

# Indo - Japan Workshop on Extreme Plasma Phenomena in Universe

## Program

Day 1 Tuesday March 11<sup>th</sup>

Session 1 (Chair: Jeewan Pandey)

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09:50 – 09:55 **Shuta J. Tanaka**, Aoyama Gakuin University

*“Opening”*

09:55 – 10:00 **Manish K. Naja** (Director of ARIES), ARIES

*“Opening”*

10:00 – 10:45a **Jagdish C. Joshi**, \*ARIES

*“Pulsar Wind Nebulae as Ultra-high Energy Gamma-ray Sources”*

10:45 – 11:30a **Shuta J. Tanaka**, Aoyama Gakuin University

*“Stochastic Acceleration Model of Pulsar Wind Nebulae as a Solution to the Pair Multiplicity Problem”*

11:30 – 12:15a **Wataru Ishizaki**, Tohoku University

*“Theoretical Modeling of Pulsar Wind Nebulae: Focusing on Radial Surface Brightness Profiles”*

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Lunch break 75 min.

Session 2 (Chair: Jagdish C. Joshi)

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13:30 – 14:15a **Kuntal Misra**, ARIES

*“VHE emission in GRBs”*

14:15 – 14:30c **Anshika Gupta**, ARIES

*“Multi-wavelength modeling of GRB 190829A”*

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Tea break 30min.

Session 3 (Chair: Kuntal Misra)

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15:00 – 15:45a **Tanima Mandal** (online), \*\*IIT-KGP

*“Joint Detection Prospects of Binary Neutron Star Merges using CTA and Gravitational-Wave Detectors”*

a. (40+5) min, b. (15+5) min, c. (12+3) min

\*ARIES = Aryabhatta Research Institute of Observational Sciences

\*\*IIT-KGP = Indian Institute of Technology, Kharagpur

15:45 – 16:00c **Dhruv Jain**, ARIES

*“Constraining the Rates and Beaming Angles of Gamma-Ray Bursts associated with Compact Binary Coalescences”*

16:00 – 16:15c **Sharma Khushboo**, ARIES

*“Prompt Emission Phase in Gamma-Ray Bursts”*

## Day 2 Wednesday March 12<sup>th</sup>

Session 4 (Chair: Shuta Tanaka)

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09:30 – 10:15a **Jeewan Pandey**, ARIES

*“Magnetic Cataclysmic Variables”*

10:15 – 10:35b **Gurpreet Singh**, ARIES

*“X-ray Flares of Solar Type Stars”*

Tea break 20 min.

Session 5 (Chair: Wataru Ishizaki)

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10:55 – 11:40a **Naveen Dukiya**, ARIES

*“Understanding the CSM asymmetries of Interacting Supernovae ASASSN-14il and 2021foa”*

11:40 – 12:00b **Monalisa Dubey**, ARIES

*“Unravelling the Progenitor's Properties of Long-plateau Supernovae”*

12:00 – 12:20b **Bhavya Ailawadhi**, ARIES

*“Early Flash Ionization Signatures in Type IIP Supernovae”*

Lunch break 70 min.

Session 6 (Chair: Jagdish C. Joshi)

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13:30 – 14:15a **Mahavir Sharma**, \*IIT-Bhilai

*“Cosmic Ray Feedback in Galaxies”*

Tea break 15min.

Session 7 (Chair: Mahavir Sharma)

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14:30 – 15:15a **Abhijit Roy** (online), \*\*GSSI

*“Galactic Powerhouses: The Quest for High-Energy Cosmic Ray Origins”*

\*IIT-Bhilai = Indian Institute of Technology, Bhilai

\*\*GSSI = Gran Sasso Science Institute

\*\*\*IAPS = Institute for Space Astrophysics and Planetology

15:15 – 16:00a **Martina Cardillo** (online), \*\*\*IAPS,  
“*PeVatron Fiction (Everything Everywhere All at PeV)*”  
16:00 – 16:05 **Jagdish C. Joshi**, ARIES  
“*Closing*”

SOC: *Shuta Tanaka, Jagdish C. Joshi, Wataru Ishizaki, Jeewan Pandey & Kuntal Misra*

LOC: *Jagdish C. Joshi, Jeewan Pandey, Kuntal Misra, Khushboo Sharma, & Ankita Khanra*

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