Giacomo Vianello

CONTACT

452 Lomita Mall
Stanford, CA 94305-4085
United States

E-mail: giacomov@stanford.edu
Website: giacomov.github.io
Phone: (650) 283 1205

EDUCATION

Post-doctoral Scholar — October 2012 — October 2014

Stanford University

Supervisor: Professor Peter F. Michelson, Luke Blossom Professor in the School of Humanities and Sciences and Physics Dept. Chair, Stanford University, Fermi/LAT Principal Investigator

Post-doctoral Scholar — January 2010 — October 2012

Consorzio Interuniversitario per la Fisica Spaziale (CIFS) / Stanford Linear Acceleration Center

Supervisor: Dr. Patrizia Caraveo, Director of IASF-Milano, part of the National Institute of Astrophysics (INAF), Italy

PhD in Astronomy and Astrophysics — October 2009

Universita' Degli Studi dell'Insubria, Italy

Thesis:*"Gamma-ray and X-ray observations of GRBs: the INTEGRAL/ISGRI sample and dust scattering expanding rings"*

Supervisor: Dott. Sandro Mereghetti (IASF-Milano)

Tutor: Dott. Gabriele Ghisellini (OAB-Brera)

Corso di laurea in Fisica (MS in Physics) — September 2006

Universita' Degli Studi di Milano, Italy

Thesis: "*Study of dust scattering rings around Gamma-Ray Bursts using the X-Ray satellites Swift and XMM-Newton*"

Supervisor: Dott. Sandro Mereghetti (IASF-Milano)

Internal Supervisor: Prof. Pierre Pizzochero (Università Degli Studi di Milano)

RESEARCH EXPERIENCE

Stanford University — October 2014 — Present

Research Scientist

Accomplishments and duties during my work at SLAC and at Stanford first as a PostDoc then as Research Scientist:

- Search and characterization of transients in astronomical data: designed and implemented new methods for the search of transients in optical (LSST), gamma-ray (Fermi Gamma-ray Space Telescope) and X-ray (XMM-Netwon and Chandra) data
  - doubled the number of Gamma-Ray Bursts detected by Fermi
  - found several hundreds new transients in Chandra and XMM-Netwon data
  - developed a new promising transient-finding algorithm for LSST competitive with image-subtraction, but substantially simpler to use
  - developed and implemented an innovative Bayesian method for the search of Gravitational Waves counterparts in Fermi data, used by the Fermi collaboration

- Authored several scientific papers on GRBs and electromagnetic counterparts to Gravitational Waves
- Multi-wavelength studies with Fermi and HAWC:
  - Owner and coordinator of the innovative open-source effort 3ML (the Multi-Mission Maximum Likelihood framework): https://github.com/giacomov/3ML
- Coordinator of the GRB Science Group within the Fermi collaboration (2011-2013)
- Responsible for the writing and maintenance of the attitude tracking software for the real-time data-processing pipeline for the LAT Instrument Scientific Operation Center (ISOC)
- Write scientific software as part of the official NASA software "Fermi Science Tools"

PROFESSIONAL DEVELOPMENT

- "Machine learning" by Andrew Ng, Stanford University, on Coursera
- Caltech/JPL "Big Data Analytics" online summer school, 2 weeks program, selected among many application as real-time student, with the possibility of interaction with the teachers (https://www.coursera.org/course/bigdataschool)
- "Introduction to Deep Learning on GPUs", Stanford, October 7th 2015
- "GPU Computing Symposium and Workshop", Stanford, October 25th, 2013
- "Udacity CS344: Intro to Parallel Programming" on CUDA and GPU programming (https://www.udacity.com/course/intro-to-parallel-programming--cs344)

RESEARCH INTERESTS

- Searches for transients in astronomical data: gamma-ray, x-ray, optical
- Gamma-ray Bursts (GRBs): spectral and temporal properties, population studies, modeling
- GRBs as electromagnetic counterparts to Gravitational Wave events
- Multi-wavelength and multi-messenger astrophysics
- X-rays dust scattering: dust models, X-ray halos, X-ray rings
- Astrophysics instrumentation
- Data analysis methods and software: Bayesian methods, machine learning, Maximum Likelihood, numerical methods
- Statistical methods for astrophysics

MANAGEMENT EXPERIENCE

- Coordinator of the GRB Science Group of the Fermi/LAT Collaboration (Jan. 2012 - Aug. 2013), an international group of 50 members of the Fermi collaboration working on Gamma-Ray Bursts
- Lead developer of the Multi-Mission Maximum Likelihood framework (threeml.stanford.edu), a software process for multi-wavelength modeling of astrophysical sources

AWARDS

Principal Investigator on the following approved research programs:

- "**The LAT Transient Factory: unveiling the nature of LAT GRBs and short-duration transients**", Fermi Guest Investigator Program (Cycle 10), proposal number 101237
- "**The LAT Transient Factory: the first 130 LAT GRBs and a blind search for short-duration transients**", Fermi Guest Investigator Program (Cycle 9), proposal number 91237
- "**Detecting short X-ray transients in the Chandra archive**", Chandra Science Program (Cycle 16), proposal number 16620799
- "**Detecting high-energy GRBs and probing their time-domain properties**": Fermi Guest Investigator Program (Cycle 7), proposal number 71209

MEMBERSHIPS

- Member of the Fermi Large Area Telescope collaboration (http://fermi.gsfc.nasa.gov/)
- Member of the High-Altitude Water Cerenkov telescope (http://www.hawc-observatory.org/)
- Member of the Transients and Variable Stars Science Collaboration within the LSST collaboration
- Member of the EXtraS project for the analysis of archival XMM-Newton data (http://www.extras-fp7.eu/)
- Leader and member of the Multi-Mission Maximum Likelihood framework team

(threeml.stanford.edu)

- Member of the Scientific Committee of the "International Center for Astronomical and Remote-sensing Observations" (ICARO): http://www.iusspavia.it/eng/centri.php?id=31&sez=5#.VlN1JLerRhE

REFEREE SERVICES AND COMMITTEE WORK

- I perform referee services for Nature Physics, the Astrophysical Journal, and Astronomy and Astrophysics
- I served in review panels for the Czech Science Foundation and the South African National Science Foundation
- Organizer and chair of the session "Understanding Gamma-Ray Bursts Emission Mechanism in the Fermi Era" at the 13th Divisional Meeting of the High-Energy Astrophysics Division of the American Astronomical Society, 7-11 Apr. 2013, Monterey, CA (US)
- Member of the LOC for the Fermi/HAWC/VERITAS and Fermi/VIRGO/LIGO workshops cycles

TEACHING EXPERIENCE AND MENTORING

- Teaching Assistant for the Lab. "Programming Languages 1", 2001-2004, Universita' Degli Studi di Milano, Italy:
  - in the first year I conducted hands-on exercises, in the 2nd and 3rd year I designed and led hands-on exercises
- Teacher at the 2016 Fermi Summer School, (Lewes, Delaware, Tuesday, May 31 - Friday, June 10, 2016): basic of Maximum Likelihood analysis, searches and studies of Gamma-Ray Bursts with Fermi/LAT
- Teacher for a 2-weeks-long refresher class for Freshmen in college on general topics in logic and math, 2001-2005, Universita' Degli Studi di Milano, Italy: I designed and taught the class along with other students
- Teacher of refresher courses for high-school teachers in Italy, on the subject "The scientific method: theory and application in teaching physics and mathematics", Milan area, 2005-2009
- Mentor for the Science Undergraduate Laboratory Internship Program (SULI), Summer 2015, 2016 and 2017:
  - I mentored 4 undergraduate students on technical projects regarding gamma-ray, x-ray and optical astronomy, focusing on the search and characterization of transients

SKILLS

- Statistical methods for astrophysics, expert
- Programming (Python, C++, C, IDL, R) and parallel programming (in Python, C++ and CUDA for GPU), expert (http://github.com/giacomov)
- Distributed computing (LSF, Torque, ipyparallel), expert
- MySQL and MongoDB: expert
- Data mining and data exploration, expert
- Modern tools for software design and deployment (github, continuous integration, test-driven development): expert
- Docker container technology: expert
- Conda package manager: expert
- Web technologies (HTML, CSS, Java Script,), good knowledge

INVITED TALKS

I participated in many international conferences. This is a list containing**only the conferences/workshops/seminars which I have been invited to**:

1. **Conference:** 13th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation, and Relativistic Field Theory, 1-7 Jul. 2012, Stockholm (Sweden)
   Presentation title: The first Fermi LAT GRB Catalog
   Conference Website: http://www.icra.it/mg
2. **Conference:** Fourth International Fermi Symposium, 28 Oct. - 2 Nov. 2012, Monterey, CA (US)

Presentation title: Observations of GRBs with Fermi
Conference Website: http://fermi.gsfc.nasa.gov/science/mtgs/symposia/2012/

3. **Conference**: 10th Rencontre du Vietnam (Very High Energy Phenomena in the Universe), 3 - 9 Aug. 2014, Qui Nhon, Vietnam
   Presentation title: Fermi/LAT observations of Gamma-Ray Bursts
   Conference Website: http://vietnam.in2p3.fr/2014/vhepu/
4. **Conference:** 3rd Annual Conference on High Energy Astrophysics in Southern Africa (HEASA 2015), 18-20 June 2015, University of Johannesburg, South Africa
   Presentation title: Observation of Gamma-Ray Bursts and short duration transients with the Fermi Large Area Telescope
   Conference website: http://physics.uj.ac.za/wiki/HEASA2015/Site/InvitedSpeakers
5. **Invited seminar:** Los Alamos National Labs, June 11th 2015
   Title: ¨A scale-agnostic, instrument-agnostic algorithm to detect transients in photon-counting experiments, and the Multi-Mission Maximum Likelihood framework (3ML)¨
   Host: Patrick Younk (pwyounk@lanl.gov)
6. **Invited seminar:** IASF-Milano, December 16th 2014
   Title: ¨Searching for transients in Fermi/LAT data: the LAT Transient Factory¨
   Host: Andrea Tiengo (andrea.tiengo@iusspavia.it)
7. **Invited seminar:** INFN-Trieste, February 7th 2014
   Title: "Extreme cosmic explosions: Gamma-Ray Bursts, from the discovery to recent breakthroughs"
   Host: Francesco Longo (francesco.longo@ts.infn.it)
8. **Invited seminar:** Michigan Technological University, Nov. 2nd 2015
   Title: Multi-Wavelength and Multi-Messenger Observations for Astronomy
   Host: Prof. Petra Huentemeyer (petra@mtu.edu)
   https://events.mtu.edu/event/epssi_seminar_multi-wavelength_and_multi-messenger_observations_for_astronomy#.VlOMXLerRhE
9. **Workshop:** 1st Fermi-LIGO-VIRGO workshop, March 22-24 2013, George Washington University, Washington, DC
   Presentation title: Fermi/LAT hands on
   Workshop website: http://www.shawhans.us/grb-gw/
10. **Workshop:** 2nd Fermi-LIGO workshop, March 14-15 2015, Pasadena, CA
    Presentation title: Fermi/LAT mission and capabilities
    Workshop website: http://www.ligo.caltech.edu/~jkanner/ligo-fermi/
11. **Workshop:** Fermi-VERITAS-HAWC, October 8-9 2014, Madison WI
    Presentation title: 3ML + HAWC
    Workshop website: http://meetings.wipac.wisc.edu/hawc2014/
12. **Workshop:** Fermi/HAWC/VERITAS, February 11-12 2014, University of Maryland, College Park, MD
    Presentation title: LAT hands on
    Workshop website: https://confluence.slac.stanford.edu/pages/viewpage.action?pageId=158044658
13. **Workshop:** High-energy gamma-ray astrophysics: from solar activity to black holes
    Presentation title: Gamma-ray bursts at high energy
    Workshop website: http://www.sexten-cfa.eu/en/high-energy-gamma-ray-astrophysics-from-solar-activity-to-black-holes
14. **Workshop:** Likelihood analysis with HAWC, 17-20 November 2015
    Presentation title: The Multi-Mission Maximum Likelihood framework
    Host: Magda Gonzalez (magda@astro.unam.mx)
15. **School:** Fermi Summer School 2016, Lewes (Delaware), US, Tuesday, May 31 - Friday, June 10, 2016
    "Basics of Maximum Likelihood", "Gamma-Ray Bursts and transients in the LAT"
    Website: https://confluence.slac.stanford.edu/display/LSP/Fermi+Summer+School+2016
16. **Conference**: SciNeGHE 2016, 18-21 October, Pisa, Italy
    Presentation title: "Gamma-Ray Bursts as multi-messenger sources"
    Website: https://agenda.infn.it/conferenceDisplay.py?ovw=True&confId=11102

