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Personal

Born on October 14, 1985 in Kiev

Citizen of Ukraine.

Education

2002 - 2007 M.Sc. Particle and nuclear physics, Kiev Taras Schevchenko National University, including advanced courses and schools in theoretical, particle and astroparticle physics at Bogolyubov Institute for theoretical physics (Kiev) and Joint Institute for Nuclear Research (Dubna, Russia).
Took active part in establishment of a Swiss-Ukrainian virtual observatory project. In the frame of this project started research in astroparticle physics.

2008 - 2012 Ph.D. *mention astronomie et astrophysique*, University of Geneva. Thesis "Gamma-ray bursts" focused on observational and theoretical aspects of this puzzling astrophysical phenomenon. Research touched a variety of other topics: pulsars, dark matter, object classification. Took part in INTEGRAL spacecraft operations. Worked on improving of data reduction accuracy and on modelling instrument response to high energy particles. Created web service for rapid distribution of improved scientific data.

Employment

2006 - 2008 Engineer, Bogolyubov Institute for theoretical physics, Kiev, Ukraine. Actively involved in creation of ukrainian national Grid infrastructure, ukrainian contribution to the growing needs of high-energy physics experiments. Explored possibilities of Grid for astrophysical applications. At the same time worked on supporting and developing computing resources of Swiss-Ukrainian virtual observatory project.

2012 Post-doctoral researcher at ISDC data centre for astrophysics, Observatory of Geneva, Switzerland. In a brief several months between finishing PhD and starting post-doctoral position in Paris continued research started during PhD, stayed involved in INTEGRAL operations.

2013 - 2016 Post-doctoral researcher, INTEGRAL/ISGRI instrument team member, François Arago Centre, APC, Université Paris Diderot. Currently primarily responsible for modelling response of hard X-ray detector ISGRI and improving energy reconstruction. Made a major improvement solving long-standing problem of insufficient accuracy of energy calibration. Actively using french Grid infrastructures for instrument calibration Monte-Carlo simulations as well as for Monte-Carlo simulations of particle propagation in the astrophysical fields. Exploring usability of french cloud infrastructures for deploying flexible analysis frameworks and software preservation (StratusLab, OpenStack at IN2P3 CC-Lyon).
Involved in multimessegner studies, in particular playing leading role in INTEGRAL follow-up of gravitational wave events.

2017 - now Post-doctoral researcher at ISDC, Departement of Astronomy, University of Geneva. Responsible for INTEGRAL in-flight calibration at ISDC. Leading the multimessenger follow-up activities with INTEGRAL.

Experience

Languages

Ukrainian, Russian	native
English	professional proficiency
French	intermediate

Student supervision

In 2015 I co-supervised an M1 student, Michele Tsirou.
In 2016 I co-supervised an M2 student, Anna de Marco.

Meeting organization

In 2012-2014 I lead an effort to bootstrap a group of researchers from Paris region interested in the GRB science. As part of the process I organized regular meetings.

In 2014 the GRB Paris group organized a large workshop "Gamma-Ray Bursts in the Multi-messenger Era"[1].

In December 2015 I lead organization of "Distributed Computing in Astrophysics" workshop at APC/FACe"[2].

Computing

C++, Python	routinely and extensively used in research and software development.
C, FORTRAN, IDL	considerable experience in reusing, debugging, updating existing software.
Ruby, Java	basic experience
ROOT	extensively used dueting the PhD studies for data-intensive analysis
GEANT3	used in the instrument calibration activities
GEANT4	followed "Formation de Geant4" at LAL in May 2014
HEAsoft, Xspec and many specialised astrophysical instrument software packages	closely familiar, making updates for personal use
Grid (gLite, ARC, DIRAC)	used extensively for particle propagation simulations, cosmological parameter space sampling (CosmoMC)
Cloud technologies StratusLab, OpenStack at CC-Lyon	using for scientific software preservation and rapid deployment of data analysis infrastructure
Web service development	developed several service for distributing scientific data.
Linux administration	in 2006-2008 was responsible for operation of servers for scientific projects.

Publications

Journal Articles

1. INTEGRAL Detection of the First Prompt Gamma-Ray Signal Coincident with the Gravitational-wave Event GW170817

[1] https://indico.in2p3.fr/event/9603/
[2] http://www.apc.univ-paris7.fr/FACe/content/distributed-computing-astrophysics

Savchenko, V.; Ferrigno, C.; Kuulkers, E.; Bazzano, A.; Bozzo, E.; Brandt, S.; Chenevez, J.; Courvoisier, T. J.-L.; Diehl, R.; Domingo, A.; Hanlon, L.; Jourdain, E.; von Kienlin, A.; Laurent, P.; Lebrun, F.; Lutovinov, A.; Martin-Carrillo, A.; Mereghetti, S.; Natalucci, L.; Rodi, J.; Roques, J.-P.; Sunyaev, R.; Ubertini, P., 2017, ApJ 848L, 15S

