

PhD

PRUZHINSKAYA

Maria Victorovna



PERSONAL DATA

PLACE AND DATE OF BIRTH: Russia | 23 July 1988
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EXPERIENCE

SEP 2014– <i>Current</i>	Sternberg Astronomical Institute of Lomonosov Moscow State University, Moscow, Russia Researcher
JAN 2018– <i>Current</i>	Sternberg Astronomical Institute of Lomonosov Moscow State University, Moscow, Russia Secretary and member of PhD/Habilitation degrees council of Lomonosov Moscow State University MSU.01.02
JUN 2018– <i>Current</i>	SNAD project, https://snad.space/ Co-founder and team member
NOV 2015–NOV 2017	Laboratoire de Physique Corpusculaire, Université Clermont Auvergne, Université Blaise Pascal, CNRS/IN2P3, Clermont-Ferrand, France Post-doctoral researcher
MAR 2015–MAY 2015	Côte d'Azur Observatory, Nice, France (3-month Mechnikov Scholarship) Researcher
JUN 2009–MAR 2015	MASTER Global robotic net http://observ.pereplet.ru , http://master.sai.msu.ru/en/ Team member
MAR 2010–SEP 2014	Sternberg Astronomical Institute of Lomonosov Moscow State University, Space Monitoring Laboratory, Moscow, Russia Leading engineer
JUL–AUG 2008	Practice at the Special Astrophysical Observatory (SAO RAS), Caucasus Participation in observations at BTA-6, Zeiss-1000 and RATAN-600 telescopes.
JUL–AUG 2006	Practice at the Special Astrophysical Observatory (SAO RAS), Caucasus Theoretical and practical courses on astrophysics, spectral analysis, instrumentation and observational methods.

EDUCATION

- 2011–2014 Doctoral programme, **Lomonosov Moscow State University**, Moscow
Speciality: Astrophysics and stellar astronomy
PhD thesis: «Supernovae, gamma-ray bursts and accelerating expansion of the Universe» | Advisor: Prof. Vladimir LIPUNOV
- 2005–2011 Specialist degree programme in ASTRONOMY, **Lomonosov Moscow State University**, Moscow
Specialization: Astrophysics | *degree with honours*
Term paper: «Spectral investigation of bright stars of association Cas OB7»
| Advisor: Prof. Alexey RASTORGUEV
Thesis: «Type Ia supernovae and energy of cosmic vacuum»
| Advisor: Prof. Vladimir LIPUNOV
- 2001–2005 **Academic Lyceum of Syktyvkar State University**, Syktyvkar, graduated with honours

MAIN SCIENTIFIC INTERESTS

1. Type Ia Supernovae: observational cosmology, photometric properties (problem of the «standard candle» hypothesis, standardization procedures, environmental effects), peculiar velocities, dark energy
2. Supernovae stars: physics of explosion, light curve modeling
3. Machine learning in astronomy: anomaly detection
4. Robotic observatories. Synoptic survey. Optical photometry and polarimetry
5. Evolution and star formation history in the Universe
6. Stellar astrophysics. Binary stars population synthesis
7. Gamma-ray bursts, fast radio bursts

TEACHING AND ADVISING EXPERIENCE

1. Lectures for the Unité d'Enseignement Astrophysique of the Licence de Physique (L3) «Supernovae and other cosmic explosions», online, May 2020.
2. Advising of bachelor thesis A. Novinskaya «Influence of host galaxy morphology on Type Ia supernova properties», 2019.
3. Advising of bachelor thesis E. Balakina «Optical photometry and modelling of Type IIb SN 2017gpn», 2019.
4. Lectures for the Unité d'Enseignement Astrophysique of the Licence de Physique (L3) «Supernovae and other cosmic explosions», Université Clermont Auvergne, France, March 2019.
5. Co-advising of Master 2 thesis V. Henne «Study of the influence of Type Ia supernovae environment on the Hubble diagram», 2016.
6. Leading the laboratory works «Photometry of Type Ia SNe. Light curves standardization procedures» & «MASTER Survey mode: supernova search» for 3 and 4 years students of astronomical department (SAI MSU), 2011–2014.

ORGANIZATION OF CONFERENCES AND SEMINARS

1. Chair and organizer of the monthly journal club at SAI MSU (2019–Current, <https://snad.space/arxiv/>).
2. Co-organizer of the SNAD Workshops (4-8 June 2018, Moscow, Russia; 11-18 May 2019, Clermont-Ferrand, France; 6-10 July 2020, online; <https://snad.space/>).
3. Member of the Local Organizing Committee of the Conference dedicated to 100 years since the birth of Ya.B. Zel'dovich «YaB-100», SAI MSU, Moscow, Russia, 20-21 March 2014.
4. Member of the Local Organizing Committee of the International Workshop MASTER Global Robotic Net devoted to the 10th Anniversary MASTER project, SAI MSU, Moscow, Russia, 13-18 August 2012.
5. Secretary of Ya. B. Zeldovich All-Moscow Seminar of Astrophysicists (2011-2015), SAI MSU, Moscow, Russia.

