SECOND ANNOUNCEMENT

St.-Petersburg Conference

PHYSICS OF NEUTRON STARS – 2001

June 6 – 8, 2001, Ioffe Physico-Technical Institute

The conference will be held at the Big Hall of the Main Building of the Ioffe Institute (Politekhnicheskaya 26). To reach the Ioffe Institute from the Moscow Railway Station, please take the metro to the station Lesnaya, then nonstop free-of-charge bus No. 80 from the metro station Lesnaya to the metro station Ploschad Muzhestva (5 minute drive), and then one stop (any tram or trolley bus) to the stop Politekhnicheskaya. More detailed instructions with a scheme and links to sites with city information can be found on our Internet pages:

`http://www.ioffe.rssi.ru/astro/NS2001/index.html`

The sessions will include a number of review talks (30–40 minutes) and contributed talks (10–20 minutes). A separate poster session will be arranged. A *preliminary* list of contributions accepted by the Local Organizing Committee is given below (with *preliminary* durations of talks including 5 min discussion). The final programme will be presented in the Third Announcement to be distributed not later than on May 28. By that date, the programme will be also available on the above Web page.

The conference has received a modest financial support from the Russian Foundation for Basic Research (for the conference as a whole as well as personal support of young participants). It will be spent to support those participants who will have registered in accordance with The First Announcement and presented their contributions at the Conference (as authors or coauthors of talks or posters). In particular, the Local Organizing Committee will cover the living expenses (hotel and per diem) for a period not longer than 4 days including three conference days. The travel expenses will be covered (at least partly) by the Local Organizing Committee during the Conference. Young scientists will be supported in accordance with their applications. **The registration fee** will be **100 roubles** to be spent for coffee breaks.

The participants will be accommodated at several hotels. Distribution of participants over hotels will be indicated in the Third Announcement.

The participants are kindly requested to confirm their participation either by sending an e-mail message to **ns@astro.ioffe.rssi.ru** on by submitting an online confirmation form (available at the above site) not later than by May 25. The hotel reservations will be made only for confirmed participants.

The beginning of June is traditionally the best period in St.-Petersburg. "White nights" are coming with their semi–darkness magics. Do not miss the opportunity to enjoy them as well as the intriguing physics of neutron stars.

Welcome to Saint-Petersburg!

List of contributions

1. **A.N. Baushev**, G.S. Bisnovatyi-Kogan (*Space Research Institute, Moscow*) Theoretical interpretation of the X-ray pulsar spectra consisting of several cyclotron harmonics (15 min)

2. **V.S. Beskin**, R.Yu. Kompaneetz (*Lebedev Physical Institute, Moscow; Moscow Institute of Physics and Technology*) On the 2D structure of a thin accretion disk (20 min)

3. **G.S. Bisnovatyi-Kogan** (*Space Research Institute, Moscow*) Phase transitions in stars: stability, pulsations, convective Urca-shells and pre-supernovae (40 min)

4. **S.V. Bogovalov**, F.A. Aharonian (*Moscow State Engineering Physics Institute; Max-Planck-Institut fuer Kernphysik, Heidelberg, Germany*) Gamma-rays from pulsar winds (20 min)

5. **A.M. Cherepashchuk** (*Sternberg Astronomical Institute, Moscow*) Wolf-Rayet Stars and Relativistic objects (40 min)

6. **M.V. Chistyakov**, N.V. Mikheev (*Yaroslavl State University*) Photon-neutrino processes in the strongly magnetized plasma (15 min)

7. **E.V. Derishev**, V.V. Kocharovsky, Vl.V. Kocharovsky (*Institute of Applied Physics, Nizhny Novgorod*) On the competition between synchrotron and Compton emission of electrons in relativistic shocks (20 min)

8. A.A. Belyanin, **E.V. Derishev** (*Institute of Applied Physics, Nizhny Novgorod*) Self-sustained neutron haloes in the inner parts of hot accretion disks (poster)

9. **T.A. Fatkhullin**, V.V. Sokolov (*Special Astrophysical Observatory*) The modeling of spectra of GRB host galaxies (15 min)

10. **Yu.N. Gnedin**, S.O. Kiikov (*Pulkovo Observatory, St.Petersburg*) The origin of QPOs in X-ray binaries (20 min)

11. **Yu.N. Gnedin**, S.O. Kiikov (*Pulkovo Observatory, St.Petersburg*) Magnetocavitation mechanism of gamma-ray burst phenomenon (poster)