PRESS

1. "Supernova blast emitted record burst of gamma rays", Los Angeles Times, November 2013 (http://articles.latimes.com/2013/nov/21/science/la- sci- sn- supernova-gamma-ray-burst-20131120)
2. "Quel mostruoso lampo gamma che sfida gli astrofisici. È il lato violento dell'Universo" (*the monster gamma-ray burst that challenges astrophysicists*), Italian national newspaper La Repubblica, November 2013 (http://www.repubblica.it/scienze/2013/11/22/news/quel_lampo_gamma_che_sfida_gli_scien 71619452/)
3. "NASA's Fermi, Swift See 'Shockingly Bright' Burst", NASA website, May 2013 (https://www.nasa.gov/topics/universe/features/shocking-burst.html)
4. "The rise of LIGO's space-studying super-team", Symmetry magazine, June 27th 2017 http://www.symmetrymagazine.org/article/the-rise-of-ligos-space-studying-super-team

PUBLIC OUTREACH AND CULTURAL ACTIVITY

1. **Event:** "Tooning the extreme cosmos", November 10th 2015, **NASA Headquarters**, Washington DC
   Presentation title: "Gamma-ray Bursts"
   Host: Roopesh Ojha (Roopesh.Ojha@nasa.gov)
   Website: http://fermi.gsfc.nasa.gov/science/mtgs/tooning/
2. **Founding member and teacher** for the association Research, Nature, Technology ("Ricerca, Natura, Tecnologia") for promoting scientific culture in Italian schools, 2005-2009. My role involved preparing curricula and organizing refresher courses for teachers, as well as short classes (one-day to two-weeks long) for students, on Astronomy and Physics.

REFERENCES

- Peter Michelson, Director, HEPL (Stanford University), peterm@stanford.edu
- Julie Mc Enery, Fermi Project Scientist, GSFC, julie.e.mcenery@nasa.gov
- Petra Huentemeyer, Associate Professor (Physics), Michigan Tech, petra@mtu.edu
- Andrea Tiengo, Researcher at Centre for Post-Graduate Training and Research in Earthquake Engineering and Engineering Seismology, IUSS-Pavia, Pavia, Italy, andrea.tiengo@iusspavia.it

LANGUAGES

- Italian, native speaker
- English, fluent

REFEREED PUBLICATIONS

NOTE: I am member of the Fermi/LAT collaboration since 2010. Important papers in the Fermi/LAT collaboration are recognized by the "Category I" status, and are signed by the entire collaboration in alphabetical order. The people who lead the work are recognized with the "Contact Author" designation. There are at most 4 contact authors for each paper. I am also member of the HAWC collaboration, which has a similar policy: important papers are singed by the entire collaboration in alphabetical order, although there is no concept of contact authors.

