

9/25/2025

Dear Editor,

Thank you for accepting the manuscript for the publication. We have revised the manuscript to address the reviewer #1 request to include a clearer justification of the middle layer parameterization, the rationale for tuning the dielectric constant, and a complete citation for Ulaby and Long (2014). Please, see the marked-up manuscript version.

We appreciate your coordination to complete the review process in time.

Best regards,

Alamgir Hossan (on behalf of all the authors)

Specific Revisions:

1. **Clearer justification of the middle layer parameterization:** We revised lines 317-317 of the revised manuscript (marked-up version) to make the justification clearer.
2. **The rationale for tuning the dielectric constant:** The rationale for tuning the dielectric constant of the middle layer is to determine the baseline emission during frozen season as described in lines 291-304. This is done by matching the simulated TB with the observed TB during frozen season. Lines 292 and 344 in the revised manuscript (marked-up version) have been revised to clarify this rationale.
3. **Complete citation for Ulaby and Long (2014):** The citation has been edited (page number added) throughout the revised manuscript. The reference has also been revised, and other minor syntaxes have been corrected as well.