GRANTS AND SCHOLARSHIPS

- 2020 Prof. invité by the School of Physics and Engineering (EUPI) at the Clermont Auvergne University
- 2020-2023 Grant of Russian Foundation For Basic Research 20-02-00779 «Machine-learning-driven search of new astrophysical objects in Zwicky Transient Facility survey», co-investigator
- 2018-2020 Grant of Russian Science Foundation 18-72-00159 «Influence of Type Ia supernova environment and their peculiar velocities on distance measurements», **leader**
- 2018-2020 Grant of Russian Foundation For Basic Research 18-32-00426 «Anomaly Detection in the Open Supernova Catalog», **leader**
- 2018-2020 Grant of Russian Science Foundation 18-12-00522 «Supernovae and other explosive phenomena in astrophysics - modelling of the light curves and radiation spectra on the basis of optical and X-ray data», co-investigator
- 2019 Winner of the contest works of talented students and young MSU scientists established by O.V. Deripaska for machine learning in Astronomy
- 2019 Prof. invité by the School of Physics and Engineering (EUPI) at the Clermont Auvergne University
- 2016-2018 Grant of Russian Science Foundation 14-12-00146 «Astrophysics of black holes, neutron stars and white dwarfs», co-investigator
- 2015 Mechnikov Scholarship of the Embassy of France for researchers, 3-month programme
- 2015 Scholarship of the Lomonosov Moscow State University for young lecturers and researchers
- 2014-2015 Grant of Russian Foundation For Basic Research 14-02-31546, co-investigator
- 2013 Scholarship of the non-profit Dynasty Foundation, Support Program for Physicists – Graduate Students
- 2012 Winner of the contest works of talented students and young MSU scientists established by O.V. Deripaska for «Pure» supernovae and accelerating expansion of the Universe»
- 2012 Scholarship of the President of Russia for PhD students
- 2012 Grant in the form of a subsidy from the Ministry of Education and Science of the Russian Federation (agreement of August 27, 2012, No. 8415), co-investigator
- 2011 Grant of Russian Foundation For Basic Research 11-02-09450-mob_z, **leader**
- 2011 Scholarship of the non-profit Dynasty Foundation, Support Program for Physicists – Students
- 2009 Grant of Ministry of Education and Science of the Russian Federation (state contract No. 02.740.11.0249), co-investigator

LANGUAGES

- RUSSIAN: Native
- ENGLISH: Fluent, including professional vocabulary
- FRENCH: Intermediate (B2)

COMPUTER AND PROGRAMMING SKILLS

- Astronomy soft: radiation-hydrodynamics code STELLA (Blinnikov et al.), MESA stellar evolution code (Paxton et al.), SNCOSMO (Barbary K.) and SNOOPY (Burns et al.) for the analysis of SNe Ia, MaxIm DL, Aladin Sky Atlas
- General: Python and its software packages: NUMPY, MATPLOTLIB, SCIPY, PANDAS, SCIKIT-LEARN, ASTROPY; LINUX, Ubuntu, L^AT_EX, Open office & MS Office (Excel, Word, PowerPoint etc.), Photoshop, Illustrator, HTML

PARTICIPATION IN CONFERENCES AND SCHOOLS

1. Oral talk «Machine learning for detection of unusual light curves», Lomonosovskie chteniya (Moscow, Russia, 22 October 2020).
2. Oral talk «New method to account for Type Ia Supernova environment in cosmological analysis», The Fourth Zeldovich Virtual Meeting (7-11 September, 2020), http://www.icranet.org/index.php?option=com_content&task=view&id=1254, *invited*.
3. Oral talk «Machine learning and new classes of astrophysical objects», 7th School-seminar «Magneto-Plasma Processes in Relativistic Astrophysics» (Tarusa, Russia, 17-21 June 2019), *invited*.
4. Oral talk «Influence of host galaxy morphology on the properties of Type Ia supernovae

- from JLA and Pantheon compilations», Frascati Workshop «Multifrequency Behaviour of High Energy Cosmic Sources - XIII» (Palermo, Italy, 3-8 June, 2019), <http://workshop2019.iaps.inaf.it>, *invited*.
5. Oral talk «Influence of Type Ia supernova environment and their peculiar velocities on distance measurements», International Workshop «Accretion Processes in Cosmic Sources — II» (Saint-Petersburg, Russia, 3-8 September, 2018), apcs2018.iaps.inaf.it, *invited*.
 6. Oral talk «Machine Learning analysis of supernova light curves», International Workshop «Accretion Processes in Cosmic Sources — II» (Saint-Petersburg, Russia, 3-8 September, 2018), apcs2018.iaps.inaf.it, *invited*.
 7. Oral talk «Supernova Light Curves», International Workshop «Search and photometry of optical transient sources in the era of LIGO/Virgo - 2018» (Tarusa, Russia, 24-30 June 2018).
 8. Oral talk «Correction for peculiar velocities of SNe Ia in galaxy clusters», School «Magneto-Plasma Processes in Relativistic Astrophysics» (Tarusa, Russia, 18-21 June 2018).
 9. Oral talk «Supernovae — a tool for observational cosmology», Lomonosovskie chteniya (Moscow, Russia, 19 April 2018).
 10. Oral talk «Peculiar velocities of Type Ia Supernovae in clusters of galaxies: the impact on distance measurements», The 29th Texas Symposium on Relativistic Astrophysics (Cape Town, South Africa, 4-8 December 2017) <http://www.texas2017.org>.
 11. Oral talk «Multicolour modelling of SN 2013dx associated with GRB 130702A», The 29th Texas Symposium on Relativistic Astrophysics (Cape Town, South Africa, 4-8 December 2017) <http://www.texas2017.org>.
 12. Oral talk «Correcting for SNIa peculiar velocities in galaxy clusters», «Colloque national Dark Energy» (LAL, Orsay, France, 11-13 October 2017) <https://indico.in2p3.fr/event/16331>.
 13. Oral talk «Peculiar velocities of SN Ia in clusters of galaxies: the impact on distance measurements», SuperNova Factory meeting, (Clermont-Ferrand, France, 3-6 July, 2017).
 14. Oral talk «Supernovae — a tool for observational cosmology», Frascati Workshop «Multifrequency Behaviour of High Energy Cosmic Sources - XII» (Palermo, Italy, 12-17 June, 2017), *invited*.
 15. Oral talk «Peculiar velocities of SN Ia in clusters of galaxies: the impact on distance measurements», Journées LSST-France, (LPNHE-Paris, France, 20-22 March, 2017).
 16. Participation in «47th Advanced Saas-Fee Course 2017: Supernovae: Cosmic Explosions» (Villars-sur-Ollon, Switzerland, 12-18 March, 2017).
 17. Oral talk «SUGAR and JLA Lightcurve fitting with SUGAR», Journées LSST-France, (LPSC-Grenoble, France, 8-9 June, 2016).
 18. Oral talk «Pure Supernovae and accelerating expansion of the Universe» on the OCA seminar (Côte d’Azur Observatory, Nice, France, March 2015).
 19. Oral talk «The optical identification of the *Fermi* GBM GRB 140801A as an event with poorly defined location», Conference «Physics of the Cosmos» (Kourovka Astronomical Observatory, Ural, Russia, February 2015).
 20. On-line oral talk «Scenario Machine: Fast Radio Bursts, short GRBs and LIGO silence» on the Seminar of a working science group of the LIGO Scientific Collaboration (Texas, USA, 31 October 2014).
 21. Oral talk «Scenario Machine: fast radio bursts, short gamma-ray bursts and LIGO silence», Ioffe Workshop on GRBs and other transient sources: 20 Years of Konus-Wind Experiment (Ioffe Institute, St.Petersburg, Russia, 2014).
 22. Poster «Fast radio bursts, kilonovae and MASTER synoptic survey», CAASTRO Annual Scientific Conference SUPERNOVAE IN THE LOCAL UNIVERSE: CELEBRATING 10,000 DAYS OF SUPERNOVA 1987A (Coffs Harbour, New South Wales, Australia, 2014).
 23. Oral talk «Scenario Machine: Fast Radio Bursts, Short GRB, Dark Energy and LIGO silence», The 40th COSPAR Scientific Assembly (Moscow, Russia, 2014).
 24. Oral talk «Polarization observations with MASTER Global robotic Net», Conference «Physics of the Cosmos» (Kourovka Astronomical Observatory, Ural, Russia, 2014).
 25. Oral talk «Cosmological fast radio bursts and neutron stars mergers», Scientific session of National Research Nuclear University MEPhI (MEPhI, Moscow, Russia, 2014).
 26. Oral talk «Polarization observations with the MASTER Global Robotic Net», 2nd Extreme Universe Laboratory Workshop on Gamma-Ray «Gamma Ray Bursts, New Missions to New Science» (Skobeltsyn Institute, Lomonosov MSU, Moscow, Russia, 2013).
 27. Poster «Type Ia Supernovae», Conference «Young scientists of Russia» («Dynasty» Foundation, Moscow, Russia, 2013).
 28. Oral talk «Pure supernovae Ia and dark energy», International Workshop MASTER Global