2. Gravitational Waves and Gamma-rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A
LIGO Scientific Collaboration, Virgo Collaboration, Fermi Gamma-Ray Burst Monitor, INTEGRAL, 2017, ApJ, 848L, 13A

3. INTEGRAL observations of GW170104
Savchenko, V.; Ferrigno, C.; Mereghetti, S.; Natalucci, L.; Bazzano, A.; Bozzo, E.; Brandt, S.; Courvoisier, T. J.-L.; Diehl, R.; Hanlon, L.; von Kienlin, A.; Kuulkers, E.; Laurent, P.; Lebrun, F.; Roques, J. P.; Ubertini, P.; Weidenspointner, G., 2017, ApJ, 846L, 2S

4. INTEGRAL IBIS, SPI, and JEM-X observations of LVT151012
Savchenko, V.; Ferrigno, C.; Mereghetti, S.; Natalucci, L.; Bazzano, A.; Bozzo, E.; Brandt, S.; Courvoisier, T. J.-L.; Diehl, R.; Hanlon, L.; von Kienlin, A.; Kuulkers, E.; Laurent, P.; Lebrun, F.; Roques, J. P.; Ubertini, P.; Weidenspointner, G., 2017, A&A, 603A, 46S

5. On the GBM event seen 0.4 sec after GW 150914
J. Greiner, J.M. Burgess, **V. Savchenko**, H.-F. Yu, 2016, ApJ, 827L, 38G

6. Localization and broadband follow-up of the gravitational-wave transient GW150914
Abbot et al 2016, 2016ApJ, 826L, 13A

7. INTEGRAL Upper Limits on Gamma-Ray Emission Associated with the Gravitational Wave Event GW150914
Savchenko, V.; Ferrigno, C.; Mereghetti, S.; Natalucci, L.; Bazzano, A.; Bozzo, E.; Brandt, S.; Courvoisier, T. J.-L.; Diehl, R.; Hanlon, L.; von Kienlin, A.; Kuulkers, E.; Laurent, P.; Lebrun, F.; Roques, J. P.; Ubertini, P.; Weidenspointner, G., 2016, ApJ, 820L, 36S

8. Correlated optical, X-ray, and gamma-ray flaring activity seen with INTEGRAL during the 2015 outburst of V404 Cygni
Rodriguez, J.; Cadolle Bel, M.; Alfonso-Garzón, J.; Siegert, T.; Zhang, X.-L.; Grinberg, V.;**Savchenko, V.**; Tomsick, J. A.; Chenevez, J.; Clavel, M.; Corbel, S.; Diehl, R.; Domingo, A.; Gouiffès, C.; Greiner, J.; Krause, M. G. H.; Laurent, P.; Loh, A.; Markoff, S.; Mas-Hesse, J. M.; Miller-Jones, J. C. A.; Russell, D. M.; Wilms, J. 2015, A&A, 581L, 9R

9. Imprint of a 2 Myr old source on the cosmic ray anisotropy
Savchenko, V.; Kachelriess, M.; Semikoz, D. V., 2015, ApJL, 809L, 23S

10. A Missing-link in the Supernova–GRB Connection: The Case of SN 2012ap
Chakraborti, Sayan; Soderberg, Alicia; Chomiuk, Laura; Kamble, Atish; Yadav, Naveen; Ray, Alak; Hurley, Kevin; Margutti, Raffaella; Milisavljevic, Dan; Bietenholz, Michael; Brunthaler, Andreas; Pignata, Giuliano; Pian, Elena; Mazzali, Paolo; Fransson, Claes; Bartel, Norbert; Hamuy, Mario; Levesque, Emily; MacFadyen, Andrew; Dittmann, Jason; Krauss, Miriam; Briggs, M. S.; Connaughton, V.; Yamaoka, K.; Takahashi, T.; Ohno, M.; Fukazawa, Y.; Tashiro, M.; Terada, Y.; Murakami, T.; Goldsten, J.; Barthelmy, S.; Gehrels, N.; Cummings, J.; Krimm, H.; Palmer, D.; Golenetskii, S.; Aptekar, R.; Frederiks, D.; Svinkin, D.; Cline, T.; Mitrofanov, I. G.; Golovin, D.; Litvak, M. L.; Sanin, A. B.; Boynton, W.; Fellows, C.; Harshman, K.; Enos, H.; von Kienlin, A.; Rau, A.; Zhang, X.; **Savchenko, V.**, 2015 ApJ, 805, 187C

11. GRB 130925A: an ultra-long Gamma Ray Burst with a dust-echo afterglow, and implications for the origin of the ultra-long GRBs
Evans, P. A.; Willingale, R.; Osborne, J. P.; O'Brien, P. T.; Tanvir, N. R.; Frederiks, D. D.; Pal'shin, V. D.; Svinkin, D. S.; Lien, A.; Cummings, J.; Xiong, S.; Zhang, B.-B.; Gotz, D.; **Savchenko, V.**; Negoro, H.; Nakahira, S.; Suzuki, K.; Wiersema, K.; Starling, R. L. C.; Castro-Tirado, A. J.; Beardmore, A. P.; Sanchez-Ramirez, R.; Gorosabel, J.; Jeong, S.; Kennea, J. A.; Burrows, D. N.; Gehrels, N., MNRAS, 444..250E.

