

# Joshua V. Shields

Department of Physics and Astronomy  
3265 Biomedical and Physical Sciences  
567 Wilson Rd  
East Lansing, MI 48824

(202)-812-0638  
Email: [shield90@msu.edu](mailto:shield90@msu.edu)  
Site: [jvshields.github.io](https://jvshields.github.io)  
Github: [@jvshields](https://github.com/jvshields)

## Education

PhD Student — Michigan State University, East Lansing, MI Degree Seeking - Astronomy and Astrophysics	2019 - Exp. 2024
Additional Coursework — The Ohio State University, Columbus, OH Graduate Level Classes - Astronomy	2017
<i>Bachelors of Arts</i> — Vassar College, Poughkeepsie, NY Triple Major - Physics, Astronomy, and Russian Studies	2012-2016

## Research Interests

Thermonuclear supernovae, Core-Collapse supernovae, time-domain surveys, transients, variable stars

## Academic Leadership and Service

Michigan State Journal Club — Founder	2020-Present
Michigan State University - PA Undergraduate Student — Graduate Student Mentor	2021-Present
<a href="#">Stellar Mentorship Program</a> — Graduate Student Mentor	2021-Present
Michigan State University - REU — Graduate Student Mentor	Summer 2020
Open Public Observing Nights - Vassar Class of 1951 Observatory — Volunteer	2015-2016

## Teaching

Outstanding Teaching Assistant Award	2020
Graduate Teaching Assistant - Introductory Astronomy Lab Class	2019-2021

## Publications

**Published(15 total, 1 first author)**

1. *Survey of period variations of superhumps in SU UMa-type dwarf novae. X. The tenth year (2017)*  
Kato, Taichi et al. 2020, *PASJ*, 72, 14K
2. *The ASAS-SN catalogue of variable stars - V. Variables in the Southern hemisphere*  
Jayasinghe, T. et al. 2020, *MNRAS*, 491, 13J
3. *The ASAS-SN Catalog of Variable Stars IV: Periodic variables in the APOGEE survey*  
Pawlak, Michal et al. 2019, *MNRAS*, 487, 5932P
4. *The ASAS-SN Catalog of Variable Stars III: Variables in the Southern TESS Continuous Viewing Zone*  
Jayasinghe, T. et al. 2018, *MNRAS*, 485, 961J
5. *The ASAS-SN Bright Supernova Catalog – IV. 2017*  
Holoien, T. W.-S., et al. 2019, *MNRAS*, 484, 1899H
6. *The ASAS-SN Catalog of Variable Stars II: Uniform Classification of 412,000 Known Variables*  
Jayasinghe, T. et al. 2019, *MNRAS*, 486, 961J

7. *An All-Sky Search For R Coronae Borealis Stars in ASAS-SN*  
Shields, J. V. et al. 2019, *MNRAS*, 483, 4470S
8. *K2 Observations of SN 2018oh Reveal a Two-Component Rising Light Curve for a Type Ia Supernova*  
Dimitriadis, G. et al. 2019, *ApJ*, 870L, 1D
9. *Photometric and Spectroscopic Properties of Type Ia Supernova 2018oh with Early Excess Emission from the Kepler 2 Observations*  
Li, W. et al. 2019, *ApJ*, 870, 12L
10. *Seeing Double: ASASSN-18bt Exhibits a Two-Component Rise in the Early-Time K2 Light Curve*  
Shappee, B. J. et al. 2019, *ApJ*, 870, 13S
11. *ASASSN-18ey: The Rise of a New Black Hole X-Ray Binary*  
Tucker, M. A. et al. 2018, *ApJ*, 867, L9
12. *The ASAS-SN catalogue of variable stars I: The Serendipitous Survey*  
Jayasinghe, T. et al. 2018, *MNRAS*, 477, 3145
13. *ASASSN-18di: Discovery of a Powerful Flare on a Mid-M Dwarf*  
Rodríguez, R. et al. 2018, *RNAAS*, 2b, 8
14. *The ASAS-SN bright supernova catalogue - III. 2016*  
Holoien, T. W.-S. et al. 2017, *MNRAS*, 471, 4966
15. *The All-Sky Automated Survey for Supernovae (ASAS-SN) Light Curve Server v1.0*  
Kochanek, C. S. et al. 2017, *PASP*, 129, 104502

## Circulars and Telegrams

Co-authored 330+ Astronomer's Telegrams and Transient Name Server reports  
(12 First Author)

## Computational Skills

Operating Systems - Windows, MacOS/OS X, UNIX/Linux  
Computer Languages - Python, L<sup>A</sup>T<sub>E</sub>X, SQL, R, html, Perl, Mathematica, Java  
Software - git, DS9, IRAF, MESA

## Advisors

**Graduate Advisor** — Michigan State University  
Wolfgang Kerzendorf

**Post-Baccalaureate Research Advisors** — The Ohio State University  
Krzysztof Stanek, Chris Kochanek

**Undergraduate Advisors** — Vassar College  
Debra Elmegreen, Brian Daly

## Previous Research Experience

The Ohio State University — Columbus, OH	2016 – 2019
Department of Astronomy	
<i>Research Assistant - Physical, Astronomy</i>	
- Worked as part of the ASAS-SN team analyzing objects and incoming sky observations.	
- Performed original research discovering new R Coronae Borealis stars in the large ASAS-SN dataset.	
Vassar College — Poughkeepsie, NY	2015 – 2016
<i>Observational Assistant</i>	

- Gathered astronomical observations through operation of a 32-inch visual band telescope.
- Reduced data using IRAF.

The Ohio State University — Columbus, OH

2014

Department of Population Sciences

*Epidemiological Research Intern*

- Designed and executed an original medical research and analysis project examining connections between social network variables and smoking status.