Loop in number of layers

Calculate the mean and the std of all the ATBs, the scattering ratio and the depolarization ratio

Yes \( \Rightarrow R_{\text{avg}} > \text{min}_\text{cloud}_R\text{-ratio} \)

Set aerosol flag

Yes

Set as cloud and set confidence flag

\( T < \text{Homogeneous freezing} \)

Set ice flag

\( T > \text{Melting Temperature} \)

Set Water flag

Yes

\( R > R_{\text{water}_\text{cloud}_\text{thresh}} \)

Is the layer attached to a lower layer?

No

Yes

Shift local Tropopause height to top layer or split layer

No

Shift local Tropopause height to bottom layer or split layer

Yes

Set stratospheric feature for Height > Trop Height

No

Is the layer close to the Tropopause?

Yes

End loop in number of layers

No