

Ioffe Workshop on GRBs and other Transient Sources: 25 years of Konus-Wind Experiment

September 9–13, 2019
St. Petersburg, Russia

Workshop Program



Saint-Petersburg
2019

Monday, September 9

8:40-9:10	Registration	
Session 1	Overviews and highlights	<i>chair: Jochen Greiner</i>
9:15-9:30	Rafail Aptekar & Andrei Bykov <i>Ioffe Institute</i>	Welcome
9:30-9:55	Dmitry Frederiks <i>Ioffe Institute</i>	25 years of the Konus-Wind experiment
9:55-10:20	Amy Lien <i>NASA GSFC</i>	Observing the transient sky with the Neil Gehrels Swift Observatory
10:20-10:45	Michael Briggs <i>UAH</i>	Fermi GBM observations on short GRBs and multi-messenger astronomy
10:45-11:10	Coffee Break	
Session 2	Prompt emission 1	<i>chair: J. Michael Burgess</i>
11:10-11:40	Gor Oganessian <i>INAF</i>	Overview of GRB prompt emission
11:40-12:00	Razmik Mirzoyan <i>MPP</i>	GRB observations in TeV range
12:00-12:20	Shaolin Xiong <i>IHEP CAS</i>	GRB polarization observations
12:20-14:00	Lunch	
Session 3	Prompt emission 2	<i>chair: Amy Lien</i>
14:00-14:20	J. Michael Burgess <i>MPE</i>	Explaining the prompt GRB emission with a synchrotron model
14:20-14:40	Maria Ravasio <i>INAF</i>	GRB prompt emission spectra: the synchrotron revenge
14:40-15:00	Gor Oganessian <i>INAF</i>	Clues to the nature of GRB prompt emission from the broad-band observations
15:00-15:20	Coffee Break	
Session 4	Prompt emission 3	<i>chair: Gor Oganessian</i>
15:20-15:40	Hirotsugu Ito <i>RIKEN</i>	The photospheric origin of the Yonetoku relation in gamma-ray bursts
15:40-16:00	Fabio De Colle <i>UNAM</i>	Thermal and non-thermal emission from the cocoon of long gamma-ray bursts
16:00-16:20	Shota Kisaka <i>Tohoku University</i>	Scattered short gamma-ray bursts as electromagnetic counterparts to Gravitational Waves

Tuesday, September 10

Session 5	Prompt emission 4 <i>chair: Alexey Pozanenko</i>	
09:00-09:20	Bruce Gendre <i>University of Western Australia</i>	The properties of ultra-long GRBs
09:20-09:40	Dmitry Svinkin <i>Ioffe Institute</i>	Konus-Wind observations of ultra-long GRBs
09:40-10:00	Alessandro Ursi <i>INAF</i>	AGILE GRB observations
10:00-10:30	Coffee Break	
Session 6	Prompt emission 5 <i>chair: Shaolin Xiong</i>	
10:30-10:50	Jochen Greiner <i>MPE</i>	Fermi/GBM localizations of GRBs
10:50-11:10	Andreas von Kienlin <i>MPE</i>	Fermi GBM GRBs with characteristics similar to GRB 170817A
11:10-11:30	Alexey Pozanenko <i>IKI RAS</i>	Strange short burst(s) associated with LIGO/Virgo Gravitational wave events
11:30-11:50	Sergey Grebenev <i>IKI RAS</i>	Known and unknown GRBs registered by IBIS/ISGRI of INTEGRAL
11:50-13:30	Lunch	
Session 7	Afterglows <i>chair: D. Alexander Kann</i>	
13:30-14:00	Antonio de Ugarte Postigo <i>Instituto de Astrofísica de Andalucía</i>	Overview of GRB afterglow observations
14:00-14:20	Tanmoy Laskar <i>University of Bath</i>	ALMA detection of a linearly polarized reverse shock in GRB 190114C
14:20-14:40	Elena Mazaeva <i>IKI RAS</i>	Inhomogeneities in GRB afterglow light curves and their models
14:40-15:10	Coffee Break	
Session 8	GRB physics and radiation processes <i>chair: Richard Willingale</i>	
15:10-15:40	Andrei Bykov <i>Ioffe Institute</i>	Shocks and nonthermal particles in relativistic supernovae and GRBs
15:40-16:10	Tsvi Piran <i>Hebrew University of Jerusalem</i>	GRBs's Rosseta stone - The sub-TeV emission from GRB190114C
Session 9	Current GRB related missions <i>chair: Andrei Bykov</i>	
16:10-16:40	Alexander Lutovinov <i>IKI RAS</i>	Spektr-RG space observatory
16:40-17:00	Dmitry Golovin <i>IKI RAS</i>	HEND (Mars-Odyssey) and BTN-M1 (ISS) GRB observations
17:00-17:20	Alexander Kozyrev <i>IKI RAS</i>	Studying cosmic Gamma-Ray Bursts by Russian Mercury Gamma-ray and Neutron Spectrometer onboard ESA BepiColombo mission

