

Wide Band Spectral and Timing Studies of Cosmic X-ray Sources

**Tata Institute of Fundamental Research
Mumbai, India**

January 10-13, 2017

Note:

XRB: X-ray Binaries
AGN: Active Galactic Nuclei
BLA: Blazars
GRB: Gamma-ray Bursts

All main sessions are in the Lecture Theater (AG-66) and the parallel sessions are in the various lecture rooms, as indicated.

Numbers in the brackets are duration of the talks (including discussion)

Day 1	January 10, 2017 (Tuesday)		
09:00 – 10:00	<i>Registration, Tea</i>		
	<i>XRB – 1 (10:00 – 11:00) Chair: Sudip Bhattacharyya</i>		
10:00 – 10:25	<i>Sandip Chakrabarti: Study of accretion flow around black holes becomes Science: Observational evidences of Theoretical Predictions (25)</i>		
10:25 - 10:45	<i>Indranil Chattopadhyay: How black hole spin may affect jets from accretion discs around black holes (20)</i>		
10:45 - 11:00	<i>Dipak Debnath: TCAF Solution in XSPEC: An Efficient Model to Study Accretion Flow Properties of Black Hole Sources (15)</i>		
11:00 - 11:30	<i>Tea</i>		
	<i>XRB – 2 (11:30 – 13:00) Chair: Arun Mangalam</i>		
11:30 – 11:55	<i>Tomaso Belloni: Black-hole binaries in the AstroSat era (25)</i>		
11:55 - 12:20	<i>Poshak Gandhi: Lessons from simultaneous multiwavelength astronomy in the Time Domain Era (25)</i>		
12:20 – 12:40	<i>Julien Malzac: A wide-band spectral and timing model for jets in X-ray binaries (20)</i>		
12:40 – 13:00	<i>Dipankar Maitra: Evidence for an extremely energetic jet-base during the June 2015 outburst of V404 Cygni (20)</i>		
13:00 - 14:30	<i>Lunch</i>		
	<i>XRB – 3 (14:30 – 16:00) Chair: Indranil Chattopadhyay</i>		
14:30 – 14:50	<i>Arun Mangalam: A model for jet polarization and emission in blazars (20)</i>		
14:50 – 15:05	<i>Santabrata Das: Dissipative accretion flow around black holes (15)</i>		
15:05 – 15:20	<i>Samir Mandal: Accretion Properties of Outbursting Black Hole Sources (15)</i>		
15:20 – 15:35	<i>Partha Sarathi Pal: Flow geometry variation of Compact objects during their outbursts (15)</i>		
15:35 – 15:50	<i>Chandrachur Chakraborty: A tilted accretion disk around a spinning black hole: an analytical solution (15)</i>		
15:50 – 16:00	<i>Manojendu Choudhury: Mass Accretion and Binary Modulation (10)</i>		
16:00 - 16:30	<i>Tea</i>		
	<i>(16:30 – 18:00) (parallel sessions)</i>		
	<i>XRB – 4 Chair: Dipak Debnath (AG-66)</i>	<i>AGN – 1 Chair: G.C. Dewangan (AG-69)</i>	<i>Others - 1 Chair: K. Sriram (AG-80)</i>
	<i>Aslam Ali Molla, Abhishek Roy, Arghajit Jana, Anuvab Banerjee, Arnab Deb, Indrani Banerjee, Arka Chatterjee, Ayan Bhattacharjee</i>	<i>Labani Mallick, Priyanka Rani, Savithri Ezhikode, Dushmantra Patra, Oluwashina Adegoke, Ajitkumar Salam, Kshama Kurian, Rubinur Khaton</i>	<i>Bhupendra Tiwari, Amitesh Omar, Sriyashri Acharya, Himali Bhat, Subhajeet Karmakar, Aarti Joshi</i>
18:30 - 20:30	Welcome Gathering		

***XRB – 4 Chair: Dipak Debnath
(AG-66)***

Aslam Ali Molla: Estimation of mass of black hole candidate H 1743-322 during its 2010 and 2011 outbursts with TCAF solution (15)

Abhishek Roy: Numerical simulations of creation and destruction of a Keplerian disk inside a two component advective flow (TCAF) (10)

Arghajit Jana: Estimation of X-ray Jet Flux for Black Holes using TCAF Solution (10)

Anuvab Banerjee: Analysis of declining phase of 2004 outburst of H1743-322 using TCAF solution (10)

Arnab Deb: Effects of Magnetic Flux Tubes on the Origin, Acceleration and Collimation of Outflows from an Advective Flow (10)

Indrani Banerjee: Dynamics of accretion flow around Cyg X-1 using TCAF fits of Spectral and timing data (10)

Arka Chatterjee: Image and Time Evolution of Photons of Two Component Advective Flow in presence of Comptonization (10)

