



ADRIM 2014

12th Asia-Pacific Regional IAU Meeting
August 18-22, 2014 / DCC, Daejeon, Korea

S1 : Solar System and Sun-Earth Interactions

Session: [B2A-1] S1 : Solar System and Sun-Earth Interactions

Date: August 19, 2014 (Tuesday)

Time: 11:00~12:20

Room: Room A (Room 101~102)

Chair: Jongchul Chae (Seoul National University)

[B2A-1-1]

11:00~11:20

[Invited] Solar Super-Active Regions and Major Activity Events

Jingxiu Wang (National Astronomical Observatories, Chinese Academy of Sciences, China) and Anqin Chen

[B2A-1-2]

11:20~11:35

Development of Daily Solar Flare and CME Probability Models Depending on Sunspot Class and Its Area Change

Kangjin Lee (Kyung Hee University, Korea), Yong-Jae Moon, and Jin-Yi Lee

[B2A-1-3]

11:35~11:50

Lower Temperature Response of an EUV Wave Observed by Hinode/EIS and SDO/AIA

Kyoung-Sun Lee (ISAS/JAXA, Japan), Ryun-Young Kwon, David Brooks, and Toshifumi Shimizu

[B2A-1-4]

11:50~12:05

A Trio of Flares Observed in AR 11087

Anand D. Joshi (Korea Astronomy and Space Science Institute, Korea) and Terry G. Forbes

[B2A-1-5]

12:05~12:20

How Well Can We Estimate the Magnetic Helicity Influx during a Magnetic Flux Emergence with a Footpoint Tracking Method?

G. S. Choe (Kyung Hee University, Korea), and Sunjung Kim



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Session: [B2B-1] S1 : Solar System and Sun-Earth Interactions

Date: August 19, 2014 (Tuesday)

Time: 14:00~15:30

Room: Room A (Room 101~102)

Chair: Jingxiu Wang (National Astronomical Observatories)

[B2B-1-1]

14:00~14:15

Digitized Archive of Kodaikanal Ca-K Spectroheliograms and Solar Activity Cycle

V. Muthu Priyal (Indian Institute of Astrophysics, India), Jagdev Singh, D. Banerjee, and B. Ravindra

[B2B-1-2]

14:15~14:30

Spectral Inversion of the H α line for a Plasma Feature in the Chromosphere of the Quiet Sun

Jongchul Chae (Seoul National University, Korea)

[B2B-1-3]

14:30~14:45

Loss of Relativistic Electrons at Geosynchronous Orbit During Quiet Geomagnetic Intervals: the Role of EMIC Waves

K. Hyun (Kyung Hee University, Korea), K.-H Kim, E. Lee, and D.-H. Lee

[B2B-1-4]

14:45~15:00

Research of Radiation Belt Models in KASI

Jaejin Lee (Korea Astronomy and Space Science Institute, Korea), Kyung-Chan Kim, and Jong-Gil Lee

[B2B-1-5]

15:00~15:15

The Signatures of Worldwide Solar Quiet of the Horizontal Field Intensity on Annual Time Scale

Owolabi T. P. (Obafemi Awolowo University, Nigeria), Rabiou A. B., Bolaji O. S., and Olayanju G. M.

[B2B-1-6]

15:15~15:30

Deep Solar Minimum During SC-23, SC-24 and its Energetic Storms

Ahmed A. Hady (Cairo University, Egypt)



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Session: [B2C-1] S1 : Solar System and Sun-Earth Interactions

Date: August 19, 2014 (Tuesday)

Time: 16:00~17:30

Room: Room A (Room 101~102)

Chair: Saku Tsuneta (Japan Aerospace Exploration Agency)

[B2C-1-1]

16:00~16:15

Which Cone Type is Closer to 3-D CME Structures?