- Robotic Net (SAI MSU, Moscow, Russia, 2012).
29. Oral talk «Pure supernovae Ia and dark energy», International School Astrophysics (Teramo, Italy, 2012).
 30. Oral talk «Unique bright supernova in NGC 2857», Ya. B. Zeldovich All-Moscow Seminar of Astrophysicists (SAI MSU, Moscow, Russia, 2012).
 31. Oral talk «Pure Supernovae and Accelerated Expansion of the Universe», Ya. B. Zeldovich All-Moscow Seminar of Astrophysicists (SAI MSU, Moscow, Russia, 2011).
 32. Participation in school «Observational and theoretical cosmology» (Nizhny Arhiz, Caucasus, Russia, 2011).
 33. Oral talk «Pure Supernovae and dark energy», XVIII International Conference of students, PhD students and young scientists «Lomonosov» (Lomonosov MSU, Moscow, Russia, 2011).
 34. Oral talk «Pure Supernovae and Accelerated Expansion of the Universe», Conference «High Energy Astrophysics-2011» (IKI RAS, Moscow, Russia, 2011).
 35. Oral talk «Pure Supernovae and Accelerated Expansion of the Universe», Conference of Young Scientists of CIS Countries «Fifty years of Cosmic Era: Real and Virtual Studies of the Sky» (Yerevan, Armenia, 2011).
 36. Oral talk «Pure supernovae Ia and dark energy», IAU Symposium 281 «Binary Paths to type Ia Supernovae explosions» (Padova, Italy, 2011).

INTERESTS AND ACTIVITIES

Reading, History

Pottery, Painting, Hiking

LIST OF PAPERS IN REFEREED JOURNALS

1. **Pruzhinskaya M.V.**, Novinskaya A.K., Pauna N., Rosnet P., «The dependency of Type Ia Supernovae SALT2 light curve parameters on host galaxy morphology», *MNRAS*, Volume 499, Issue 4, 5121–5135, 2020, [DOI](#)
2. Balakina Elena A., **Pruzhinskaya Maria V.**, Moskvitin Alexander S., et al., «Optical and spectral observations and hydrodynamic modelling of Type IIb Supernova 2017gpn», accepted in *MNRAS*, 2020, [DOI](#)
3. **Pruzhinskaya M.V.**, Chernin A.D., Karachentsev I.D., «Local dark energy in the Sculptor Filament of galaxies», *Astrophys Space Sci* 365, 120, 2020, [DOI](#)
4. Lutykh A.V., **Pruzhinskaya M.V.**, Blinnikov S.I., «Light curves of SNe Ia», accepted in *Pis'ma v Astronomicheskii Zhurnal (Astronomy Letters)*, 2021
5. P-F Léget, E. Gangler, F. Mondon, ..., **Pruzhinskaya M.V.**, et al., «SUGAR: An improved empirical model of Type Ia Supernovae based on spectral features», *Astronomy and Astrophysics*, 636, A46, 2020, [DOI](#)
6. **Pruzhinskaya M.V.**, Malanchev K.L., Kornilov M.V., et al., «Anomaly Detection in the Open Supernova Catalog», *MNRAS*, Volume 489, Issue 3, 3591-3608, 2019, [DOI](#)
7. P-F Léget, **Pruzhinskaya M.V.**, Ciulli A., et al., «Correcting for peculiar velocities of Type Ia supernovae in clusters of galaxies», *Astronomy and Astrophysics*, 615, 162, 2018, [DOI](#)
8. Volnova A.A., **Pruzhinskaya M. V.**, Pozanenko A.S., Blinnikov S.I., et al., «Multicolour modelling of SN 2013dx associated with GRB 130702A», *MNRAS*, 467 (3), 3500-3512, 2017, [DOI](#)
9. Henne V., **Pruzhinskaya M. V.**, Rosnet, P., et al., «The influence of host galaxy morphology on the properties of Type Ia supernovae from the JLA compilation», *New Astronomy*, 51, 43-50, 2017, [DOI](#)
10. Moriya T. J., **Pruzhinskaya M. V.**, Ergon M., Blinnikov S. I., «On the nature of rapidly fading Type II supernovae», *MNRAS*, vol. 455, 423, 2016, [DOI](#)
11. Lipunov V.M., Gorosabel J., **Pruzhinskaya M. V.**, et al., «The optical identification of events with poorly defined locations: the case of the Fermi GBM GRB 140801A», *MNRAS*, vol. 455, 712, 2016, [DOI](#)
12. Lipunov V. M., **Pruzhinskaya M. V.**, «Scenario Machine: Fast Radio Bursts, Short GRB, Dark Energy and LIGO silence», *MNRAS*, vol. 440, 1193-1199, 2014, [DOI](#)
13. **Pruzhinskaya M. V.**, Krushinsky V. V., Lipunova G. V., et al., «Optical polarization observations with the MASTER robotic net», *New Astronomy*, 29, 65-74, 2014, [DOI](#)
14. Lipunov V. M., Panchenko I. E., **Pruzhinskaya M. V.**, «The mechanism of Supernova Ia explosion in elliptical galaxies», *New Astronomy*, 16, 250-252, 2011, [DOI](#)
15. **Pruzhinskaya M.V.**, Gorbovskoy E.S., Lipunov V.M., «Pure» supernovae and accelerated expansion of the Universe», *Pis'ma v Astronomicheskii Zhurnal (Astronomy Letters)*, 37, N9, 1-7, 2011, [DOI](#)
16. Tsvetkov D. Yu., Balanutsa P. V., ..., **Pruzhinskaya M. V.**, et al., «Photometric observations of SN 2009nr», *Pis'ma v Astronomicheskii Zhurnal (Astronomy Letters)*, 37, N11, 837-845, 2011, [DOI](#)
17. Gorbovskoy E. S., Lipunov V. M., Kornilov V. G., ..., **Pruzhinskaya M. V.**, et al., «The MASTER-II network of robotic optical telescopes. First results», *Astronomicheskii Zhurnal (Astronomy Reports)*, 90, N4, 267-321, 2013, [DOI](#)

