Response to Associate editor comments on AMT 2017-487 "Estimating observation and model error variances using multiple data sets"

Associate Editor comments in italics are given below, followed by our responses:

All reviewer and associate editor comments have been well considered, putting this manuscript well in context with existing scientific literature.

A last minor note is that according to the Oxford dictionary, collocation has the meaning of "The action of placing things side by side or in position". Please consider to use it rather than co-location.

We found the following definitions for collocate and co-locate (<u>www.merriam-webster.com/dictionary/</u>):

Collocate: transitive verb: to set or arrange in a place or position; especially: to set side by side intransitive verb: to occur in conjunction with something

Colocate or co-locate: transitive + intransitive: to locate (two or more things) together or be located together: such as:

- to cause (two or more things) to be in the same place or close together
- to place (two or more units) close together so as to share common facilities
- to place (computer servers) together in a secure dedicated storage facility
- be in the same location

A number of articles discuss the use of "collocate" versus "co-locate" and we found that "co-locate" is more appropriate in the context of our manuscript.

We therefore kept the word "co-locate" in the manuscript but changed it to "collocate" when referring to the "Triple collocation method" to have consistent spelling with Stoffelen (1998).