



**ADRIM 2014**

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

## **S2 : Interstellar Matter, Star Formation and the Milky Way**

**Session:** [B2C-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 19, 2014 (Tuesday)

**Time:** 16:00~17:25

**Room:** Room B (Room 103)

**Chair:** Bon-Chul Koo (Seoul National University)

[B2C-2-1]

16:00~16:20

**[Invited] A Global View of Star Formation in the Milky Way**

Karl M. Menten (Max-Planck-Institute for Radio Astronomy, Germany)

[B2C-2-2]

16:20~16:40

**[Invited] New Frontiers of Magnetized Turbulence in the Multiphase Interstellar Medium**

Blakesley Burkhart (University of Wisconsin Madison, USA) and Alex Lazarian

[B2C-2-3]

16:40~16:55

**Cosmic Fountains Reveal the Birth and Death of Stars**

Lisa Harvey-Smith (CSIRO Astronomy & Space Science, Australia), Jimi Green, Steven Longmore, Cormac Purcell, and Andrew Walsh

[B2C-2-4]

16:55~17:10

**Inflows in Massive Star Formation Regions**

Yuefang Wu (Peking University, China), and Tie Liu

[B2C-2-5]

17:10~17:25

**ALMA Results of the Pseudodisk, Rotating Disk, and Jet in the Very Young Protostellar System HH 212**

Chin-Fei Lee (Academia Sinica Institute of Astronomy and Astrophysics, Taiwan), Naomi Hirano, Qizhou Zhang, Hsien Shang, Paul T. P. Ho, and Ruben Krasnopolsky



# APRIM 2014

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

**Session:** [B3A-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 20, 2014 (Wednesday)

**Time:** 11:00~12:30

**Room:** Room B (Room 103)

**Chair:** Toshihiro Handa (Kagoshima University)

[B3A-2-1]

11:00~11:20

**[Invited] Near-Infrared Study of Young Galactic Supernova Remnants**

Bon-Chul Koo (Seoul National University, Korea)

[B3A-2-2]

11:20~11:40

**Supernova Remnants in the Magellanic Clouds**

Miroslav D. Filipovic (University of Western Sydney, Australia) and Luke Bozzetto

[B3A-2-3]

11:40~12:00

**[Invited] Constraints on Supernova Progenitors from Integral Field Spectroscopy of the Explosion Site**

H. Kuncarayakti (Universidad de Chile, Chile), G. Aldering, J. P. Anderson, N. Arimoto, M. Doi, L. Galbany, M. Hamuy, Y. Hashiba, K. Maeda, T. Morokuma, and T. Usuda

[B3A-2-4]

12:00~12:15

**IR-to-X-ray Ratio of Supernova Remnants in the Large Magellanic Cloud**

Ji Yeon Seok (Academia Sinica Institute of Astronomy and Astrophysics, Taiwan), Bon-Chul Koo, and Hiroyuki Hirashita

[B3A-2-5]

12:15~12:30

**Star Formation in Extreme Galactic Environments**

Quang Nguyen Luong (Canadian Institute for Theoretical Astrophysics, Canada), Frederique Motte, Fabian Louvet, and Tracey Hill



# ADRIM 2014

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

**Session:** [B3B-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 20, 2014 (Wednesday)

**Time:** 14:00~15:25

**Room:** Room B (Room 103)

**Chair:** Hauyu Baobab Liu (Academia Sinica Institute of Astronomy and Astrophysics)

[B3B-2-1]

14:00~14:20

**[Invited] Dynamics of Filamentary Molecular Clouds: A Galactic View of Star Formation**

Shu-ichiro Inutsuka (Nagoya University, Japan)

[B3B-2-2]

14:20~14:40

**[Invited] The Processing of the Clumpy Molecular Gas in the Galactic Center and the Star-Formation**

Hauyu Baobab Liu (Academia Sinica, Taiwan), Young Chol Minh, and Elisabeth Mills

[B3B-2-3]

14:40~14:55

**The Role of Ridges in High Mass Star Formation: Super Filaments Hosting Protostars**

Tracey Hill (Joint ALMA Observatory, Chile), Frederique Motte, Pierre Didelon, Quang Ngyuen Luong, Philippe Andre, Martin Hennemann, and V. Minier

[B3B-2-4]

14:55~15:10

**UKIRT Widefield Infrared Survey for Fe+**

Jae-Joon Lee (Korea Astronomy and Space Science Institute, Korea), Bon-Chul Koo, Yong-Hyun Lee, Ho-Gyu Lee, Jong-Ho Shinn, Hyun-Jeong Kim, Yesol Kim, Tae-Soo Pyo, Dae-Sik Moon, Sung-Chul Yoon, Moo-Young Chun, Dirk Froebrich, Chris J. Davis, Watson P. Varr