12. GRB 120711A: an intense INTEGRAL burst with long-lasting soft gamma-ray emission and a powerful optical flash
Martin-Carrillo, A.; Hanlon, L.; Topinka, M.; LaCluyze, A. P.; **Savchenko, V.**; Kann, D. A.; Trotter, A. S.; Covino, S.; Kruhler, T.; Greiner, J.; McGlynn, S.; Murphy, D.; Tisdall, P.; Meehan, S.; Wade, C.; McBreen, B.; Reichart, D. E.; Fugazza, D.; Haislip, J. B.; Rossi, A.; Schady, P.; Elliott, J.; Klose, S., 2014, A&A, 567A, 84M.

13. Interplanetary Network Localizations of Konus Short Gamma-Ray Bursts
Pal'shin, V. D.; Hurley, K.; Svinkin, D. S.; Aptekar, R. L.; Golenetskii, S. V.; Frederiks, D. D.; Mazets, E. P.; Oleynik, P. P.; Ulanov, M. V.; Cline, T.; Mitrofanov, I. G.; Golovin, D. V.; Kozyrev, A. S.; Litvak, M. L.; Sanin, A. B.; Boynton, W.; Fellows, C.; Harshman, K.; Trombka, J.; McClanahan, T.; Starr, R.; Goldsten, J.; Gold, R.; Rau, A.; von Kienlin, A.; **Savchenko, V.**; Smith, D. M.; Hajdas, W.; Barthelmy, S. D.; Cummings, J.; Gehrels, N.; Krimm, H.; Palmer, D.; Yamaoka, K.; Ohno, M.; Fukazawa, Y.; Hanabata, Y.; Takahashi, T.; Tashiro, M.; Terada, Y.; Murakami, T.; Makishima, K.; Briggs, M. S.; Kippen, R. M.; Kouveliotou, C.; Meegan, C.; Fishman, G.; Connaughton, V.; Boer, M.; Guidorzi, C.; Frontera, F.; Montanari, E.; Rossi, F.; Feroci, M.; Amati, L.; Nicastro, L.; Orlandini, M.; Del Monte, E.; Costa, E.; Donnarumma, I.; Evangelista, Y.; Lapshov, I.; Lazzarotto, F.; Pacciani, L.; Rapisarda, M.; Soffitta, P.; Di Cocco, G.; Fuschino, F.; Galli, M.; Labanti, C.; Marisaldi, M.; Atteia, J.-L.; Vanderspek, R.; Ricker, G., 2013, ApJS, 207, 38

14. Timing properties of the GRBs detected by INTEGRAL/SPI-ACS
Savchenko, V; Neronov, A; Couroisier, T.J-L.; 2012, A&A, 541A, 122S

15. The catalog of variable sources detected by INTEGRAL. I. Catalog and techniques
Telezhinsky, I.; Eckert, D.; **Savchenko, V.**; Neronov, A.; Produit, N.; Courvoisier, T. J.-L., 2010, A&A, 522A, 68T

16. Gamma ray emission from magnetized relativistic GRB outflows
Neronov, A.; **Savchenko, V.**, 2010A&A, 520L, 1N

17. SGR-like flaring activity of the anomalous X-ray pulsar 1E 1547.0-5408
Savchenko, V.; Neronov, A.; Beckmann, V.; Produit, N.; Walter, R., 2010, A&A, 510A, 77S

18. INTEGRAL probes the morphology of the Crab nebula in hard X-rays/soft γ-rays
Eckert, D.; **Savchenko, V.**; Produit, N.; Ferrigno, C.,

19. Where are Swift γ-ray bursts beyond the "synchrotron deathline"?
Savchenko, V.; Neronov, A., 2009, MNRAS, 396, 935S

20. Constraints on decaying dark matter from XMM-Newton observations of M31
Boyarsky, A; Iakubovskyi, D.; Ruchayskiy, O.; **Savchenko, V.**, 2008, MNRAS, 387, 1361B

Proceedings

1. INTEGRAL upper limits on gamma-ray emission associated with the gravitational wave event GW150914,
Savchenko, V. et al, 2016, HEAD, 1511303S

