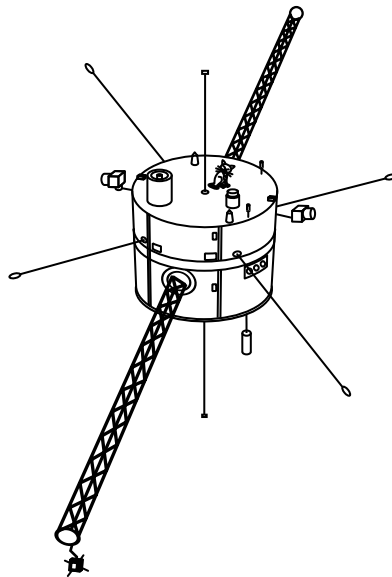


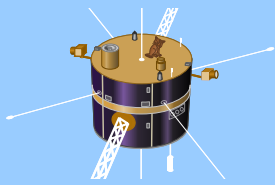
Ioffe Workshop on GRBs and other Transient Sources: 20 years of Konus-Wind Experiment

22–26 September 2014
St. Petersburg, Russia

Workshop Program



Saint-Petersburg
2014

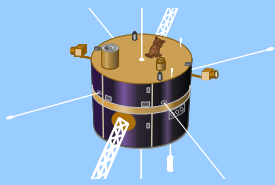


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Monday, September 22

Session 1		Overviews and highlights	<i>chair: A. M. Bykov</i>
9:30–9:45	Rafail Aptekar & Andrei Bykov <i>Ioffe Institute</i>	Welcome	
9:45–10:15	Rafail Aptekar <i>Ioffe Institute</i>	Overview of the Russian-American Konus-Wind experiment	
10:15–10:45	Richard Willingale <i>University of Leicester</i>	GRBs in the Swift era	
10:45–11:20	Frédéric Piron <i>Université de Montpellier</i>	High-energy observations of Gamma-Ray Bursts with Fermi	
11:20–12:00	Coffee Break		
Session 2		Prompt emission processes I	<i>chair: R. Willingale</i>
12:00–12:30	Takanori Sakamoto <i>Aoyama Gakuin University</i>	Prompt emission properties of Swift GRBs	
12:30–13:00	Marco Tavani <i>INAF/IAPS-Roma</i>	Expected and Unexpected Gamma-Ray Emission in Light of AGILE and Fermi	
13:00–13:30	Vladimir Lipunov <i>MSU SAI</i>	MASTER and unsolved GRB observational and theoretical problems	
13:30–15:00	Lunch		
Session 3		Prompt emission processes II	<i>chair: F. Piron</i>
15:00–15:30	Frédéric Daigne <i>Institut d'Astrophysique de Paris</i>	GRB prompt emission mechanisms	
15:30–16:00	Felix Ryde <i>KTH Royal Institute of Technology</i>	Observational signatures of the GRB photosphere	
16:00–16:30	Indrek Vurm <i>Columbia University</i>	Radiative transfer in GRB jets	
16:30–17:00	Coffee Break		
Session 4		GRB physics and radiation processes I	<i>chair: F. Daigne</i>
17:00–17:30	Andrew MacFadyen <i>New York University</i>	The dynamics, stability and radiation of GRB Jets	
17:30–17:50	Hiroataka Ito <i>RIKEN</i>	Effects of jet structure on the photospheric emission in gamma-ray bursts	

