Alexis Popkow

Contact Department of Physics and Astronomy

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RESEARCH gamma-ray astrophysics, particle astrophysics, astrophysics experiment, INTERESTS high energy physics experiment, gamma-ray astrophysics, neutrino physics

EDUCATION University of California, Los Angeles, Los Angeles, CA, USA

PhD in Physics, Fall 2016

Thesis: Very-High-Energy Astrophysical Processes in the Cygnus Region of the Galaxy

Advisor: Prof. Rene ONG

University of California, Los Angeles, Los Angeles, CA, USA

M.S. in Physics, Winter 2012

University of California, Berkeley, Berkeley, CA, USA

B.A. in Physics and Astrophysics, May 2010

RESEARCH EXPERIENCE

Graduate Student Researcher University of California, Los Angeles

2010-present

Successfully proposed discovery observations of unidentified Galactic sources motivated by *Fermi*-LAT data, and took observations of those objects. Analyzed *Fermi*-LAT and VERITAS data sets and discussed scientific implications of results, primarily in the Cygnus region. Assisted with the camera upgrade of VERITAS for 5 weeks in Summer 2012. Participated in over 2 weeks of observations each year, and oversaw observations as "czar" of operations for a few weeks. Served on data quality monitoring shifts.

Undergraduate Researcher University of California, Berkeley

2008-2010

Department of Nuclear Engineering - Used computer modeling to estimate the efficiency of particle detector and imaging experiment, set up and used a gamma-ray double sided strip germanium detector.

Undergraduate Researcher Lawrence Berkeley National Lab

Summer 2009

Semiconductor Detector Group - Studied methods for improving Germanium based gamma-ray double sided strip detectors, gained experience working with vacuum, cryogenic, and high voltage systems.

TEACHING EXPERIENCE

University of California, Los Angeles, Los Angeles, California USA

Teaching Assistant

Physics 118 Electronics for Physical Measurements, Spring 2013

Physics 6B Physics for Life Science Majors: Electricity and Magnetism - Lab, Spring 2011

Physics 6A Physics for Life Science Majors: Mechanics - Lab, Fall 2010

Physics 4AL Physics Laboratory for Scientists and Engineers, Winter 2011, Summer 2013

TECHNICAL SKILLS PYTHON, UNIX, IDL, MATLAB, ROOT, LATEX, Geant4, MySQL, Office

soldering, FADCs, clean room, cryogenic systems, vacuum systems, high voltage systems

Presentations

Alexis Popkow for the VERITAS Collaboration, "The VERITAS Survey of the Cygnus Region of the Galaxy", (Talk), International Cosmic Ray Conference (ICRC), The Hague, The Netherlands, August 2015

Alexis Popkow for the VERITAS Collaboration, "The VERITAS Survey of the Cygnus Region of the Galaxy", (poster), American Astronomical Society, High Energy Astrophysics Division Meeting, Chicago, Illinois, August 2014

Alexis Popkow for the VERITAS Collaboration, "The VERITAS Sky Survey Results and Futrue Plans", (poster), American Astronomical Society Meeting, Long Beach, California, January 2013

AWARDS

University of California, Los Angeles, Physics and Astronomy Department

Rudnick-Abelman Scholarship 2013-2014

The Engel Fellowship 2010-2011

LEADERSHIP ACTIVITIES Women in Physics and Astronomy (WiPA) at UCLA – founded group; started mentoring program

Astronomy Live! at UCLA – assisted in outreach events at UCLA and local schools

Exploring Your Universe at UCLA – Merchandise Coordinator, 2015; Developed and led VERITAS booth, 2013, 2014, 2015

Math and Physical Sciences Council of the Graduate Student Association at UCLA - Representative $\,$

PUBLICATIONS

Archambault, S., et al. (The VERITAS Collaboration), "Discovery of Very High Energy Gamma Rays from 1ES 1440+122" MNRAS, 2016, Volume 461, Issue 1, p.202-208

Aliu, E., et al. (The VERITAS Collaboration), "Very High Energy outburst of Markarian 501 in May 2009" accepted A&A 2016

Abeysekara, A. U., et al. (The VERITAS Collaboration), "VERITAS and Multiwavelength Observations of the BL Lacertae Object 1ES 1741+196" MNRAS, 2016, Volume 459, Issue 3, p.2550-2557

Archambault, S., et al. (The VERITAS Collaboration), "Upper limits from five years of blazar observations with the VERITAS Cherenkov telescopes" ApJ, 151, 2016, 6

Archer, A., et al. (The VERITAS Collaboration, "TeV Gamma-ray Observations of The Galactic Center Ridge By VERITAS" ApJ, 821, 2016, 2

