We made the following changes to the text in response to editor's comments. We thank the editor very much for the useful comments.

"Associate Editor Decision: Publish subject to technical corrections (05 Sep 2018) by Mark Weber

Comments to the Author:

Dear Dejian Fu et al., your paper is accepted and can proceed for final publication in AMT. I suggest that you go thru your revised text for some further English style corrections (e.g. "in balance convergence speed and ..." should be changed to "in balancing ...") before submitting the final version. Further copy-editing will be done in the editorial office, best regards, Mark Weber"

Re: We went through the text and made following English style correction.

Page 5 line 26: "in balance" to "in balancing".

Page 7 line 10 and Page 10 line 16: "good quality" to "quality-assured".

Page 11 line 4: "the cloud effective TIR optical depth and cloud height" to "the TIR cloud effective optical depth and cloud height"

Page 19: line 4: "The NOAA-20/JPSS-1 OMPS Nadir Mapper products' resolution has improved from 50×50 km^2 field of view to 12×17 km^2 (JPSS-1), and will further improve to 10×10 km^2 (JPSS-2) in the operational NOAA processing (private communication with Dr. Lawrence E. Flynn)."

Page 19: line 31: "We thank the editor, M. Weber for his excellent work."