

**TABLE 2: Links to Post-Publication Review Comments for Documentation of Problems**

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**Firestone et al (2007)**

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Lack of standard peer review.

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#11>

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#16>

Paper was communicated by NAS member with no subject matter expertise in impact physics.

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#11>

Individual data points omitted from magnetic spherule plot derived from Firestone et al (2006). Data apparently adjusted or transformed without explanation.

<https://bit.ly/47a6gfZ>

Graphs of putative impact markers are different from and inconsistent with previous and subsequent publications and presentations by same authors.

<https://bit.ly/4fZNsUJ>, <https://bit.ly/3AE9hbZ>, <https://bit.ly/4g3jf75>, <https://bit.ly/4cT154Z>

Unexplained labeling contradictions, inconsistencies, and anomalies. <https://bit.ly/3Z9MVcD>

Failed to disclose obvious nearby sources of industrial contaminants. Starting at

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#19>

Online version of supporting information has been deleted and is no longer available from PNAS.

<https://bit.ly/4g3jf75>

Graph of concentration peak has no associated data point. <https://bit.ly/3ALEWbI>

No response to multiple good-faith requests for materials, raw data and information.

<https://bit.ly/3XsGfVC> and subsequent requests.

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#17>

Failed to comply with Materials and Data Availability guidelines. <https://bit.ly/4cOdkzR>

Failed to respond to request for data supporting key evidence (fullerenes with extraterrestrial helium).

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#11>

Failed to disclose that modern contaminants were improperly used as “YDB marker”.

Comments starting at:

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#20>

Failed to disclose that material was collected from mixed and disturbed sediments.

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#54>

Descriptions of laboratory methods suggest lack of care to avoid contamination.

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#50>

<https://pubpeer.com/publications/9D7247C13B6A0ACA3E812D4DAECB0B#44>

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**Kennett et al (2009b)**

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Lack of standard peer review, Communicated by NAS member with no relevant subject matter expertise.

<https://pubpeer.com/publications/D8096583642350F2ED20846E53D5AD#2>

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**Kurbatov et al (2010)**

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Unresolved discrepancy: concentrations of supposed impact markers are different (by up to three orders of magnitude) in one table, compared to the graph of the same data. <https://bit.ly/3MuJXbf>,

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#7>

Unresolved graphing problems: graphs contradict claims described in text.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#21>

Data that the authors claimed were archived in 2010 do not exist in the archive.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#6>

Repeated data misrepresentations in other papers written by coauthors of this paper.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#10>

Failed to disclose their unsuccessful attempt to confirm results. Starting at

<https://bit.ly/4e23hrY> and subsequent comments.

Failed to disclose their own withdrawn misidentifications of other putative impact markers that must have been containments.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#18>

Failed to respond to good-faith requests for materials, raw data and information. See <https://bit.ly/3XosVBR> and subsequent comments.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#28>

After previously stating samples existed, authors now state that there is nothing left.

<https://pubpeer.com/publications/CB9BF60F18A553088BEFB061164940#8>

Failed to acknowledge possible source of laboratory contamination.

<https://pubpeer.com/publications/28B83ADB820618B3F374667D5FBB92#27>

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### **Israde-Alcantara et al (2012a)**

Lack of standard peer review. Communicated by NAS member with no relevant subject matter expertise.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#2>

Failed to correct misinformation about carbon spherules.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#1>

Failed to correct false claim about air shock temperatures and misattribution.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#3>

Failed to correct mistake about dating of Clovis archaeological sites.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#4>

Failed to disclose that modern contaminants were improperly used as “YDB marker”.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#5>

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/E4972B5F6092D573B191DF9EFE7CC5#6>

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### **Israde-Alcántara et al (2012b)**

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/BE7A20D91132EEFE8F80D8A1F7BC48>

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### **Bunch et al (2012)**

Lack of standard peer review, Communicated by NAS member with no relevant subject matter expertise.

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#11>

Failed to disclose key collaborators.

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#1>

Failed to disclose nearby sources of industrial contamination. Starting at

<https://bit.ly/3AVwGFU> and <https://bit.ly/3XpoBSR>.