Here I present the list of papers for whichI am first author, and collaboration papers in which I had a fundamental leading role (explained for each paper). I order them by publication date (most recent first).

1. A. U. Abeyesekara et al., *Extended gamma-ray sources around pulsars constrain the origin of the positron flux at Earth*, Science 358, 2017.

   The first major results that HAWC obtained with the Multi-Mission Maximum Likelihood (3ML) framework that I designed and am leading (https://github.com/giacomov/3ML).

2. G. Vianello, N. Omodei, J. Chiang and S. Digel,*Searching for High-energy Gamma-ray Counterparts to Gravitational-wave Sources with Fermi-LAT: A Needle in a Haystack.*, Astrophys. J.l 841, 2017.

3. J. L. Racusin et al., *Searching the Gamma-Ray Sky for Counterparts to Gravitational Wave Sources: /Fermi GBM and LAT Observations of LVT151012 and GW151226.*, Astrophys. J. 835, 2017

   A joint Fermi/GBM - Fermi/LAT publication. I am LAT contact author for this publication. I contributed a large part of the LAT sections of the paper, as well as designed, implemented and executed a major part of the LAT analysis.

4. A. Goldstein et al., *Fermi Observations of the LIGO Event GW170104*, Astrophys. J.l 846, 2017.

   A joint Fermi/GBM - Fermi/LAT publication. I am LAT contact author for this publication. I contributed a large part of the LAT sections of the paper, as well as designed, implemented and executed a major part of the LAT analysis.

5. R. Alfaro et al., *Search for Very-high-energy Emission from Gamma-Ray Bursts Using the First 18 Months of Data from the HAWC Gamma-Ray Observatory.*, Astrophys. J. 843, 2017

   A joint HAWC/LAT collaboration paper. I contributed with the Fermi/LAT analysis as well as the development of the software and the methods used to compute the upper limits for GRBs using HAWC data. I am a LAT contact author.

6. B. P. Abbott et al., *Multi-messenger Observations of a Binary Neutron Star Merger.*, Astrophys. J.l 848, 2017

   The "capstone paper" for the first detection of an electromagnetic counterpart to a GW event. I participated as part of the Fermi team.

7. M. Ackermann et al., *Fermi-LAT Observations of the LIGO Event GW150914*, Astrophys. J.l 823, 2016

   I am contact author. I ideated and executed one of the two searches for a gamma-ray counterpart of the Gravitational Wave event in the data of Fermi/LAT. I gave a major contribution to all aspects of this work,and contributed substantially to the paper itself.

8. M. Ackermann et al., *Fermi-LAT Observations of the Gamma-Ray Burst GRB 130427A*, Science 343, 2014.

   I am contact author, and I led the LAT data analysis of this extraordinary GRB. I also wrote large parts of the paper.

9. M. Ackermann et al., *Multiwavelength Observations of GRB 110731A: GeV Emission from Onset to Afterglow.*, Astrophys. J. 763, 2013.

   I am LAT contact author, and gave an essential contribution to all aspects of this work, which focuses on the analysis of multi-wavelength data for the afterglow of this GRB

10. M. Ackermann et al., *The First Fermi-LAT Gamma-Ray Burst Catalog.*, Astrophys. J.s 209, 2013.

    I am LAT contact author. I ideated, implemented and executed the search for GRBs at low energies (between 10 MeV and 100 MeV) with the LAT Low-Energy class (LLE). I gave an essential contribution to the data analysis, the discussion of the results, and wrote large

sections of the paper.

11. G. Vianello, D. Gotz and S. Mereghetti, *The updated spectral catalogue of INTEGRAL gamma-ray bursts*., Astron. Astrophys. 495, 2009.

