

International school of young astronomers
«Magneto plasmic processes in relativistic astrophysics»
Tarusa, September 12 2016 – September 16 2016

September 12 2016, Monday

12:00 – departure from Space Research Institute

14:00-15:00 lunch

Session 1 «Astrophysics»
Chair **G.S. Bisnovatyi-Kogan**

15:00-17:00 –H. Spruit (MPA, Garching, Germany) Essential MHD for astrophysics (2 lectures)

17:00-17:30 – coffee-break

17:30 – 18:30 F. Giovannelli (INAF - Istituto di Astrofisica e Planetologia Spaziali, Rome, Italy)

"Taxonomy of X-ray Binary Systems: A Cauldron of Physical Processes

19:00 dinner

September 13 2016, Tuesday

08:30-09:30 – breakfast

Session 2 «Stellar Physics and Hydrodynamics»
Chair **H. Spruit**

09:30-10:30 S.G. Moiseenko (IKI RAN, Russia) Isentropic "shock waves" in numerical astrophysical simulations

10:30-11:30 S.A. Lamzin (SAI MSU, Russia), Axial asymmetry of RW Aur A protoplanetary disk - the first scientific results from 2.5 m telescope of SAI MSU

11:30-12:00 coffee-break

12:00-14:00 A.N. Timokhin (NASA Goddard Space Flight Center, USA), Numerical modeling of astrophysical plasmas (2 lectures)

14:00-15:00 lunch

Session 3 «Stellar Physics and Hydrodynamics»
Chair: **A.N. Timokhin**

15:00-16:00 A.G. Zhilkin (INASAN, Russia) Wave turbulence in strong magnetized astrophysical plasma

16:00-17:00 V.M. Chechetkin (IPM RAN, Russia) Physics of formation of polar and tropical vortices

17:00-17:30 coffee-break

Chair: **F. Giovannelli**

17:30-18:30 A.V.Byalko (ITP RAN, Russia) Modern climate: conclusions of Paris conference

19:00 dinner

September 14 2016, Wednesday

08:30-09:30 – breakfast

Session 4 « Gravitation, Cosmology, and Gravitational Waves »
Chair **A.D. Chernin**

09:30-10:30 M. Demianski (Warsaw University, Poland) First direct detections of gravitational waves

10:30-11:30 A.G.Polnarev (Queen Mary University of London, UK) Gravitational wave astrophysics and cosmology

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11:30-12:00 coffee-break

Chair **M. Demianski**

12:00-13:00 I.D. Novikov (ASC FIAN, Russia), Wormholes and Multiverse

13:00-14:00 A.G. Doroshkevich (ASC FIAN, Russia), Cosmology of XXI century: progress and problems

14:00-15:00 lunch

Session 5 « Gravitation Cosmology, and Gravitational Waves »
Chair **A.G. Doroshkevich**

15:00-16:00 A.D. Chernin (SAI MSU, Russia) Gravity-antigravity interplay in the Local Universe

16:00-17:00 O.Yu.Tsupko (IKI RAN, Russia) Influence of plasma on the black hole shadows, and other chromatic effects in gravitational lensing

17:00-17:30 coffee-break

17:30-18:30 A.S. Pozanenko (IKI RAN, Russia), Interconnection between gamma ray bursts and gravitational wave registration

19:00 dinner

September 15 2016, Thursday

08:30-09:30 – breakfast

Excursion

14:00-15:00 lunch

Session 6 «Stellar Physics and Astrophysics»

Chair: A.S. Pozanenko

15:00-16:00 Bisnovatyi-Kogan G.S. (IKI RAN, Russia) Transport coefficients in a very dense plasma: kinetic approach

16:00-17:00 K.V.Postnov (SAI MSU, Russia) TBA

LIGO binary black hole merging: astrophysical consequences and challenges

17:00-17:30 coffee-break

Contributed talks 17:30 -18:30

17:30-18:00 A.A.Volnova (IKI RAN, Russia) Multicolour modelling of SN 2013dx associated with GRB 130702A

18:00-18:30 R.A. Kislov (IKI RAN, Russia) TBA

19:00 banquet

September 16 2016, Friday

08:30-09:30 – breakfast

Session 7 «Supernovae»

Chair S.G. Moiseenko

09:30-10:30 S.I. Blinnikov (ITEP, Russia) Superluminous Supernovae: Current Status of Research

10:30-11:30 Ch. Ott (Caltech, USA) Numerical Relativity and Simulations of Core- Collapse Supernovae

11:30-12:00 coffee-break

12:00-12:15 – contribution

12:15-12:30 - contribution

12:30-12:45 – contribution

12:45 -13:00 closing remarks

14:00-15:00 lunch

15:00 departure to Moscow