[B3B-2-5]

15:10~15:25

**[Fe II] 1.64  $\mu\text{m}$  Outflow Features Around Ultracompact H II Regions in the 1st Galactic Quadrant**

Jong-Ho Shinn (Korea Astronomy and Space Science Institute, Korea), Kee-Tae Kim, Jae-Joon Lee, Yong-Hyun Lee, Hyun-Jeong Kim, Tae-Soo Pyo, Bon-Chul Koo, Jaemann Kyeong, Narae Hwang, and Byeong-Gon Park



# ADRIM 2014

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

**Session:** [B3C-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 20, 2014 (Wednesday)

**Time:** 16:00~17:30

**Room:** Room B (Room 103)

**Chair:** Shu-ichiro Inutsuka (Nagoya University)

[B3C-2-1]

16:00~16:20

**[Invited] Radio Astrometric Observations and the Galactic Constant as Basis of the Galactic Kinematics Study**

Takumi Nagayama (National Astronomical Observatory of Japan, Japan), Toshihiro Omodaka, Toshihiro Handa, Hideyuki Kobayashi, and Ross A. Burns

[B3C-2-2]

16:20~16:40

**[Invited] Water Maser Outburst in W49N: a Multi-Transition Study**

Busaba Hutawarakorn Kramer (Max Planck Institute for Radio Astronomy, Germany), Karl M. Menten, Tomasz Kaminski, and Alex Kraus

[B3C-2-3]

16:40~16:55

**Trigonometric Parallaxes of Star Forming Regions in the Perseus Spiral Arm**

Y. K. Choi (Korea Astronomy and Space Science Institute, Korea), K. Hachisuka, M. J. Reid, Y. Xu, A. Brunthaler, K. M. Menten, and T. M. Dame

**Poster Session**

16:55~17:30

**Chair:** Shu-ichiro Inutsuka (Nagoya University)



# ADRIM 2014

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

**Session:** [B4A-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 21, 2014 (Thursday)

**Time:** 11:00~12:30

**Room:** Room B (Room 103)

**Chair:** Jeong-Eun Lee (Kyung Hee University)

[B4A-2-1]

11:00~11:20

**[Invited] Organic Dust in the Interstellar Medium**

Sun Kwok (The University of Hong Kong, Hong Kong, China)

[B4A-2-2]

11:20~11:40

**[Invited] Infrared Properties of Interstellar Dust Grains**

Hidehiro Kaneda (Nagoya University, Japan), Daisuke Ishihara, Toru Kondo, Shinki Oyabu, Rika Yamada, Mitsuyoshi Yamagishi, Takashi Onaka, and Toyoaki Suzuki

[B4A-2-3]

11:40~12:00

**[Invited] Microwave Emission from Spinning Dust: An Improved Model and Polarization Spectrum**

Thiem Hoang (Ruhr University Bochum, Germany)

[B4A-2-4]

12:00~12:15

**Mapping the 3D Multi-Band Extinction and Diffuse Interstellar Bands in the Milky Way with LAMOST**

Haibo Yuan (Peking University, China), Xiaowei Liu, Maosheng Xiang, Yang Huang, and Bingqiu Chen

**Poster Session**

12:15~12:30

**Chair:** Jeong-Eun Lee (Kyung Hee University)



# ADRIM 2014

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

**Session:** [B5A-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 22, 2014 (Friday)

**Time:** 09:00~10:25

**Room:** Room B (Room 103)

**Chair:** Sun Kwok (The University of Hong Kong)

[B5A-2-1]

09:00~09:20

**[Invited] Chemical Evolution in Star Formation**

Jeong-Eun Lee (Kyung Hee University, Korea)

[B5A-2-2]

09:20~09:40

**[Invited] Chemical Evolution of N-bearing Organic Molecules Leading to Glycine**

Masatoshi Ohishi (National Astronomical Observatory of Japan, Japan)

[B5A-2-3]

09:40~09:55

**The Physical Condition of Gas and Origin of [CII] in NGC 3184**

A. S. Abdullah (Leiden Observatory, Netherlands), B. R. Brandl, A. G. G. M Tielens, B. Groves, and M. Wolfire

[B5A-2-4]

09:55~10:10

**The Carbon Inventory in a Quiescent, Filamentary Molecular Cloud in G328**

Catherine Braiding (University of New South Wales, Australia) and Michael Burton

[B5A-2-5]

