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R E P O R T
on School and Workshop on Space Plasma Physics
held from August 31 to September 7, 2008 in Sozopol, Bulgaria

The forum was organized and sponsored by the Sveti Sedmochislenitsi-08 Foundation and the Faculty of Physics of Sofia University. The number of participants was 36 persons from France, Belgium, UK, Germany, Russia, the US, Georgia, Serbia, Romania, and Bulgaria. There were delivered 16 invited talks, 11 contributed talks, and 5 Posters. All these presentations embraced a large number of topics of space plasma physics, notably global MHD modeling of the coronal mass ejections (CMEs), shock waves, interaction of solar wind with Earth magnetosphere, magnetospheric boundary layers, MHD models and numerical simulations of CME's onset, evolution and impact on magnetospheres, active galactic nuclei – plasma conditions around super massive black holes, impact of large scale magnetic fields on stellar structure and evolution, 3D numerical simulations of accretion discs etc. The full program is given at the Conference web-pages:

<http://phys.uni-sofia.bg/~tmishonov/BlackSeaForum-08.pdf> and <http://sp.phys.uni-sofia.bg/Sozopol08/>.

With the sponsorship of a few donators a large number of young scientists it was able to attend the meeting and to actively participate in the scientific discussions. We would like to point out that Sozopol's conference was as successful as the previous one held in Kiten, Bulgaria in 2006. These Black Sea summer schools complete the Sofia University's master's programme on Space Plasma Physics run by the University Center for Space Research and Technologies. We do hope that Bulgaria will become a regular member of ESA soon and we expect that the next biannual school and workshop on space plasma physics will be a part of the ESA scientific activities. We would like especially to thank the ESA authorities for their kind interest to that event.

We would like to mention some of the invited talks in which the lecturers presented their latest results. Typical examples of such talks are those delivered by Prof. Dr. Stefaan Poedts (Belgium) on the numerical simulations of coronal mass ejections and its impact on magnetospheres; Dr. Dmitry Bisikalo (Russia) on accretion discs in close binaries; Dr. Temury Zaqarashvili (Georgia) on Rossby waves in rotating magnetized fluids. There were also very impressive presentations by Dr Angelos Vourlidas (USA) on CME observations from SECCHI experiment on the *STEREO* mission, Prof. Dr. Michael Rudrman (UK) on transverse oscillations of coronal magnetic loops, Prof. Dr. Luka Popović (Serbia) on active galactic nuclei, more specifically on plasma conditions around supermassive black holes. The most impressive talk on the physics of CME and related solar energetic particle events was given by Dr. Ilia Roussev (USA). Another interesting and spectacular talk on the new insights on geomagnetic storms from observations and modeling was delivered by Dr. Vania Jordanova (USA). Bulgarian astronomers Dr. Tsvetan Georgiev, Dr. Daniela Kirilova, Dr. Petko Nedyalkov and Dr. Nikolay Tomov presented their recent investigations on the radial brightness profiles of spiral galaxies (TsG), non-equilibrium oscillating neutrinos in the early Universe plasma (DK), stellar content and extinction in the bulge of the M 31 galaxy (PN) and on the loss of mass by the symbiotic binary Z Andromedae during its outburst at the end of 2002 (NT). Dr. Mihail Chizhov gave a talk on the chiral tensor particles in primeval plasma.

It was a great pleasure for the audience to listen to the very interesting and emotionally delivered talk by Miss Dragana Ilić (Serbia), Miss Veronica Ontiveros (USA), Miss Jelena Kovačević (Serbia), Miss Yana Maneva (Germany), Miss Svetlana Rossolenko (Russia) and Nataša Gavrilović (Serbia). No less impressive were the contributed talks given by Mr. Elijah Falayi (UK), Mr. Vincent Duez (France), Mr. Dan Vladoiu (Romania), Mr. Dmitry Kononov (Russia) and Mr. Alexey Sytov (Russia). The palm of the best presentation by a young scientist went to Dr. Pavel Kaigorodov (Russia) – the title of his talk was “Gas flow structures in a near-contact binary system”.

On a poster session the youngest participants, the MSc students Miss Yana Baldzhiyska, Miss Vesselina Dimitrova, Mr. Simeon Assenovski, and Mr. Kamen Kozarev (Boston University), as well as the PhD student Mr. Zlatan Dimitrov presented their current research.

The impression of all participants in this meeting was that the scientific level corresponded to a typical international conference held in a very friendly atmosphere. That is why the forum deserves to become a regular event. We plan next conference on space plasma physics to be held in 2010 on the Bulgarian Black Sea coast and the subjects will be again: accretion discs, active galactic nuclei, coronal mass ejections, ionospheric and magnetospheric physics, MHD simulations, waves and turbulence in space plasmas, sprites, blue jets and elves.

We are happy to announce that all contributions will be published in 2009 in a special issue of AIP Conference Proceedings due to the financial support by the European Office of Aerospace Research & Development (EOARD).

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