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Education

- 2005 – 2007  **Ph.D. Cornell University** Particle Accelerator Physics
Thesis: *The Preservation of Emittance and Polarization in the International Linear Collider*
Advisor: Prof. David Rubin
- 2001 – 2005  **M.S. Cornell University** Physics
- 1997 – 2001  **B.A. Knox College** *Magna Cum Laude, College Honors* in Physics
Thesis: *Design and Construction of a Fixed-Frequency Cyclotron*.
Advisor: Prof. Andrew McDowell

Employment History

- 2014 –  **Principal Investigator, Sr. Data Scientist Manager**
SETI Institute
Manages a team of data scientists, software engineers and students on the design and implementation of science data processing and analysis algorithms and pipelines for NASA and SETI related missions and projects.
- Principal Investigator for five NASA Cooperative Agreements, including NNX11AI13A, NNX13AD16A, NNX14AH97A, 80NSSC18M0068, 80NSSC21M0079, and 80NSSC19M0089, plus several grants, for a total of over \$15 million in funding.
 - Chair of Data Science on the SETI Institute Science Council.
 - Developing meteor detection machine learning algorithms and signal processing software running at the NASA Advanced Supercomputing Facility for NASA's Asteroid Threat Assessment Project (ATAP).
 - Developing object detection algorithms for the use in planetary protection studies on the deposition of bacterial spores on other terrestrial bodies due to NASA landers.
 - Develops machine learning based meteor detection algorithms.
 - Operates an automated meteor detection pipeline for ATAP.
 - Involved with the study and detection of exotic lightning by weather satellites.
 - Coordinate with Mission Managers and Data Analysis Leads to schedule staff working on the Kepler and TESS missions.
 - Lead developer for the Pre-search Data Conditioning and Transiting Planet Search pipeline components of the Kepler/TESS Data Processing Pipelines.
 - Responsible for the design, development and implementation of an empirical Bayesian statistical approach to correcting systematic errors in Kepler and TESS data.
 - Developed an innovative optimal aperture finding algorithm to improve planet detection efficiency.
 - Led development of data analysis algorithms for the K2 extended mission of Kepler.
 - Member of the TESS Data Analysis Working Group.
 - Developed commissioning tools for the TESS mission.

Employment History (continued)

2010 – 2014

Scientific Programmer.

SETI Institute

Member of the NASA Kepler Mission Science Operations Center.

- Research, development and implementation of signal processing algorithms for the Kepler Science Processing Pipeline.
- Lead developer for the Pre-search Data Conditioning component of the Kepler Science Processing Pipeline.
- Studied and implemented methods for the preservation of stellar signals and the removal of stochastic and systematic effects in Kepler Data.

2007 – 2010

Research Associate.

SLAC National Accelerator Laboratory, Stanford University

Member of the Large Hadron Collider (LHC) Accelerator Research Project engaged in design, simulation and hardware testing in support of the LHC and other accelerator-based experiments.

- Collaborated with a multinational team of physicists and engineers on the LHC collimation system upgrade.
- Developed and ran beam dynamics simulations for multi-turn collimation efficiency in the LHC.
- Bench-top RF frequency impedance measurements of collimator prototypes.
- Built and implemented relativistic beam dynamics simulation tools to aid in the design of the International Linear Collider (ILC).

2001 – 2007

Graduate Research Assistant.

Wilson Laboratory, Cornell University

Member of the International Linear Collider (ILC) team engaged in design and simulation in support of the proposed ILC. Developed Relativistic beam dynamics software; Contributions include spin tracking, beam distribution tracking and normal-mode beam analysis.

Skills

Programming Languages	Proficient: Python, MATLAB, LaTeX, Shell Script Out-of-practice: Fortran, C, C++
Operating Systems and Envrionments	Proficient: Linux, Mac OS, NASA Advanced Supercomputer Facility, Google Cloud Platform Out-of-practice: MS Windows, VAX/VMS
Numerical Methods	Signal Processing, Matched Filter Analysis, Principle Component Analysis, Machine learning Methods: Supervised classifier training, Clustering Analysis, Self-Supervised Learning, Anomaly Detection
Numerical Tools and Packages	Active: Numpy, Scipy, Scikit-Learn, PyTorch, Ray Tune, vim, PyCharm, MATLAB, Jupyter, LabelBox Other: Mathematica, Maple, LabView, Totalview TAO(co-author), BMAD, SixTrack, GnuPlot, MAD8, MAD-X, Physica, MAFIA, Elegant
Project Management	JIRA Issue Tracking, GitHub, Git/SVN/CVS,

Skills (continued)

Scientific Equipment	■ Oscilloscope, Vector Network Analyzer, Spectrum Analyzer, multimeters, basic circuit analysis, National Instruments test equipment and other laboratory equipment
Machine Shop	■ lathe, milling machine, brazing, gear hobbing, etc...