OTHERS

1. K. L. Malanchev, **M. V. Pruzhinskaya**, V. S. Korolev, et al., «Anomaly detection in the Zwicky Transient Facility DR3», [arXiv:2012.01419](#).
2. Emille E. O. Ishida, Matwey V. Kornilov, Konstantin L. Malanchev, **Maria V. Pruzhinskaya**, et al., «Active Anomaly Detection for time-domain discoveries», [arXiv:1909.13260](#), under review in *A&A*.
3. **Pruzhinskaya M.V.**, Lisakov S.M., «How supernovae became the basis of observational cosmology», *Journal of Astronomical History and Heritage*, 19(2), 203-215, 2016.
4. **Pruzhinskaya M.V.**, «Sverhyarkaya sverhnovaya - ASASSN-15lh», *Priroda, Izd. Nauka (Moskva)*, 3, 48-50, 2016.
5. **Pruzhinskaya M.V.**, Lisakov S.M., «Kak sverhnovye stali osnovoy nablyudatel'noy kosmologii», *Priroda, Izd. Nauka (Moskva)*, 12, 36-43, 2015.

1. **M. Pruzhinskaya**, A. Novinskaya, P. Rosnet, N. Pauna «Influence of host galaxy morphology on the properties of Type Ia supernovae from JLA and Pantheon compilations», Proceedings of Science, Multifrequency Behaviour of High Energy Cosmic Sources Workshop-XIII (MULTIF2019), Palermo, Italy, 362, 2020, [DOI](#)
2. Konstantin Malanchev, Vladimir Korolev, Matwey Kornilov, ..., **Maria Pruzhinskaya**, et al., «Realization of Different Techniques for Anomaly Detection in Astronomical Databases», In: Elizarov A., Novikov B., Stupnikov S. (eds) Data Analytics and Management in Data Intensive Domains. DAMDID/RCDL 2019. Communications in Computer and Information Science, vol 1223. Springer, Cham, 2020, [DOI](#)
3. **Pruzhinskaya M.**, Malanchev K.L., Kornilov M., et al., «Machine Learning Analysis of Supernova Light Curves», Proceedings of Science, Accretion Processes in Cosmic Sources – II (APCS2018) - Accretion onto White Dwarfs, Neutron Stars & Black Holes, Saint-Petersburg, Russia, 342, 2020, [DOI](#)
4. **Pruzhinskaya M.**, Leget P.F. «Influence of Type Ia Supernova Environment and Their Peculiar Velocities on Distance measurements», Proceedings of Science, Accretion Processes in Cosmic Sources – II (APCS2018) - Accretion onto White Dwarfs, Neutron Stars & Black Holes, Saint-Petersburg, Russia, 342, 2020, [DOI](#)
5. Malanchev K., Volnova A., Kornilov M., **Pruzhinskaya M.**, et al., «Use of Machine Learning for Anomaly Detection Problem in Large Astronomical Databases», [Proceedings of the XXI International Conference DAMDID / RCDL'2019, CEUR Workshop Proceedings](#), Vol-2523, Pages 205-216, 2019.
6. Balakina Elena, **Maria Pruzhinskaya**, Moskvitin Alexander, Blinnikov Sergey «Optical photometry and preliminary modeling of Type IIB Supernova 2017gpn», in Proceedings of the International Conference «The multi-messenger astronomy: gamma-ray bursts, search for electromagnetic counterparts to neutrino events and gravitational waves», Publishing house SNEG Pyatigorsk, pp. 32-36, 2019, [DOI](#)
7. Kornilov M.V., **Pruzhinskaya M.V.**, Malanchev K.L., et al., «Machine learning techniques for analysis of photometric data from the Open Supernova catalog», in Proceedings of the International Conference «The multi-messenger astronomy: gamma-ray bursts, search for electromagnetic counterparts to neutrino events and gravitational waves», Publishing house SNEG Pyatigorsk, pp. 100-110, 2019, [DOI](#)
8. **Pruzhinskaya M.**, Leget P.F. «Supernovae — a tool for observational cosmology», Proceedings of Science, XII Multifrequency Behaviour of High Energy Cosmic Sources Workshop Palermo, Italy, 306, 2017, [DOI](#)
9. Volnova A. A., **Pruzhinskaya M. V.**, Pozanenko A. S., et al., «Numerical Simulation of SN 2013dx / GRB 130702A», Stars: From Collapse to Collapse, Proceedings of a conference held at Special Astrophysical Observatory, Nizhny Arkhyz, Russia 3-7 October 2016, San Francisco: Astronomical Society of the Pacific, p.447, 2017.
10. **Pruzhinskaya, Maria**, Lipunov, Vladimir, 40th COSPAR Scientific Assembly. Held 2-10 August 2014, in Moscow, Russia, Abstract E1.17-28-14, «Scenario Machine: Fast Radio Bursts, Short GRB, Dark Energy and LIGO silence», 2014.
11. **Pruzhinskaya M. V.**, Krushinski V. V., Lipunova G. V., et al., «Polarization observations with the MASTER Global Robotic Net», Abstracts of the Workshop «Gamma-Ray Bursts: New Missions to New Science», Extreme Universe Laboratory Skobeltsyn Institute of Nuclear Physics Lomonosov MSU, Moscow, p. 18-24, 2013.
12. **Pruzhinskaya M. V.**, Gorbovskoy E. S., Lipunov V. M., «Pure Supernovae and Dark Energy», Binary Paths to Type Ia Supernovae Explosions, Proceedings of the International Astronomical Union, IAU Symposium, Volume 281, 2011, p. 17-20, CAMBRIDGE UNIVERSITY PRESS (CUP), 2013, [DOI](#)
13. **Pruzhinskaya M. V.**, Gorbovskoy E. S., Lipunov V. M., «Pure» Supernovae and Accelerated Expansion of the Universe» «Fifty years of Cosmic Era: Real and Virtual Studies of the Sky», Proceedings of the Conference of Young Scientists of CIS Countries, held 21-25 Nov 2011, in Yerevan, Armenia. Editors: A.M. Mickaelian, O.Yu. Malkov, N.N. Samus. Yerevan: National Academy of Sciences of the Republic of Armenia (NAS RA), p. 209-209, 2012.
14. **Pruzhinskaya M.V.**, «Supernovae Ia and cosmic energy of vacuum», Proceedings in «Lomonosov-2011», section «Physics», volume 1, Faculty of Physics MSU, Moscow, pages 25-27, 2011.