10:10~10:25

**Unraveling the Physical and Chemical Properties of Planck Cold Clumps**

Tie Liu (Korea Astronomy and Space Science Institute, Korea), Yuefang Wu, Kee-Tae Kim, Diego Mardones, Arnaud Belloche, Di Li, Friedrich Wyrowski, Guido Garay, Isabelle Ristorcelli, Jeong-Eun Lee, Karl M. Menten, Ken Tatematsu, Ke Wang, Leonardo Bronfman,



# APRIM 2014

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

**Session:** [B5B-2] S2 : Interstellar Matter, Star Formation and the Milky Way

**Date:** August 22, 2014 (Friday)

**Time:** 11:00~12:30

**Room:** Room B (Room 103)

**Chair:** Busaba Hutawarakorn Kramer (Max Planck Institute for Radio Astronomy)

[B5B-2-1]

11:00~11:20

**[Invited] Radio Variability and Magnetic Activities of Low Luminosity Protostars**

Minho Choi (Korea Astronomy and Space Science Institute, Korea), Jeong-Eun Lee, and Miju Kang

[B5B-2-2]

11:20~11:40

**[Invited] Molecular Outflows and the Formation of Very Low Mass Objects**

Phan Bao Ngoc (International University, Vietnam)

[B5B-2-3]

11:40~11:55

**Unveiling Complex Outflow Structure of UY Aur**

Tae-Soo Pyo (National Astronomical Observatory of Japan, USA), Masahiko Hayashi, Tracy L. Beck, Christopher J. Davis, and Michihiro Takami

[B5B-2-4]

11:55~12:15

**[Invited] Youngest Protoplanetary Disk Discovered with ALMA**

Shih-Ping Lai (National Tsing Hua University, Taiwan), Nadia Murillo, Simon Bruderer, Daniel Harsono, and Ewine F. van Dishoeck

[B5B-2-5]

12:15~12:30

**Clues to the Evolution of Protoplanetary Disks in Orion A Star-Forming Region**

Kyoung Hee Kim (Korea Astronomy and Space Science Institute, Korea), Dan M. Watson, and Spitzer IRS\_DISKS Team



# ADRIM 2014

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

## Poster Presentation

### **P2-01 The Mopra Southern Galactic Plane CO Survey**

Michael Burton (University of New South Wales, Australia) and Catherine Braiding

### **P2-02 Three Years Survey in Local Bubble with Diffuse Interstellar Bands**

Amin Farhang (Institute for Research in Fundamental Sciences, Iran), Habib G. Khosroshahi, Atefeh Javadi, and Jacco van Loon

### **P2-03 3D Distribution of Interstellar Gas and Dust in the Galaxy: Preparing the Analysis of GAIA Observations**

Lucky Puspitarini (GEPI Observatoire de Paris, France) and Rosine Lallement

### **P2-04 Importance of Magnetic Fields in the Formation and Evolution of Dark Globules, Bright Rimmed Clouds and Mid-infrared Bubbles**

C. Eswaraiah (National Central University, Taiwan) and W. P. Chen

### **P2-05 Double Stars as Tracers of Tiny Structures in Interstellar Medium**

Somayeh Morabbi (Alzahra University, Iran) and Mohammad Taghi Mitorabi

### **P2-06 Magnetic Fields in Bright-rimmed Clouds and Cometary Globules Traced using R-band Polarization Observations**

Soam, A (Aryabhata Research Institute of Observational Sciences, India), Maheswar G., Chang Won Lee, H. C. Bhatt, and Sami Dib

### **P2-07 Radiative Association of Ar<sup>+</sup> and H**

Moncef Bouledroua (Badji Mokhtar University, Algerie)

### **P2-08 The Galaxy Rotation Curve based on Measurements of Interstellar Call**

G. Galazutdinov (Universidad Catolica del Norte, Chile), J. Krelowski, A. Strobel, F. Musaev, and A. Bondar

### **P2-09 New Non-Parametric Approach to Determine Proper Motion of Star Clusters**

Rhorom Priyatikanto (Institut Teknologi Bandung, Indonesia) and M. Ikbal Arifyanto

### **P2-10 Stellar Metallicity Gradient of the Galactic Disc in LSS-GAC**

Xiang Maosheng (Peking University, China), Liu xiaowei, Yuan Haibo, and Huang Yang

### **P2-11 TRAO Outer Galaxy Survey in 13CO**

Youngung Lee (Korea Astronomy and Space Science Institute, Korea), Youngsik Kim, In-Sung Yim, Bong-Kyu Kim, Hyung-Woo Kang, Jae-Hoon Jung, Chang-Hoon Lee, and Kwang-Tae Kim