Ayan Bhattacharjee: Is neutron star spectrum also an outcome of TCAF? (10)

***AGN – 1 Chair: G.C. Dewangan
(AG-69)***

Labani Mallick: Large-amplitude rapid variability in the NLS1 galaxy PG 1404+226 (10)

Priyanka Rani: Measurements of coronal properties of the AGN with NuSTAR (10)

Savithri Ezhikode: Torus covering factors of a sample of type 1 AGN in the local Universe (10)

Dusmanta Patra: Spectral ageing property of giant radio galaxy (10)

Oluwashina Adegoke: Spectral and Time Series Analyses of the Seyfert 1 AGN: Zw 229.015 (10)

Ajitkumar Salam: A study of Quasi-stellar Objects (QSOs) (10)

Kshama Kurian : Intra-night optical variability characteristics of NLSy1 galaxies (10)

Rubinur Khaton: Radio Observations of Candidate Dual Active Galactic Nuclei in Double Peaked Emission Line Galaxies (10)

***Others – 1 Chair: K. Sriram
(AG-80)***

Bhupendra Tiwari: Heliospheric modulation of cosmic rays during solar cycle 23/24 (15)

Amitesh Omar: Possibilities of millisecond time & amp; spectral variability studies in optical bands using FOSC on 3.6 meter Devasthal Optical Telescope (15)

Sriyashri Acharya: Variability study of UV sky (10)

Himali Bhat: X-ray Properties of Young Stars (10)

Subhajeet Karmakar: A Very Long and Hot X-ray flare on an RS CVn type eclipsing binary SZ Psc (10)

Aarti Joshi: V2400 Oph: A disc-less IP with soft X-ray excess (10)

Day 2	January 11, 2017 (Wednesday)		
	<i>XRB – 5 (09:30 – 11:00) Chair: Santabrata Das</i>		
09:30 – 09:55	<i>Andrzej Zdziarski: Accretion in black-hole binaries: how does the inner flow look like? (25)</i>		
09:55 – 10:20	<i>James Miller-Jones: Radio observations of X-ray binaries and the disk-jet connection (25)</i>		
10:20 – 10:45	<i>Sera Markoff: Multi-wavelength modeling of black holes across the mass scale (25)</i>		
10:45 – 11:00	<i>Susmita Chakravorty: MHD driven winds from accretion discs around black hole binaries (15)</i>		
11:00 – 11:30	<i>Tea</i>		
	<i>XRB – 6 (11:30 – 13:00) Chair: Varun Bhalerao</i>		
11:30 – 11:50	<i>Biswajit Paul: Tale of X-ray eclipses (20)</i>		
11:50 – 12:10	<i>Giancarlo Cusumano: Swift-BAT observation of the cyclotron lines in HMXB (20)</i>		
12:10 – 12:30	<i>Deepto Chakrabarty: X-ray Pulsars as GW sources (20)</i>		
12:30 – 12:45	<i>Sachindra Naik: Cyclotron Resonance Scattering Features in High Mass X-ray Binary Pulsars (15)</i>		
12:45 – 13:00	<i>Zheng Cheng: The mass, radius, distance and cooling of the neutron star in EXO 0748-676 in quiescence with XMM-NEWTON (15)</i>		
13:00 – 14:30	<i>Lunch</i>		
	<i>XRB - 7 (14:30 – 15:30) Chair: Santosh Vadawale</i>		
14:30 – 14:50	<i>J S Yadav: LAXPC- recent results (20)</i>		
14:50 – 15:10	<i>Ranjeev Misra: LAXPC observation of Cyg X-1 (20)</i>		
15:10 – 15:20	<i>Aru Beri: Thermonuclear X-ray bursts in rapid succession in 4U 1636-536 with AstroSat (10)</i>		
15:20 – 15:30	<i>Gaurava Kumar Jaisawal: Time resolved spectroscopy of high mass X-ray binaries (10)</i>		
15:30 – 16:00	<i>Tea</i>		
16:00 – 17:00	<i>Colloquium (Prof. Mariano Mendez)</i>		
	<i>(18:00 – 19:30) (parallel sessions)</i>		
	<i>XRB – 8 Chair: Samir Mandal (AG-69)</i>	<i>XRB – 9 Chair: S. Naik (AG-66)</i>	<i>BLA – 1 Chair: S. Sahayanathan (AG-80)</i>
	<i>Arindam Ghosh, Mukesh Kumar Vyas, Shilpa Sarkar, Md Ramiz Aktar, Indu Dihingia, Kuldeep Singh, Biplob Sarkar</i>	<i>Mayukh Pahari, Sharada Jogdand, Anjali Rao, Jayashree Roy, James Court, Purna Rana, Evandro Ribeiro, K. Sriram</i>	<i>A Krishna Mohana, Atreyee Sinha, Nibedita Kalita, Bhoomika Rajput, Ashwani Pandey, Aditi Agrawal</i>

