



This is the print version of the [Skeptical Science](http://sks.to/negspencer) article '[Roy Spencer finds negative feedback](http://sks.to/negspencer)', which can be found at <http://sks.to/negspencer>.

Roy Spencer's paper on climate sensitivity

What The Science Says:

Spencer's model is too simple, excluding important factors like ocean dynamics and treats cloud feedbacks as forcings.

Climate Myth: Roy Spencer finds negative feedback

"NASA satellite data from the years 2000 through 2011 show the Earth's atmosphere is allowing far more heat to be released into space than alarmist computer models have predicted, reports a new study in the peer-reviewed science journal Remote Sensing. The study indicates far less future global warming will occur than United Nations computer models have predicted, and supports prior studies indicating increases in atmospheric carbon dioxide trap far less heat than alarmists have claimed." ([James Taylor](#))

Climate scientists have identified a number of fundamental problems in [Spencer and Braswell's 2011 study](#) which wrongly concludes that the climate is not sensitive to human greenhouse gas emissions. One of the main problems with the paper is that it uses Roy Spencer's very

simple climate model which we've previously looked at in



This simple model does not have a realistic representation of the Earth's oceans, which are a key factor in the planet's climate, and it also doesn't model [the Earth's water cycle](#). One key aspect in the Earth's temperature changes is the El Niño Southern Oscillation (ENSO), which is a cycle of the Pacific Ocean. Spencer's model does not include ENSO, and he assumes that ENSO responds to changes in cloud cover, when in reality [it's the other way around](#).

There are some other key problems in the paper. It doesn't provide enough information for other scientists to repeat the study. When two other climate scientists (Kevin Trenberth and John Fasullo) tried to replicate its results as best they could with the information provided, they found quite different results (see the [Advanced version of this rebuttal](#) for further details). Spencer and Braswell's conclusions also only seems to work using the satellite data set they chose, but Trenberth and Fasullo found that using other data sets also changes their results.

Trenberth and Fasullo also found that when using a few different climate models, the one which replicated the observed data best was the one with a climate **more** sensitive to greenhouse gases, which directly contradicts Spencer and Braswell's conclusion that the climate is not sensitive to greenhouse gases.

It's also worth noting that the journal which published Spencer and Braswell's paper does not normally publish climate science research. This may explain how the paper made it through their peer-review system with so many problems. In the end, Trenberth and Fasullo find that the Spencer and Braswell study has no merit.

- The model it uses is far too simple to accurately represent the Earth's climate
- The paper doesn't provide enough information to replicate their results
- Their results depend on using one particular data set
- They assume that ENSO responds to cloud cover changes, when in reality, the reverse is true
- The study's conclusions are incorrect and unsupported

UPDATE 3 Sep 2011: Wolfgang Wagner, has [stepped down as editor-in-chief of the journal Remote Sensing](#). Wagner concluded the Spencer's paper was "fundamentally flawed and therefore wrongly accepted by the journal". [More here...](#)



Skeptical Science explains the science of global warming and examines climate misinformation through the lens of peer-reviewed research. The website won the Australian Museum 2011 Eureka Prize for the Advancement of Climate Change Knowledge. Members of the Skeptical Science team have authored peer-reviewed papers, a [college textbook on climate change](#) and the book [Climate Change Denial: Heads in the Sand](#). Skeptical Science content has been used in university courses, textbooks, government reports on climate change, television documentaries and numerous books.



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