# ADRIM 2014

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

---

**P2-12 SED Modeling of 20 Massive Young Stellar Objects**

Kamal Kumar Tanti (University of Technology and Management, India)

---

**P2-13 Census and Analysis of Molecular Clouds**

A. S. Hojaev (ANUUz & UBAI, Uzbekistan)

---

**P2-14 OH Masers Toward W49 A Star-Forming Region with MERLIN and e-MERLIN Observations**

K. Asanok (Khon Kaen University, Thailand), M. D. Gray, S. Etoke, A. M. S. Richards, B. H. Kramer, and N. Gasiprong

---

**P2-15 Trigonometric Distance to IRAS 20056+3350: Massive Star Forming Region in the Solar Circle**

Ross A. Burns (Kagoshima University, Japan), Toshihiro Handa, Takumi Nagayama, Toshihiro Omodaka, Akiharu Nakagawa, Hiroyuki Nakanishi

---

**P2-16 Searching for Young Methane T Dwarfs**

Wen-Ping Chen (National Central University, Taiwan) and Pochih Chiang

---

**P2-17 Identification of L328-IRS as a Proto-Brown Dwarf : Implication on the Origin of Brown Dwarfs**

Chang Won Lee (Korea Astronomy and Space Science Institute, Korea), Mi-ryang Kim, Gwanjeong Kim Kim, Masao Saito, Philip Myers, and Yasutaka Kurono

---

**P2-18 Far-Ultraviolet Study of the GSH 006-15+7: A Local Galactic Supershell**

Young-Soo Jo (Korea Astronomy and Space Science Institute, Korea), Kyoung-Wook Min, and Kwang-Il Seon

---

**P2-19 Numerical Simulations of HH211: A Reflection-Symmetric bi-polar Outflow**

Anthony Moraghan (Academia Sinica Institute for Astronomy and Astrophysics, Taiwan), Chin-Fei Lee, and Po-Sheng Huang

---

**P2-20 3D Extinction Map from Multi-band Photometry and the Dust-to-gas Ratio of the Galactic Anti-center**

B.-Q. Chen (Peking University, China), X.-W. Liu, H.-B. Yuan, Y. Huang, and M.-S. Xiang

---

**P2-21 Completion of the Methanol Multibeam Survey: Science Highlights and Follow-up Work**

Shari Breen (CSIRO Astronomy and Space Science, Australia)

---

**P2-22 Linear Polarization of Class I Methanol Masers in Massive Star Forming Regions**

Ji-hyun Kang (Korea Astronomy and Space Science Institute, Korea), Do-Young Byun, Kee-Tae Kim, Jongsoo Kim, and Aran Lyo



# APRIM 2014

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

---

**P2-23 Star Formation History and Dust Production: NGC 147 and NGC 185**

R. Hamedani Golshan (Isfahan University of Technology, Iran), A. Javadi, J. Th. van Loon, and H. G. Khosroshahi

---

**P2-24 Physical and Chemical Properties of Planetary Nebulae with WR-type Nuclei**

A. Danehkar (Macquarie University, Australia), R. Wesson, A. I. Karakas, and Q. A. Parker

---

**P2-25 Instability of Magnetized Ionization Fronts**

Jeong-Gyu Kim (Seoul National University, Korea) and Woong-Tae Kim

---

**P2-26 Star Formation and the Molecular Gas Property in W4 West (AFGL333) Region**

Toshihiro Handa (Kagoshima University, Japan), Takashi Soejima, Makoto Nakano, Toshihiro Omodaka, Takumi Nagayama, James Okwe Chibeze, Tatsuya Baba, and Tatsuya Kamezaki

---

**P2-27 Star Formation in the Long Infrared Dark Cloud IRDC G53.2**

Hyun-Jeong Kim (Seoul National University, Korea), Bon-Chul Koo, and Christopher J. Davis

---

**P2-28 Trigonometric Parallax of IRAS 22555+6213 with VERA: 3-Dimensional View of Sources Along the Same Line of Sight**

James O. Chibueze (National Astronomical Observatory of Japan, Japan), Hirofumi Sakanoue, Takumi Nagayama, Toshihiro Omodaka, Toshihiro Handa, Tatsuya Kamezaki, Ross Burns, Hideyuki Kobayashi, Hiroyuki Nakanishi, Mareki Honma, and Yuji Ueno

---

**P2-29 The Variation of Mass-loss in IRC +10216**

Doan Duc Lam (Hanoi National University of Education, Vietnam), Dinh-V-Trung, and N. Q. Lan

