Current methodologies neglect drizzle scattering effects and assume the entire liquid water located in the cloud as cloud drops with diameter < 90 μm.

The proposed methodology includes drizzle scattering effects for drizzle drops with diameter > 100 μm and assumes a realistic drizzle drop size distribution.
The inclusion of scattering reduces the cloud liquid water path of 8-15% depending on the amount of precipitation and drizzle drop size and allows to gain insight into the partition of cloud and drizzle water path in the cloud.
Ongoing work

Datasets 2015-2019:

Merged 5 yrs of Radar, Ceilometer, Doppler lidar, aerosol, and radiometer data
Selected **56 days** of closed cell stratocumulous clouds

Current work:

• Evaluating uncertainty in Active module due to assumptions in the retrieval
• Characterizing drizzle sedimentation rate
• Analyze data from these cleaned datasets with a focus on **aerosols, and drizzle intraction**

Details of our work so far can be found in:

