Publication Record

Jamie Zvirzdin

Updated December 10, 2025

ORCID: 0009-0005-5418-0654

Peer-Reviewed Physics Papers and Proceedings

Telescope Array Collaboration, Abbasi, R. U., Abu-Zayyad, T., Allen, M., Belz, J. W., Bergman, D. R., Bradfield, F., Buckland, I., Campbell, W., Cheon, B. G., Endo, K., Fedynitch, A., Fujii, T., Fujisue, K., Fujita, K., Fukushima, M., Furlich, G., Galvez Urena, A., Gerber, Z., ... Zvirzdin, J. (2025). **Searching for EeV photons with the Telescope Array surface detector and neural networks**. *arXiv preprint*. https://doi.org/10.48550/arXiv.2512.01638.

Sakamoto, R., Abbasi, R., Abu-Zayyad, T., Allen, M., Belz, J., Bergman, D., Bradfield, F., Buckland, I., Campbell, W., Cheon, B., Endo, K., Fedynitch, A., Fujii, T., Fujisue, K., Fujita, K., Fukushima, M., Furlich, G., Gálvez Ureña, A., Gerber, Z., ... Zvirzdin, J. (2025). **Study of air shower reconstruction with asymmetric lateral distribution function for TAx4 surface detector**. *Proceedings of the 39th International Cosmic Ray Conference, PoS(ICRC2025)*, 378. https://doi.org/10.22323/1.501.0378.

Kieu, N., Abbasi, R. U., Saba, M. M. F., Krehbiel, P. R., Gordillo-Vazquez, F. J., Stanley, M. A., da Silva, D. R., Belz, J. W., Warner, T., Rison, W., Rodeheffer, D., Cruz, I. T., Mazzucco, D., Knight, T., Remington, J., Mazich, J., LeVon, R., Smout, K., Petrizze, A., ... Zvirzdin, J. (2025). **Time-resolved leader spectra of downward terrestrial gamma-ray flashes observed at the Telescope Array surface detector**. *Journal of Geophysical Research: Atmospheres*, *130*(16), e2025JD043812. https://doi.org/10.1029/2025JD043812.

Rubtsov, G., Abdul Halim, A., Abreu, P., Aglietta, M., Allekotte, I., Almeida Cheminant, K., Almela, A., Aloisio, R., Alvarez-Muñiz, J., Ambrosone, A., Ammerman Yebra, J., Anastasi, G. A., Anchordoqui, L. A., Andrada, B., Andrade Dourado, L., Andringa, S., Apollonio, L., Aramo, C., Arnone, E., ... Zvirzdin, J. (2025). **Update on full-sky searches for large- and medium-scale anisotropies in the ultra-high-energy cosmic-ray flux using the Pierre Auger Observatory and the Telescope Array**. *Proceedings of the 7th International Symposium on Ultra High Energy Cosmic Rays, PoS(UHECR2024)*, 009. https://doi.org/10.22323/1.484.0009.

Kieu, N., Abbasi, R. U., Saba, M. M. F., Belz, J. W., Krehbiel, P. R., Stanley, M. A., Gordillo-Vazquez, F. J., Passas-Varo, M., Warner, T., Rison, W., Rodeheffer, D., da Silva, D. R., Mazzucco, D., Knight, T., Cruz, I. T., Remington, J., Mazich, J., LeVon, R., Smout, K., ... Zvirzdin, J. (2024). **First time-resolved leader spectra associated with a downward terrestrial gamma-ray flash detected at the Telescope**

Array surface detector. *Journal of Geophysical Research: Atmospheres*, *129*(24), e2024JD041720. https://doi.org/10.1029/2024JD041720.

Telescope Array Collaboration, Abbasi, R. U., Abu-Zayyad, T., Allen, M., Belz, J. W., Bergman, D. R., Buckland, I., Campbell, W., Cheon, B. G., Endo, K., Fedynitch, A., Fujii, T., Fujisue, K., Fujita, K., Fukushima, M., Furlich, G., Gerber, Z., Globus, N., Hanlon, W., ... Zvirzdin, J. (2024). **Observation of declination dependence in the cosmic ray energy spectrum**. *arXiv preprint*. https://doi.org/10.48550/arXiv.2406.08612.

