Thank the reviewer for his/her review and valuable comments. In the revised manuscript, we have accommodated the suggested changes into consideration and revised the manuscript accordingly. The reviewers' comments are copied here as texts in BLACK. The authors' responses are followed in BLUE.

Review Comments of "Assessment of cloud properties from the reanalysis with satellite observations over East Asia" by Yao et al.

General Comments:

I think after the first round of review and revision, the manuscript is greatly improved and I believe it is close to be ready for publication. The authors mostly addressed my questions well and I have no further comments on those questions. But I still have a few more comments that I think will be useful for the manuscript improvements.

1. I think the title of the manuscript can be revised to illustrate the highlight of this study by including "radiance-based approach" term in the title, for example, "Assessment of cloud properties from the reanalysis with satellite observations over East Asia from a radiance-based evaluation approach". In this way, the readers could easily distinguish this paper from the papers using conventional "retrieval-based approach".

Response: Thanks for the suggestion, and we have changed the title into "Evaluation of cloud properties from the reanalysis over East Asia with a radiance-based approach".

2. In the revised manuscript of line 276, the authors mentioned "To better illustrate the differences between cloudy and clear pixels, we distinguish them based on integrated column cloud optical depth in each pixel of 0.1". This kind of treating obvious will omit a large amount of cloudy pixels with low optical depth, especially the thin cirrus clouds. Could the authors estimate how this choice of cloud-clear pixel threshold will influence the results?

Response: Yes, if the cloudy and clear-sky pixels are generally distinguished based on the integrated COD of 0.1, some optically thin clouds may be missed. Figure 1 below shows the correlation coefficients between the observed and simulated BTs in the 11.2-μm as a function of different integrated column CODs. As the threshold decreases to 0.01 or smaller, the correlations between the observation and simulation achieve stable values. Deviations are obvious as the integrated column CODs increase from 0.01 to 0.1, especially for CRA. However, the general analysis is the same, and

there is no influence on our conclusion. Following the suggestion of the reviewer, we have updated

Figure 5 in the revision by the following figure. The threshold between cloudy and clear-sky pixels is

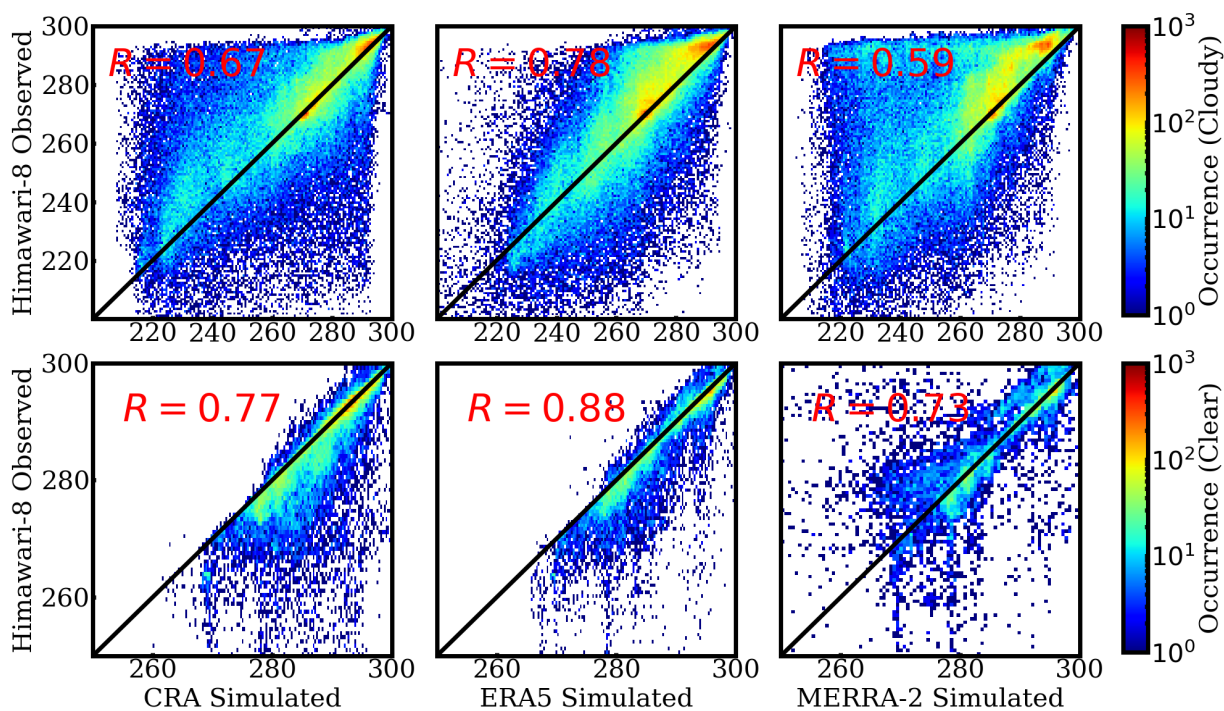modified as 0.001, and the corresponding discussions are updated.
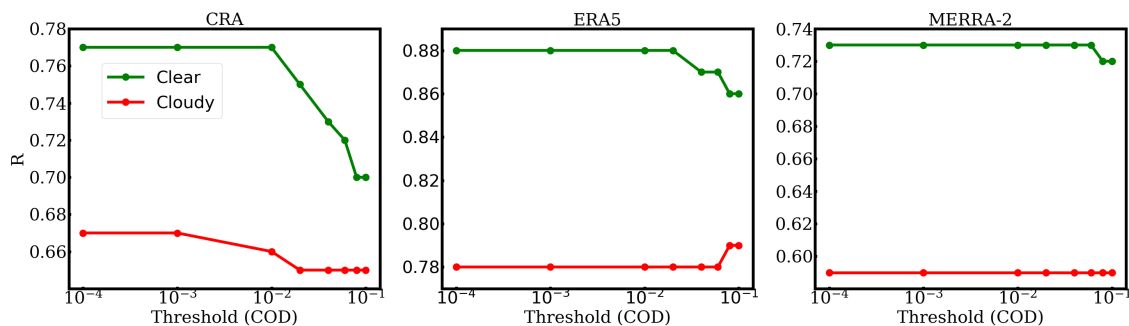
Figure 1. Correlation coefficient between observed and simulated BTs in the 11.2-μm with pixels for clear (green) and cloudy (red). The cloudy and clear-sky is distinguished by the threshold based on integrated column cloud optical depth (COD).

Figure 2. Comparisons between the observed and simulated BTs in the 11.2-μm channel with pixels for cloudy (top) and clear-sky (bottom). The distinction between cloudy and clear-sky is based on integrated column cloud optical depth of 0.001 and the results are taken at 00:00 (UTC) on 12 September 2016.

3. This manuscript still has a lot of typos and errors, and thus I suggest the authors thoroughly check their paper for the small typos. For example, in the abstract, quite a few acronyms are actually not needed to be defined at all, because they are never used again, i.e., RTM, AHI, BTDs. And in the main text, many acronyms are defined too many times (more than once), such as AHI, again. And in line 349, "clear seasonable variation" – I think the authors mean "clear seasonal variation"? Mostly, such typos are small errors, but they just make the paper look bad. I hope the authors could take the chance to polish the paper before it is finally accepted for publication.

Response: Thanks for the suggestions and comments. We have thoroughly and carefully checked the manuscript. The typos and errors are corrected, and some sentences and paragraphs are rephrased.