Comment on amt-2021-418
Anonymous Referee #1

Referee comment on "Quality assessment of Second-generation Global Imager (SGLI)-observed cloud properties using SKYNET surface observation data" by Pradeep Khatri et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-418-RC1, 2022

It is important to assess SGLI-observed cloud properties using surface data, such as SKYNET data. The authors discuss the quality of the two most fundamental cloud properties—COD and CER of both water and ice clouds—from SGLI. In fact, it is not easy to do this kind of assessment. In particular, the author should pay attention to the following issues:

1. Objects seen from satellites and the ground need to be substantially identical.

2. The algorithm that distinguishes between ice and water clouds requires precision and rigor to achieve good results.

3. As the authors say, the SGLI-observed CER exhibits poorer agreement than does the COD, with the SGLI values being generally higher than the sky radiometer values. And what's the reason? and how to improve? should be discussed in detail.

4. Some errors such as: "and (iii) the SGLI COD can be underestimated (resp. underestimated) for optically thick (resp. thin) clouds. in line 386;" "... for ice clouds and the tendency to underestimate (resp. overestimate) the COD in SGLI observations for optically thick (resp. thin) clouds." in line 35;