Wednesday, September 11

Session 10		Hosts and progenitors <i>chair: Jean-Luc Atteia</i>
09:00-09:30	John Graham <i>KIAA-PKU</i>	The hosts of LGRBs: metallicities and a surprising lack of metallicity evolution
09:30-09:50	Christina Thöne <i>Instituto de Astrofísica de Andalucía</i>	GRB hosts at high resolution and what we can learn about the progenitor
09:50-10:10	Michał J. Michałowski <i>Adam Mickiewicz University in Poznań</i>	What we can learn from gas in host galaxies of gamma-ray bursts and supernovae
10:10-10:30	Gustavo Romero <i>Instituto Argentino de Radioastronomía</i>	Between the first collapsars: gamma-ray binaries in the early Universe
10:30-11:00	Coffee Break	
Session 11		GRBs as cosmological probes <i>chair: Lorenzo Amati</i>
11:00-11:30	Vahé Petrosian <i>Stanford University</i>	Cosmological evolution of GRBs (Efron-Petrosian methods) - TBA
11:30-11:50	Maria G. Dainotti <i>Stanford University</i>	Correlation of rest-frame prompt and afterglow parameters
11:50-12:10	Anastasia Tsvetkova <i>Ioffe Institute</i>	Konus-Wind GRBs with known redshifts
12:10-12:30	Jean-Luc Atteia <i>IRAP</i>	The maximum isotropic luminosity of GRBs
12:30-12:50	Pavel Minaev <i>IKI RAS</i>	$E_{p,i} - E_{iso}$ correlation and the new criterion for the blind classification of short and long GRBs
12:50-14:30	Lunch	
Session 12		History of GRB research <i>chair: Dmitry Frederiks</i>
14:30-14:50	Rafail Aptekar <i>Ioffe Institute</i>	History of GRB research at Ioffe Institute
14:50-15:10	Thomas Cline <i>NASA GSFC</i>	The history of the cosmic gamma-ray burst mystery
15:10-15:30	Filippo Frontera <i>University of Ferrara</i>	Historical overview of GRBs and SGRs

17:00 Tour + Conference dinner

Thursday, September 12

Session 13	New missions <i>chair: Amy Lien</i>	
09:20-09:40	Richard Willingale <i>University of Leicester</i>	Finding X-ray Transients in the Post KONUS-WIND et al. Era
09:40-10:00	Lorenzo Amati <i>INAF</i>	THESEUS (Transient High-Energy Sky and Early Universe Surveyor)
10:00-10:20	Michael Briggs <i>UAH</i>	Glowbug project
10:20-10:40	Shaolin Xiong <i>IHEP CAS</i>	GECAM: an all-time all-sky X-ray/Gamma-ray monitor in multi-messenger and multi-wavelength era
10:40-11:00	Jean-Luc Atteia <i>IRAP</i>	The ECLAIRs GRB detector and imager for the SVOM mission
11:00-11:30	Coffee Break	
Session 14	GRB-SN connection and afterglows <i>chair: Andrei Bykov</i>	
11:30-11:50	D. Alexander Kann <i>Instituto de Astrofísica de Andalucía</i>	Highly luminous supernovae associated with Gamma-Ray Bursts: News on the GRB-SN connection
11:50-12:10	Alina Volnova <i>IKI RAS</i>	Observations and modelling SNs associated with GRBs
12:10-12:40	Vladimir Lipunov <i>SAI MSU</i>	Central Engine from Early Multimessenger GRB observations
12:40-13:00	Yuji Urata <i>National Central University, Taiwan</i>	GRB afterglow polarimetry
13:00-14:30	Lunch	
Session 15	Solar flares 1 <i>chair: Marina Battaglia</i>	
14:30-15:00	Gregory Fleishman <i>NJIT</i>	Frontiers in Solar Flares
15:00-15:30	Melissa Pesce-Rollins <i>INFN</i>	High energy gamma-ray Solar flares: The first ten years of observations with Fermi-LAT
15:30-16:00	Vahé Petrosian <i>Stanford University</i>	Fermi Observations of solar flare gamma-rays connecting flare and CME-shock particle acceleration processes
16:00-16:30	Coffee Break	
Session 16	Solar flares 2 <i>chair: Gregory Fleishman</i>	
16:30-17:00	Marina Battaglia <i>Fachhochschule Nordwestschweiz</i>	X-ray view on solar flare accelerated electrons
17:00-17:20	Sergey Anfinogentov <i>Institute of Solar-Terrestrial Physics</i>	Bayesian analysis of Konus-Wind solar flare data
17:20-17:40	Alexandra Lysenko <i>Ioffe Institute</i>	Probing solar accelerated particles with Konus-Wind data
17:40-18:00	Yuri Charikov <i>Ioffe Institute</i>	Hard X-rays of solar flares, acceleration and electron transport in magnetoactive plasma

Friday, September 13

Session 17		SGRs and FRBs	<i>chair: Konstantin Postnov</i>
09:00-9:30	Kelly Gourdji <i>UvA API</i>	Fast radio bursts and their potential links to GRBs	
09:30-10:00	Sergey Popov <i>SAI MSU</i>	FRBs: extreme pulsars, bursting magnetars or what?	
10:00-10:20	Anatoly Iyudin <i>SINP MSU</i>	SGR 1935+2154 activity in 2016 detected by Lomonosov satellite	
10:20-10:40	Anna Kozlova <i>Ioffe Institute</i>	SGR observations with Konus-Wind	
10:40-11:00	Ilya Kondratyev <i>IKI RAS</i>	Anisotropic heat transfer simulation in outer layers of magnetized neutron stars	
11:00-11:30	Coffee Break		
Session 18		GRBs and multi-messenger astronomy	<i>chair: Dmitry Svinkin</i>
11:30-12:00	Jordan Palamos <i>University of Oregon</i>	Search for gravitational wave signals from GRBs	
12:00-12:20	Konstantin Postnov <i>SAI MSU</i>	GRBs from NS+BH coalescences: expected rates and properties	
12:20-12:40	Gennady Bisnovatyi-Kogan <i>IKI RAS</i>	Gravitational waves and core-collapse supernovae	
12:40-13:00	Coffee Break		
13:00-13:30	Eleonora Troja <i>NASA GSFC</i>	Overview of two year long GW170817/GRB170817A observations	
13:30-14:00	Ramandeep Gill <i>Open University of Israel</i>	Constraints on the binary NS merger remnant and outflow structure from EM counterparts of GW170817	
General discussion			