Featured Presentations, Essays, and Books

Zvirzdin, J. (2025a, January 27). **Psst . . . your AI is showing: How to put your own voice in scientific papers** [Slides for presentation at the Workshop on Machine Learning for Analysis of High-Energy Cosmic Particles, Bartol Research Institute, University of Delaware, 27–31 January 2025]. Zenodo. https://doi.org/10.5281/zenodo.15115279.

Zvirzdin, J. (2024a). **The city of wisdom: To understand physics, we need to tell and hear stories**. *Aeon*. https://aeon.co/essays/to-understand-physics-we-need-to-tell-and-hear-stories

Zvirzdin, J. (2023a). **Subatomic writing: Six fundamental lessons to make language matter**. Johns Hopkins University Press. https://www.subatomicwriting.com/

Zvirzdin, J. (2016). **Observations of a science editor: If romantic scientists pilfered fiction's toolbox, you can too** [Fall 2016, online centerpiece essay of Poetics of Science issue. Adapted from a lecture given at Bennington College in June 2015]. *The Kenyon Review Online*. https://kenyonreview.org/kr-online-issue/2016-fall/selections/jamie-zvirzdin-656342/

2025 "Citizen Science" NY Newspaper Column: Physics Mysteries

This column publishes in AllOtsego.com as well as the Cooperstown newspaper *The Freeman's Journal* and the newspaper *Hometown Oneonta*.

Zvirzdin, J. (2025b). **Solving the clue of the GZK cutoff** [Citizen Science column #30; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-solving-the-clue-of-the-gzk-cutoff/

Zvirzdin, J. (2025c). **Discovering the secret of the Rocky Road of Life** [Citizen Science column #29; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-discovering-the-secret-of-the-rocky-road-of-life/

Zvirzdin, J. (2025d). **Solving the mystery of celestial ELVES, TROLLs and sprites** [Citizen Science column #28; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-solving-the-mystery-of-celestial-elves-trolls-and-sprites/

Zvirzdin, J. (2025e). **Solving the mystery of life on a faraway world** [Citizen Science column #27; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-solving-the-mystery-of-life-on-a-faraway-world/

Zvirzdin, J. (2025f). **Solving the mystery of the vanishing love for science** [Citizen Science column #26; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-solving-the-mystery-of-the-vanishing-love-for-science/

Zvirzdin, J. (2025g). **New physics mystery series: Developing Nancy Drew grit** [Citizen Science column #25; Physics Mysteries series]. *Citizen Science*. https://www.allotsego.com/citizen-science-new-physics-mystery-series-developing-nancy-drew-grit/

2024 "Citizen Science" NY Newspaper Column: Energy Demystified

Zvirzdin, J. (2024b). **Honoring light from Stonehenge to science** [Citizen Science column #24; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-honing-light-from-stonehenge-to-science/

Zvirzdin, J. (2024c). **Assessing real and perceived risks of nuclear energy** [Citizen Science column #23; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-assessing-real-perceived-risks-of-nuclear-energy/

Zvirzdin, J. (2024d). **The bolts and volts of electric energy** [Citizen Science column #22; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-the-bolts-and-volts-of-electric-energy/

Zvirzdin, J. (2024e). **The real attraction of magnetic energy** [Citizen Science column #21; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-the-real-attraction-of-magnetic-energy/

Zvirzdin, J. (2024f). **Thermal energy, hotbed of activity** [Citizen Science column #20; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-thermal-energy-a-hotbed-of-activity/

Zvirzdin, J. (2024g). **Understanding sound energy** [Citizen Science column #19; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-understanding-sound-energy/

Zvirzdin, J. (2024h). **Let's get chemical** [Citizen Science column #18; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-lets-get-chemical/

Zvirzdin, J. (2024i). **Bounce back this summer with elastic potential energy** [Citizen Science column #17; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-bounce-back-this-summer-with-elastic-potential-energy/

Zvirzdin, J. (2024j). **Potential energy's untapped value** [Citizen Science column #16; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-potential-energys-untapped-value/

