Climate change sceptics suffer blow as satellite data correction shows 140% faster global warming

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Climate change deniers and sceptics have long pointed to satellite data showing lower temperatures than those recorded on the ground.

However, new research has found an explanation for this apparent discrepancy.

The orbit of satellites around the Earth gradually decays over time due to friction in the Earth's atmosphere and this gradually changes the time they

pass over any one spot and this obviously has a significant effect on the temperature.

US Vice President Mike Pence says climate change is just an issue for the left

Using information from the satellites, the scientists, Dr Carl Mears and Frank Wentz, of Remote Sensing Systems, a California-based research company, developed a new method of correcting for the changes.

And what they found was startling.

The rate of warming was about a third higher at 0.174 degrees Celsius per decade between 1976 and 2016, compared to 0.134C per decade.

Writing in the *Journal of Climate*, the scientists said: "The changes result in global-scale warming … about 30 per cent larger than our previous version of the dataset.

"This change is primarily due to the changes in the adjustment for drifting local measurement time. The new dataset shows more warming than most similar datasets constructed from satellites or radiosonde [weather balloon] data."

In an article on the Carbon Brief website about the new research, data scientist Dr Zeke Hausfather said it showed an even faster rate of warming since 1998 – at nearly 140 per cent – than previous satellite-based studies.

"Climate sceptics have long claimed that satellite data shows global warming to be less pronounced that observational data collected on the Earth's surface," he said.

"This new correction to the … data substantially undermines that argument. The new data actually shows more warming than has been observed on the surface, though still slightly less than predicted in most climate models."

Dr Hausfather explained the problem with interpreting climate data from satellites due to their subtly changing orbit.

“As these satellites circle the Earth, their orbits slowly decay over time due to drag from the upper atmosphere,” he wrote.

“While the satellites are designed to fly over the same spot on the Earth at the same time every day – a precondition to accurately estimating changes in temperatures over time – this orbital decay causes their flyover time to change.

“Some satellites have fairly large orbital drifts, going from measuring temperatures at 2pm to 6pm or 8pm.

“Since the temperature changes since 1979 are on the order of 0.6C or so, it is relatively easy for bias, due to changing observation times, to swamp the underlying climate signal.”

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Surface temperature records, Dr Hausfather added, “all tend to agree quite closely with each other, despite different groups using different datasets”.

“Unlike the satellite temperature record, where only a few satellites are measuring temperatures at any given point of time, there is a large amount of redundancy in surface temperature observations, with multiple independent sets of data producing consistent results,” he said.

“Therefore, it is not too surprising that corrections to problems with satellite data would move them closer to surface records.”

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