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### For General Release:

A paper that I recently wrote, entitled ‘Rethinking the lower bound on aerosol radiative forcing’ has been accepted for publication in the *Journal of Climate*. This paper presents a number of arguments as to why the radiative forcing from aerosols is neither as negative, nor as uncertain, as has previously been thought. That said, my new estimates of aerosol radiative forcing are within the range of previous estimates, e.g., as provided in Chapter 7 of the IPCC fifth assessment report of which I was one of the authors, albeit on the lower end of that range in terms of the estimated magnitude of the forcing.

In my new paper I did not speculate as to the implications of my findings for estimates of Earth’s Equilibrium Climate Sensitivity, which is perhaps the simplest measure of the response of the Earth System to a change in concentration of atmospheric carbon dioxide. However others have used my findings to suggest that Earth’s surface temperatures are rather insensitive to the concentration of atmospheric CO<sub>2</sub>. I do not believe that my work supports these suggestions, or inferences.

As fond as I am of my own ideas, one should resist concluding too much, too soon, from a single study. In the long run I certainly hope that my findings will help constrain the climate’s sensitivity to CO<sub>2</sub> but they do not, on their own, relieve society of the threat of dangerous warming arising from anthropogenic emissions of CO<sub>2</sub>. Indeed, even a warming of only 2°C from a doubling of CO<sub>2</sub> poses considerable risks for society. Many scientists (myself included) believe that a warming of more than 2°C from a doubling of the concentration of atmospheric carbon dioxide is consistent with both my new study and our best understanding. Some insight into our reasoning can be found in a number of excellent blogs reporting on a workshop on Earth’s Climate Sensitivities, which I co-organized just last week, e.g.,

<http://www.realclimate.org/index.php/archives/2015/04/reflections-on-ringberg>

So contrary to some reports that have appeared in the media, anthropogenic climate change is not called into question by my study. I continue to believe that warming of Earth’s surface temperatures from rising concentrations of greenhouse gases carries risks that society must take seriously, even if we are lucky and (as my work seems to suggest) the most catastrophic warming scenarios are a bit less likely.



Bjorn Stevens