---

**P2-30 A High-resolution Study of the CO-to-H<sub>2</sub> Conversion Factor Across the Perseus Molecular Cloud**

Min-Young Lee (CEA-Saclay, France), Snezana Stanimirovic, Mark Wolfire, Rahul Shetty, Simon Glover, Faviola Molina, and Ralf Klessen

---

**P2-31 The Analysis of Star Cluster Family in the Northern Part of Carina Nebula**

R. P. Ayu (Institut Teknologi Bandung, Indonesia), R. Priyatikanto, M. I. Arifyanto, R. W. Romadhonia, M. Hilmi, I. K. Fitriana, and H. R. T. Wulandari

---

**P2-32 Galactic Center Molecular Cloud M0.76-0.06 with Mechanical Dominated Region**

Atsushi Miyazaki (Korea Astronomy and Space Science Institute, Korea) and Masato Tsuboi

---

**P2-33 Improved Dynamical Modelling of the Arches Cluster**

Joowon Lee (Kyung Hee University, Korea), Sungsoo S. Kim, and Jihye Shin

---

**P2-34 Near-IR Photometric and Optical Spectroscopic Study of The FU Orionis Objects V582 Aur**

Hyung-II Oh (Kyungpook National University, Korea), Tae Seog Yoon, and Hyun-il Sung



# APRIM 2014

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

---

**P2-35** **Rotation Measure Synthesis at 800MHz of High Galactic Latitude Fields**

Y.-W. Liao (Academia Sinica Institute of Astronomy and Astrophysics, Taiwan), N. Oppermann, C. Anderson, K. Bandura, T.-C. Chang, X.-L. Chen, J. Kumar, C.-Y. Kuo, Y.-C. Li, K. W. Masui, A. Natarajan, U.-L. Pen, J. B. Peterson, J. R. Shaw, E. R. Switzer, P

---

**P2-36** **A Mapping Study of Herbig Ae/Be Stars with Lines of CO and Its Isotopes**

C. Zhang (Peking University, China), Y. Wu, J. Yuan, and T. Liu

---

**P2-37** **Can UV Heated Outflow Cavity Walls Reproduce the Warm CO Gas in the Embedded Protostars?**

Seokho Lee (Kyung Hee University, Korea), Jeong-Eun Lee, Edwin A. Bergin, and Yong-Sun Park

---

**P2-38** **High Resolution Optical Spectra of HBC 722**

Sunkyung Park (Kyung Hee University, Korea), Jeong-Eun Lee, Wonseok Kang, Hyun-II Sung, Sang-Gak Lee, Joel D. Green, and William D. Cochran

---

**P2-39** **Scaling of Velocity and Magnetic Field in Decaying Turbulence in Expanding and Contracting Media**

JunSeong Park (Ulsan National Institute of Science and Technology, Korea), Dongsu Ryu, and Jungyeon Cho

---

**P2-40** **OH Emission Toward Embedded YSOs**

Hyeong-Sik Yun (Kyung Hee University, Korea), Jeong-Eun Lee, Seokho Lee, Neal J. Evans II

---

**P2-41** **Chemical Differentiation of CS and N<sub>2</sub>H<sup>+</sup> in Dense Starless Cores**

Shinyoung Kim (Korea National University of Education, Korea), Chang Won Lee, Jungjoo Sohn, Gwanjeong Kim, and Mi-Ryang Kim

---

**P2-42** **Capture of WIMP Dark Matter by Stars in the Galactic Center: Impact of Orbital Eccentricity**

H. Wulandari (Institut Teknologi Bandung, Indonesia), Sulistiyowati, B. Dermawan, M. I. Arifyanto, and M. I. Ibrahim

---

**P2-43** **Flux Monitor of the 6.7 GHz Methanol Masers to Systematically Research the Periodic Variation Using Hitachi 32-m**

Koichiro Sugiyama (Ibaraki University, Japan), Yoshinori Yonekura, Kazuhito Motogi, Yu Saito, Kenta Fujisawa, Shota Ishii, Munetake Momose, Mareki Honma, Kei E. I. Tanaka, Takashi Hosokawa, Mizuho Uchiyama, and Kohei Inayoshi

---

**P2-44** **Infall & Outflow in Dense Cores in the Milky Way**

Shailla Akhter (The University of New South Wales, Australia), Maria R. Cunningham, and Paul A. Jones

---

**P2-45** **Simultaneous Observation of the J=1-0, v=1 and v=2 SiO Masers Towards WX Psc using KaVA**

Youngjoo Yun (Korea Astronomy and Space Science Institute, Korea), Se-Hyung Cho, and Hiroshi Imai