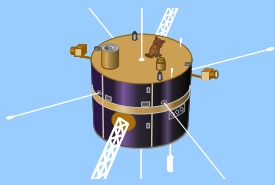


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Tuesday, September 23

Session 5	Progenitors, ultra-long bursts, short bursts <i>chair: T. Sakamoto</i>	
9:00–9:30	Nial Tanvir <i>University of Leicester</i>	Short GRBs and kilonovae: electromagnetic signatures of compact binary mergers
9:30–10:00	Andrew Levan <i>University of Warwick</i>	The progenitors of the longest gamma-ray bursts
10:00–10:20	Dmitry Svinkin <i>Ioffe Institute</i>	Konus-Wind gamma-ray bursts: temporal characteristics, hardness, and classification
10:20–10:40	Maria Pruzhinskaya <i>MSU SAI</i>	Scenario Machine: fast radio bursts, short gamma-ray bursts and LIGO silence
10:40–11:00	Alexei Pozanenko <i>Space Research Institute</i>	Extended emission of Gamma-Ray Bursts
11:00–11:30	Coffee Break	
Session 6	Special session on GRB 130925A <i>chair: A. Levan</i>	
11:30–11:50	Dmitry Frederiks <i>Ioffe Institute</i>	GRB 130925A and other ultra-long GRBs observed by Konus-Wind
11:50–12:10	Jochen Greiner <i>MPE</i>	GROND coverage of the main peak of Gamma-Ray Burst 130925A
12:10–12:30	Phil Evans <i>University of Leicester</i>	GRB130925A: a dust-scattered afterglow, but a low-density circumburst medium
12:30–14:00	Lunch	
Session 7	GRB afterglows <i>chair: N. R. Tanvir</i>	
14:00–14:30	Jochen Greiner <i>MPE</i>	Recent progress on GRB afterglow observations
14:30–15:00	Alberto J. Castro-Tirado <i>Instituto de Astrofísica de Andalucía</i>	Afterglows of GRBs: early optical and millimetre observations
15:00–15:20	Stefano Covino <i>INAF-OA Brera</i>	Polarimetry of gamma-ray bursts: peering at the shock front
15:20–15:40	Evgeny Gorbovskoy <i>MSU SAI</i>	Prompt and follow-up GRB observation by MASTER net
15:40–16:10	Coffee Break	
Session 8	GRB hosts <i>chair: A. J. Castro-Tirado</i>	
16:10–16:40	John Graham <i>MPE</i>	GRB Host Galaxies
16:40–17:10	Leslie Hunt <i>INAF-Osservatorio Astrofisico di Arcetri</i>	Demographics of GRB host galaxies



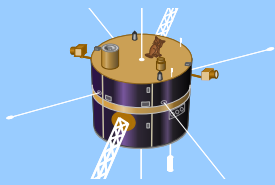
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Wednesday, September 24

Session 9	GRBs and their Supernovae <i>chair: L. Amati</i>	
9:00–9:30	Massimo Della Valle <i>INAF-OACN</i>	Gamma-ray Bursts and their Supernovae: Flashy and Somber Explosions
9:30–10:00	Sergei Blinnikov <i>ITEP</i>	Light produced by shocks and shocks produced by light: Superluminous supernovae and GRB afterglows
10:00–10:30	Pascal Chardonnet <i>Université de Savoie</i>	Pair Instability Supernovae Explosion and Gamma-Ray Bursts
10:30–11:00	Coffee Break	
Session 10	GRBs as cosmological probes <i>chair: J. Graham</i>	
11:00–11:30	Lorenzo Amati <i>INAF-IASF Bologna</i>	Measuring cosmological parameters with GRBs: status and perspectives
11:30–12:00	Maria G. Dainotti <i>RIKEN</i>	An intrinsic luminosity-time correlation in X-ray afterglows: study of selection effects, implications for cosmology and for theoretical models
12:00–12:30	Anastasia Tsvetkova <i>Ioffe Institute</i>	Konus-Wind observations of GRBs with measured redshifts
12:30–14:00	Lunch	
Session 11	Very High-Energy and Non-Electromagnetic Emission <i>chair: K. A. Postnov</i>	
14:00–14:30	Alessandra Corsi <i>Texas Tech University</i>	Gravitational Waves associated with Gamma-Ray Bursts
14:30–15:00	Kazumi Kashiyama <i>University of California</i>	Neutrino Tomography of GRB jet
15:00–15:30	Coffee Break	
Session 12	GRB physics and radiation processes II <i>chair: M. G. Baring</i>	
15:30–16:00	Martin Lemoine <i>Institut d'Astrophysique de Paris</i>	Particle acceleration at relativistic shock waves – implications for gamma-ray bursts
16:00–16:30	Andrei Bykov <i>Ioffe Institute</i>	Particle acceleration and radiation in magnetized outflows: GRBs vs. pulsar wind nebulae