Yong-Jae Moon (Kyung Hee University, Korea), Hyeonock Na, Harim Lee, Soojeong Jang, and Jae-Ok Lee

[B2C-1-2]

16:15~16:30

Magnetohydrodynamic Modeling of the Solar Flare Based on the Photospheric Magnetic Field

Satoshi Inoue (Kyung Hee University, Korea), Keiji Hayashi, and Gwangson Choe

[B2C-1-3]

16:30~16:45

Flux Rope Eruption above Kinked Filament Observed by SDO/AIA and STEREO

Pankaj Kumar (Korea Astronomy and Space Science, Korea) and K.S. Cho

[B2C-1-4]

16:45~17:00

Wave Properties of a Pore Observed by SDO HMI and AIA on 2013 March 11

Su-Chan Bong (Korea Astronomy and Space Science Institute, Korea), Kyung-Suk Cho, Eun-Kyung Lim, Il-Hyun Cho, Yeon-Han Kim, and Young-Deuk Park

[B2C-1-5]

17:00~17:15

An Observation of Broken Type II Solar Burst on 13th November 2012 at the National Space Centre, Malaysia by Using the CALLISTO System

Z. S. Hamidi (MARA University of Technology, Malaysia), N. N. M. Shariff, C. Monstein, Z. A. Ibrahim, W. N. A. Wan Zulkifli, M. B. Ibrahim, N. S. Arifin, and N. A. Amran

[B2C-1-6]

17:15~17:30

Relationship between Metric Type II Solar Radio Bursts and Coronal Mass Ejections

Kyungsuk Cho (Korea Astronomy and Space Science Institute, Korea)



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Session: [B3A-1] S1 : Solar System and Sun-Earth Interactions

Date: August 20, 2014 (Wednesday)

Time: 11:00~12:35

Room: Room A (Room 101~102)

Chair: Young-deuk Park (Korea Astronomy and Space Science Institute)

[B3A-1-1]

11:00~11:20

[Invited] Superflares of Sun-Like Stars

Kazunari Shibata (Kyoto University, Japan)

[B3A-1-2]

11:20~11:40

[Invited] Heating of Solar Active Region

Durgesh Tripathi (Inter-University Centre for Astronomy and Astrophysics, India)

[B3A-1-3]

11:40~12:00

[Invited] Study on the Triggering Mechanism and Predictability of Solar Eruptions

Kanya Kusano (Nagoya University, Japan), Yumi Bamba, Daiko Shiota, Shinsuke Imada, and Shin Toriumi

[B3A-1-4]

12:00~12:20

[Invited] Spectral Variations of Cosmic Rays

David Ruffolo (Mahidol University, Thailand), Alejandro Sáiz, Pierre-Simon Mangeard, Warit Mitthumsiri, Achara Seripienlert, and Usanee Tortempun

[B3A-1-5]

12:20~12:35

Latitude Survey Investigation of Galactic Cosmic Ray Solar Modulation during 1994-2007

Paul Evenson (University of Delaware, USA), Waraporn Nuntiyakul, David Ruffolo, Alejandro Saiz, John Bieber, John Clem, Roger Pyle, Marcus Duldig, and John Humble



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Room: Room A (Room 101~102)

Chair: Kyungsuk Cho (Korea Astronomy and Space Science Institute)

[B3B-1-1]

14:00~14:20

[Invited] Solar and Space Weather Studies in Korea

Y.-D. Park (Korea Astronomy and Space Science Institute, Korea), K. S. Cho, and J.-J. Lee

[B3B-1-2]

14:20~14:35

Relationship of Smoothed Sunspot Number and Land Surface Temperature In the Philippines

John Christian B. Lequiron (Rizal Technological University, Philippines)

[B3B-1-3]

14:35~14:55

[Invited] Probing the Upper Atmosphere by Observing Meteors Over King Sejong Station Antarctica

Yongha Kim (Chungnam National University, Korea), Junseok Hong, Changsup Lee, Jeong-Han Kim, and Geonhwa Jee

[B3B-1-4]

14:55~15:10

CME, Dynamo Effect and Their Effect on Auroras

Karan Bhatta (St. Xavier's College, Nepal) and Kishor Acharya

[B3B-1-5]

15:10~15:25

The Daejeon 40.8 MHz VHF Radar Observations of the E- and F-Region Field-Aligned Irregularities in the Middle Latitude