***XR*B – 8 Chair: Samir Mandal
(AG-69)**

Arindam Ghosh: Smearing of Mass Accretion Rate Variation by Viscous Processes in Accretion Disks in Compact Binary Systems (10)

Mukesh Kumar Vyas: General relativistic study of astrophysical jets with non-radial cross section (10)

Shilpa Sarkar: Computation of black hole spectrum (10)

Md Ramiz Aktar: Mass loss from viscous accretion disc around rotating black holes (10)

Indu Dihingia: Two temperature accretion flow around rotating black hole (10)

Kuldeep Singh: Study of magnetized accretion flow with relativistic equation of state (10)

Biplob Sarkar: Implications of standing shocks in magnetized accretion discs around black holes (10)

***XR*B – 9 Chair: S. Naik
(AG-66)**

Mayukh Pahari: AstroSat/LAXPC view of micro-quasars at different spectral states (15)

Sharada Jogdand: X-ray Spectral Analysis of AstroSat Observation Cygnus X-1 (10)

Anjali Rao: Study of timing properties of black hole binaries with AstroSat/LAXPC (10)

Jayashree Roy: Timing studies of 4U 0115+63 using LAXPC (10)

James Court: Radiation-Dominated Accretion in LMXBs; why GRS 1915+105 is Special (10)

Prerna Rana: Kinematic models for QPOs in BHBs (10)

Evandro Ribeiro: A spectral-timing analysis of the kHz QPOs in 4U 1636-53: the frequency-energy resolved RMS spectrum (10)

K. Sriram: A study of Cross-Correlation in a Neutron star source GX 17+2 (10)

***BL*A – 1 Chair: S. Sahayanathan
(AG-80)**

A Krishna Mohana: Time Resolved Broadband Spectral Energy Distribution of Blazars (15)

Atreyee Sinha: A plausible origin of lognormality in the high energy emission from blazars (15)

Nibedita Kalita: X-ray spectral evolution of flaring blazars (10)

Bhoomika Rajput: The connection between optical and GeV flux variations in blazars (10)

Ashwani Pandey: X-ray Intra-day Variability of Five TeV Blazars with NuSTAR (10)

Aditi Agrawal: Core shift effect in blazars (10)

Day 3	January 12, 2017 (Thursday)	
	AGN – 2 (09:30 – 11:00) Chair: Vaidehi Sharan Paliya	
09:30 – 09:55	<i>Ian Mchardy</i> : X-ray and multiband variability of AGN (25)	
09:55 – 10:15	<i>Sibasish Laha</i> : Need for simultaneous UV to hard X-ray observations to study quasar evolution (20)	
10:15 - 10:30	<i>C.S. Stalin</i> : Narrow line Seyfert 1 galaxies and their multi-wavelength properties (15)	
10:30 - 10:45	<i>Sabyasachi Pal</i> : Multi-wavelength properties of Transient Radio Sources (15)	
10:45 – 11:00	<i>Achamveedu Gopakumar</i> : Measuring primary black hole spin in OJ287 from the predicted General Relativity centenary flare (15)	
11:00 - 11:30	Tea	
	AGN - 3 (11:30 – 13:00) Chair: Susmita Chakravorty	
11:30 – 11:55	<i>Smita Mathur</i> : Tidal Disruption Events (TDEs) (25)	
11:55 - 12:15	<i>Dharam Veer Lal</i> : GMRT Upgrade: Our Experiences from Observations of AGNs and Diffuse Radio Sources (20)	
12:15 – 12:30	<i>Preeti Kharb</i> : Multi-Band Spectral Studies of Seyfert Galaxies (15)	
12:30 – 12:45	<i>Dheeraj Pasham</i> : Panchromatic echoes from the tidal disruption of a star by a supermassive black hole (15)	
12:45 – 13:00	<i>Vinay Kashyap</i> : Time-resolved X-ray spectroscopy of stellar flares (15)	
13:00	Group Photo	
13:00 - 14:30	Lunch	
	Special session: X-rays in focus (14:30 – 16:30) Chair: P. N. Bhat	
14:30 – 14:55	<i>Ajit Kembhavi</i> : The beauty of X-ray images (25)	
14:55 – 15:10	<i>Gordon Stewart</i> : The making of SXT Camera (15)	
15:10 – 15:30	<i>Vadim Burwitz</i> : Mirrors: Test them on ground and/or in space (20)	
15:30 – 15:45	<i>Gulab Dewangan</i> : Seyfert galaxies: AstroSat results (15)	
15:45 – 16:00	<i>Vikram Rana</i> : Cataclysmic Variables: Hard X-ray view from NuSTAR (15)	
16:00 – 16:15	<i>Kiran Lakhchaura</i> : X-ray spectral deprojection of clusters of galaxies using jMCMC (15)	
16:15 – 16:30	<i>K.P. Singh</i> : A peek into the future (15)	
16:30 – 17:00	Tea	
	(17:00 – 18:00) (parallel sessions)	
	XR - 10 Chair: Banibrata Mukhopadhyay (AG-66)	GRB - 1 Chair: Preeti Kharb (AG-80)
	<i>Shivangi Gupta, Prahlad Epili, Debjit Chatterjee, Shreeram Nagarkoti, Yanan Wang</i>	<i>Debdutta Paul, Vikas Chand, Priya Bharali, Yash Bhargava, Navpreet Kaur, Kalyani Bagri</i>
18.00 – 19.00	Special Lecture (AG-66) Charles Bailyn: Writing Successful Observing Proposals: The Good, the Bad, and the Ugly	
19:30 – 21:30	Conference Banquet	

