L2a composite cloud & aerosol profiles + surface optical properties

ECMWF & surface datasets (X-MET)

L2b multi-sensor synergy (ACM-CAP)

vertical extension of columns + add trace gases

§3.1

§3.2

ACM-RT

gas, aerosol, cloud, and surface optical properties from RRTMG in L2 plane

1D RT for all admissible columns in L2-plane: pristine-, clear-, all-sky

§4.1, 4.2

§4.3

flux and HR profiles for each column in L2 plane

§4.4

3D LW RT on sampled $D'$

- BBR radiances
- flux at $h_{ref}$
- MC errors
  (for sampled $D'$)

3D SW RT on sampled $D'$

- BBR radiances
- flux and HR profiles
- MC errors
  (for sampled $D'$)

SCA indices & define $D$ and $D'$ (ACM-3D)

reference hgt for LW radiances (BMA-FLX)

ACM-COM

L2a single-sensor (A-ICE; C-CLD; M-COP; A-EBD; A-TC)