LIST OF PAPERS IN NON-REFEREED JOURNALS

1. Patrick D. Aleo, Emille E. O. Ishida, ..., **Maria Pruzhinskaya**, et al., «The Most Interesting Anomalies Discovered in ZTF DR3 from the SNAD-III Workshop», Res. Notes AAS, Vol. 4, №7, 2020, [DOI](#)
2. G. Aldering, P. Antilogus, ..., **Maria Pruzhinskaya**, et al., «The SNEMO and SUGAR Companion Data Sets», Res. Notes of the AAS, Vol. 4, №5, 2020, [DOI](#)
3. **Maria Pruzhinskaya**, Elena Balakina, Alexander Moskvitin, «Photometry and preliminary modelling of Type IIb Supernova 2017gpn», Res. Notes of the AAS, Vol. 2, №4, 2018, [DOI](#)

Telegrams:

Electronic publications in ATel (The Astronomer's telegram, <http://www.astronomerstelegam.org/>) and GCN (Gamma-ray Coordinates Network, http://gcn.gsfc.nasa.gov/gcn3_archive.html)

1. Gress, O.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Balanutsa, P.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6976 «MASTER-SAAO Detection of an Optical Transient with the Fast Variability».
2. Balanutsa, P.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6967 «MASTER Detection of Two Cataclysmic Variables in One Image».
3. Gress, O.; Balanutsa, P.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6966 «Two Cataclysmic Variables discovered by MASTER».
4. Shumkov, V.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6951 «Photometry of the MASTER OT J004207.99+405501.1 = M31N 2015-01a Bright Nova in Andromeda Galaxy».
5. Balanutsa, P.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6946 «Very Bright OT detected by MASTER».
6. Gress, O.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6931 «New CV detected by MASTER-SAAO».
7. Shumkov, V.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Denisenko, D.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6927 «OT detected by MASTER-SAAO during Inspection Two Fermi GRB».
8. Balanutsa, P.; Lipunov, V.; Denisenko, D.; Gorbovskoy, E.; Tiurina, N.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6918 «Unusual Flaring Object in Taurus detected by MASTER».
9. Shumkov, V.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Balanutsa, P.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6911 «Possible Nova in Andromeda detected by MASTER».
10. Vladimirov, V.; Zubareva, A.; Lipunov, V.; Gorbovskoy, E.; Tiurina, N.; Balanutsa, P.; Kuznetsov, A.; **Pruzhinskaya, M.**, et al., 2015, The Astronomer's Telegram 6910 «Blue MASTER OT J020844.29+481923.0 Detection».
11. Balanutsa, P.; Denisenko, D.; Lipunov, V.; Gorbovskoy, E.; **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6799 «MASTER Discovery of a Possible Supernova in PGC 1397065».
12. Shumkov, V.; Denisenko, D.; Lipunov, V.; Gorbovskoy, E.; **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6745 «MASTER Detection of New Flare of QSO NVSS J075043+790917 During the Fermi GRB Error Box Inspection».
13. Balanutsa, P.; Shumkov, V.; Denisenko, D.; Lipunov, V.; Gorbovskoy, E.; **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6693 «Flare Star and New Cataclysmic Variable discovered by MASTER».
14. Shumkov, V.; Denisenko, D.; Lipunov, V.; Gorbovskoy, E.; **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6687 «Possible Supernova in Six-degree Field discovered by MASTER».
15. Tiurina, N., **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6632 «The OT discovery during FERMI LAT GRB141028A observations».
16. Shumkov, V., Denisenko, D., Lipunov, V., Tiurina, N., Balanutsa, P., Gorbovskoy, E., Kornilov, V., **Pruzhinskaya, M.**, et al., 2014, The Astronomer's Telegram 6544 «Optical Flare from Pan-STARS PSN PS1-13eet detected by MASTER».

17. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17487 «GRB 150222A: MASTER early optical observations».
18. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17456 «GRB 150212A: MASTER optical observations».
19. Gres, O., Ivanov, K., Yazev, S., Budnev, N. M., Chuvalaev, O., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17446 «GRB 150210A: MASTER SN detection during LAT error box inspection».
20. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17433 «GRB 150211A: MASTER early optical observations».
21. Gorbovskoy, E., Lipunov, V., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17299 «GRB 150110A: MASTER inspection».
22. Buckley, D., Potter, S., Kniazev, A., Kotze, M., Gorbovskoy, E., Lipunov, V., Tyurina, N., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2015, GRB Coordinates Network 17279 «GRB 150103A: MASTER optical observations».
23. Gorbovskoy, E., Lipunov, V., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17259 «GRB 141229A: Deep MASTER inspection».
24. Buckley, D., Potter, S., Kniazev, A., Kotze, M., Gorbovskoy, E., Lipunov, V., Tyurina, N., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17245 «GRB 141225A: MASTER-SAAO OT light curve».
25. Buckley, D., Potter, S., Kniazev, A., Kotze, M., Gorbovskoy, E., Lipunov, V., Tyurina, N., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17237 «GRB 141225A: MASTER-SAAO first OT detection».
26. Buckley, D., Potter, S., Kniazev, A., Gorbovskoy, E., Lipunov, V., Balanutsa, P., Denisenko, D., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17224 «GRB 141222A: First MASTER-SAAO optical observation».
27. Gres, O., Ivanov, K., Yazev, S., Budnev, N. M., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., Denisenko, D., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17162 «GRB 141212A: MASTER early optical observations».
28. Vladimirov, V., Gorbovskoy, E., Denisenko, D., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17154 «GRB141208.63: MASTER OT Detection During the Fermi Error Box inspection».
29. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Shumkov, V., Gorbovskoy, E., Denisenko, D., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 17095 «GRB141124A: MASTER Detection of New Flare of QSO NVSS J075043+790917 During the Fermi Error Box inspection».
30. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16999 «GRB 141031B: MASTER early optical observations».
31. Gorbovskoy, E., Lipunov, V., Tyurina, N., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16972 «GRB 141028A: MASTER OT candidate detection».
32. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16958 «GRB 141026A: MASTER early optical observations».
33. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16957 «GRB 141026A: MASTER early optical observations».
34. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16875 «GRB 140930B: MASTER early possible OT detection».
35. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16871 «GRB 140930A/MAXI J2259+524: MASTER optical observations».
36. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16858 «GRB 140930B: MASTER early optical observations».
37. Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16806 «GRB 140907A: MASTER optical observations».
38. Tyurina, N., Gorbovskoy, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16745 «Fermi TRIGGER NUM 430645968: MASTER OT inside error box».
39. Tyurina, N., Lipunov, V., Gorbovskoy, E., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16741 «Fermi TRIGGER NUM 430583595: MASTER OT 20 hours later».
40. Tyurina, N., Lipunov, V., Gorbovskoy, E., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16740 «Fermi TRIGGER NUM 430583595: MASTER OT JR011101.13+603337.5 detection».

