

Workshop to bring together experts on High Energy Astrophysics from Japan and Israel

Thursday, July 18, 2019 - Tuesday, July 23, 2019

RIKEN, Wako Campus and Kobe Campus

Program

Program Last update: July 3, 2019 at 22:55 (JST)
50 min talk = 40 min talk + 10 min questions
30 min talk = 25 min talk + 5 min questions
20 min talk = 17 min talk + 3 min questions
1st week (July 18-19th)

Place: Okochi Hall, RIKEN, Wako, Saitama, Japan

July 18 (Thu.)

[9:00] - [9:50] -- Registration -- |
[9:50] - [10:00] Shigehiro Nagataki (RIKEN) "Opening Address" |
[10:10] - [11:00] Roger Blandford (KIPAC, Stanford University) "Electromagnetic Jets, Ejection
Disks and the Black Hole Shadow in M87" |
[11:00] - [11:30] -- Coffee Break -- |
[11:30] - [12:00] Akira Mizuta (RIKEN) "BH spin parameter dependence for episodic Alfvén pulse
generation from BH accretion disks" |
[12:00] - [12:30] Jin Matsumoto (Fukuoka University) "Acceleration of Relativistic Jets with Toroidal
Magnetic Field Reversals by Magnetic Dissipation" |
[12:30] - [14:00] -- Lunch -- |
[14:00] - [14:30] Omer Bromberg (Tel Aviv University) "On the dissipation of EM energy in
relativistic jets" |
[14:30] - [15:00] Asaf Pe'er (Bar Ilan University) "Relativistic jets formation and collimation: status
on theory and numerical simulations" |
[15:00] - [15:30] Christopher Irwin (Tel Aviv University) "Jet-driven bubbles in Fanaroff-Riley type I
sources" |
[15:30] - [16:00] -- Coffee Break -- |
[16:00] - [16:30] David Eichler (Ben-Gurion University) "Are Dim GRBs Different from Bright
GRBs?" (online presentation via Zoom)
[16:30] - [17:00] Chi-Ho Chan (The Hebrew University) "Tidal disruption events in active galactic
nuclei" |
[17:00] - [17:20] Kojiro Kawanaka (University of Tokyo) "Emission from thermonuclear explosions
in white dwarf TDEs" |
[17:20] - [17:50] Yoshiyuki Inoue (RIKEN) "Detection of Coronal Magnetic Activity in Nearby Active
Supermassive Black Holes" |

July 19 (Fri.)

[9:30] - [10:00] Kenji Toma (Tohoku University) "M87 black hole shadow image and its connection
with the radio jet" |
[10:00] - [10:30] Noemie Globus (New York University/Flatiron Institute) "On the origin of
ultra-high energy cosmic-rays" |
[10:30] - [11:00] Katsuaki Asano (University of Tokyo) "Stochastic turbulence acceleration of
particles in high-energy objects" |
[11:00] - [11:30] -- Coffee Break -- |

[11:30] - [12:00]|| Susumu Inoue (RIKEN) "High-energy neutrinos from active galactic nuclei" |
[12:00] - [12:20]|| Toshikazu Ebisuzaki (RIKEN) "Astrophysical Wake Acceleration Driven by
Relativistic Alfvénic Pulse Emitted from Bursting Accretion Disk" |
[12:20] - [14:00]|| -- Lunch -- |
[14:00] - [14:30]|| Haoning He (RIKEN) "On the Origin of IceCube Observed High Energy Neutrinos"
|
[14:30] - [15:00]|| Ryo Yamazaki (Aoyama Gakuin University) "Toward the generation of magnetized
collisionless shocks with high-energy lasers" |
[15:00] - [15:30]|| Tatsuya Matsumoto (The Hebrew University) "Generalized compactness limit from
an arbitrary viewing angle and its application to GRB170817A" |
[15:30] - [16:00]|| -- Coffee Break -- |
[16:00] - [16:30]|| Ore Gottlieb (Tel Aviv University) "The structure of hydrodynamic GRB jets" |
[16:30] - [17:00]|| Oliver Just (RIKEN) "Remnant disks of neutron-star mergers" |
[17:00] - [17:30]|| Kyohei Kawaguchi (University of Tokyo) "On possible diversity of kilonova
lightcurves" |
[17:30] - [17:50]|| Haoxiang Lin (University of Tokyo) "The efficiency of electron acceleration in
GW170817 afterglow" |

2nd week (July 22-23th)

Place: Integrated Innovative Building (IIB), RIKEN, Kobe, Hyogo, Japan

July 22 (Mon.)