Awards & Teaching

Honors and Awards

2023	■ NASA Group Achievement Award for Ziggy Software Development Team
2020	■ NASA Team Medal for SPOC pipeline
2018	■ NASA Group Achievement Award for TESS SPOC Commissioning Team
2012	■ NASA Exceptional Technology Achievement Medal
	■ NASA Individual Award, Ames Honor Award for Contractor Employee
2011	■ NASA Group Achievement Award for Kepler Missions Operations Team
2009	■ American Physical Society, California Section Luis Alvarez Award for Best Experimental Research
2001	■ American Association of Physics Teachers, Illinois Section, 1st place in Student Research Symposium
2000	■ Ford Fellowship Grant for undergraduate independent research
	■ Richter Memorial Scholarship for Undergraduate Independent Research
1997	■ Ellen Browning Scripps Academic Scholarship
	■ Knox College Music Scholarship
	■ John Phillip Sousa U.S. Marine Award in Music
1995 – 1997	■ Illinois Music All-State for Trombone Performance

Teaching Experience

2015 –	■ SETI Institute, Research Experience for Undergraduates (REU) student summer research
	■ SETI Institute, School year undergraduate student independent research mentor
2004 – 2005	■ Cornell University, Lab. for Elementary Particle Physics, Guided undergraduate student summer research
2002 – 2006	■ Cornell University, Lab. for Elementary Particle Physics, CESR accelerator tour guide
2003 – 2006	■ Cornell University, Lab. for Elementary Particle Physics, Elementary School Student Outreach
2001	■ Cornell University, Physics Teaching Assistant
1999 – 2001	■ Knox College, Physics Teaching Assistant
1998	■ Knox College, Physics grader

Publications

Journal Articles

- 1 A. Ozerov, **J. C. Smith**, J. L. Dotson, R. S. Longenbaugh, and R. L. Morris, “Goes glm, biased bolides, and debiased distributions,” *Icarus*, vol. 408, p. 115 843, 2024, ISSN: 0019-1035.  DOI: <https://doi.org/10.1016/j.icarus.2023.115843>.