12. G. Vianello, A. Tiengo and S. Mereghetti, *Dust-scattered X-ray halos around two Swift gamma-ray bursts: GRB 061019 and GRB 070129*., Astron. Astrophys. 473, 2007.

Papers under revision:

1. G. Vianello et al., "The Bright and the Slow - GRBs 100724B & 160509A with high-energy cutoffs at <= 100MeV", arXiv:1706.01481 (under revision in ApJ)

2. G. Vianello, "Significance of an excess in a counting experiment: assessing the impact of systematic uncertainties and the case with Gaussian background" (submitted to ApJ)

3. LAT collaboration, "Fermi-LAT observations of the LIGO/Virgo event GW170817", arXiv:1710.05450 (submitted to ApJ)

   I am LAT contact author, I performed LAT analysis and wrote large sections of the paper.

These are papers where I contributed as a co-author with analysis and interpretation of the data:

1. F. Pintore et al., *Behind the dust curtain: the spectacular case of GRB 160623A*, Mon. Not. R. Astron. Soc.ras 472, 2017.
2. F. Pintore et al., *The effect of X-ray dust scattering on a bright burst from the magnetar 1E 1547.0-5408*., Mon. Not. R. Astron. Soc.ras 467, 2017.
3. L. Nava et al., *Constraints on the bulk Lorentz factor of gamma-ray burst jets from Fermi /LAT upper limits*., Mon. Not. R. Astron. Soc.ras 465, 2017.
4. B. P. Abbott et al., *Multi-messenger Observations of a Binary Neutron Star Merger.*, Astrophys. J.l 848, 2017.
5. D. Pizzocaro et al., *Results from DROXO. IV. EXTraS discovery of an X-ray flare from the Class I protostar candidate ISO-Oph 85.*, Astron. Astrophys. 587, 2016.
6. M. Ackermann et al., *Fermi-LAT Observations of the LIGO Event GW150914*, Astrophys. J.l 823, 2016.
7. W. T. Vestrand et al., *The Bright Optical Flash and Afterglow from the Gamma-Ray Burst GRB 130427A*., Science 343, 2014.
8. R. Preece et al., *The First Pulse of the Extremely Bright GRB 130427A: A Test Lab for Synchrotron Shocks*., Science 343, 2014.
9. L. Nava et al., *Clustering of LAT light curves: a clue to the origin of high-energy emission in gamma-ray bursts*., Mon. Not. R. Astron. Soc.ras 443, 2014.
10. A. Maselli et al., *GRB 130427A: A Nearby Ordinary Monster.*, Science 343, 2014.
11. J. M. Burgess et al., *Time-resolved Analysis of Fermi Gamma-Ray Bursts with Fast- and Slow-cooled Synchrotron Photon Models*., Astrophys. J. 784, 2014.
12. C. Kouveliotou et al., *NuSTAR Observations of GRB 130427A Establish a Single Component Synchrotron Afterglow Origin for the Late Optical to Multi-GeV Emission*., Astrophys. J.l 779, 2013.
13. S. Guiriec et al., *Evidence for a Photospheric Component in the Prompt Emission of the Short GRB 120323A and Its Effects on the GRB Hardness-Luminosity Relation*., Astrophys. J. 770, 2013.
14. C. Guidorzi et al., *A faint optical flash in dust-obscured GRB 080603A: implications for GRB prompt emission mechanisms*., Mon. Not. R. Astron. Soc.ras 417, 2011.
15. V. Bianchin et al., *The first GRB survey of the IBIS/PICsIT archive*, Astron. Astrophys. 536, 2011.
16. A. Tiengo, G. Vianello et al., *The Dust-scattering X-ray Rings of the Anomalous X-ray Pulsar 1E 1547.0-5408*., Astrophys. J. 710, 2010.
17. A. Giuliani et al., *AGILE Detection of Delayed Gamma-ray Emission From the Short Gamma-Ray*

Burst GRB 090510., Astrophys. J.l 708, 2010.