41. Lipunov, V., Gorbovskey, E., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16720 «Fermi trigg num 430148973: bright OT inside large error box».
42. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16552 «GRB 140709B: MASTER optical observation».
43. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16507 «GRB 140629A: MASTER optical observations».
44. Gorbovskey, E., Krushinski, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16500 «GRB 140629A: MASTER-Net preliminary light curve».
45. Yurkov, V., Sergienko, Yu., Varda, D., Sinyakov, E., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16478 «GRB 140629A: MASTER OT detection».
46. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16381 «GRB 140610A: MASTER optical observations».
47. Vladimirov, V., Balanutsa, P., Gorbovskey, E., Lipunov, V., ..., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16312 «GRB 140521A: MASTER optical observations».
48. Yurkov, V., Sergienko, Yu., Varda, D., Sinyakov, E., Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16074 «GRB 140402A: MASTER optical observations».
49. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16043 «GRB 140320D: MASTER optical observations».
50. Yurkov, V., Sergienko, Y., Varda, D., Sinyakov, E., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 16009 «GRB 140320C: MASTER optical observations».
51. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15983 «GRB 140311C: MASTER optical observations».
52. Yurkov, V., Sergienko, Yu., Varda, D., Sinyakov, E., Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15981 «GRB 140311C: MASTER before, during and after trigger optical observations».
53. Ivanov, K., Yazev, S., Budnev, N. M., Gres, O., Chuvalaev, O., Poleshchuk, V. A., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15960 «GRB 140311B: final MASTER OT light curve».
54. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15948 «GRB 140311B: MASTER OT light curve (fwd)».
55. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15946 «GRB 140311A: MASTER early optical observations».
56. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15932 «GRB 140304A: MASTER OT light curve».
57. Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2014, GRB Coordinates Network 15914 «GRB 140304A: MASTER OT detection».
58. Lipunov, V., **Pruzhinskaya, M.**, Gorbovskey, E., et al., 2014, GRB Coordinates Network 15881 «GRB 140219A: the confirmation of the brightening SDSS J102406.41+062937.6 star».
59. Lipunov, V., **Pruzhinskaya, M.**, Gorbovskey, E., et al., 2014, GRB Coordinates Network 15879 «GRB 140219A: MASTER optical brightening inside XRT-5 error box detection».
60. Denisenko, D., **Pruzhinskaya, M.**, Lipunov, V., et al., 2013, The Astronomer's Telegram 5600 «Possible pure SN Ia near PGC 60984 detected by MASTER».
61. Grigoreva, E., Krushinsky, V., **Pruzhinskaya, M.**, et al., 2013, The Astronomer's Telegram 5588 «MASTER polarization measurements of the quasar CGRaBSJ0211+1051».
62. Balanutsa, P., Denisenko, D., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2013, The Astronomer's Telegram 5555 «The bright OT discovered in Andromeda direction».
63. Yecheistov, V., Balanutsa, P., Denisenko, D., Gorbovskey, E., Lipunov, V., **Pruzhinskaya, M.**, et al., 2013, The Astronomer's Telegram 5536 «Two OTs and Possible Supernova discovered by MASTER».

64. Lehmann, G., Knoefel, A., Balanutsa, P., Lipunov, V., Shurpakov, S., Tiurina, N., Gorbovskoy, E., Parkhomenko, A., Tlatov, A., Dormidontov, D., Senik, V., Shumkov, V., Denisenko, D., **Pruzhinskaya, M.**, et al., 2013, Minor Planet Electronic Circulars, 2013MPEC....S...74L «2013 SW24».
65. Balanutsa, P., **Pruzhinskaya, M.**, Denisenko, D., et al., 2013, The Astronomer's Telegram 5432 «MASTER detection of Near-Earth Object 9 hours before the very close fly-by».
66. Balanutsa, P., **Pruzhinskaya, M.**, Lipunov, V., et al., 2013, The Astronomer's Telegram 4702 «Pure PSN type Ia near PGC1483058 detected by MASTER».
67. **Pruzhinskaya, M.**, Denisenko, D., Gorbovskoy, et al., 2013, GRB Coordinates Network 14770 «GRB 130603B: MASTER-net early observations and optical slope limit».
68. **Pruzhinskaya, M.**, Lipunov, V., Balanutsa, P., et al., 2012, The Astronomer's Telegram 3875 «Eight MASTER OT's detection».
69. **Pruzhinskaya M.**, et al., 2012, The Astronomer's Telegram 4489, «Follow up B,V,R,I photometry bright SN 2012fg in NGC 2857 discovered by MASTER».
70. Gareeva, D., Lipunov, V., Gorbovskoy, E.,..., **Pruzhinskaya, M.**, et al., 2011, The Astronomer's Telegram 3823 «Short Bright MASTER OT114444.53 +323011.3 detection and 6-m telescope follow up deep image».