Young-Sil Kwak (Korea Astronomy and Space Science Institute, Korea), Tae-yong Yang, Hyosub Kil, Woo Kyoung Lee, and Jae-Jin Lee



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Room: Room A (Room 101~102)

Chair: David Ruffolo (Mahidol University)

[B3C-1-1]

16:00~16:15

Probing the Energy Build-Up and Trigger Mechanism of a X1.2 Class Solar Flare on May 15, 2013

Aabha Monga (Aryabhata Research Institute of Observational Sciences (ARIES), India), Arun Awasthi, Wahab Uddin, and Ramesh Chandra

[B3C-1-2]

16:15~16:30

Acceleration of Solar Energetic Particles during Decline Phase of SC-23

Ahmed A. Hady (Cairo University, Egypt)

[B3C-1-3]

16:30~16:45

Classification of SPEs According to Their Origins and Acceleration Trends Using the Multi-Channel Observation

R.-S. Kim (Korea Astronomy and Space Science Institute, Korea), K.-S. Cho, S.-C. Bong, and Y.-D. Park

[B3C-1-4]

16:45~17:00

3D Simulation of Galactic Protons and Electrons Modulation for Fisk-Parker Hybrid Heliospheric Magnetic Field Pattern

Zbigniew Kobylinski (Polish Air Force Academy, Poland), Ali Ajabshirizadeh, and Tengiz Botchorishvili

Poster Session

17:00~17:30

Chairs: David Ruffolo (Mahidol University)

Kyungsuk Cho (Korea Astronomy and Space Science Institute)



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Session: [B5A-1] S1 : Solar System and Sun-Earth Interactions

Date: August 22, 2014 (Friday)

Time: 09:00~10:25

Room: Room A (Room 101~102)

Chair: Shuhrat Ehgamberdiev (Ulugh Beg Astronomical Institute)

[B5A-1-1]

09:00~09:20

[Invited] The Observations of Comet 67P/C-G from the Ground-Based Telescopes and from In-Situ Instruments of Rosetta Spacecraft

Zhong-Yi Lin (National Central University, Taiwan), Wing-Huen Ip, and OSIRIS Team

[B5A-1-2]

09:20~09:40

[Invited] Astrometry for Natural Satellites of Planets in China

Q. Y. Peng (Jinan University, China), A. Vienne, Q. F. Zhang, N. Wang, and Z. Li

[B5A-1-3]

09:40~09:55

Non-LTE and LTE Emissions of the 3.3-micron Bands of CH₄ in the Auroral Regions of Jupiter

Sang Joon Kim (Kyung Hee University, Korea)

[B5A-1-4]

09:55~10:10

Temporal Variations of Io's Magnetic Footprint Brightness

Suwicha Wannawichian (Chiang Mai University, Thailand) and Tatphicha Promfu

[B5A-1-5]

10:10~10:25

The Study of Minor Planets at the Maidanak Observatory

O. A. Burkhonov (Ulugh Beg Astronomical Institute (UBAI) of the Uzbekistan Academy of Sciences, Uzbekistan), Sh. A. Ehgamberdiev, K. E. Ergashev, F. Yoshida, T. Ito, and Yu. N. Krugly



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Session: [B5B-1] S1 : Solar System and Sun-Earth Interactions

Date: August 22, 2014 (Friday)

Time: 11:00~12:30

Room: Room A (Room 101~102)

Chair: Yongha Kim (Chungnam National University)

[B5B-1-1]

11:00~11:15

The Pan-STARRS-1 Outer Solar System Key Project: A Status Report

Hsing Wen Lin (National Central University, Taiwan), Matthew Holman, and Ying Tung Chen

[B5B-1-2]

11:15~11:30

A New Theory of the Formation and Evolution of the Solar System and the Expansion of the Universe as well as the Cause and Strategy of Global Climate Change

Cuixiang Zhong (Jiangxi Normal University, China)

[B5B-1-3]

11:30~11:45

Orbital Energy during Orbital Dynamics of Asteroid 4179 Toutatis

Endang Soegiartini (Institut Teknologi Bandung, Indonesia)

[B5B-1-4]

