

# ZELDOVICH-100 CONFERENCE

IKI, MOSCOW, JUNE 16-20, 2014

## *MONDAY, JUNE 16*

### **9:30 REGISTRATION**

#### **MEMORIAL SESSION**

- 10:00 Opening of the Conference  
10:05 Alex Szalay, Zeldovich and Cosmology  
10:20 Jaan Einasto, Zeldovich and Cosmology  
10:35 Boris Zeldovich (University of Central Florida), Yakov Zeldovich in real life  
11:05 Robert Nigmatullin (Institute of Oceanology RAS, Moscow), Zeldovich and hydrodynamics

### **11:35-12:00 Coffee break**

#### **CMB and Cosmology**

- 12:00 Jan Tauber (ESTEC), PLANCK mission  
12:30 John Kovac (CfA, Harvard) B-modes and the BICEP / Keck Array CMB polarization survey  
13:00 Jean-Loup Puget (IAS, Orsay) Planck polarization data: being limited by foregrounds and systematics and not by noise

### **13:30-15:00 LUNCH**

- 15:00 John Carlstrom (Chicago), South Pole Telescope and Results  
15:30 Lyman Page (Princeton), Atacama Cosmology Telescope and Results  
16:00 Alexei Starobinsky (Landau Institute), Beyond the Harrison-Zeldovich spectrum: inflation after the WMAP, Planck and BICEP2 data

### **16:30-17:00 Coffee break**

- 17:00 Slava Mukhanov (LMU, Munich), Quantum Universe  
17:30 Eiichiro Komatsu (MPA, Garching), Polarization of the Cosmic Microwave Background: Toward an Observational Proof of Cosmic Inflation  
18:00–18:30 Valery Rubakov (INR), Pseudo-conformal Universe: towards being falsified

### **18:30-21:00 Reception, Memorial talk by Bruce Partridge**

## ***TUESDAY, JUNE 17***

### **X-Ray and CMB space missions: recent and future**

- 09:30 Mikhail Pavlinskii (IKI, Moscow), ART-XC on Spectrum-Roentgen-Gamma
- 10:00 Peter Predehl (MPE, Garching), eROSITA on Spectrum-Roentgen-Gamma
- 10:30 Jacques Delabrouille (University Paris Diderot), A future CMB satellite mission after Planck?
- 11:00 Fiona Harrison (Caltech), New Results from the NuSTAR: The High Energy X-ray Sky In Focus

### **11:30-12:00 Coffee break**

### **Cosmological simulations**

- 12:00 Avishai Dekel (The Hebrew University of Jerusalem), Feeding Galaxies by Cosmic-Web Streams and Pancakes
- 12:30 Debora Sijacki (Cambridge), Resolving the flows around black holes in cosmological simulations
- 13:00 Tom Abel (Stanford), Dark Matter Dynamics

### **13:30-15:00 LUNCH and poster session**

### **Cosmological simulations and theory**

- 15:00 Piero Madau (UC Santa Cruz), The Dark and Light Side of Galaxy Formation
- 15:30 Rashid Sunyaev (IKI, MPA), The black body photosphere and last scattering surface of our Universe and spectral distortions of the CMB due to early energy release

### **Black Holes**

- 16:00 Abraham Loeb (Harvard), A Closer Look at Black Holes

### **16:30-17:00 Coffee break**

- 17:00 Scott Tremaine (Institute for Advanced Study, Princeton), Binary black holes and the broad-line region in quasars
- 17:30 James Stone (Princeton), Modeling Radiation-Dominated Black Hole Accretion Disks
- 18:00-18:30 Stefan Gillessen (MPE, Garching), Observing a gas cloud disrupt on its way to Sgr A\*

***WEDNESDAY, JUNE 18***

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| <b>09:30-11:10</b> | <b>Parallel sessions</b>   |
| <b>11:10-11:40</b> | <b>Coffee break</b>  |
| <b>11:40-13:20</b> | <b>Parallel sessions</b>   |
| <b>13:20-15:00</b> | <b>LUNCH</b>   |
| <b>15:00-16:40</b> | <b>Parallel sessions</b>   |
| <b>16:40-17:10</b> | <b>Coffee break</b>  |
| <b>17:10-18:30</b> | <b>Parallel sessions</b>   |
| <b>18:45-22:45</b> | <b>Conference Dinner</b>   |
| <b>20:00-21:00</b> | <b>Afterdinner memorial talks: Ene Ergma, Nick Shakura,<br/>Remo Ruffini</b> |

***THURSDAY, JUNE 19***

**Violent Universe**

- 10:00 Shri Kulkarni (Caltech), The Dynamic Optical Sky  
10:30 Bernard Schutz (Albert Einstein Institute), Gravitational waves, black holes, and eLISA  
11:00 Bill Forman (CfA), Supermassive Black Holes at Work: "Fossil Records" of Outbursts from Supermassive Black Holes and the Effects of Outbursts on the Evolution of Gas Rich Galaxies, Groups, and Galaxy Clusters
- 11:30-12:00 Coffee break**
- 12:00-13:20 Parallel sessions**
- 13:20-15:00 LUNCH and poster session**
- 15:00-16:40 Parallel sessions**
- 16:40-17:10 Coffee break**
- 17:10-19:10 Parallel sessions**

**FRIDAY, JUNE 20**

**Star Formation, external galaxies and Black Holes**

- 09:30 Chris McKee (UC Berkeley), Star formation  
10:00 Marat Gilfanov (IKI, MPA), X-ray binaries and star formation rate  
in external galaxies  
10:30 Dmitri Varshalovich (Ioffe Institute, St-Peterburg), HD/H2 interstellar clouds  
at high redshifts

**11:00-11:30 Coffee break**

- 11:30 Asantha Cooray (UC Irvine), The dusty universe unveiled by Herschel  
12:00 Eugene Churazov (IKI, MPA), First detection of  $^{56}\text{Co}$  gamma-ray lines from  
type Ia supernova (SN2014J) with INTEGRAL  
12:30 Zoltan Haiman (Columbia, NY), Electromagnetic Signatures from Binary  
Black Holes

**13:00-14:30 LUNCH and poster session**

**Clusters of Galaxies in X-Rays and in CMB maps**

- 14:30 Alexey Vikhlinin (CfA, IKI), Chandra observations of the Cosmic Web  
converging on a rich galaxy cluster.  
15:00 Monique Arnaud (Saclay), Planck view of galaxy clusters  
15:30 Hans Boehringer (MPE), Cosmology with X-ray Galaxy Clusters

**16:00 -16:30 Coffee break**

- 16:30 Andrey Kravtsov (Chicago), The baryon content of galaxy clusters and  
evolution of cluster scaling relations  
17:00 Alex Szalay (JHU), Redshift Space Distortions and Baryon Acoustic  
Oscillations  
17:30 Joachim Wambsganss (Heidelberg), Gravitational lensing

**18:00 The end of the conference**