Optimization of SICE algorithm

A.Kokhanovsky

Technical note

22.01.2019

Currently, SICE retrievals are based on the determination of spherical albedo (SA) from the following formula ( see Eq.(9) in [1]):

(1)

It is proposed to make the following modification of this equation:

(2)

This is possible bacause both and are close to 1.0 in most of cases. Both Eq.(1) and Eq.(2) provide different approximations for teh reflection of snow-underlying surface reflectance.

An important point is that Eq. (2) allows for the analytical determination of SA. Namely, it follows:

(3)

where .

References

*1. A. Kokhanovsky, et al., Remote Sens. 2020, 12, 234; doi:10.3390/rs12020234*