Failed to disclose bioturbation and mixed sediments and lack of stratigraphic control.

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#5>

Failed to disclose that their former collaborator and previous coauthor told them that their “impact marker” was railroad slag, and that sediments were post-industrial.

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#7>

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#15>

Failed to cite scientific sources. Conflated biblical concepts with science.

<https://pubpeer.com/publications/7031153F4F3B5EB62FA7EE5B6FD9E3#12>

Failed to disclose identification of contaminants at YDB location they cite. Starting at <https://bit.ly/47ccWda>

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**LeCompte et al (2012)**

Lack of standard peer review, Communicated by NAS member with no relevant subject matter expertise.

Failure to respond to good-faith requests for materials, raw data and information.

<https://pubpeer.com/publications/36327E9B6171AB6EB008E64D5B757F#9>

Violations of PNAS Materials and Data Availability guidelines.

<https://pubpeer.com/publications/36327E9B6171AB6EB008E64D5B757F#15>

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**Wittke et al (2013)**

Lack of standard peer review, Communicated by NAS member with no relevant subject matter expertise.

<https://pubpeer.com/publications/9A21579856058427D869DBC02885F6#2>

Failure to correct false claim about location from which Clovis point was recovered.

<https://pubpeer.com/publications/9A21579856058427D869DBC02885F6#1>

Failure to correct false information about air shock temperatures and misattribution.

<https://pubpeer.com/publications/9A21579856058427D869DBC02885F6#3>

Failure to disclose nearby sources of potential industrial contaminants.

<https://bit.ly/3Z7TegN> and subsequent.

Failure to correct data discrepancy and misinformation about sampling location.

<https://pubpeer.com/publications/9A21579856058427D869DBC02885F6#19>

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**LeCompte et al (2013)**

Cites non-peer-reviewed fringe source for physically impossible explanation of data.

<https://bit.ly/3MuW1cE> and following.

Redefinition of the word “independent”.

<https://pubpeer.com/publications/0D230E3EEEEAA761E307D5174103038#6> and following.

Uncorrected misattribution:

<https://pubpeer.com/publications/0D230E3EEEEAA761E307D5174103038#10>

Failure to disclose nearby sources of potential industrial contaminants.

<https://pubpeer.com/publications/0D230E3EEEEAA761E307D5174103038#14>

Failure to acknowledge or address contamination findings.

<https://pubpeer.com/publications/0D230E3EEEEAA761E307D5174103038#24>

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**Wu et al (2013)**

Lack of standard peer review, Communicated by NAS member with no relevant subject matter expertise.

<https://pubpeer.com/publications/05B8B3E4CD63FB278F28AF5D35DB9D#2>

Failed to disclose that modern contaminants were improperly used as “YDB marker”.

<https://pubpeer.com/publications/05B8B3E4CD63FB278F28AF5D35DB9D#3>

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**Kinzie et al (2014)**

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/B72D7794E85B9C3A082A7AA0C3B6DE#2>

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**Silvia (2015)**

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Directly quoted sources without proper citation and misrepresented cited sources. Lack of any peer review. Report published by unaccredited religious institution.

<https://bit.ly/3XqLyoS>

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**Kennett et al (2015)**

Reported results claimed to be based on code with inconsistencies. Published code fails to execute. Methodological problem undermines paper's central findings.

<https://bit.ly/3XopivF>

Falsely claims that Kurbatov et al (2010) found nanodiamonds at the Younger Dryas boundary.

<https://pubpeer.com/publications/1F7147A644242D2914CF890FA5F7E0#6>

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**Sweatman and Tsikritsis (2017a)**

Introduced novel diagnostic of impact events (“YDIH marker” and “impact proxy”) with no citation to impact cratering or collisional airburst literature.

<https://pubpeer.com/publications/76A3338C3D08856249D1D046DFAA6A#1>

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**Moore et al (2017)**

Failed to correct mistake about location from which Clovis point was recovered.

