

Retracted: Paper claiming climate change caused by distance from Sun

March 9 2020, by Bob Yirka



Credit: CC0 Public Domain

The editors at the journal *Scientific Reports* have retracted a paper that was published last summer challenging the human factor in climate change. In their retraction notice, the editors cited concerns about the paper regarding how the Earth-sun distance responded to oscillations of the solar background magnetic field. Notably, *Scientific Reports* is an open access journal and belongs to the *Nature* family.

The [paper](#) was written by V. V. Zharkova, with Northumbria University, S. J. Shepherd, with the University of Bradford, S. I. Zharkov with the University of Hull and E. Popova with the National Research University. It immediately attracted attention in the [scientific community](#) because of claims that [global warming](#) is caused by changing distances between the sun and the Earth. More specifically, they claimed that Earth was getting warmer because the planet had entered a 1000-year warming period that was part of a cycle of sun movement tied to gravity pull from the planets.

Prior research has shown that the sun does wobble from its course over large time spans due to gravity pull from the planets, but virtually all other work done to study its impact has shown that Earth wobbles right along with it, nearly in lockstep. In their paper, Zharkova et al, suggested that this was not the case—they claimed that the Earth did not change its movement as the sun changed course, resulting in a change in distance between the two, leading to the Earth getting hotter.

Critics of the paper pointed out that Zharkova and her team did not provide evidence for their claims—instead, they chose to base their findings on assumptions about the ways that the solar system barycenter impacts the movement of the sun and Earth. The barycenter is the center of the solar system based on the mass of the sun and all of the planets. Zharkova and her team had suggested that the movement of the sun around the barycenter was responsible for changes in distance between the sun and the Earth. Critics of the paper noted that the Earth does not orbit the barycenter—it orbits the sun, which means its distance from it does not change.

In their retraction notice, the [editors](#) at *Scientific Reports* wrote that they agreed with the criticism aimed at the paper, and no longer had confidence in its conclusions.

More information: V. V. Zharkova et al. RETRACTED ARTICLE: Oscillations of the baseline of solar magnetic field and solar irradiance on a millennial timescale, *Scientific Reports* (2019). [DOI: 10.1038/s41598-019-45584-3](https://doi.org/10.1038/s41598-019-45584-3)

V. V. Zharkova et al. Retraction Note: Oscillations of the baseline of solar magnetic field and solar irradiance on a millennial timescale, *Scientific Reports* (2020). [DOI: 10.1038/s41598-020-61020-3](https://doi.org/10.1038/s41598-020-61020-3)

© 2020 Science X Network

Citation: Retracted: Paper claiming climate change caused by distance from Sun (2020, March 9) retrieved 25 April 2024 from <https://phys.org/news/2020-03-retracted-paper-climate-distance-sun.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.