



OPEN Retraction Note: A Tunguska sized airburst destroyed Tall el-Hammam a Middle Bronze Age city in the Jordan Valley near the Dead Sea

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Retraction of: *Scientific Reports* <https://doi.org/10.1038/s41598-021-97778-3>, published online 20 September 2021

The Editors have retracted this Article.

Following publication of this Article concerns have been raised by Jaret & Harris¹ about errors in methodology, analyses, and interpretation of the mineralogic and geochemical data in the Article. In addition, Boslough & Bruno² show that comparisons between the Tall el-Hammam site and the Tunguska event are not adequately substantiated, as a result of errors propagated from the original sources that overestimated the temperature, wind speeds, and impact of the air blast at Tunguska.

Therefore, the claims that an airburst event destroyed the Middle Bronze Age city of Tall el-Hammam appear to not be sufficiently supported by the data in the Article. Given these concerns, the Editors no longer have confidence that the conclusions presented are reliable.

Malcolm A. LeCompte, T. David Burleigh, Robert E. Hermes, Wendy S. Wolbach, Gunther Kletetschka, Timothy Witwer, George A. Howard, Christopher R. Moore, James P. Kennett, Allen West, and Phillip J. Silvia disagree with the retraction. A. Victor Adedeji, James H. Wittke, Charles Mooney, Dale Batchelor, Joel Kathan, Mark C. L. Patterson, Edward C. Swindel, Siddhartha Mitra, and Kurt Langworthy did not respond to the Editors' correspondence about the retraction. Ted E. Bunch is deceased.

References

1. Jaret, S. J. & Scott Harris, R. No mineralogic or geochemical evidence of impact at Tall el-Hammam, a Middle Bronze Age city in the Jordan Valley near the Dead Sea. *Sci. Rep.* **12**, 5189. <https://doi.org/10.1038/s41598-022-08216-x> (2022).
2. Boslough, M. & Bruno, A. Misunderstandings about the Tunguska event, shock wave physics, and airbursts have resulted in misinterpretations of evidence at Tall el-Hammam. *Sci. Rep.* **15**, 13869. <https://doi.org/10.1038/s41598-025-98362-9> (2025).

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