11:45~12:00

Polarimetric and Morphological Imaging Analysis of Comets

Sonam Arora (Physical Research Laboratory, India) and Shashikiran Ganesh

Poster Session

12:00~12:30

Chairs: Yongha Kim (Chungnam National University)

Shuhrat Ehgamberdiev (Ulugh Beg Astronomical Institute)



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Poster Presentation

P1-01 **Linear Stability of Triangular Equilibrium Points in Photogravitational Restricted Three Body Problem with Triaxial Rigid Bodies, Bigger One Oblate Spheroid and Source of Radiation**
Avdhesh Kumar (Institute of Engineering & Technology, India) and B. Ishwar

P1-02 **Non-linear Stability in Photogravitational Non-Planar Restricted Three Body Problem with Oblate Smaller Primary**
B. Ishwar (B. R. A Bihar University) and J.P. Sharma

P1-03 **Motion in the Vicinity of Libration Points in the Sun-(Earth-Moon) Bicircular System with Poynting-Robertson and Solar Wind Drag**
Ashok Kumar Pal (Indian School of Mines, India) and Badam Singh Kushvah

P1-04 **Disturbances in Solar Wind Plasma Parameters In Relation with X and M Class X- Ray Solar Flare Related Intense Geomagnetic Storms**
P. L. Verma (A. P. S. University Rewa M. P. India, India)

P1-05 **Ground Level Enhancements In Relation with Energetic Solar Features and Disturbances in Solar Wind Plasma Parameters**
P. L. Verma (A. P. S. University Rewa M. P. India, India)

P1-06 **Statistical Relation of Geomagnetic Activity Parameters with Solar Activity Parameters**
P. L. Verma (A. P. S. University Rewa M. P. India, India) and Brijesh Singh

P1-07 **Nonlinear Force-Free Modeling of the Coronal Magnetic Field Producing the Large Solar Flares**
Satoshi Inoue (Kyung Hee University, Korea) and Jihye Kang

P1-08 **Lunar Gene Bank for Endangered Species**
Swain, R. K. (D.A.V. Public School, India) and Behera D.

P1-09 **Enhanced Meteor Detection Radar (EMDR) Installed at Tirupati: First Results and Wind Comparison**
E. Kosalendra (Sri Venkateswara University, India), S. Eswariah, S. Vijaya Bhaskara Rao, M. Venkat Ratnam, K. Kishore Kumar, S. Sathish Kumar, and S. Gurubaran

P1-10 **Polarimetric Studies of Comet C/2012 L2 (LINEAR)**
Parizath Deb Roy (Assam University, India), Himadri Sekhar Das, and Biman J. Medhi

P1-11 **Magnetic Flux-Current Surfaces of Magnetohydrostatic Equilibria**
Kap-Sung Kim (Kyung Hee University, Korea), G. S. Choe, Satoshi Inoue, and Minhwan Jang



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P1-12 Proper Temporal Integration of Polarization Signals in the Quiet Sun Internetwork to Improve Signal-to-Noise Ratio

Akram Gheidi shahran (Alzahra University, Iran), Taghi Mirtorabi, and Shahin Jafarzadeh

P1-13 Relationship between the Neutron Time Delay Distribution and the Rigidity Spectrum of Primary Cosmic Rays

Pierre-Simon Mangeard (Mahidol University, Thailand), David Ruffolo, Alejandro Saiz, Waraporn Nuntiyakul, John W. Bieber, Paul Evenson, Roger Pyle, Marcus Leslie Duldig, and John Humble

P1-14 Geomagnetic Indices Frequency-Modulated by Solar Rotation

Heon-Young Chang (Kyungpook National University, Korea)

P1-15 Multi-wavelength Observation of Initiation Phase of Filament Eruption

Sujin Kim (Korea Astronomy and Space Science Institute, Korea), Sung-Hong Park, and Kyung-Suk Cho

P1-16 Study of Solar Quiet Daily Variation at Sonmiani Geomagnetic Observatory, Pakistan

AAbdul Salam Kumbher (Pakistan Space and Upper Atmosphere Research Commission, Pakistan), Zain Rahim, Asim Waris, and Muneeza Muhammad Ali

