

Icarus Journal—Special Issue on the 1908 Tunguska Airburst



Icarus publishes original work in the field of Solar System studies. The July 2019 issue of *Icarus* (volume 327) has a collection of eight papers taking a modern look at the 1908 Tunguska airburst, covering topics presented at a 16 January 2018 workshop at NASA Ames Research Center. About 50 people gathered at the workshop to discuss and consider the 1908 Tunguska event and the current status of airburst modeling, especially drawing knowledge from the techniques developed since the 2013 Chelyabinsk impact airburst.

The [Icarus Table of contents and abstracts](#) are available to everyone. Articles:

"Introduction to Icarus Special Papers on Tunguska" by Morrison, D. and Robertson, D. K., p. 1-3, doi: [10.1016/j.icarus.2019.04.011](https://doi.org/10.1016/j.icarus.2019.04.011).

"Tunguska Eyewitness Accounts, Injuries, and Casualties" by Jenniskens, P., Popova, O. P., Glazachev, D. O., Podobnaya, E. D., and Kartashova, A. P., p. 4-18, doi: [10.1016/j.icarus.2019.01.001](https://doi.org/10.1016/j.icarus.2019.01.001).

"Uncertainty Quantification in Continuous Fragmentation Airburst Models" by McMullan, S. and Collins, G. S., p. 19-35, doi: [10.1016/j.icarus.2019.02.013](https://doi.org/10.1016/j.icarus.2019.02.013).

"Hydrocode Simulations of Asteroid Airbursts and Constraints for Tunguska" by Robertson, D. K. and Mathias, D. L., p. 36-47, doi: [10.1016/j.icarus.2018.10.017](https://doi.org/10.1016/j.icarus.2018.10.017), open access.

"A Model for Thermal Radiation from the Tunguska Airburst" by Johnston, C. O. and Stern, E. C., p. 48-59, doi: [10.1016/j.icarus.2019.01.028](https://doi.org/10.1016/j.icarus.2019.01.028), open access.

"Upper Atmosphere Effects After the Entry of Small Cosmic Bodies: Dust Trains, Plumes, and Atmospheric Disturbances" by Artemieva, N., Shuvalov, V. V., and Khazins, V. M., p. 60-71, doi: [10.1016/j.icarus.2019.02.023](https://doi.org/10.1016/j.icarus.2019.02.023).

"Reprint of Effects of Asteroid property Distributions on Expected Impact Rates" by Wheeler, L. F. and Mathias, D. L., p. 72-82, doi: [10.1016/j.icarus.2019.04.006](https://doi.org/10.1016/j.icarus.2019.04.006), open access.

"Probabilistic Assessment of Tunguska-scale Asteroid Impacts" by Wheeler, L. F. and Mathias, D. L., p. 83-96, doi: [10.1016/j.icarus.2018.12.017](https://doi.org/10.1016/j.icarus.2018.12.017), open access.

See also:

Morrison, D. (2019) Tunguska Workshop: Applying Modern Tools to Understand the 1908 Tunguska Impact. NASA Technical Memorandum. [NASA/TM--220174](#), open access.

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