Isaac Shivvers

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Education

Ph.D. Astrophysics, University of California at Berkeley, 2017 *(in progress)*.

M.A. Astrophysics, University of California at Berkeley, 2013

A.B. Astrophysics *Cum Laude*, Harvard University, 2010
Secondary Field: Earth & Planetary Sciences

Research Positions

Graduate Student Researcher, University of California at Berkeley
Advisor: Prof. A. Filippenko *January 2013–present*

Graduate Student Researcher, BSRC/Breakthrough Listen, University of California at Berkeley
Advisors: D. Werthimer, A. Siemion *January 2014–present*

Graduate Student Researcher, Center for Time-Domain Informatics, University of California at Berkeley
Advisor: Prof. J. Bloom *January 2012–January 2013*

Research Assistant, Stubbs Lab, Harvard University
Advisor: Prof. C. Stubbs, *June 2010–June 2011*

Research Assistant, Center for Astrophysics, Harvard University
Advisor: Prof. E. Berger, *January 2010–June 2010*

Peer-Reviewed Publications

Please see ADS for an up-to-date listing of publications.

I. Shivvers *et al.*, "Revisiting the Lick Observatory Supernova Search Volume-Limited Sample: Updated Classifications and Revised Stripped-Envelope Supernova Fractions," submitted to PASP, arXiv:1609.02922

I. Shivvers *et al.*, "SN 2015U: A Rapidly Evolving and Luminous Type Ibn Supernova," MNRAS, 461, 3057

I. Shivvers *et al.*, "Early Emission from the Type IIn Supernova 1998S at High Resolution," ApJ, 806, 2, 213

I. Shivvers *et al.*, "The Highly Eccentric Detached Eclipsing Binaries in ACVS and MACC," MNRAS, 441, 343, 2014

I. Shivvers *et al.*, "Nebular Spectroscopy of the Nearby Type IIb SN 2011dh," MNRAS, 436, 3614, 2013

I. Shivvers, E. Berger, "A Beaming-Independent Estimate of the Energy Distribution of Long Gamma-Ray Bursts: Initial Results and Future Prospects," ApJ, 732, 58, 2011

J. Mauerhan *et al.*, "Asphericity, Interaction, and Dust in the Type II-P/II-L Supernova 2013ej in Messier 74," submitted to ApJ, arXiv:1611.07930

O. Fox *et al.*, "The Candidate Progenitor of the Type IIn SN 2010jl is Not an Optically Luminous Star," submitted to ApJ, arXiv:1611.00369

O. Graur *et al.*, "LOSS Revisited - I: Unraveling correlations between supernova rates and galaxy properties, as measured in a re-analysis of the Lick Observatory Supernova Search," submitted to ApJ, arXiv:1609.02921

O. Graur *et al.*, "LOSS Revisited - II: The relative rates of different types of supernovae vary between low- and high-mass galaxies," submitted to ApJ, arXiv:1609.02923

T. Laskar *et al.*, "A Reverse Shock in GRB 160509A," submitted to ApJ, arXiv:1606.08873

B. Friesen *et al.*, "Optical and Ultraviolet Spectroscopic Analysis of SN 2011fe at Late Times," submitted to MNRAS, arXiv:1607.04784

G. Dhungana *et al.*, "Extensive Spectroscopy and Photometry of the Type IIP Supernova 2013ej," ApJ, 882, 6

B. Poppe *et al.*, "Early-Time Flux Measurements of SN 2014J Obtained with Small Robotic Telescopes: Extending the AAVSO Light Curve," JAAVSO, 43, 1, 43

O. Fox *et al.*, "On the Nature of Type IIn/Ia-CSM Supernovae: Optical and Near-Infrared Spectra of SN 2012ca and SN 2013dn," MNRAS, 447, 1, 772-785

M.L. Graham *et al.*, "Twins for life? A Comparative Analysis of the Type Ia Supernovae 2011fe and 2011by," MNRAS, 446, 2, 2073-2088