This is the complete list of my publications (including those reported above), including also papers where I gave technical contributions as part of the Fermi/LAT and HAWC team:

[1] S. Mereghetti, A. Tiengo and G. Vianello, Dust scattering X-ray expanding rings around gamma-ray bursts., Nuovo Cimento B Serie 121, 2006.

[2] G. Vianello, A. Tiengo and S. Mereghetti, Dust-scattered X-ray halos around two Swift gamma-ray bursts: GRB 061019 and GRB 070129., Astron. Astrophys. 473, 2007.

[3] S. Mereghetti et al., Strong Bursts from the Anomalous X-Ray Pulsar 1E 1547.0-5408 Observed with the INTEGRAL/SPI Anti-Coincidence Shield., Astrophys. J.l 696, 2009.

[4] G. Vianello, D. Götz and S. Mereghetti, The updated spectral catalogue of INTEGRAL gamma-ray bursts., Astron. Astrophys. 495, 2009.

[5] A. A. Abdo et al., Fermi Large Area Telescope observations of Local Group galaxies: detection of M 31 and search for M 33., Astron. Astrophys. 523, 2010.

[6] A. A. Abdo et al., Search for Gamma-ray Emission from Magnetars with the Fermi Large Area Telescope., Astrophys. J.l 725, 2010.

[7] A. Giuliani et al., AGILE Detection of Delayed Gamma-ray Emission From the Short Gamma-Ray Burst GRB 090510., Astrophys. J.l 708, 2010.

[8] A. Tiengo et al., The Dust-scattering X-ray Rings of the Anomalous X-ray Pulsar 1E 1547.0-5408., Astrophys. J. 710, 2010.

[9] A. A. Abdo et al., Observations of the Young Supernova Remnant RX J1713.7-3946 with the Fermi Large Area Telescope., Astrophys. J. 734, 2011.

[10] A. A. Abdo et al., Gamma-Ray Flares from the Crab Nebula., Science 331, 2011.

[11] A. A. Abdo et al., Fermi Gamma-ray Space Telescope Observations of the Gamma-ray Outburst from 3C454.3 in November 2010., Astrophys. J.l 733, 2011.

[12] A. A. Abdo et al., Discovery of High-energy Gamma-ray Emission from the Binary System PSR B1259-63/LS 2883 around Periastron with Fermi., Astrophys. J.l 736, 2011.

[13] A. A. Abdo et al., Detection of High-energy Gamma-Ray Emission During the X-Ray Flaring Activity in GRB 100728A., Astrophys. J.l 734, 2011.

[14] A. A. Abdo et al., Fermi Large Area Telescope Observations of Two Gamma-Ray Emission Components from the Quiescent Sun., Astrophys. J. 734, 2011.

[15] A. A. Abdo et al., Fermi Large Area Telescope Observations of Markarian 421: The Missing Piece of its Spectral Energy Distribution., Astrophys. J. 736, 2011.

[16] M. Ackermann et al., Constraining Dark Matter Models from a Combined Analysis of Milky Way Satellites with the Fermi Large Area Telescope., Phys. Rev. Lett. 107, 2011.

[17] M. Ackermann et al., The Radio/Gamma-Ray Connection in Active Galactic Nuclei in the Era of the Fermi Large Area Telescope., Astrophys. J. 741, 2011.

[18] M. Ackermann et al., The Second Catalog of Active Galactic Nuclei Detected by the Fermi Large Area Telescope., Astrophys. J. 743, 2011.

[19] M. Ackermann et al., A Cocoon of Freshly Accelerated Cosmic Rays Detected by Fermi in the Cygnus Superbubble., Science 334, 2011.

