediction Model with Machine-Learning using Vector Magnetogram and Chromospheric Brightening**

Naoto Nishizuka (NICT, Japan)

**P – 10** **First Detection of Radial and Azimuthal Oscillations in Halo Coronal Mass Ejections**

LEE Harim (SSR, Kyung Hee University, Korea)

**P – 11** **2016 Total Solar Eclipse Expedition of KASI**

BONG Su Chan (KASI, Korea)

**P – 12** **Heating of an erupting prominence associated with a coronal mass ejection on 2012 January 27**

LEE Jin-Yi (Kyung Hee University, Korea)

**P – 13** **Relations of Seismic Properties with Solar Activity from 1996 to 2015**

KIM Kibeom (Kyungpook National University, Korea)

**P – 14** **Forecast of a solar daily X-ray peak flux based on deep learning using SOHO MDI magnetograms**

KIM Taeyoung (InSpace Co. Ltd., Korea)

**P – 15** **Statistical characteristics of interplanetary magnetic field near the Earth**

CHOI Kyung-Eun (Chungbuk National University, Korea)

**P – 16** **The variation of the Geoeffectiveness of the Recurrent CIRs during their Life Period**

Chenglong Shen (School or Earth and Space Science, China)

**P – 17** **Prediction of long-term solar activities based on fractal dimension method**

KIM Roksoon (KASI, Korea)

**P – 18** **Probing Heliospheric Disturbances using Low Frequency Radio Imaging Arrays**

Colin Lonsdale (MIT Haystack Observatory, USA)

**P – 19** **Propagation of MHD disturbance in numerical modelling: Accuracy issues and condition**

KIM Kyung-Im (SSR, Kyung Hee University, Korea)

**P – 20** **What determines IMF northward/southward directions at the Earth?**

SUNG Suk-Kyung (Kyung Hee University, Korea)

**P – 21** **Verification on Radiation Pattern Of IPS Array With**

KIM Tae Young (Radar&Space Co. Ltd., Korea)

**P – 22** **Two peculiar examples of ICME impacts on the Earth: the September 2014 and March 2015 Events**

CHO Kyungsuk (KASI, Korea)

**P – 23** **World Interplanetary Scintillation Systems (WIPSS) USE of the UCSD IPS Tomography Program for Space Weather Forecasting**

Bernard Jackson (UCSD, USA)

## Ionosphere

**P – 24** **Occurrence climatology of E- and F-region field-aligned irregularities in the middle latitudes as observed by the Daejeon 40.8 MHz coherent scatter radar in South Korea**

KWAK Young-Sil (KASI, Korea)

**P – 25** **Ionospheric electron density forecast during geomagnetic storm time**

Chia-Hung Chen (National Cheng Kung University, Taiwan)

**P – 26** **The Australian Region Ionospheric Maps**

Zahra bouya (BOM/SWS, Australia)

**P – 27** **Verification of a revised version of SAMI3 with the observed ionospheric data over the Korean peninsula**

KIM JeongHeon (KASI, Korea)

**P – 28** **Storm time varaition of radiative cooling of thermosphere by nitric oxide emission**

MV Sunil Krishna (IITR, India)

**P – 29** **Korean three dimensional ionosphere electron density modeling using data assimilation**

Chalachew Kindie Mengist (Chungnam National University, Korea)

**P – 30** **Forecast model of ionospheric total electron content over Japan using a machine learning technique**

Michi Nishioka (NICT, Japan)

**P – 31** **Research and Monitoring of The Ionosphere over Indonesia for Space Weather Information and Forecast Services (SWIFtS)**

Jiyo (LAPAN, Indonesia)

**P – 32** **High-resolution GNSS-TEC observations using dense GNSS receiver networks**

Takuya Tsugawa (NICT, Japan)

**P – 33** **Pre-earthquake Anomalous Ionospheric signatures observed at low mid-latitude Indian station Delhi during the year 2015 to early 2016: Preliminary results**

Sumedha Gupta (Radio & Atmospheric Sciences Division, India)

**P – 34** **The plasma density Irregularities in the middle latitude F-region using the observation data by multiple instruments**

OH Seung-Jun (SELab, Inc., Korea)

**P – 35** **Three-dimensional raytracing for HF radio communication**

Kornyanat Watthanasangmechai (NICT, Japan)

**P – 36** **Plasma bubble observed from the ground to space, from the past to the future**

Kornyanat Watthanasangmechai (NICT, Japan)

**P – 37** **The variations of ionosphere critical frequency of E layer over the equatorial geomagnetic region in Southeast Asia**

Prasert Kenpankho (KMITL, Thailand)

## Magnetophere

**P – 38** **Space Weather Monitoring with Van Allen Probes Beacon Signals**

LEE Jongkil (KASI, Korea)

**P – 39** **Dependence of spacecraft anomalies on energetic electron/proton particle fluxes**

YI Kangwoo (SSR, Kyung Hee University, Korea)

**P – 40** **Observational Test of Empirical Magnetopause Location Models with Geosynchronous Data from 1996 to 2010**

PARK Eunsu (SSR, Kyung Hee University, Korea)

**P – 41** **Statistical Analysis of The Geomagnetic Field Variation due to The Solar Eclipse**

KIM Jung Hee (Kyungpook National University, Korea)

**P – 42** **Observational test of Earth's bow shock locations from gasdynamics and magnetohydrodynamics during low Alfven Mach number conditions**

LEE Jae-Ok (SSR, Kyung Hee University, Korea)

**P – 43** **An analysis of magnetospheric and ionospheric responses to the Sudden Commencement (SC) event on 16 Feb 2013**

KIM Su-In (SSR, Kyung Hee University, Korea)

P – 44 **Statistical analysis of EMIC Pc1-Pc2 waves observed at the subauroral-latitude Athabasca (L ~ 4.6) ground station**

LEE Sung-Hwan (SSR, Kyung Hee University, Korea)

P – 45 **Development of Advanced SAFE system (Safety during Aviation Flight Environment from radiation)**

OH YunHee (InSpace Co., Ltd., Korea)

P – 46 **Space Environment Monitoring Sensor Survey and Analysis for Consumers Requirement of Space Environment Information Service**

JEONG CheolOh (ETRI, Korea)

P – 47 **A study on EMIC waves and their closely located external sources by using CLUSTER satellite data**

LEE Sung-Hwan (SSR, Kyung Hee University, Korea)

P – 48 **Developing the geomagnetic indices prediction algorithms using artificial neural network and linear multiple regression**

PARK Wooyeon (KASI, Korea)

P – 49 **Effects of asymmetry between the northern and southern ionospheres on quarter waves**

JANG Jae-Jin (SSR, Kyung Hee University, Korea)

P – 50 **Quantitative comparison between KREAM (Korean Radiation Exposure Assessment Model for aviation route dose) and NAIRAS**

JO Gyeongbok (KASI, Korea)

P – 51 **On the characteristics of field line resonances in non-symmetric conditions**

CHOI Jiwon (SSR, Kyung Hee University, Korea)

P – 52 **Development of High Energy Particle Detector (HEPD) onboard Instruments for the Study of Space Storms (ISSS)**

SOHN Jongdae (KASI, Korea)

P – 53 **Relationship between geomagnetic indices and satellite anomaly event on geosynchronous orbit**

LEE Junhyun (KASI, Korea)

P – 54 **The comparison of electron flux prediction at geostationary orbit using two methods**

PARK Keunchan (Chungnam National University, Korea)