- 2 R. L. Morris, **J. C. Smith**, J. L. Dotson, E. C. Stern, and R. S. Longenbaugh, "Correction and calibration of atmospheric impact observations in goes glm data," *Meteoritics & Planetary Science*, vol. 57, no. 12, pp. 2229–2247, 2022.  DOI: <https://doi.org/10.1111/maps.13926>. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/maps.13926>.
- 3 H. Valizadegan, M. J. S. Martinho, L. S. Wilkens, *et al.*, "Exominer: A highly accurate and explainable deep learning classifier that validates 301 new exoplanets," *The Astrophysical Journal*, vol. 926, no. 2, p. 120, Feb. 2022.  DOI: [10.3847/1538-4357/ac4399](https://doi.org/10.3847/1538-4357/ac4399).
- 4 N. M. Guerrero, S. Seager, C. X. Huang, *et al.*, "The tess objects of interest catalog from the tess prime mission," *The Astrophysical Journal Supplement Series*, vol. 254, no. 2, p. 39, Jun. 2021.  DOI: [10.3847/1538-4365/abefe1](https://doi.org/10.3847/1538-4365/abefe1).
- 5 **J. C. Smith**, R. L. Morris, C. Rumpf, *et al.*, "An automated bolide detection pipeline for goes glm," *Icarus*, vol. 368, p. 114 576, 2021, ISSN: 0019-1035.  DOI: <https://doi.org/10.1016/j.icarus.2021.114576>.
- 6 L. G. Bouma, J. N. Winn, G. R. Ricker, *et al.*, "Ptf0 8-8695: Two stars, two signals, no planet," *The Astronomical Journal*, vol. 160, no. 2, p. 86, Jul. 2020.  DOI: [10.3847/1538-3881/ab9e73](https://doi.org/10.3847/1538-3881/ab9e73).
- 7 S. Bryson, M. Kunitomo, R. K. Kopparapu, *et al.*, "The occurrence of rocky habitable-zone planets around solar-like stars from kepler data," *The Astronomical Journal*, vol. 161, no. 1, p. 36, Dec. 2020.  DOI: [10.3847/1538-3881/abc418](https://doi.org/10.3847/1538-3881/abc418).
- 8 D. A. Caldwell, P. Tenenbaum, J. D. Twicken, *et al.*, "Tess science processing operations center ffi target list products," *Research Notes of the AAS*, vol. 4, no. 11, p. 201, Nov. 2020.  DOI: [10.3847/2515-5172/abc9b3](https://doi.org/10.3847/2515-5172/abc9b3).
- 9 J. L. Christiansen, B. D. Clarke, C. J. Burke, *et al.*, "Measuring transit signal recovery in the kepler pipeline. iv. completeness of the dr25 planet candidate catalog," *The Astronomical Journal*, vol. 160, no. 4, p. 159, Sep. 2020.  DOI: [10.3847/1538-3881/abab0b](https://doi.org/10.3847/1538-3881/abab0b).
- 10 Osborn, H. P., Ansdell, M., Ioannou, Y., *et al.*, "Rapid classification of tess planet candidates with convolutional neural networks," *A&A*, vol. 633, A53, 2020.  DOI: [10.1051/0004-6361/201935345](https://doi.org/10.1051/0004-6361/201935345).
- 11 E. Leiner, R. D. Mathieu, A. Vanderburg, N. M. Gosnell, and **J. C. Smith**, "Blue lurkers: Hidden blue stragglers on the m67 main sequence identified from their kepler/k2 rotation periods," *The Astrophysical Journal*, vol. 881, no. 1, p. 47, Aug. 2019.  DOI: [10.3847/1538-4357/ab2bf8](https://doi.org/10.3847/1538-4357/ab2bf8).
- 12 T. Markiewicz, E. Bong, L. Keller, *et al.*, "Design, construction, and beam tests of a rotatable collimator prototype for high-intensity and high-energy hadron accelerators," *Phys. Rev. Accel. Beams*, vol. 22, p. 123 002, 12 Dec. 2019.  DOI: [10.1103/PhysRevAccelBeams.22.123002](https://doi.org/10.1103/PhysRevAccelBeams.22.123002).
- 13 **J. C. Smith**, P. Tenenbaum, J. M. Jenkins, *et al.*, "A four-sector simulated data set for the transiting exoplanet survey satellite," *Research Notes of the AAS*, vol. 3, no. 7, p. 111, Jul. 2019.  DOI: [10.3847/2515-5172/ab35e0](https://doi.org/10.3847/2515-5172/ab35e0).
- 14 M. Ansdell, Y. Ioannou, H. P. Osborn, *et al.*, "Scientific domain knowledge improves exoplanet transit classification with deep learning," *The Astrophysical Journal Letters*, vol. 869, no. 1, p. L7, Dec. 2018.  DOI: [10.3847/2041-8213/aaf23b](https://doi.org/10.3847/2041-8213/aaf23b).
- 15 R. Esselstein, S. Aigrain, A. Vanderburg, *et al.*, "The k2 m67 study: Establishing the limits of stellar rotation period measurements in m67 with k2 campaign 5 data," *The Astrophysical Journal*, vol. 859, no. 2, p. 167, Jun. 2018.  DOI: [10.3847/1538-4357/aac20e](https://doi.org/10.3847/1538-4357/aac20e).
- 16 J. M. Jenkins, P. Tenenbaum, D. A. Caldwell, *et al.*, "A simulated data set for the transiting exoplanet survey satellite," *Research Notes of the AAS*, vol. 2, no. 1, p. 47, Mar. 2018.  DOI: [10.3847/2515-5172/aab95d](https://doi.org/10.3847/2515-5172/aab95d).
- 17 S. E. Thompson, J. L. Coughlin, K. Hoffman, *et al.*, "Planetary candidates observed by kepler. viii. a fully automated catalog with measured completeness and reliability based on data release 25," *The*

Astrophysical Journal Supplement Series, vol. 235, no. 2, p. 38, Apr. 2018.  DOI: 10.3847/1538-4365/aab4f9.