<https://pubpeer.com/publications/ADDB72BBC26F0C2CEC62920D92CBA4>

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**Wolbach et al (2018a)**

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/79AC1409C811F9A1D32BE160B44C43#2>

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**Israde-Alcántara et al (2018)**

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/306E3936FB4F4206611BAA1CB93D04#2>

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**Pino et al (2019)**

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/D910848F691840105CA665367BA9F2#6>

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**Moore et al (2020)**

Went through peer review after correspondence author became member of journal's editorial board after representing himself as a geophysicist with a PhD.

<https://pubpeer.com/publications/CB9BF60F18A553088BEFB061164940#1>

Authors stated that it is their policy not to share their processed samples, and have no original samples.

<https://pubpeer.com/publications/CB9BF60F18A553088BEFB061164940#8>

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/CB9BF60F18A553088BEFB061164940#10>

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**Bunch et al (2021)**

Maps contradict the data the authors purported to show, or omit important information.

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#58>

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#103>

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#125>

Images were inappropriately manipulated or photoshopped. <https://www.nature.com/articles/s41598-022-06266-9>

Cited misinformation they got from creationist literature.

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#63>

Misrepresented cited sources.

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#74>

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#118>

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#122>

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#123>

Failed to cite sources.

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#125>

Failed to publish response to Matters Arising article, "No mineralogic or geochemical evidence of impact at Tall el-Hammam, a Middle Bronze Age city in the Jordan Valley near the Dead Sea".

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#33>

Editorial expression of concern has been published, stating, "Readers are alerted that concerns raised about the data presented and the conclusions of this article are being considered by the Editors. A further editorial response will follow the resolution of these issues."

<https://pubpeer.com/publications/37B87CAC48DE4BC98AD40E00330143#85>

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### **Sweatman (2021)**

Failed to publish correction to large error in stated age of the onset of Younger Dryas and misrepresentation of Pt age published by Petaev et al (2013).

<https://pubpeer.com/publications/E53FEC64CC5381A83E47BDED4C8026#1>

Failed to disclose extent of collaboration and personal relationships with leaders of the Comet Research Group. Comments starting with

<https://pubpeer.com/publications/E53FEC64CC5381A83E47BDED4C8026#2>

Falsely claimed that Kurbatov et al (2010) reported nanodiamonds at the YDB.

<https://pubpeer.com/publications/E53FEC64CC5381A83E47BDED4C8026#5>

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### **Tankersley et al (2022) RETRACTED**

Retracted by journal, because "the Editors no longer have confidence that the conclusions presented are adequately supported."

<https://pubpeer.com/publications/3995AA384244BC7D4ADEF36FFDDD98>

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### **Powell (2022a)**

Failed to disclose personal relationships with authors whose work the paper is reviewing.

<https://pubpeer.com/publications/C3865334683DD92059FF608650FB69>

Failed to disclose the fact that evidence the author cites has never been made available.

<https://pubpeer.com/publications/C56FE6DC98A03C18DCA688B80AF433#2>

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### **Powell (2022b) WITHDRAWN**

Withdrawn by journal due to false allegations and defamatory content.

<https://pubpeer.com/publications/3387E305D6F21F200D98F1937DD1FC>

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### **Powell (2023)**

Cites non-peer-reviewed advocacy blog as primary source of information.

<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#33>

Misattribution of sources. <https://bit.ly/4dJyBMh> (and subsequent comments).

Lack of standard peer review.

<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#39>

Substantively similar to paper withdrawn by another journal.

<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#30>

Failed to acknowledge and publish corrections to well documented and demonstrably false statements.

<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#1>  
<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#3>  
<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#4>  
<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#18>  
<https://pubpeer.com/publications/EB6B06831411E6EC13E53589CC84EC#19>

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**Tankersley et al (2023)**

Lack of standard peer review.

<https://pubpeer.com/publications/DABAB5A97314031F2F1AB793AD1827>

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**Moore et al (2023a)**

Failed to address dating ambiguities.

<https://pubpeer.com/publications/375D20E97CA73BFB8A2E196A93C492#1>

Failed to address or correct possible error.

<https://pubpeer.com/publications/375D20E97CA73BFB8A2E196A93C492#2>

Failure to disclose nearby sources of potential industrial contaminants.