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[9:30] - [10:00]|| Norita Kawanaka (Kyoto University) "Instability in Neutrino Dominated Accretion
Flows and Application to Gamma-ray Bursts" |
[10:00] - [10:30]|| Tsvi Piran (The Hebrew University) "GRB's Rosetta Stone -- the sub-TeV
emission" |
[10:30] - [11:00]|| -- Coffee Break -- |
[11:00] - [11:30]|| Amir Levinson (Tel Aviv University) "Efficient photospheric emission entailed by
formation of a collimation shock in GRBs" |
[11:30] - [12:00]|| Hiroataka Ito (RIKEN) "Numerical simulation of photospheric emission in GRBs" |
[12:00] - [12:30]|| Hamidani Hamid (Kyoto University) "Jet propagation and cocoon emission in
neutronstar mergers and GW170817" |
[12:30] - [14:00]|| -- Lunch -- |
[14:00] - [14:30]|| Jonathan Granot (The Open University of Israel) "Gamma-Ray Burst Polarization"
|
[14:30] - [15:00]|| Ramandeep Gill (The Open University of Israel) "Polarization and afterglow of
structured jet" |
[15:00] - [15:30]|| Kazuya Takahashi (Kyoto University) "Inverse reconstruction of jet structure from
off-axis gamma-ray burst afterglows" |
[15:30] - [16:00]|| -- Coffee Break -- |
[16:00] - [16:30]|| Donald Warren (RIKEN) "A semi-analytical GRB afterglow with thermal electrons" |
[16:30] - [17:00]|| Shota Kisaka (Tohoku University) "Pair multiplicity in the black hole
magnetosphere" |
[17:00] - [17:30]|| Kazumi Kashiyama (University of Tokyo) "Optically thick rotating magnetic wind

from a massive white-dwarf merger product" |
[18:30] - [21:00] -- Discussion with Dinner -- |

July 23 (Tue.)

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[9:30] - [10:00] Yutaka Fujita (Osaka University) "High Energy Phenomena in Galaxy Clusters" |
[10:00] - [10:30] Uri Keshet (Ben-Gurion University) "Virial shocks around galaxy clusters" |
[10:30] - [11:00] -- Coffee Break -- |
[11:00] - [11:30] Nir Shaviv (The Hebrew University) "Cosmic Ray Diffusion in the Dynamic Galaxy
-- From Dark matter to Dinosaurs" |
[11:30] - [12:00] Nagisa Hiroshima (RIKEN) "Modeling dark matter substructure and annihilation
boost" |
[12:00] - [12:30] Koutarou Kyutoku (Kyoto University) "Measuring tidal deformability of neutron
stars with numerical relativity" |
[12:30] - [14:00] -- Lunch -- |
[14:00] - [14:30] Kentaro Takami (Kobe City College of Technology) "NR Waveforms from BNS
Mergers and the Utilizations" |
[14:30] - [14:50] Yongjia Huang (RIKEN) "Binary neutron star merger simulation and Gravitational
wave signal" |
[14:50] - [15:20] Akihiro Suzuki (NAOJ) "Dynamical evolution of supernova ejecta with a central
energy source" |
[15:20] - [15:50] -- Coffee Break -- |
[15:50] - [16:10] Nobuya Nishimura (Kyoto University) "R-process Nucleosynthesis in the jet-like
explosion of core-collapse supernova" |
[16:10] - [16:30] Conor Omand (University of Tokyo) "Radio and Submillimetre Constraints on the
Pulsar-Driven Supernova Model" |
[16:30] - [17:00] Noemie Globus (New York University/Flatiron Institute) "General summary and
concluding remarks" |