Dear Professor Britt,

I would like to nominate "Meteor storm evidence against the recent formation of lunar crater Giordano Bruno" (2001) Meteoritics and Planetary Science, v36, pp525-529, by Paul Withers for the Planetary Sciences Best Student Paper Award.

It has been suggested that the formation of 22km diameter lunar crater Giordano Bruno was witnessed in 1178 AD (Hartung, Meteoritics, v11, pp187-194, 1976). If true, our understanding of the important geological process of impact cratering would be greatly advanced by studies of such a pristine large crater. It would also have implications for the dangers posed to civilization by impacts.

This provocative theory has been largely unchallenged in the past twenty years. Withers has tested it with an elegant combination of a simple order-of-magnitude calculation and a search through medieval archives. By considering the fate of Earth-bound ejecta, he showed that the formation of Giordano Bruno would have caused a spectacular meteor storm on the Earth. Since such a storm is absent from the historical record, the formation of Giordano Bruno could not have been witnessed in 1178 AD.

The writing is accessible to readers beyond those active in the field of impacts and there was sufficient public interest in these results for them to be featured in Astronomy, Sky and Telescope, and Science.

This paper demonstrates imagination in finding a new test for an old hypothesis, ingenuity in its use of historical sources, insight in its simple, yet quantitative, reasoning, and initiative in developing a class literature review into a sole-authored peer-reviewed publication.

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PDF copy of paper available from:
http://www.lpl.arizona.edu/~withers/pppp/pdf/mapsbruno2001.pdf
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