<https://pubpeer.com/publications/375D20E97CA73BFB8A2E196A93C492#3> and subsequent

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**Moore et al (2023c)**

Nonstandard definition of “airburst”. Misrepresentation of cited sources. Lack of standard peer review.

<https://pubpeer.com/publications/195465D4D85390D3FDE37FCFAFFAEC>

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**Moore et al (2023d)**

Nonstandard definition of “airburst”. Misrepresentation of sources in citation chain. Lack of standard peer review.

<https://pubpeer.com/publications/2D28B7BDA350CCDCBCE6233FF9BDAC>

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**Hermes et al (2023)**

Nonstandard definition of “airburst”. Misrepresentation of sources in citation chain. Lack of standard peer review.

<https://pubpeer.com/publications/7549A47951D98994708E83760BE0EE#1>

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**Tankersley et al (2024)**

Earlier version of this paper was retracted by journal. Lack of standard peer review.

<https://pubpeer.com/publications/72F9F2E30C444328018394D68A6F44#2>

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**Sweatman (2024)**

Failed to disclose the fact that evidence the author cites has never been made available.

<https://pubpeer.com/publications/C56FE6DC98A03C18DCA688B80AF433#2>

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**Moore et al (2024)**

Lack of standard peer review.

<https://pubpeer.com/publications/F5D96FDA02483CC7B17014305B292E>

Previously rejected by two different journals.

