Contribution of women astronomers to scientific researches at Sternberg Astronomical Institute

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Sternberg Astronomical Institute is a scientific institute in Moscow State University system and the oldest astronomical institution in Moscow. Its 175th anniversary was celebrated in 2006. Today it is a leading astronomical center in Russia. 203 scientists work in the institute: 122 PhDs and 41 Doctors of Science in Physics and Mathematics. Among them, 50 PhDs, 8 Doctors of Science in Physics and Mathematics, 1 associated professor, and 1 professor are women. The field of their activity is wide enough, from practical astrophysics to accretion theory, black holes and neutron stars. They successfully carry out observations, work out new PC codes, develop methods for analysis of physical processes in stellar systems and participate in preparation of new Catalogues. Their research was awarded different prizes, the most prominent of them being The State Prize of Russia for Science and Technology in 2003.

- 5 women-scientists were awarded the title "Distinguished Scientist of Moscow State University";
- 3 women have medals «For discovery of new celestial objects»;
- 6 women have special grants for young teachers and scientists who achieved important results in teaching and scientific activity;
- 1 woman was awarded by Shuvalov prize (Price of Moscow university) and The State Prize of RF
- 3 minor planets were named in honor of our women-scientists
- 3 women have grants of President of Russia for young scientists (2 PhD and 1 Doctor of Science)

Dr. Olga Silchenko is the only one woman-head of department in Sternberg institute, - department of Physics of emission stars and galaxies. By starting in 1989 the pioneering integral-field spectroscopic survey of the stellar populations in the central parts of nearby galaxies with the Multi-Pupil Fiber Spectrograph on the 6-m telescope of SAO (Caucusus) she had discovered chemically distinct galactic stellar nuclei, which are relics of nuclear starbursts caused by abrupt gas redistribution in galactic disks, they may be related to tidal interactions and minor merging. The formation of 50 galaxies from spiral progenitors are often accompanied by such events. Another important finding of Silchenko is circumnuclear gas polar disks in regular (non-interacting) disk galaxies. The first spiral galaxy with the inner polar disk, NGC 2841, was reported in 1997, and now a dozen objects are known found mostly by Dr.Silchenko. For the prominent scientific results Dr. Silchenko was many times awarded by different prizes,- including Shuvalov prize(Moscow State university prize) and later (together with two colleagues) the highest prize of new Russia,- The State prize of Russia.

Dr. Elena Kostyakova, the Sternberg Institute's distinguished veteran, still actively works in the field of studies of planetary nebulae. She knows a lot about the history of the institute, her presentations on historical topics are always welcome at the seminars and conferences of the institute.

Dr. Nataly Tyurina works in MASTER-team (Mobile Astronomical System of the TELEscope-Robots is the first and unique telescope net in Russia). She finds optical transients on time scales of seconds to days, the emphasis is on gamma-ray bursts (GRBs), the most powerful explosions in our Universe.

Dr. Eleonora Antokhina studies close binary systems, developing numerical methods for light and radial velocity curves synthesis. She interprets observational data for various type binaries.

Professor Tatiana Lozinskaya studies the structure and kinematics of the interstellar medium controlled by supernovae and stellar winds in galaxies. Her research is based on the observations with slit spectrograph, the MPFS field spectrograph and a scanning Fabry-Perot interferometer on the 6-m telescope of the SAO in Caucasus and 125-cm telescope of our institute in Crimea. Prof. Lozinskaya was the first to associate the unique Synchrotron Supershell in the starburst galaxy IC 10 with a Hypernova explosion. (Earlier this object was believed to be a result of multiple, - about ten supernova explosions). She is the author of more than 150 publications and two books: "Supernovae and stellar wind: their interaction with the interstellar gas" (Moscow) and "Supernovae and stellar wind in the Interstellar Medium" (New York). She teaches a class "Supernova and Stellar Wind in the Interstellar Medium" at the Astronomy Department of Moscow State university.

Dr. Nina Solovaya studies the dynamical evolution and stability of triple hierarchical stellar systems with high eccentricity and inclination. She created the analytical theory in the frame of the general three-body problem, which allows to establish the type of possible motions, close approaches and the mutual secular perturbations of components.

Dr. Jeanna Rodionova studies the features of the Moon, Mars and Venus global relief. She investigates morphology of the lunar and Martian craters, works out the hypsometric maps of the Moon, Mars and Venus. More than 200 papers have been published with her participation. Her most prominent work - The Morphological catalogues of craters of the Moon and Mars. As an editor she also takes part in compiling the globes of the Moon and Mars.

Dr. Elena Glushkova is the only one female associated professor at AstronomyDepartment. Besides a very successful teaching activity she provides researches of stellar kinematic, radial velocities of stars and stellar clusters.

Dr. Nadezda Chuikova studies the problems connected with abnormal internal gravity and structure of the Earth. She also developed the Nutation Theory for the New Earth Model.

What is more difficult for us:
- Where to get travel money to observe your favorite objects...
- With whom to leave your child when you are coming to observe your favorite objects....
- How to convince your boss that you need a more powerful computer to provide data analysis of your favorite objects...
- How to look smart after solving all these problems...

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