***XRB - 10 Chair: Banibrata Mukhopadhyay
(AG-66)***

Shivangi Gupta: Spectral Properties of High Mass X-ray Binary Cen X-3 (10)

Prahlad Epili: Timing and spectral studies of the transient X-ray binary pulsar KS 1947+300 (10)

Debjit Chatterjee: Evolution of Spectral and Timing Properties of XTE J1118+480 during its 2000 outburst (10)

Shreeram Nagarkoti: 2003 Outburst of H1743-322 : A unique X-ray flare after long silence (10)

Yanan Wang: NuSTAR observations of the neutron star 4U 1636-53 (10)

***GRB - 1 Chair: Preeti Kharb
(AG-80)***

Debdutta Paul: Luminosity function of Gamma Ray Bursts (10)

Vikas Chand: Can GRBs be standard candles? (10)

Priya Bharali: Broadening of the thermal component of the prompt GRB emission due to rapid temperature evolution (10)

Yash Bhargava: Constraining orbital period parameters of Cygnus X-3 (10)

Navpreet Kaur: Multi-wavelength study of variability in blazars (10)

Kalyani Bagri: Systematic Analysis of Low/Hard State RXTE Spectra of GX339-4 to Constrain the Geometry of the System (10)

Day 4	January 13, 2017 (Friday)
	<i>GRB – 2 (09:30 – 11:00) Chair: Amit Shukla</i>
09:30 – 09:55	<i>Narayana Bhat: Recent developments in Gamma Ray Bursts (25)</i>
09:55 – 10:15	<i>Santosh Vadawale: X-ray polarimetry of GRBs (20)</i>
10:15 – 10:30	<i>Varun Bhalerao: AstroSat CZT-Imager as a GRB monitor (15)</i>
10:30 - 10:45	<i>Rupal Basak: The first CZTI detected GRB: 151006A (15)</i>
10:45 - 11:00	<i>Firoza Sutaria: Observations of Crab and other SNR with AstroSat (15)</i>
11:00 - 11:30	<i>Tea</i>
	<i>BLA - 2 (11:30 – 13:00) Chair: Dharam Veer Lal</i>
11:30 – 11:55	<i>Somak Raychaudhury: AGN Feedback in groups and clusters of galaxies (25)</i>
11:55 – 12:15	<i>Sunil Chanda: Constraining the particle energy distribution in blazars using recent AstroSat observations (20)</i>
12:15 – 12:30	<i>Vaidehi Sharan Paliya: Chasing the Most Powerful Blazars (15)</i>
12:30 – 12:45	<i>Amit Shukla: Multi-waveband study of TeV blazar 1ES1959+650 (15)</i>
12:45 – 13:00	<i>Sunder Sahayanathan: Blazar Spectral Shape: Clues on particle acceleration process (15)</i>
13:00 - 14:00	<i>Lunch</i>
	<i>Others - 2 (14:00 – 15:30) Chair: Vikram Rana</i>
14:00 – 14:20	<i>David Buckley: Identification of a white dwarf pulsar and observations of a diskless intermediate polar (20)</i>
14:20 – 14:40	<i>Banibrata Mukhopadhyay: AR Scorpii as a possible seed of highly magnetized white dwarfs (20)</i>
14:40 – 15:00	<i>Kim Page: X-ray observations of novae with Swift (20)</i>
15:00 – 15:15	<i>B.C Joshi: Giant pulse emission from pulsars and ASTROSAT (15)</i>
15:15 – 15:30	<i>D. Bhattacharya: Coordinated timing of Crab pulsar with Astrosat CZTI and radio observatories (15)</i>
15:30 – 16:00	<i>Tea</i>
16:00	<i>Conference Ends</i>