<https://pubpeer.com/publications/F5D96FDA02483CC7B17014305B292E#2>

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## References

- Bunch, T.E., Hermes, R.E., Moore, A.M.T., Kennett, D.J., Weaver, J.C., Wittke, J.H., DeCarli, P.S., Bischoff, J.L., Hillman, G.C., Howard, G.A., Kimbel, D.R., Kletetschka, G., Lipo, C.P., Sakai, S., Revay, Z., West, A., Firestone, R.B., Kennett, J.P., 2012. Very high-temperature impact melt products as evidence for cosmic airbursts and impacts 12,900 years ago. *Proc. Natl. Acad. Sci. U. S. A.* 109, E1903–E1912.
- Bunch, T.E., LeCompte, M.A., Adedeji, A.V., Wittke, J.H., Burleigh, T.D., Hermes, R.E., Mooney, C., Batchelor, D., Wolbach, W.S., Kathan, J., Kletetschka, G., Patterson, M.C.L., Swindel, E.C., Witwer, T., Howard, G.A., Mitra, S., Moore, C.R., Langworthy, K., Kennett, J.P., West, A., Silvia, P.J., 2021. A Tunguska sized airburst destroyed Tall el-Hammam a Middle Bronze Age city in the Jordan Valley near the Dead Sea. *Sci Rep* 11, 18632. <https://doi.org/10.1038/s41598-021-97778-3>
- Firestone, R.B., West, A., Kennett, J.P., Becker, L., Bunch, T.E., Revay, Z.S., Schultz, P.H., Belgya, T., Kennett, D.J., Erlandson, J.M., Dickenson, O.J., Goodyear, A.C., Harris, R.S., Howard, G.A., Kloosterman, J.B., Lechler, P., Mayewski, P.A., Montgomery, J., Poreda, R., Darrach, T., Hee, S.S.Q., Smith, A.R., Stich, A., Topping, W., Wittke, J.H., Wolbach, W.S., 2007. Evidence for an extraterrestrial impact 12,900 years ago that contributed to the megafaunal extinctions and the Younger Dryas cooling. *Proc. Natl. Acad. Sci. U. S. A.* 104, 16016–16021.
- Hermes, R.E., Wenk, H.-R., Kennett, J.P., Bunch, T.E., Moore, C.R., LeCompte, M.A., Kletetschka, G., Adedeji, A.V., Langworthy, K., Razink, J.J., Brogden, V., van Devener, B., Perez, J.P., Polson, R., Nowell, M., West, A., 2023. Microstructures in shocked quartz: linking nuclear airbursts and meteorite impacts. *Airbursts and Cratering Impacts*, 1(1). DOI: 10.14293/ACI.2023.0001
- Israde-Alcántara, I., Bischoff, J.L., DeCarli, P.S., Domínguez-Vázquez, G., Bunch, T.E., Firestone, R.B., Kennett, J.P., West, A., 2012b. Reply to Blaauw et al., Boslough, Daulton, Gill et al., and Hardiman et al.: Younger Dryas impact proxies in Lake Cuitzeo, Mexico. *Proc. Natl. Acad. Sci. U. S. A.* 109, E2245–E2247.
- Israde-Alcántara, I., Bischoff, J.L., Domínguez-Vázquez, G., Li, H.-C., DeCarli, P.S., Bunch, T.E., Wittke, J.H., Weaver, J.C., Firestone, R.B., West, A., Kennett, J.P., Mercer, C., Xie, S., Richman, E.K., Kinzie, C.R., Wolbach, W.S., 2012a. Evidence from central Mexico supporting the Younger Dryas extraterrestrial impact hypothesis. *Proc. Natl. Acad. Sci. U. S. A.* 109, E738–E747.
- Israde-Alcántara, I., Domínguez-Vázquez, G., Gonzalez, S., Bischoff, J., West, A. and Huddart, D., 2018. Five Younger Dryas black mats in Mexico and their stratigraphic and paleoenvironmental context. *Journal of paleolimnology* 59, 59-79.
- Kennett, D.J., Kennett, J.P., West, A., West, G.J., Bunch, T.E., Culleton, B.J., Erlandson, J.M., Hee, S.S.Q., Johnson, J.R., Mercer, C., Shen, F., Sellers, M., Stafford Jr., T.W., Stich, A., Weaver, J.C., Wittke, J.H., Wolbach, W.S., 2009b. Shock-synthesized hexagonal diamonds in Younger Dryas boundary sediments. *Proc. Natl. Acad. Sci. U. S. A.* 106, 12623–12638.
- Kennett, J.P., Kennett, D.J., Culleton, B.J., Tortosa, J.E.A., Bischoff, J.L., Bunch, T.E., Daniel Jr., I.R., Erlandson, J.M., Ferraro, D., Firestone, R.B., Goodyear, A.C., Israde-Alcántara, I., Johnson, J.R., Pardo, J.F.J., Kimbel, D.R., LeCompte, M.A., Lopinot, N.H., Mahaney, W.C., Moore, A.M.T., Moore, C.R., Ray, J.H., Stafford Jr., T.W., Tankersley, K.B., Wittke, J.H., Wolbach, W.S., West, A., 2015. Bayesian chronological analyses consistent with synchronous age of 12,835–12,735 Cal B.P. for Younger Dryas boundary on four continents. *Proc. Natl. Acad. Sci. U. S. A.* 12, E4344–E4353.
- Kinzie, C.R., Hee, S.S.Q., Stich, A., Tague, K.A., Mercer, C., Razink, J.J., Kennett, D.J., DeCarli, P.S., Bunch, T.E., Wittke, J.H., Israde-Alcántara, I., Bischoff, J.L., Goodyear, A.C., Tankersley, K.B., Kimbel, D.R., Culleton, B.J., Erlandson, J.M., Stafford, T.W., Kloosterman, J.B., Moore, A.M.T., Firestone, R.B., Tortosa, J.E.A., Pardo, J.F.J., West, A., Kennett, J.P., Wolbach, W.S., 2014. Nanodiamond-rich layer across three continents consistent with major cosmic impact at 12,800 Cal BP. *J. Geol.* 122, 475–506.