12. **S.A. Grebenev**, S.V. Molkov, A.A. Lutovinov, R.A. Sunyaev (*Space Research Institute, Moscow*) X-ray bursts with signs of strong photospheric radius expansion of a neutron star (20 min)

13. **A.A. Gvozdev**, I.S. Ognev (*Yaroslavl State University*) Efficiency of e^+e^- pairs production by neutrinos in Kerr BH collapsars with strong magnetic field (25 min, combined with Ognev and Gvozdev)

14. **P. Haensel** (*Copernicus Astronomical Center, Warsaw*) Unified equations of state of dense matter and neutron star structure (40 min)

15. **V.B. Ignatiev**, A.G. Kuranov, K.A. Postnov, M.E. Prokhorov (*Moscow State University, Sternberg Astronomical Institute*) Gravitational wave background from coalescing compact stars in eccentric orbits (15 min)

16. **A.D. Kaminker**, P. Haensel, D.G. Yakovlev (*Ioffe Institute, St.Petersburg; Copernicus Astronomical Center, Warsaw*) Masses of isolated neutron stars and superfluid gaps in their cores: constraints from observations and cooling theory (20 min)

17. S.V. Bogovalov, **D.V. Khangoulian** (*Moscow Engineering Physics Institute*) Interaction of the anisotropic pulsar winds with the interstellar medium (15 min)

18. **D.V. Khangoulian**, S.V. Bogovalov (*Moscow Engineering Physics Institute*) Shock fronts at the termination of anisotropic relativistic winds (poster)

19. **V.N. Komarova**, V.G. Kurt, T.A. Fatkhullin, V.V. Sokolov, Yu.A. Shibanov, A.B. Koptsevich (*Special Astrophysical Observatory; Astro Space Center, Moscow; Ioffe Institute, St.Petersburg*) Multiband photometry of Geminga (15 min)

20. Ya.N.Istomin, **B.V. Komberg** (*Lebedev Institute, Moscow; Astro Space Center, Moscow*) GRB as the result of the interaction of supernova ejecta with NS companion of a closed binary (20 min)

21. **A.B. Koptsevich**, G.G. Pavlov, S.V. Zharikov, V.V. Sokolov, Yu.A. Shibanov, V.G.Kurt (*Ioffe Institute, St.Petersburg; Penn State Univ., USA; Obs. Astr. Nacional. de Inst. de Astronomia de UNAM., Mexico; Special Astrophysical Observatory; Astro Space Center, Moscow*) Multiband photometry of the PSR B0656+14 and its neighborhood (20 min)

22. **A.B. Koptsevich**, P. Lundqvist, J. Sollerman, Yu.A. Shibanov, S. Wagner (*Ioffe Institute, St.Petersburg; Stockholm Obs., ESO, Germany; Heidelberg Univ., Germany*) First detection of the Vela pulsar in IR with VLT (poster)

23. S.I. Blinnikov, E.I. Sorokina, **D.I. Kosenko**, K.A. Postnov (*Sternberg Astronomical Institute, Moscow; Inst. Theor. Exper. Phys., Moscow*) X-ray emission from young SN remnants (15 min)

24. A.M. Bykov, **A.M. Krassilchtchikov** (*Ioffe Institute, St.Petersburg*) A model of sub-Eddington accretion onto a magnetized neutron star (20 min)

25. **A.G. Kuranov**, K.A. Postnov, M.E. Prokhorov (*Sternberg Astronomical Institute, Moscow*) The evolution of binary stars in a globular cluster (15 min)

26. **A.D. Kuzmin** (*Pushchino Radio Astronomy Observatory*) Radio luminosity comparative analysis of the millisecond and normal pulsars (20 min)

27. M.V. Chistyakov, **A.V. Kuznetsov**, N.V. Mikheev (*Yaroslavl State University*) Three-vertex loop processes in strong magnetic field (15 min)

28. **K.P. Levenfish**, P. Haensel, D.G. Yakovlev (*Ioffe Institute, St.Petersburg; Copernicus Astronomical Center, Warsaw*) Viscous damping of neutron star pulsations (20 min)

29. **A.A. Lutovinov**, S.A. Grebenev, S.V. Molkov (*Space Research Institute, Moscow*) Review of X-ray bursters in the Galactic Center Region (20 min)

30. V.M. Malofeev, **O.I.Malov** (*Pushchino Radio Astronomical Observatory*) Detection of pulsed radio emission of first AXP 1E2259+58 (20 min)

31. **I.F. Malov** (*Pushchino Radio Astronomy Observatory*) On the pulsed optical emission from radio pulsars (20 min)