L. Pei *et al.*, "Reverberation Mapping of the KEPLER Field AGN KA1858+4850," ApJ, 795, 1, 38

W. Zheng *et al.*, "Estimating the First-light Time of the Type Ia Supernova 2014J in M82," ApJL, 783L, 24, 2014

J. Silverman *et al.*, "SN 2000cx and SN 2013bh: Extremely Rare, Nearly Twin Type Ia Supernovae," MNRAS, 436, 1225, 2013

S. D. Van Dyk *et al.*, "The Progenitor of Supernova 2011dh Has Vanished," ApJL, 772L, 32, 2013

J. L. Tonry *et al.*, "The Pan-STARRS1 Photometric System," ApJ, 750, 99, 2012

Various ATeLs and CBETs: reports on astronomical transient discoveries and followup observations

Major Presentations

"Observing the Death Throes of Massive Stars," *Invited talk, FLASH seminar series*, UC Santa Cruz, 2016

"Existing Machine Learning Efforts on Data from the Green Bank Telescope," *Invited talk, Breakthrough Listen Machine Learning Workshop*, Berkeley, 2016

"Supernova 2015U: A Core-Collapse Supernova Sheds Light on the Final Fate of A Massive Star," *Invited talk, Berkeley Astronomy Department Fund-Raising Series*, Berkeley, 2016

"A 1.1 to 1.9 GHz SETI Raster Scan of the Kepler Field: A Machine-Learned Search for Narrow-band Emission," *Contributed talks, Astrobiology Science Conference and International Astronautical Congress*, Chicago and Toronto, 2014 and 2015

"The Young Type IIn Supernova 1998S in High Resolution," *Contributed talk, Supernovae in the Local Universe*, Coffs Harbor, Australia, 2014

"Supernova 2014J and the Filippenko Research Group," *Invited talk*, Oldenburg University, Germany, 2014

"Supernova 2014J at Lick Observatory," *Invited talk*, Lick Observatory, California, 2014

Observing Time Allocations

Lick Observatory, Shane 3 m, 2014 – 2015 (3 semesters). *Nebular Spectroscopy of Stripped-Envelope Core Collapse Supernovae*, Role: P.I.

NOAO Small & Moderate Aperture Research Telescope System, 1.3 m & 1.5 m, Fall 2012. *Observationally Constraining the Effects of Orbital Circularization for Stars in Binary Orbits*, Role: P.I.

Hubble Space Telescope, Wide Field Camera 3, 2015–2016 (Cycle 23). *Continuing a Snapshot Survey of the Sites of Recent, Nearby Supernovae*, Role: Co-I.

Hubble Space Telescope, Space Telescope Imaging Spectrograph, 2014–2015 (Cycle 22). *Early-Time UV Spectroscopy of Stripped-Envelope Supernovae: A New Window*, Role: Co-I.

Lick Observatory, Automated Planet Finder, 2015–2016. *Exploring Circumstellar and Interstellar Material with Bright Nearby Supernovae*, Role: Co-I.

Mauna Kea Observatory, Keck Large Multi-Year Approved Project, 2014–2016. *Keck-UC Time Domain Exploration*, Role: Co-I.

Lick Observatory, Shane 3 m, 2013–present. *Long-Term Spectra of Supernovae*, Role: Co-I.

Honors, Awards, & Fellowships

Berkeley Graduate Division Conference Travel Awards, 2014 & 2016

AAS International Travel Award, 2014

Departmental Award (Anselmo J. Macchi Fellowship Fund), 2013

Cum Laude, Harvard University, 2011

Harvard University PRISE Fellow, 2010

Teaching & Mentorship

Trained 5+ UCB undergraduates, graduates, and researchers to be independent spectroscopic observers at Lick Observatory, 2014 – 2017

Mentor of 2 UCB undergraduates, observing and classifying new supernovae, leading to 5+ Astronomer's Telegrams, 2015 – 2016

Mentor of recent UCSC undergraduate, implementing an autonomous photometry pipeline for UCB research group's archival images, 2015 – 2016

Mentor of UCB undergraduate, reducing UCB research group's spectroscopic data, 2015 – 2016

Mentor of UCB undergraduate, modernizing UCB research group's data management system, 2015

Instructor and Counsellor, UCB Python Bootcamp, 2012 – 2014

Teaching Assistant for Prof. Josh Bloom , Astronomy 250, UCB, Fall 2012

Teaching Assistant for Prof. Marc Davis, Astronomy 10, UCB, Fall 2011

Teaching Assistant for Prof. Paul Horowitz, Physics 123, Harvard University, Fall 2009–Fall 2010

Last updated: November 26, 2016