P1-17 Low/Mid-latitude Ionospheric Irregularities and Scintillation Climatology

A. M. Abdallah (Helwan University, Egypt), F. Hussein, A. M. Mahrous, and K. M. Groves

P1-18 Laboratory Simulation of Light Scattering from Regolith Analogue: Effect of Porosity

Amritaksha Kar (Assam University, India), Asoke Kumar Sen, and Ranjan Gupta

P1-19 Multi-wavelength Fibril Dynamics and Oscillations Above Sunspot – Wave Propagation

Emanuel Sungging Mumpuni (Faculty of Mathematics and Natural Science, ITB, India), Dhani Herdiwijaya, Mitra Djamal, and Thomas Djamaluddin

P1-20 A Possibility of Modulating the Near-Earth Space Environment by Mercury

Jung-Hee Kim (Kyungpook National University) and Heon-Young Chang

P1-21 Statistical Properties of Geomagnetic Activity Indices and Solar Wind Parameters

Jung-Hee Kim (Kyungpook National University) and Heon-Young Chang

P1-22 Trace Elemental Distribution of Dergaon Meteorite

P. Dutta (Dimoria College, India) and K. Duorah

P1-23 Comparison of ICME Arrival Times and Solar Wind Parameters based on the WSA-ENLIL Model with Three Cone Types and Observations

Soojeong Jang (Kyung Hee University, Korea), Yong-Jae Moon, and HyeonOck Na



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P1-24 Comparison of 3-D CME Parameters from Single and Multi-Spacecraft Observations

Harim Lee (Kyung Hee University, Korea), Yong-Jae Moon, Hyeonock Na, Soojeong Jang, and Jae-Ok Lee

P1-25 MHD Waves in a Stratified Viscous Solar Atmosphere

Nagendra Kumar (M. M. H. College, India) and Anil Kumar

P1-26 Characteristics of Marginally Decelerating Coronal Mass Ejections

V. C. Dwivedi (NCRA-TIFR, India) and P. K. Manoharan

P1-27 Comparison of Daily Solar Flare Peak Flux Forecast Models by Regressive and Neural Network Methods

Seulki Shin (Kyung Hee University, Korea), Jin-Yi Lee, and Yong-Jae Moon

P1-28 Dependence of Energetic Electron Precipitation on the Type of Magnetic Storms

Mi-Young Park (Chungbuk National University, Korea), Dae-Young Lee, Dae-Kyu Shin, Drew Turner, Jung-Hee Cho, and Eun-Hee Lee

P1-29 On the Dynamics and Stability of Filament and Associated Flux Rope

Navin Chandra Joshi (Kyung Hee University, Korea), Tetsuya Magara, and Satoshi Inoue

P1-30 Multi-band Observations of Recent Active Comets

Myung-Jin Kim (Korea Astronomy and Space Science Institute, Korea), Y.-J. Choi, Y.-M. Lim, H.-K. Moon, M. Sohn, and K.-T. Kim

P1-31 Confirmation of the Relation between Anisotropy of Energetic Electron Distribution and Chorus Wave Occurrence using RBSP Satellites Observation

Dong-Hee Lee (Chungbuk National University, Korea), Dae-Young Lee, Dae-Kyu Shin, and Jin-Hee Kim

P1-32 Prediction Model of the Electron Flux in Geosynchronous Orbit using Neural Network

D.-K. Shin (Chungbuk National University, Korea), K.-C. Kim, and D.-Y. Lee

P1-33 Moreton Waves Related to the Flare Events of June 3, 2012 and July 6, 2012

Agustinus Gunawan Admiranto (National Institute of Aeronautics and Space, Indonesia) and Rhorom Priyatikanto

P1-34 Relation between the Outer Radiation Belt Structure and the Plasmopause

Junghee Cho (Chungbuk National University, Korea), Dae-Young Lee, Jin-Hee Kim, Dae-Kyu Shin, and Drew Turner



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P1-35 Prediction Model for a Global Distribution of Whistler Chorus Waves Optimized for Solar Ascending Phase Years