- 18 J. L. Christiansen, B. D. Clarke, C. J. Burke, *et al.*, “Measuring transit signal recovery in the kepler pipeline. iii. completeness of the q1–q17 dr24 planet candidate catalog with important caveats for occurrence rate calculations,” *The Astrophysical Journal*, vol. 828, no. 2, p. 99, Sep. 2016.  DOI: 10.3847/0004-637X/828/2/99.
- 19 J. L. Coughlin, F. Mullally, S. E. Thompson, *et al.*, “Planetary candidates observed by kepler. vii. the first fully uniform catalog based on the entire 48-month data set (q1–q17 dr24),” *The Astrophysical Journal Supplement Series*, vol. 224, no. 1, p. 12, May 2016.  DOI: 10.3847/0067-0049/224/1/12.
- 20 J. C. Smith, R. L. Morris, J. M. Jenkins, S. T. Bryson, D. A. Caldwell, and F. R. Girouard, “Finding optimal apertures in kepler data,” *Publications of the Astronomical Society of the Pacific*, vol. 128, no. 970, p. 124 501, Oct. 2016.  DOI: 10.1088/1538-3873/128/970/124501.
- 21 J. D. Twicken, J. M. Jenkins, S. E. Seader, *et al.*, “Detection of potential transit signals in 17 quarters of kepler data: Results of the final kepler mission transiting planet search (dr25),” *The Astronomical Journal*, vol. 152, no. 6, p. 158, Nov. 2016.  DOI: 10.3847/0004-6256/152/6/158.
- 22 J. E. Van Cleve, S. B. Howell, J. C. Smith, *et al.*, “That’s how we roll: The nasa k2 mission science products and their performance metrics,” *Publications of the Astronomical Society of the Pacific*, vol. TBD, 2016.
- 23 J. L. Christiansen, B. D. Clarke, C. J. Burke, *et al.*, “Measuring transit signal recovery in the kepler pipeline. ii. detection efficiency as calculated in one year of data,” *The Astrophysical Journal*, vol. 810, no. 2, p. 95, Sep. 2015.  DOI: 10.1088/0004-637X/810/2/95.
- 24 R. L. Gilliland, W. J. Chaplin, J. M. Jenkins, L. W. Ramsey, and J. C. Smith, “Kepler mission stellar and instrument noise properties revisited,” *The Astronomical Journal*, vol. 150, no. 4, p. 133, Oct. 2015.  DOI: 10.1088/0004-6256/150/4/133.
- 25 F. Mullally, J. L. Coughlin, S. E. Thompson, *et al.*, “Planetary candidates observed by kepler. vi. planet sample from q1–q16 (47 months),” *The Astrophysical Journal Supplement Series*, vol. 217, no. 2, p. 31, Apr. 2015.  DOI: 10.1088/0067-0049/217/2/31.
- 26 J. F. Rowe, J. L. Coughlin, V. Antoci, *et al.*, “Planetary candidates observed by kepler. v. planet sample from q1–q12 (36 months),” *The Astrophysical Journal Supplement Series*, vol. 217, no. 1, p. 16, Mar. 2015.  DOI: 10.1088/0067-0049/217/1/16.
- 27 S. Seader, J. M. Jenkins, P. Tenenbaum, *et al.*, “Detection of potential transit signals in 17 quarters of kepler mission data,” *The Astrophysical Journal Letters Supplement*, vol. 217, no. 1, 2015.
- 28 M. C. Stumpe, J. C. Smith, J. H. Catanzarite, *et al.*, “Multiscale systematic error correction via wavelet-based bandsplitting in kepler data,” *Publications of the Astronomical Society of the Pacific*, vol. 126, no. 935, p. 100, Jan. 2014.  DOI: 10.1086/674989.
- 29 P. Tenenbaum, J. M. Jenkins, S. Seader, *et al.*, “Detection of potential transit signals in 16 quarters of kepler mission data,” *The Astrophysical Journal Supplement Series*, vol. 211, no. 1, p. 6, Feb. 2014.  DOI: 10.1088/0067-0049/211/1/6.
- 30 N. M. Batalha, J. F. Rowe, S. T. Bryson, *et al.*, “Planetary candidates observed by kepler. iii. analysis of the first 16 months of data,” *The Astrophysical Journal Supplement Series*, vol. 204, no. 2, p. 24, Feb. 2013.  DOI: 10.1088/0067-0049/204/2/24.
- 31 J. L. Christiansen, B. D. Clarke, C. J. Burke, *et al.*, “Measuring transit signal recovery in the kepler pipeline. i. individual events,” *The Astrophysical Journal Supplement Series*, vol. 207, no. 2, p. 35, Aug. 2013.  DOI: 10.1088/0067-0049/207/2/35.

