

Friday, 30 October: PBCEC (adjacent to Visitor Hostel)

9:00 onwards: Registration  
9:30-9:45 AM: Inauguration  
9:45-10:00 AM: Short Break

Session I:

Chairman: S. Mohanty

10:00-10:45 AM: Astroparticle Physics with the GRAPES-3 experiment, Sunil K. Gupta (TIFR)

10:45-11:10 AM: TAUDEX Mission: UV Astronomy from Geosynchronous Orbit, Jayant Murthy (IIAP)

11:10-11:30 AM: tea break

11:30-11:55 PM: Thawing Dark Energy Models With nearly Flat Potentials, Anjan Sen (Jamia)

11:55-12:20 PM: Holographic Dark Energy and Brans-Dicke Theory, B. Nayak (Utkal)

12:20-12:45 PM: Constraints on Cosmological Constant due to Scale Invariance: Naveen K. Singh (IITK)

12:45-1:10 PM: Dark Matter and Dark Energy in a Scale Invariant Standard Model: Pavan K. Aluri (IITK)

1:10-2:30 PM: Lunch

Session II:

Chairman: Sunil K. Gupta

2:30-2:55 PM: A unified model of stellar collapse origin of all cosmic rays up to  $10^{20}$  eV, Srirupa Das Gupta (SINP)

2:55-3:20 PM: Simulation of improvement in trigger efficiency and angular resolution of GRAPES-3 EAS array, Sonali Bhatnagar (Dayalbagh)

4:30-5:00 PM: High tea (Lecture Hall Complex)

5:00-6:00 PM: Jagadishwar Mahanty Distinguished Lecture

Galaxies: today, yesterday, and the day before, Rajaram Nityananda (NCRA)

Venue: L17, Lecture Hall Complex

Saturday: October 31: PBCEC (adjacent to Visitor Hostel)

Session III:

Chairman: Jayant Murthy

9:30-10:15 AM: re-ionization, review, Somnath Bharadwaj (IITKgp)

10:15-10:40 AM: Observational Constraints on Reionization History, Tirthankar Roy Choudhury (HRI)

10:40-11:05 AM: Quasar environments as a probe of reionization, Girish Kulkarni (HRI) 11:05-11:20 AM: tea break

11:20-11:45 AM: A two component cluster survey as an efficient cosmological probe, Satej Khedekar (TIFR)

11:45-12:10 PM: Dispersion in the offset of fractal Dimension of Large Scale Structures, Jaswant K. Yadav (HRI)

12:10-12:35 PM: Gravitational-wave Detection Using Redshifted 21-cm Observations, Tapomoy Guha Sarkar (IITKgp)

12:35-1:00 PM Modeling the Sunyaev-Zel'dovich scaling relations and secondary CMB anisotropies from galaxy clusters, Anya Chaudhuri (TIFR)

1:00-2:30 PM: Lunch

Session IV:

Chairman: R. Rangarajan

2:30 -2:55 PM: Magnus Effect on Galaxies, Amitesh Omar (ARIES)

2:55-3:20 PM: Measuring Turbulence in the ISM of galaxies, Prasun Dutta (IITKgp)

3:20-3:45 PM: The Local Dimension: a method to quantify the Cosmic Web, Prakash Sarkar (IITKgp)

3:45-4:10 PM: Bianchi Type I Anisotropic Universe with  $\omega < -1$  without Big Smash, Anil Yadav, (Anand Engineering College, Agra)

4:10 PM: tea break

Astronomy Club Lecture:

6:30-7:30 PM: Search for Extra Terrestrial Intelligence Jayant Murthy (IIAP)

Venue: L1 (Lecture Hall Complex)

Banquet: 8:00 PM, Visitor Hostel Lawns

Sunday November 1: PBCEC (adjacent to Visitor Hostel)

Session V:

Chairman: Anjan Sen

9:30-9:55 AM: WIMPs in the Milky Way: The Standard Halo Model Revisited, Pijushpani Bhattacharjee (SINP)

9:55-10:20 AM: The Self-consistent Isothermal Dark Matter Halo of the Galaxy: Implications for Laboratory Search for WIMP Dark Matter, Soumini Chaudhury (SINP)

10:20-10:45 AM: Neutrino Signal from Dark Matter Annihilation in Sun, Susmita Kundu (SINP)

10:45-11:10 AM: High redshift cluster searches, Subhabrata Majumdar (TIFR)

11:10-11:30 AM: tea break

11:30-11:55 AM: Gravitino Production in an Inflationary Universe and Implications for Leptogenesis, R. Rangarajan (PRL)

11:55-12:20 PM: Natural inflation at the GUT scale, Akhilesh Nautiyal (HRI)

12:20-12:45 PM: Non-Gaussianity as a signature of thermal initial condition of inflation, Suratna Das (PRL)

12:45-1:10 PM: Towards detecting the HI 21 cm signal from  $z=1.32$  using the GMRT, Abhik Ghosh (IITKgp) 1:10-2:30 PM: Lunch

Session VI:

Chairman: Pijushpani Bhattacharjee

2:30-2:55 PM: CMB Polarization power spectrum, Pramoda Samal (IITK)

2:55-3:20 PM: Deviations from Statistical Isotropy in CMB, Maumita Aich (IUCAA)

3:20-3:45 PM: Perfect Fluid Bianchi Type -I Cosmological Models in Lyra Geometry, Vineet K. Yadav (Gorakhpur Univ.)

3:45 PM: tea