

The reviewer comments are in blue and italic and the replies are in black.

Anonymous Referee #2

*The manuscript “Simulating precipitation radar observations from a geostationary satellite” details a theoretical study of the performance of a hypothetical geostationary weather radar using both a uniform rain layer and more realistic cloud model output. Offering a cogent analysis of the challenges of observing precipitation in the presence of surface clutter due to the coarse resolution of a geostationary platform, the paper is straightforward, well-written, and highly relevant, and should be published after minor revisions.*

#### *Specific Comments*

*There is one point that is really lacking from the discussion: sidelobe clutter. The idealized antenna pattern in the paper neglects antenna sidelobes. Given the attention focused on realistic distributions of precipitation, such analysis can be considered outside of the scope of the paper; however, discussing the results presented in this manuscript in the context of other studies that look at sidelobe clutter (Kubota et al., 2016; Li et al., 2017) would add more depth to the conclusions of the paper.*

Thank you for the comments and the helpful references. We will discuss the impact of sidelobe clutter and sidelobe clutter correction. Presumably, the impact of sidelobe clutter should be insignificant as shown by Li et al. (2017). Even though the impact is not negligible, the correction method proposed by Kubota et al. (2016) should be applicable after a reasonable number of observations are collected.

#### *Technical Corrections*

*Throughout the paper, “incident” should be “incidence.”*

Will be corrected in the revised manuscript.

*Lines 44-45: contaminations from the surface clutters -> contamination from surface clutter*

Will be corrected in the revised manuscript.

*Line 51: the surface clutters -> surface clutter*

Will be corrected in the revised manuscript.

*Line 122: The word “power” should come between “path” and “beam”*

Will be corrected in the revised manuscript.

*Line 182: The word “image” after “schematic” is unnecessary.*

The word will be removed in the revised manuscript.

*Line 227: Include “the” before “Marshall Islands.”*

Will be included in the revised manuscript.

*Line 228: Remove “the” before “generation.”*

Will be removed in the revised manuscript.