- 32 P. Tenenbaum, J. M. Jenkins, S. Seader, *et al.*, “Detection of potential transit signals in the first 12 quarters of kepler mission data,” *The Astrophysical Journal Supplement Series*, vol. 206, no. 1, p. 5, Apr. 2013.  DOI: 10.1088/0067-0049/206/1/5.
- 33 J. L. Christiansen, J. M. Jenkins, D. A. Caldwell, *et al.*, “The derivation, properties, and value of kepler’s combined differential photometric precision,” *Publications of the Astronomical Society of the Pacific*, vol. 124, no. 922, p. 1279, Nov. 2012.  DOI: 10.1086/668847.
- 34 J. C. Smith, M. C. Stumpe, J. E. Van Cleve, *et al.*, “Kepler presearch data conditioning ii - a bayesian approach to systematic error correction,” *Publications of the Astronomical Society of the Pacific*, vol. 124, no. 919, p. 1000, Sep. 2012.  DOI: 10.1086/667697.
- 35 M. C. Stumpe, J. C. Smith, J. E. Van Cleve, *et al.*, “Kepler presearch data conditioning i—architecture and algorithms for error correction in kepler light curves,” *Publications of the Astronomical Society of the Pacific*, vol. 124, no. 919, p. 985, Aug. 2012.  DOI: 10.1086/667698.
- 36 P. Tenenbaum, J. L. Christiansen, J. M. Jenkins, *et al.*, “Detection of potential transit signals in the first three quarters of kepler mission data,” *The Astrophysical Journal Supplement Series*, vol. 199, no. 1, p. 24, Mar. 2012.  DOI: 10.1088/0067-0049/199/1/24.
- 37 P. Tenenbaum, J. L. Christiansen, J. M. Jenkins, *et al.*, “Detection of potential transit signals in the first three quarters of *Kepler* mission data,” *Astrophysical Journal Supplement Series*, vol. 199, p. 24, 2012.

Theses, Books and Other

- 1 J. Jenkins *et al.*, “Kepler data characteristics handbook,” in KSCI-19081-002. 2017.
- 2 J. Jenkins *et al.*, “Kepler data processing handbook,” in KSCI-19040-005. 2016.
- 3 J. M. Jenkins, J. C. Smith, P. Tenenbaum, J. D. Twicken, and J. V. Cleve, “Advances in machine learning and data mining for astronomy,” in Chapman and Hall, CRC Press, 2012, ch. Planet Detection: The Kepler Mission, pp. 355–382.
- 4 J. C. Smith, “The preservation of emittance and polarization in the International Linear Collider,” Ph.D. dissertation, Cornell University, Ithaca, NY, USA, 2007.
- 5 J. C. Smith, “Design and Construction of a Fixed-Frequency Cyclotron,” M.S. thesis, Knox College, Galesburg, IL, USA, 2001.

Conference Proceedings and Meetings

- 1 J. C. Smith *et al.*, “Advances in detecting bolides, and other phenomena, in glm,” in *GOES Geostationary Lightning Mapper Science Meeting*, Huntsville, AL, USA, 2024.
- 2 J. C. Smith *et al.*, “Finding fireballs in lightning: A daily pipeline to find meteors in weather satellite data,” in *Proc. of the Astronomical Data Analysis Software & Systems Conference*, ser. XXXIV, Valletta, Malta, 2024.
- 3 J. C. Smith *et al.*, “Finding fireballs in lightning: Repurposing weather satellites to find exploding meteors,” in *Proc. of the AAS Division of Planetary Sciences Conference*, ser. 56, Boise, ID, USA, 2024.
- 4 L. Boggs, J. C. Smith, *et al.*, “Project jetnet: Hemispheric-scale gigantic jet detection network,” in *Poster at Eurpean Geophysical Union General Assembly*, Vienna, Austria, Apr. 2023.
- 5 J. C. Smith *et al.*, “Advancements in detecting bolides in glm,” in *GOES Geostationary Lightning Mapper Science Meeting*, Huntsville, AL, USA, 2023.