2. Search for ^{44}Ti sources with INTEGRAL IBIS/ISGRI
Savchenko, V; Renaud, M; Lebrun, F., INTEGRAL Workshop October 5-9, 2015, Rome (Italy) "The New High Energy Sky after a Decade of Discoveries"

3. Absolute flux measurements with ISGRI
Savchenko, V., Lebrun, F., Laurent, P., Proceedings of the 10th INTEGRAL Workshop "A Synergistic View of the High Energy Sky", 15-19 September 2014 Annapolis, MD, USA

4. Studying Out-of-FoV gamma-ray bursts with INTEGRAL/IBIS
Savchenko, V., Lebrun, F., Laurent, P., Lin, L. Proceedings of the 10th INTEGRAL Workshop "A Synergistic View of the High Energy Sky", 15-19 September 2014 Annapolis, MD, USA

5. Timing properties of gamma-ray bursts detected by SPI-ACS detector onboard of INTEGRAL
Savchenko, V. et al, Proceedings of 9th INTEGRAL "An INTEGRAL view of the high-energy sky" 15-19 October 2012, Paris

6. Gamma ray emission from magnetized relativistic GRB outflows
Neronov, A.; **Savchenko, V.**, Proceedings of the 25th Texas Symposium on Relativistic Astrophysics. December 6-10, 2010. Heidelberg, Germany

7. Integral in Heavens
Walter, R.; Rohlfs, R.; Meharga, M. T.; Binko, P.; Morisset, N.; Beck, M.; Produit, N.; Pavan, L.; **Savchenko, V.**; Ferrigno, C.; Frankowski, A.; Bordas, P., Proceedings of the 8th INTEGRAL Workshop "The Restless Gamma-ray Universe" (INTEGRAL 2010)

8. Exceptional flaring activity of the anomalous X-ray pulsar 1E 1547.0-540
Savchenko, V.; Neronov, A.; Beckmann, V.; Produit, N.; Walter, R., Proceedings of the 8th INTEGRAL Workshop "The Restless Gamma-ray Universe" (INTEGRAL 2010)

9. Constraints on decaying Dark Matter from XMM-Newton observations of M31, Boyarsky, A.; Iakubovskyi, D.; Ruchayskiy, O.; **Savchenko, V.**, "The X-ray Universe 2008" Symposium held in Granada, Spain

Selected online publications: GCNs and ATels

1. INTEGRAL IBIS/ISGRI confirms renewed activity of V404 Cyg,
Malyshev, D.; **Savchenko, V.**; Ferrigno, C.; Bozzo, E.; Kuulkers, E.

2. Detection of bursting activity with INTEGRAL/SPI-ACS, possibly from 1E 2259+586 or SGR 1806-20; **Savchenko, V.**; Mereghetti, S.; Ferrigno, C.; Bozzo, E.; Courvoisier, T. J.-L.; Goetz, D.; Borkowski, J.; Kienlin, A. von; Rau, A.; Zhang, X.; Beckmann, V., 2012, ATel 4101

3. First hard X-ray detection of the neutron star X-ray transient SAX J1806.5-2215 with INTEGRAL
Del Santo, M.; Romano, P.; Sidoli, L.; Mereghetti, S.; Ferrigno, C.; Degenaar, N.; Wijnands, R.; Kuulkers, E.; Nucita, A.; **Savchenko, V.**, 2011, ATel 3210

4. INTEGRAL observes continued activity from AXP 1E1547.0-5408
Baldovin, C.; **Savchenko, V.**; Beckmann, V.; Neronov, A.; Goetz, D.; den Hartog, P.; Hermsen, W.; Kuiper, L.; Mereghetti, S.; Hurley, K., 2009, ATel 1908

5. AXP 1E1547.0-5408: long bursts with INTEGRAL SPI-ACS, Mereghetti, S.; Gotz, D.; von Kienlin, A.; Beckmann, V.; **Savchenko, V.**; Neronov, A.; Beck, M.; Borkowski, J., 2009, GCN 8841

6. AXP 1E1547.0-5408: INTEGRAL SPI-ACS confirms activity increase
Savchenko, V.; Beckmann, V.; Neronov, A.; Mereghetti, S.; von Kienlin, A.; Beck, M.; Borkowski, J.; Gotz, D., 2009, GCN 8837

7. GRB 080319A/B/C: INTEGRAL SPI-ACS light curves available
Beckmann, V.; Mereghetti, S.; von Kienlin, A.; Beck, M.; **Savchenko, V.**; Borkowski, J.; Gotz, D., 2008, GCN 7450

8. and over 30 IPN GCNs

Press release

The paper “INTEGRAL Upper Limits on Gamma-Ray Emission Associated with the Gravitational Wave Event GW150914” was featured in ESA press release on 30 March 2016.

`http://www.isdc.unige.ch/~savchenk/cv.pdf`