Zvirzdin, J. (2024k). **Kinetic energy, the *force vive*** [Citizen Science column #15; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-kinetic-energy-the-force-vive/

Zvirzdin, J. (2024l). **Calculating the metaphysical and physical value of work** [Citizen Science column #14; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-calculating-the-metaphysical-and-physical-value-of-work/

Zvirzdin, J. (2024m). **A year of studying energy** [Citizen Science column #13; Energy Demystified series]. *Citizen Science*. https://www.allotsego.com/citizen-science-energy-demystified-a-year-of-studying-energy/

2023 "Citizen Science" NY Newspaper Column: Pseudoscience vs. Science

Iron String Press, parent company of *The Freeman's Journal*, *Hometown Oneonta*, and AllOtsego.com, received three awards from the New York Press Association. "Citizen Science" won 3rd place in "Best Column, Division 3."

Zvirzdin, J. (2023b). **Navigating the waters of truth** [Citizen Science column #12; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-navigating-the-waters-of-truth/

Zvirzdin, J. (2023c). **Desert vigil: Patience and the pulse of cosmic-ray secrets** [Citizen Science column #11; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/desert-vigil-patience-and-the-pulse-of-cosmic-ray-secrets/

Zvirzdin, J. (2023d). **Superstitious by design: How we negotiate chaos, uncertainty** [Citizen Science column #10; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-superstitious-by-design-how-we-negotiate-chaos-uncertainty/

Zvirzdin, J. (2023e). **The flamingo conspiracy: They're out to get you** [Citizen Science column #9; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-the-flamingo-conspiracy-theyre-out-to-get-you/

Zvirzdin, J. (2023f). **Science is a word game** [Citizen Science column #8; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-science-is-a-word-game/

Zvirzdin, J. (2023g). **Welcome to Biasville, where partiality thrives** [Citizen Science column #7; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-welcome-to-biasville-where-partiality-thrives/

Zvirzdin, J. (2023h). **The power of the placebo effect, Part II: When belief brings harm** [Citizen Science column #6; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-the-power-of-the-placebo-effect-part-ii-when-belief-brings-harm/

Zvirzdin, J. (2023i). **The power of the placebo effect, Part I: Magic feathers and medical transparency** [Citizen Science column #5; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-the-power-of-the-placebo-effect-part-i-magic-feathers-and-medical-transparency/

Zvirzdin, J. (2023j). **AI renaissance: A chance to reduce cheating and revitalize the school experience** [Citizen Science column #4; Pseudoscience vs. Science series]. *Cit-*

izen Science. https://www.allotsego.com/citizen-science-ai-renaissance-a-chance-to-reduce-cheating-revitalize-the-school-experience/

Zvirzdin, J. (2023k). **"Science says so": Sifting evidence-based science from pseudoscience** [Citizen Science column #3; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-science-says-so-sifting-evidence-based-science-from-pseudoscience/

Zvirzdin, J. (2023l). **False alarms in science and the media: Examining cause and effect** [Citizen Science column #2; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-false-alarms-in-science-and-the-media-examining-cause-and-effect/

Zvirzdin, J. (2023m). **Introducing citizen science: Finding intellectual security** [Citizen Science column #1; Pseudoscience vs. Science series]. *Citizen Science*. https://www.allotsego.com/citizen-science-introduction-to-citizen-science-finding-intellectual-security/

Other Essays, Articles, and Projects

Zvirzdin, J. (2023n, February 16). **Dust to dust: The cosmic perspective** [Science sonnet plus prose flash-nonfiction]. Microlit Almanac. https://www.birchbarkediting.com/microlit-almanac/dust-to-dust-zvirzdin

Zvirzdin, J. (2021). **The complicated truth of climate change in the Marshall Islands**. *The New Republic*. https://newrepublic.com/article/160768/complicated-truth-climate-change-marshall-islands

Zvirzdin, J. (2019a). **6 ways to calculate a universe in flux** [Enumeration column, Autumn 2019 issue]. *Orion Magazine*. https://orionmagazine.org/article/6-ways-to-calculate-a-universe-in-flux/

