

Known Issues for ATL16 and ATL17, Release 004

Global_aerosol_fraction (parameter *global_aerosol_frac*)

There is a problem with this gridded value. Mostly it appears poleward of latitude 70S. Sometimes it happens in the northern hemisphere. It is recognized by an abrupt change in the fraction of aerosol as a function of latitude. The problem was traced to the L3A cloud/aerosol discrimination algorithm that produces the ATL09 data product which is input to the L3B code that makes ATL16 and ATL17. This will be addressed in version 006 L3A products.

Expanded global total column optical depth (parameter *expanded_global_column_od*)

This is not so much a problem, but a comment on the scientific accuracy of this parameter. It is built by assuming that when a ground return is not found that this is caused by a cloud with optical depth greater than 3 and less than 35. The selection of what optical depth to use is based on a random, normally distributed number from 3 to 35. A future release will improve upon this by using satellite-derived measurements of cloud optical depth distributions as a function of latitude.