

Thank you for addressing the reviewer comments. It is my judgement that they have been satisfied in the revisions, but I noticed a few remaining technical or language errors in the revised manuscript. Please make these corrections to complete the manuscript for publication.

Line 293: "study" should be "studies"

Reply: Thank you for your comments. Yes, we did the correction, please see in the paper "It is noted here that Eq.(1) is assumed for specular reflection, and was used in previous similar observation studies (Lemmetyinen et al., 2015; Montpetit et al."

Line 296: "idea" should be "ideal"

Reply: Yes, we did the correction, please see in the paper" information, then the ideal and uniform Lambertian surface is too simple"

Line 317: "shown" should be "shows"

Reply: Yes, it was corrected as "As Fig.5a shows"

Line 369: "corresponding" should be "corresponds to", and this sentence is missing a period at the end.

Reply: Yes, it was corrected as "Fig. 6 Variations in the observed Tb over different land surfaces(a) and water surface(b) as well as Tb polarized difference(c) with the elevation angle in October 2018. The vertical dotted line corresponds to elevation angle 36°"

Line 387: "is" should be "are"

Reply: Here it was corrected as "Emissivity polarization difference is"

Line 389: "property" should be "properties"

Reply: Yes, it was corrected as "dielectric constant properties."

Line 393: Is "scatters" in reference to volume scattering by vegetation or Lambertian surface scattering? Please be specific.

Reply: Thank you for your comments, it was corrected as "Both Tb and emissivity

polarized difference demonstrated that surface roughness over grass is obviously larger than that over other three land surfaces, especially smooth cement surface, thus generate more volume scattering by vegetation and weakens the polarization difference over grass.”

Line 398: This sentence needs a period

Reply: Thank for your reminding. This sentence is corrected as “Fig. 8 Variations in the surface emissivity (a, b) and ϵ polarization differences(c) over different surfaces with increasing elevation angle in Oct. 2018.”