Jinhee Kim (Chungbuk University, Korea), Dae-Young Lee, Jung-Hee Cho, Dae-Kyu Shin, Kyung-Chan Kim, Wen Li, and Thomas K. Kim

P1-36 The Sonmiani Geomagnetic Field Effects of High Speed Solar Wind Stream Emanating from Coronal Holes during 2010

Muneeza M. Ali (Pakistan Space & Upper Atmosphere Research Commission, Pakistan) and Madeeha Ashfaq

P1-37 Analysis of GPS-TEC Variations during the Rising Phase of Solar Cycle 24

Byeong Hyun Kang (Korea Advanced Institute of Science and Technology, Korea) and Sun Mie Park

P1-38 Characterization of Thermal and Non-Thermal Emission during the Precursor and Main Phase of Solar Flares

Arun K. Awasthi (Aryabhata Research Institute of observational sciences, India), Rajmal Jain, and Wahab Uddin

P1-39 Magnetic-Reconnection Generated Shock Waves as a Driver of Surges

Heesu Yang (Seoul National University, Korea), Jongchul Chae, Eun-Kyung Lim, Kyoung-sun Lee, Hyungmin Park, Dong-uk Song, and Kyuhyoun Cho

P1-40 Solar and Interplanetary Relations of X-Class, X-Ray Solar Flare Related Forbush Decreases in Cosmic Ray Intensity

P. L. Verma (A. P. S. University Rewa M. P. India, India) and Anita Shukla

P1-41 Multi-Band Polarimetric Observations of the Lunar Regolith

Chae kyung Sim (Kyung Hee University, Korea), Sungsoo S. Kim, Minsup Jung, Il-Hoon Kim, So-Myoung Park, Ian Garrick-Bethell, Ho Jin, and Kyoung Wook Min

P1-42 Detection of a Fine-Scale Magnetic Discontinuity Around a Pore

Donguk Song (Seoul National University, Korea), Jongchul Chae, Soyoung Park, and Kwangsu Ahn

P1-43 Generation of Suprathermal Protons via Parallel Electron Fire-Hose Instability: Particle-in-Cell Simulations

Jungjoon Seough (Korea Astronomy and Space Science Institute, Korea), Peter H. Yoon, Junga Hwang, and Khan-Hyuk Kim

P1-44 Ionospheric TEC Variations Observed before Earthquakes: Tashkent and Kitab GPS Stations

Husan Eshqvatov (Institute of Nuclear Physics, Uzbekistan)

P1-45 A Comparative View of the Valles Marineris Landslides with Terrestrial Analogues

Johanna Erika S. Valdueza (Manila Observatory, Philippines)



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P1-46 **The UKMtrapcast: A LEO-NEqO Trapped Particles Forecasting System**

Gusrizal (Universiti Kebangsaan Malaysia, Malaysia), W. Suparta, and K. Kudela

P1-47 **The Study of Electron Flux Characteristics Associated to GSO Satellite Anomalies**

Neflia (National Institute of Aeronautics and Space, Indonesia)

P1-48 **Physical Properties of Erupting Plasma Associated with Coronal Mass Ejections Observed in EUV and X-ray**

Jin-Yi Lee (Kyung Hee University, Korea), John C. Raymond, Katharine K. Reeves, Yong-Jae Moon, and Kap-Sung Kim

P1-49 **Solar and Geomagnetic Activity during 24 Cycle – a Look Over and Prediction of Solar 25 Cycle**

T. Seredyn (Polish Air Force Academy, Poland), A. Ajabshirizadeh, and A. Wysokiński

P1-50 **Occurrence of GLE Events and Characteristic Features during Recent Solar Cycles**

Subhash C. Kaushik (Government Autonomous Excellent College, India)

P1-51 **Intense Geomagnetic Storms and Associated Cosmic Ray Intensities**

Subhash C. Kaushik (Government Autonomous Excellent College, India), Dinesh C. Gupta, and Sonia Kaushik

P1-52 **Interplanetary Transient Solar wind Flows and Extremely Disturbed Geomagnetic Field Conditions**

Sonia Kaushik (Jiwaji University, India) and Subhash C. Kaushik