- 6 J. C. Smith *et al.*, "Finding fireballs hidden in satellite lightning data," in *Supercomputers Conference*, Denver, CO, USA, 2023.
- 7 J. C. Smith *et al.*, "Finding fireballs in the lightning: Utilizing ai to repurpose weather satellites to find meteors," in *Poster at the American Geophysical Union Annual Meeting*, Chicago, IL, USA, 2023.
- 8 J. C. Smith *et al.*, "Glm bolide detection and light curve reconstruction," in *Talk at the Superbolide Workshop*, Lowell Observatory, Flagstaff, AZ, USA, Jun. 2023.
- 9 J. C. Smith *et al.*, "Goes-bolide: Bolides detected by the goes geostationary lightning mappers," in *Poster at the Asteroids, Comets and Meteors Conference*, Flagstaff, AZ, USA, 2023.
- 10 J. C. Smith *et al.*, "A self-supervised learning-based recommender system for nasa's planetary data system," in *Proc. of the 6th Planetary Data Workshop*, Flagstaff, AZ, USA, Jun. 2023.
- 11 J. C. Smith *et al.*, "A self-supervised learning-based recommender system for nasa's pds," in *Talk at the American Geophysical Union Annual Meeting*, Chicago, IL, USA, Dec. 2022.
- 12 J. C. Smith *et al.*, "A statistical analysis of bolides detected by goes glm," in *GOES Geostationary Lightning Mapper Science Meeting*, Huntsville, AL, USA, Sep. 2022.
- 13 J. C. Smith *et al.*, "A statistical analysis of bolides detected with the goes geostationary lightning mapper," in *Talk at the Meteoroids Conference*, Virtual Conference, Jun. 2022.
- 14 J. C. Smith *et al.*, "An automated detection pipeline and statistical analysis of meteors detected by goes glm," in *Poster at the American Geophysical Union Annual Meeting*, Chicago, IL, USA, 2022.
- 15 J. C. Smith *et al.*, "Detecting bolides with goes geostationary lightning mappers," in *Talk at the NASA Lightning Workshop*, Virtual Meeting, May 2022.
- 16 J. C. Smith *et al.*, "Development and statistical analysis of an automated meteor detection pipeline for goes weather satellites," in *Poster at the AI for Earth and Space Science conference at ICLR*, Virtual Conference, 2022.
- 17 J. C. Smith *et al.*, "Image classification via ml self-supervised learning," in *Talk at the NASA Planetary Data System Management Council Meeting*, Nov. 2022.
- 18 J. C. Smith *et al.*, "Pipeline development and statistical analysis of bolides detected by the goes geostationary lightning mappers," in *Talk at the EU-ESA Workshop on NEO Imminent Impactors Warning Coordination*, Darmstadt, Germany, Dec. 2022.
- 19 J. C. Smith *et al.*, "Pipeline development and statistical analysis of bolides detected by the goes geostationary lightning mappers," in *Poster at the Annual Meeting of The Meteoritical Society*, Glasgow, Scotland, UK, Aug. 2022.
- 20 J. C. Smith *et al.*, "A statistical analysis of bolides detected by goes glm and its implications to planetary defense," in *Poster at the American Geophysical Union Annual Meeting*, New Orleans, LA, USA, Dec. 2021.
- 21 J. C. Smith *et al.*, "An automated bolide detection pipeline for goes glm," in *Proc. of the Lunar and Planetary Science Conference*, Virtual Conference, Mar. 2021.
- 22 J. C. Smith, "Experiences with integrating ml into the planetary sciences," in *Talk at the American Geophysical Union Annual Meeting*, New Orleans, LA, USA, Dec. 2021.
- 23 J. C. Smith *et al.*, "Development of an automated bolide detection pipeline for the goes geostationary lightning mapper," in *Poster at the American Geophysical Union Annual Meeting*, Virtual Conference, Dec. 2020.
- 24 J. C. Smith *et al.*, "Finding every planet we can: Optimizing tess spoc pipeline transit detection," in *Poster at the American Astronomical Society Meeting*, Honolulu, HI, USA, Jan. 2020.

