

## Covering letter

The *Journal of Ocean and Climate* welcomes “*Observational, numerical, analytical, and empirical methods employed to understand processes[.] related to oceans and climate.*”. This paper is one of those, although the understanding that it imparts is simply that one or more of the generally accepted processes must be incorrect.

The submitted paper is deliberately kept as simple as possible. It contains no formulae, statistics, estimates, new statistical methods, models, etc – they are not needed. All it does is to take an important part of the latest IPCC report, and test it against the available data. It is not a nit-pick – the matter being examined is genuinely significant. There is no cherry-pick – I use as much as possible of the available data and I use it to test exactly what is stated and intended in the IPCC report. I was also careful to ensure that the time period covered was adequate.

I have used simple language throughout.

I have been careful to compare like with like. So for example I use the same set of longitudes, the same set of calendar months, and the same Y-axis range in all the SST graphs in the paper (except for those in **4.1 Other Areas** which necessarily use different longitudes).

There is no over-reach. So, for example, the chain of logic from the data to the conclusion that “the climate models’ global projections are unreliable” is complete end-to end. I have also checked and recorded in the paper that the IPCC expressed *high confidence* in the part of the report that I have tested. Note that the IPCC does refer to it in that section as a *large-scale warming pattern*.

I acknowledge that this may be a somewhat unusual paper, in that it explicitly shows someone else’s work to be of dubious quality simply by checking the data (but isn’t that an important part of the scientific method?). In this case, the “someone else” is the IPCC and the climate models that they reference. The paper may also be somewhat unusual because of its simplicity – no formulae, no statistics, etc. But please do not be deceived by the simplicity into thinking that there is a lack of rigour. On the contrary, this paper has taken a long time, as I have examined all of the data from various angles, and in many subsets, to verify as thoroughly as I can that the data is not open to any other interpretation, and I have then attempted to find the simplest possible complete presentation of the data which shows the full undistorted picture. I have verified that the data covers a sufficient area over a sufficient period. Wherever possible, I have avoided estimating or filling in any missing data, explicitly or implicitly. Given the state of much of the climate data, this is not quite as easy as it sounds. There may be some circumstances in which it is legitimate to fill in missing data, but I felt that it was necessary to avoid doing it in order to maintain the simplicity and integrity of the analysis. The paper explains how and where the missing data has been avoided. [If NOAA (Reynolds, 2002) have estimated or adjusted some of their data, then that should be described in their documentation.]. Where the paper does use a value for missing data, it is clearly explained that the result is not real.

I have not been offered or accepted any funding at all, no-one else has been involved in the writing of the paper in any way, and I have not consulted anyone about any of the issues in the paper or any of the content of the paper.

There are other papers that challenge the IPCC and the climate models with respect to Antarctica, but I am not aware of any other paper providing the analysis in this paper.

Mike Jonas

PS. Abbreviations (such as IPCC, SST, NOAA, used above) are listed in the paper.