Abeysekara, A. U., et al. (The VERITAS Collaboration), "A Search for Brief Optical Flashes Associated with the SETI Target KIC 8462852" ApJL, 818, 2016, 2

Archambault, S., et al. (The VERITAS Collaboration), "Exceptionally bright TeV flares from the binary LS I $+61\hat{a}\dot{L}\ddot{Y}$ 303" ApJL, 817, 2016, 1

Abeysekara, A. U., et al. (The VERITAS Collaboration), "Gamma rays from the quasar PKS 1441+25: story of an escape" ApJL, 815, 2015, 2

Abeysekara, A. U., et al. (The VERITAS Collaboration), "VERITAS Collaboration Contributions to the 34th International Cosmic Ray Conference" 2015, arXiv:1510.01639 Staszak, D., Abeysekara, A. U., et al. (The VERITAS Collaboration), "Science Highlights from VERITAS" International Cosmic Ray Conference, 2015, arXiv:1510.01269

Furniss, A., et al. "First NuSTAR Observations of Mrk 501 within a Radio to TeV Multi-Instrument Campaign" ApJ, 812, 2015, 65

Archambault, S., et al. (The VERITAS Collaboration), "VERITAS detection of Îşray flaring activity from the BL Lac object 1ES 1727+502 during bright moonlight observations" ApJ, 808, 2015, 110

Aleksic, J., et al., "The 2009 multiwavelength campaign on Mrk 421: Variability and correlation studies" A&A, 576, 2015, A126

Aliu, E., et al. (The VERITAS Collaboration), "A Search for Pulsations from Geminga Above 100 GeV with VERITAS" ApJ, 800, 2014, 61

Aliu, E., et al. (The VERITAS Collaboration), "VERITAS Observations of the BL Lac Object PG 1553+113" ApJ, 799, 2014, 7

D'Ammando, F., et al., "The most powerful flaring activity from the NLSy1 PMN J0948+0022" MNRAS, 2014, Volume 446, Issue 3, p.2456-2467

Aliu, E., et al. (The VERITAS Collaboration), "Constraints on Very High Energy Emission from GRB 130427A" ApJL, 795, 2014, L3

Aliu, E., et al. (The VERITAS Collaboration), "Investigating the TeV Morphology of MGRO J1908+06 with VERITAS" ApJ, 787, 2014, 166

Archambault, S., et al. (The VERITAS Collaboration), "Deep Broadband Observations of the Distant Gamma-Ray Blazar PKS 1424+240" ApJL, 785, 2014, L16

Aliu, E., et al. (The VERITAS Collaboration), "Observations of the Unidentified Gamma-Ray Source TeV J2032+4130 by VERITAS" ApJ, 783, 2014, 16

- Responsible for the Fermi-LAT analysis in Section 4.

Aliu, E., et al. (The VERITAS Collaboration), "A Three-year Multi-wavelength Study of the Very-high-energy Îş-Ray Blazar 1ES 0229+200" ApJ, 782, 2013, 13

Aliu, E., et al. (VERITAS Collaboration), "Long-term TeV and X-ray Observations of the Gamma-ray Binary HESS J0632+057" ApJ, 780, 2013, 168

Archambault, S., et al. (The VERITAS Collaboration), "VERITAS Observations of the Microquasar Cygnus X-3" ApJ, 779, 2013, 150

Aliu, E., et al. (VERITAS Collaboration), "Multiwavelength Observations of The TeV Binary LS I +61 303 with VERITAS, Fermi-LAT and Swift-XRT During a TeV Outburst" ApJ, 779, 2013, 88

Aliu, E., et al. (VERITAS Collaboration), "Long term observations of B2 1215+30 with VERITAS" ApJ, 779, 2013, 2

Aliu, E., et al. (VERITAS Collaboration), "A Search for Enhanced Very High Energy Gamma-Ray Emission from the 2013 March Crab Nebula Flare" ApJ, 781, 2013, L11

Aliu, E., et al. (VERITAS Collaboration), "VERITAS contributions to the 33rd International Cosmic Ray Conference" 2013, arXiv:1308.6173

Aliu, E., et al. (VERITAS Collaboration), "Discovery of a New TeV Gamma-Ray Source: VER J0521+211" ApJ, 776, 2013, 69

Aliu, E., et al. (VERITAS Collaboration), "Multiwavelength observations and modeling of 1ES 1959+650 in a low flux state" ApJ, 775, 2013, 3

Aliu, E., et al. (VERITAS Collaboration), "Discovery of TeV Gamma-ray Emission Toward Supernova Remnant SNR G78.2+2.1" ApJ, 770, 2013, 93

PROFESSIONAL American Physical Society
AFFILIATIONS American Astronomical Society

CITIZENSHIP USA