Zvirzdin, J. (2019b). **I fell under the spell of NASA's most notorious thief** [Science article about my curious relationship with a curious criminal. Talks about the difference between a confident scientist vs. a con artist]. *The Atlantic*. https://www.theatlantic.com/science/archive/2019/02/nasa-thief-thad-roberts/582472/

Zvirzdin, J. (2018a). **Walking by dogs on a Marshallese morning** [One-Minute Memoir, audio flash-nonfiction about walking with women on Majuro Atoll in the Marshall Islands. Starts at minute 33]. *Brevity Magazine*. https://brevity.wordpress.com/2018/09/04/walking-by-dogs-on-a-marshallese-morning/

Zvirzdin, J. (2018b). **The makeup of a monster** [Issue 66: Dangerous Creations]. *Creative Nonfiction*. https://creativenonfiction.org/writing/the-makeup-of-a-monster/

Zvirzdin, J. (2018c). **On the revolution of revolutions: Nicaraguan women after war** [Spring 2018, special all-women ten-year anniversary issue]. *CONSEQUENCE Magazine*.

Zvirzdin, J. (2017a). **"Shuddering before the beautiful": Trains of thought across the Mormon cosmos** [Special collaborative issue on the challenges and/or harmonies of science and religion; also published in Creative Nonfiction Issue 65. Winner of the $5,000

runner-up prize. I was asked to speak at the launch event on October 13, 2017, at the National Academies of Science, Engineering, and Medicine in Washington, D.C. Contest sponsored by the Think Write Publish Foundation]. *Issues in Science & Technology*. https://issues.org/shuddering-before-the-beautiful/

Zvirzdin, J. (2017b). **"Shuddering before the beautiful": Trains of thought across the Mormon cosmos** [Issue 65: Special collaborative issue on science and religion]. *Creative Nonfiction*. https://creativenonfiction.org/writing/shuddering-before-the-beautiful-trains-of-thought-across-the-mormon-cosmos/

Zvirzdin, J. (Ed.). (2015, July). **Fresh courage take: New directions by Mormon women** [Nonfiction anthology project. Nominated by the John Whitmer Historical Association for 2016 Best Anthology and a finalist for the 2015 Smith-Pettit Foundation Award for Outstanding Contribution to Mormon Letters in Creative Nonfiction.]. Signature Books.

Zvirzdin, J. (2014a). **Gaia mission versus Star Trek: The Data challenge** [Science & Energy section]. *Gigaom*. https://web.archive.org/web/20150318193101/https://gigaom.com/2014/10/11/gaia-mission-versus-star-trek-the-data-challenge/

Zvirzdin, J. (2014b). **On inhaling books** [Nonfiction essay on the volatile organic compounds (VOCs) that create the vanilla smell of old books. "Geek Girls" edition, Volume 37.3]. *Room Magazine*.

Translation, Editing, and Early Work

Tima, K. (2013, September 8). **My story as a survivor of U.S. nuclear tests in the Marshall Islands** (J. Zvirzdin, Ed. & Trans.) [Translated and edited by Jamie Zvirzdin]. CreateSpace Independent Publishing Platform.

Zvirzdin, J. (2013, May 7). **Look at that fat white baby: Moving to a developing country** [Essay about moving to the Marshall Islands]. In A. of the American Foreign Service Worldwide (Ed.), *The Foreign Service companion: Moving your household without losing your mind*. Associates of the American Foreign Service Worldwide (AAFSW).

Zvirzdin, J. (Ed.). (2012). **The Unbound Bookmaker Project: Marshallese–English children's books** [Series of 14 Marshallese–English children's books written and illustrated by over 200 students in the Marshall Islands]. https://www.unboundbookmaker.com

Peretti Poggi, W. (2009, April 1). **Illustration & *The Divine Comedy*** (J. Zvirzdin, Trans.) [Booklet prepared for professional artist's lecture series at Notre Dame University, Chicago, April 1–2, 2009].

Zvirzdin, J. (1995). **Goldilocks II** [Children's book written in fifth grade: Goldilocks breaks into a dentistry. Major credit to Mrs. Arlene Caldwell for getting all our books bound and "published"].