[20] M. Ajello et al., Constraints on dark matter models from a Fermi LAT search for high-energy cosmic-ray electrons from the Sun., Phys. Rev. D 84, 2011.

[21] V. Bianchin et al., The first GRB survey of the IBIS/PICsIT archive., Astron. Astrophys. 536, 2011.

[22] E. Del Monte et al., The observation of gamma ray bursts and terrestrial gamma-ray flashes with AGILE., Nuclear Instruments and Methods in Physics Research A 630, 2011.

[23] P. C. C. Freire et al, Fermi Detection of a Luminous Gamma-Ray Pulsar in a Globular Cluster., Science 334, 2011.

[24] C. Guidorzi et al., A faint optical flash in dust-obscured GRB 080603A: implications for GRB prompt emission mechanisms., Mon. Not. R. Astron. Soc.ras 417, 2011.

[25] H.E.S.S.~Collaboration et al., Simultaneous multi-wavelength campaign on PKS 2005-489 in a high state., Astron. Astrophys. 533, 2011.

[26] M. L. Lister et al., Gamma-Ray and Parsec-scale Jet Properties of a Complete Sample of Blazars From the MOJAVE Program., Astrophys. J. 742, 2011.

[27] S. Mereghetti et al., Two magnetars: SGR 1627-41 and 1E 1547-5408., Advances in Space Research 47, 2011.

[28] A. Noutsos et al., Radio and Gamma-ray Constraints on the Emission Geometry and Birthplace of PSR J2043+2740., Astrophys. J. 728, 2011.

[29] A. A. Abdo et al., Fermi Observations of Gamma-Ray Emission from the Moon., Astrophys. J. 758, 2012.

[30] M. Ackermann et al., The Fermi Large Area Telescope on Orbit: Event Classification, Instrument Response Functions, and Calibration., Astrophys. J.s 203, 2012.

[31] M. Ackermann et al., Anisotropies in the diffuse gamma-ray background measured by the Fermi LAT., Phys. Rev. D 85, 2012.

[32] M. Ackermann et al., Publisher's Note: Anisotropies in the diffuse gamma-ray background measured by the Fermi LAT [Phys. Rev. D 85, 083007 (2012)]., Phys. Rev. D 85, 2012.

[33] M. Ackermann et al., Fermi LAT search for dark matter in gamma-ray lines and the inclusive photon spectrum., Phys. Rev. D 86, 2012.

[34] M. Ackermann et al., Gamma-Ray Observations of the Orion Molecular Clouds with the Fermi Large Area Telescope., Astrophys. J. 756, 2012.

[35] M. Ackermann et al., A Statistical Approach to Recognizing Source Classes for Unassociated Sources in the First Fermi-LAT Catalog., Astrophys. J. 753, 2012.

[36] M. Ackermann et al., In-flight measurement of the absolute energy scale of the Fermi Large Area Telescope., Astroparticle Physics 35, 2012.

[37] M. Ackermann et al., Measurement of Separate Cosmic-Ray Electron and Positron Spectra with the Fermi Large Area Telescope., Phys. Rev. Lett. 108, 2012.

[38] M. Ackermann et al., Fermi Detection of Gamma-Ray Emission from the M2 Soft X-Ray Flare on 2010 June 12., Astrophys. J. 745, 2012.

[39] M. Ackermann et al., Fermi Large Area Telescope Study of Cosmic Rays and the Interstellar Medium in nearby Molecular Clouds., Astrophys. J. 755, 2012.

[40] M. Ackermann et al., Search for Gamma-ray Emission from X-Ray-selected Seyfert Galaxies with Fermi-LAT., Astrophys. J. 747, 2012.

[41] M. Ackermann et al., The cosmic-ray and gas content of the Cygnus region as measured in Gamma-rays by the Fermi Large Area Telescope., Astron. Astrophys. 538, 2012.

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HOBBIES

- Playing acoustic and electric guitar
- Climbing indoor and outdoor
- Fixing my cars