- Kurbatov, A.V., Mayewski, P.A., Steffensen, J.P., West, A., Kennett, D.J., Kennett, J.P., Bunch, T.E., Handley, M., Introne, D.S., Hee, S.S.Q., Mercer, C., Sellers, M., Shen, F., Sneed, S.B., Weaver, J.C., Wittke, J.H., Stafford Jr., T.W., Donovan, J.J., Xie, S., Razink, J.J., Stich, A., Kinzie, C.R., Wolbach, W.S., 2010. Discovery of a nanodiamond-rich layer in the Greenland ice sheet. *J. Glaciol.* 56, 749–759.
- LeCompte, M.A., Goodyear, A.C., Demitroff, M.N., Batchelor, D., Vogel, E.K., Mooney, C., Rock, B.N., Seidel, A.W., 2012. Independent evaluation of conflicting microspherule results from different investigations of the Younger Dryas impact hypothesis. *Proc. Natl. Acad. Sci. U. S. A.* 109, E2960-E2969.
- LeCompte, M.A., Batchelor, D., Demitroff, M.N., Vogel, E.K., Mooney, C., Rock, B.N., Seidel, A.W., 2013. Reply to Boslough: Prior studies validating research are ignored. *Proc. Natl. Acad. Sci. U. S. A.* 110, E1652.
- Moore, A.M., Kennett, J.P., Napier, W.M., Bunch, T.E., Weaver, J.C., LeCompte, M., Adedeji, A.V., Hackley, P., Kletetschka, G., Hermes, R.E., Wittke, J.H., Razink, J.J., Gaultois, M.W., West, A., 2020. Evidence of cosmic impact at Abu Hureyra, Syria at the younger Dryas Onset (~ 12.8 ka): High-temperature melting at > 2200 C. *Scientific Reports* 10(1), 4185.
- Moore, A.M.T, Kennett, J.P., Napier, W.M., LeCompte, M.A., Moore, C.R., West, A., 2023d. Abu Hureyra, Syria, Part 3: Comet airbursts triggered major climate change 12,800 years ago that initiated the transition to agriculture. *Airbursts and Cratering Impacts* 1(1). DOI: 10.14293/ACI.2023.0004
- Moore, A.M.T., Kennett, J.P., LeCompte, M.A., Moore, C.R., Li, Y.-Q., Kletetschka, G., Langworthy, K., Razink, J.J., Brogden, V., van Devener, B. Perez, J.P., Polson, R., Mitra, S., Wolbach, W.S., West A., 2023c. Abu Hureyra, Syria, Part 1: Shock-fractured quartz grains support 12,800-year-old cosmic airburst at the Younger Dryas onset. *Airbursts and Cratering Impacts* 1(1). DOI: 10.14293/ACI.2023.0003
- Moore, C.R., Brooks, M.J., Dunbar, J.S., Hemmings, C.A., Langworthy, K.A., West A., LeCompte, M.A., Adedeji, V., Kennett, J.P., Feathers, J.K., 2023a. Platinum and microspherule peaks as chronostratigraphic markers for onset of the Younger Dryas at Wakulla Springs, Florida. *Sci Rep* 13, 22738. <https://doi.org/10.1038/s41598-023-50074-8>
- Moore, C.R., LeCompte, M.A., Kennett, J.P., Brooks, M.J, Firestone, R.B., Ivester, A.H., Ferguson, T.A., Lane, C.S., Duernberger, K.A., Feathers, J.K, Mooney, C.B., Adedeji, V., Batchelor, D., Salmon, M., Langworthy, K.A., Razink, J.J., Brogden, V., van Devener, B., Perez, J.P., Polson, R., Martínez-Colón, M., Rock, B.N., Young, M.D., Kletetschka, G., Bunch T.E., West. A., 2024. Platinum, shock-fractured quartz, microspherules, and meltglass widely distributed in Eastern USA at the Younger Dryas onset (12.8 ka). *Airbursts and Cratering Impacts* 2(1). DOI: 10.14293/ACI.2024.0003
- Moore, C.R., West, A., LeCompte, M.A., Brooks, M.J., Daniel Jr., I.R., Goodyear, A.C., Ferguson, T.A., Ivester, A.H., Feathers, J.K., Kennett, J.P., Tankersley, K.B., Adedeji, A.V., Bunch, T.E., 2017. Widespread platinum anomaly documented at the Younger Dryas onset in North American sedimentary sequences. *Sci. Rep.* 7, 44031.
- Pino, M., Abarzúa, A.M., Astorga, G., Martel-Cea, A., Cossio-Montecinos, N., Navarro, R. X., Lira, M.P., Labarca, R., LeCompte, M.A., Adedeji, V., Moore, C.R., Bunch, T.E., Mooney, C., Wolbach, W.S., West, A., Kennett, J.P., 2019. Sedimentary record from Patagonia, southern Chile supports cosmic-impact triggering of biomass burning, climate change, and megafaunal extinctions at 12.8 ka. *Sci. Rep.* 9, 4413.
- Powell, J.L., 2022a. Premature rejection in science: The case of the Younger Dryas Impact Hypothesis. *Sci. Prog.* 105 (1), 1–43.
- Powell, J.L., 2022b. *Sodom and Skepticism*. Sage Publications. WITHDRAWN.
- Powell, J.L., 2023. Peer review and the pillar of salt: a case study. *Research Ethics* 19(1), 78-89.
- Silvia, P.J., 2015. The Middle Bronze Age civilization-ending destruction of the Middle Ghor. Ph.D. thesis, Trinity Southwest University.