19:00 Conference dinner

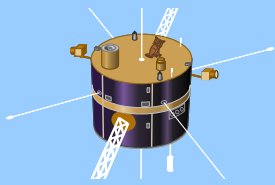


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Thursday, September 25

Session 13 Prof. Mazets memorial session <i>chair: D. D. Frederiks</i>		
9:00–10:30	Rafail Aptekar, Alexander Kaplyanskii, Robert Suris, Dmitry Varshalovich <i>Ioffe Institute</i>	Reminiscence about Prof. Evgeny Mazets
10:30–11:00	Coffee Break	
Session 14 SGRs and AXPs: observations and theory I <i>chair: G. S. Bisnovatyi-Kogan</i>		
11:00–11:30	Sandro Mereghetti <i>INAF/IASF-Milano</i>	Recent results on magnetars
11:30–12:00	Dmitry Frederiks <i>Ioffe Institute</i>	SGR studies with Konus-Wind and other Ioffe GRB experiments
12:00–12:30	Ersin Göğüş <i>Sabancı University</i>	Magnetar Bursts detected with Fermi/GBM
12:30–12:50	Alexander J. van der Horst <i>Anton Pannekoek Institute, University of Amsterdam</i>	Comprehensive overview of SGR J1550–5418 bursts detected with the Fermi Gamma-ray Burst Monitor
12:50–14:20	Lunch	
Session 15 SGRs and AXPs: observations and theory II <i>chair: S. Mereghetti</i>		
14:20–14:50	Matthew G. Baring <i>Rice University</i>	Theoretical Aspects of Magnetar Emission
14:50–15:10	Nazar Ikhsanov <i>Pulkovo Observatory</i>	A new look at the Anomalous X-ray Pulsars
15:10–15:40	Gennady Bisnovatyi-Kogan <i>Space Research Institute</i>	SGR/AXP - are they magnetars?
15:40–16:10	Coffee Break	
Session 16 SGRs and AXPs: observations and theory III <i>chair: E. Göğüş</i>		
16:10–16:35	Sergei Popov <i>MSU SAI</i>	Origin and evolution of magnetars
16:35–17:00	Konstantin Postnov <i>MSU SAI</i>	Fast radio transients and their possible relation to neutron stars
17:00–17:25	Alexander Kaminker <i>Ioffe Institute</i>	Thermal radiation of magnetars
17:25–17:50	Alexander Potekhin <i>Ioffe Institute</i>	Atmospheres and radiating surfaces of neutron stars with strong magnetic fields



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Friday, September 26

Session 17 Future instruments and missions I <i>chair: A. M. Bykov</i>		
9:00–9:20	Anatoli Iyudin <i>MSU SINP</i>	GRB experiments on-board LOMONOSOV mission
9:20–9:40	Frédéric Daigne <i>Institut d'Astrophysique de Paris</i>	SVOM (Space-based multi-band astronomical Variable Objects Monitor)
9:40–10:00	Jochen Greiner <i>MPE</i>	AstroMeV: towards a sensitive survey of the gamma-ray sky between 100 keV and 100 MeV
10:00–10:20	Makoto Tashiro <i>Saitama University</i>	Future ASTRO-H Capability in Observing Gamma-ray Bursts and their Afterglows
10:20–10:50	Coffee Break	
Session 18 Future instruments and missions II <i>chair: R. L. Aptekar</i>		
10:50–11:10	Valentin Pal'shin <i>Ioffe Institute</i>	Future KONUS experiments
11:10–11:30	Sergey Sazonov <i>Space Research Institute</i>	Spectrum-Roentgen-Gamma: status and scientific prospects
11:30–11:50	Kazutaka Yamaoka <i>Nagoya University</i>	CALET on the ISS
11:50–12:20	Coffee Break	
Session 19 Closing session		
12:20–13:20	Discussions	What we have learned from recent missions and what we should do in the future; Fundamental (astro)physics questions that can be addressed with GRBs
13:20–14:20	Lunch	

14:30 Guided tour