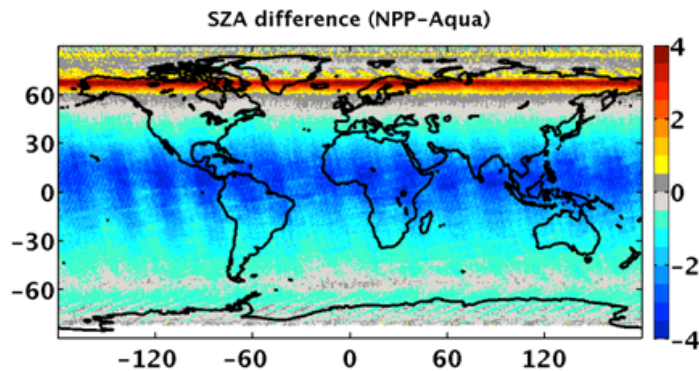


Thank you for your revision. After some follow-up discussion with a previous Reviewer, they are concerned that you did not explain the high-latitude artefact in Figure 3 sufficiently. Following on from their initial review comments, could you please check whether this is a plotting error, and if it is not, go in to more detail about this artefact? This is a major sticking point of theirs before they can assess the revision in detail, as they feel that if the artefact cannot be explained then the later analysis may not hold up.

Figure 3 is correct and the “dark blue” band is not an artifact, it is caused by the difference in Aqua and NPP orbit. The figure below shows the monthly mean SZA differences between NPP and Aqua. For the ‘dark blue’ band in the solar insolation difference plot, the monthly mean SZA from NPP is about 4 degrees greater than that from Aqua orbit (which results in smaller insolation compared with Aqua). Over the tropical regions, the monthly mean SZA from NPP is smaller than that from Aqua by as much as 3 degrees. This figure should help explain the differences in solar insolation better.



To help reviewers and readers understand the differences in the solar insolation, we added the TOA reflected SW flux differences between CERES-NPP and CERES-Aqua to the manuscript and modified the sentence on lines 193-195 to the following:

“When we compare the monthly gridded TOA reflected SW flux between CERES-NPP and CERES-Aqua (Figure 4), the difference features in high latitude regions (north of 60N and south of 60S) resemble those of the insolation differences.”