Sweatman, M.B., 2021. The Younger Dryas impact hypothesis: Review of the impact evidence. *Earth Sci. Rev.* 218, 103677.

Sweatman, M.B., 2024. Representations of calendars and time at Göbekli Tepe and Karahan Tepe support an astronomical interpretation of their symbolism. *Time and Mind*, 1-57.

Sweatman, M.B., Tsikritsis, D., 2017a. Decoding Göbekli Tepe with archaeoastronomy: What does the fox say? *Mediterr. Archaeol. Archaeom.* 17 (1), 233–250.

Tankersley, K.B., Meyers, S.A., Stimpson, D.I. and Knepper, S.M., 2023. Evidence for a large late-Holocene Strewn Field in Kiowa County, Kansas, USA. *Airbursts and Cratering Impacts* 1(1). DOI: 10.14293/ACI.2023.0005

Tankersley, K.B., Meyers, S.D. and Meyers, S.A., 2024. The Hopewell Cosmic Airburst Event: A review of the empirical evidence. *Airbursts and Cratering Impacts* 2(1). DOI: 10.14293/ACI.2024.0001

Tankersley, K.B., Meyers, S.D., Meyers, S.A., Jordan, J.A., Herzner, L., Lentz, D.L. and Zedaker, D., 2022. The Hopewell airburst event, 1699–1567 years ago (252–383 CE). *Scientific Reports*, 12(1), p.1706. RETRACTED ARTICLE

Wittke, J.H., Weaver, J.C., Bunch, T.E., Kennett, J.P., Kennett, D.J., Moore, A.M.T., Hillman, G.C., Tankersley, K.B., Goodyear, A.C., Moore, C.R., Daniel Jr., I.R., Ray, J.H., Lopinot, N.H., Ferraro, D., Israde-Alcántara, I., Bischoff, J.L., DeCarli, P.S., Hermes, R.E., Kloosterman, J.B., Revay, Z., Howard, G.A., Kimbel, D.R., Kletetschka, G., Nabelek, L., Lipo, C.P., Sakai, S., West, A., Firestone, R.B., 2013. Evidence for deposition of 10 million tonnes of impact spherules across four continents 12,800 y ago. *Proc. Natl. Acad. Sci. U. S. A.* 110, E2088–E2097.

Wolbach, W.S., Ballard, J.P., Mayewski, P.A., Adedeji, V., Bunch, T.E., Firestone, R.B., French, T.A., Howard, G.A., Israde-Alcántara, I., Johnson, J.R., Kimbel, D., Kinzie, C.R., Kurbatov, A., Kletetschka, G., LeCompte, M.A., Mahaney, W.C., Melott, A.L., Maiorana-Boutillier, A., Mitra, S., Moore, C.R., Napier, W.M., Parlier, J., Tankersley, K.B., Thomas, B.C., Wittke, J.H., West, A., Kennett, J.P., 2018a. Extraordinary biomass-burning episode and impact winter triggered by the Younger Dryas cosmic impact ~12,800 Years Ago. 1. Ice cores and glaciers. *J. Geol.* 126, 165–184.

Wu, Y., Sharma, M., LeCompte, M.A., Demitroff, M.N., Landis, J.D., 2013. Origin and provenance of spherules and magnetic grains at the Younger Dryas boundary. *Proc. Natl. Acad. Sci. U. S. A.* 110, E3557–E3566.