32. **S.V. Molkov**, S.A. Grebenev, A.A. Lutovinov (*Space Research Institute, Moscow*) X-ray spectral variability of the LMXB and Z-source GX340+0 (15 min)

33. **E.N. Narynskaya**, N.V. Mikheev (*Yaroslavl State University*) Familon emissivity of magnetized plasma (poster)

34. **I.S. Ognev**, A.A. Gvozdev (*Yaroslavl State University*) Dynamic effects in a collapsar envelope due to neutrino propagation through a strongly magnetized plasma (25 min combined with Gvozdev and Ognev)

35. **I.V. Panov**, F.-K.Thielemann (*Inst. Theor. Exper. Phys., Moscow; University of Basel, Switzerland*) r-process in neutron star mergers and beta-delayed fission (20 min)

36. **M.V. Popov**, V.I. Kondratev (*Astro Space Center, Moscow*) Observed parameters of microstructure in pulsar radio emission (15 min)

37. **S.B. Popov**, M.E. Prokhorov, M. Colpi, R. Turolla, A. Treves (*Sternberg Astronomical Institute, Moscow; University Milano-Bicocca, Italy; University of Padova, Italy; University of Como, Italy*) Isolated neutron stars as X-ray sources: accretion vs. cooling (20 min)

38. **S.B. Popov**, M.E. Prokhorov (*Sternberg Astronomical Institute, Moscow*) Evolution of isolated neutron stars in globular clusters: number of Accretors (poster)

39. **K.A. Postnov** (*Sternberg Astronomical Institute, Moscow*) Relation of Gamma-ray bursts to formation of compact stars (30 min)

40. **A.Y. Potekhin**, D.G. Yakovlev (*Ioffe Institute, St.Petersburg*) Thermal structure and cooling of neutron stars with magnetized envelopes (20 min)

41. **M.E. Prokhorov**, K.A. Postnov (*Sternberg Astronomical Institute, Moscow*) Distribution of NS and BH masses and mechanism of SN explosion (20 min)

42. **M.G. Revnivtsev**, M.R. Gilfanov, E.M. Churazov, R.A. Sunyaev (*Space Research Institute, Moscow*) Short-term X-ray variability of neutron stars: current status and perspectives (30 min)

43. **D.A. Rumyantsev**, A.V. Kuznetsov, N.V. Mikheev (*Yaroslavl State University*) Lepton pair production by high-energy neutrino in an external electromagnetic field (15 min)

44. **A.V. Serber** (*Institute of Applied Physics, Nizhny Novgorod*) Cyclotron scattering with mode switching in accretion column of a magnetized neutron star (20 min)

45. **Yu.A. Shibanov** (*Ioffe Institute, St.Petersburg*) Multiwavelength observations of isolated NSs: thermal emission vs nonthermal (30 min)

46. **T.V. Smirnova** (*Pushchino Radioastronomy Observatory*) Diffractive scintillations of PSR 0809+74 and 0950+08 at low frequencies (15 min)

47. **V.A. Soglasnov**, M.V.Popov, V.I. Kondratev, S.V. Kostyuk (*Astro Space Center, Moscow*) Giant pulses from radio pulsars (15 min)

48. **V.V. Sokolov** (*Special Astrophysical Observatory*) On the gamma-ray burst progenitors (30 min)

49. B.E. Stern, **Ya. Tikhomirova**, R. Svensson (*Inst. Nuclear Res., Mosow; Astro Space Center, Moscow; Stockholm Observatory*) Evidence for a strong evolution of GRBs and constraints on the GRB intrinsic luminosity function with new GRB statistical data (15 min)

50. **M.Yu. Timofeev** (*Astro Space Center, Moscow*) Some features of weak and strong pulses of pulsars (poster)

51. **L.G. Titarchuk** (*Naval Res. Lab., USA*) Spectral and timing properties of neutron star and black hole systems. Theory and observations (30 min)

52. V.D. Pal'shin, **A.I. Tsygan** (*Ioffe Institute, St.Petersburg*) The manifestations of different acceleration mechanisms of binaries containing neutron stars (15 min)

53. **D.G. Yakovlev**, O.Y. Gnedin, A.Y. Potekhin (*Ioffe Institute, St.Petersburg; Inst. Astronomy, Camridge, UK*) Thermal relaxation in young and old neutron stars (30 min)

54. **A.F. Zakharov** (*Inst. Exper. Theor. Phys., Moscow*) From white dwarfs to black holes (70th anniversary of the theory of compact objects) (20 min)

55. **J.L. Zdunik** (*Copernicus Astronomical Center, Warsaw*) Accreting strange stars (30 min)