- 25 J. C. Smith *et al.*, “An automated bolide detection and lightcurve pipeline for goes geostationary lightning mapper,” in *Poster at the American Geophysical Union Annual Meeting*, San Francisco, CA, USA, Dec. 2019.
- 26 J. C. Smith, “Exploring beyond earth’s atmosphere with human- machine teams,” in *Invited plenary talk at the Geospacial Intelligence Conference GEOINT*, San Antonio, TX, USA, Jun. 2019.
- 27 J. C. Smith *et al.*, “Finding every planet we can: Tess spoc pipeline transit detection modeling and tuning,” in *Talk at the TESS Science Conference I*, Cambridge, MA, USA, 2019.
- 28 J. C. Smith, “The spoc pipeline data products, performance and you!” In *Invited talk at the TESS Data Workshop*, Baltimore, MD, USA, Feb. 2019.
- 29 J. C. Smith *et al.*, “Lilith: A versatile instrument and all-sky simulator for use with space-based astrophysics observatories,” in *Proc. of the Astronomical Data Analysis Software & Systems Conference*, College Park, MD, USA, Nov. 2018.
- 30 J. C. Smith *et al.*, “The tess transiting planet search predicted recovery and reliability rates,” in *Poster at the American Astronomical Society Meeting*, Denver, CO, USA, 2018.
- 31 J. C. Smith and P. Tenenbaum, “Simulated multi-sector tess data from spoc,” in *Talk at the TESS Science Team Meeting*, Cambridge, MA, USA, Aug. 2018.
- 32 J. M. Jenkins, J. D. Twicken, S. McCauliff, *et al.*, “The TESS science processing operations center,” in *Software and Cyberinfrastructure for Astronomy IV*, G. Chiozzi and J. C. Guzman, Eds., International Society for Optics and Photonics, vol. 9913, SPIE, 2016, 99133E.  DOI: 10.1117/12.2233418.
- 33 J. C. Smith *et al.*, “Reduce, reuse, recycle: The success of the kepler transit finding pipeline and its adaptation to the transiting exoplanet survey satellite (tess),” in *Proc. of the Astronomical Data Analysis Software & Systems Conference*, Trieste, Italy, Nov. 2016.
- 34 J. C. Smith *et al.*, “K2 mission data products,” in *Talk at the Kepler Asteroseismic Science Consortium Conference*, Aarhus, Denmark, Jun. 2015.
- 35 J. C. Smith *et al.*, “K2 mission light curves,” in *Poster at the International Astronomical Union Meeting*, Honolulu, HI, USA, 2015.
- 36 J. C. Smith *et al.*, “Finding every planet we can – improving the optimal apertures in kepler data,” in *Towards Other Earths II, The Star Planet Connection Conference*, Porto, Portugal, 2014.
- 37 J. C. Smith *et al.*, “Finding every planet we can – removal of transit-like false triggers in kepler data,” in *Poster at the American Astronomical Society Meeting*, Boston, MA, USA, 2014.
- 38 J. C. Smith *et al.*, “Removing the noise and systematics while preserving the signal – an empirical bayesian approach to kepler light curve systematic error correction,” in *Poster at the American Astronomical Society Meeting*, Anchorage, AK, USA, 2012.
- 39 J. C. Smith *et al.*, “Application of an empirical bayesian technique to systematic error correction and data conditioning of kepler photometry,” in *Poster at the American Astronomical Society Meeting*, Boston, MA, USA, 2011.
- 40 J. C. Smith *et al.*, “Prospects for integrating a hollow electron lens into the lhc collimation system,” in *Proc. of the US Particle Accelerator Conference*, 2009.
- 41 J. C. Smith *et al.*, “Recent progress on the design of a rotatable copper collimator for the lhc collimation upgrade,” in *Proc. of the US Particle Accelerator Conference*, 2009.
- 42 L. Xiao, J. C. Smith, *et al.*, “Trapped mode study for a rotatable collimator design for the lhc upgrade,” in *Proc. of the US Particle Accelerator Conference*, 2009.
- 43 J. C. Smith *et al.*, “Bench-top impedance measurements for a rotatable copper collimator for the lhc phase ii collimation upgrade,” in *Proc. of the European Particle Accelerator Conference*, 2008.

- 44 J. C. Smith *et al.*, “Design of a rotatable copper collimator for the lhc phase ii collimation upgrade,” in *Proc. of the European Particle Accelerator Conference*, 2008.
- 45 J. C. Smith *et al.*, “Mechanical and thermal prototype testing for a rotatable collimator for the lhc phase ii collimation upgrade,” in *Proc. of the European Particle Accelerator Conference*, 2008.
- 46 J. C. Smith, “Comparison of tracking codes for the international linear collider,” in *Proc. of the US Particle Accelerator Conference*, 2007.
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