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26 April 2010

RE: JCLI-3656

Dr. Broccoli,

Please find our revised manuscript, Supporting Information, print-quality figures, and responses to reviewers in our submission package for JCLI-3656.

As mentioned in my last email to you, we feel that Review A was not objective, and we have included a comprehensive, thorough discussion of these issues in our response. We apologize for the length of the response; however, given the number of incorrect assertions by the reviewer, we felt that it was necessary to discuss each in detail and include the calculations that show the reviewer's assertions to be incorrect.

We have several concerns that we feel do not belong in the response and are more appropriately expressed in a letter. With this in mind, we would like to take a few moments of your time to discuss them. First, it is quite clear that Reviewer A is one (or more) of the authors of S09. This results in a conflict of interest for the reviewer when examining a paper that is critical of their own. This conflict of interest is apparent in the numerous misstatements of fact in the review. The most important of these were:

- 1. That we should define regions based on the resulting reconstruction trends, a *post hoc* decision that would invalidate regional tests of significance and render direct comparison to S09 impossible;
- 2. The assertions that our seasonal patterns fully support S09, when they clearly do not;
- 3. That our reconstructions were done using detrended AVHRR data, when they were not, and the text contains no mention of detrending with the exception of the row-centering step for RLS (which is irrelevant since RLS does not use the AVHRR PCs);
- 4. The multiple unsupported and incorrect assertions about the relative importance of the proposed modifications and the asserted stability of the S09 method;
- 5. The misuse of the sensitivity studies by the reviewer to criticize our selection of the truncation parameters;

- 6. The incorrect assertion that our cross-validation statistics were calculated to infilled values; and,
- 7. The repeated request that we describe our agreement/disagreement with S09 not in terms of the actual patterns and magnitudes of trends but whether the differences support S09's sea ice hypothesis or the work of Thompson & Solomon both being subjects that are extratopical.

We feel, based on the above, that Reviewer A has not given an unbiased review of our work. While the reviewer *did* give several extremely helpful comments, the amendments required amount to minor – not major – revisions of the text.

With this in mind, we respectfully request that you reconsider your decision to route our paper through the major revisions process. The revisions to the manuscript and Supporting Information are, in our opinion, minor.

We additionally feel justified in expressing our concern that Reviewer A will be able to provide an unprejudiced evaluation of the revisions and may refuse to accept the accuracy of our responses. We do not mean to imply any impropriety; only that the conflict of interest results in the very human tendency to be unintentionally biased. Should you decide that the major revisions process remains appropriate, we request that Review A, our responses, and any rejoinder from Reviewer A be evaluated by one or both of the other independent reviewers (or a third party) prior to your final editorial decision.

Thank you in advance for your time.

Best regards, Ryan O'Donnell