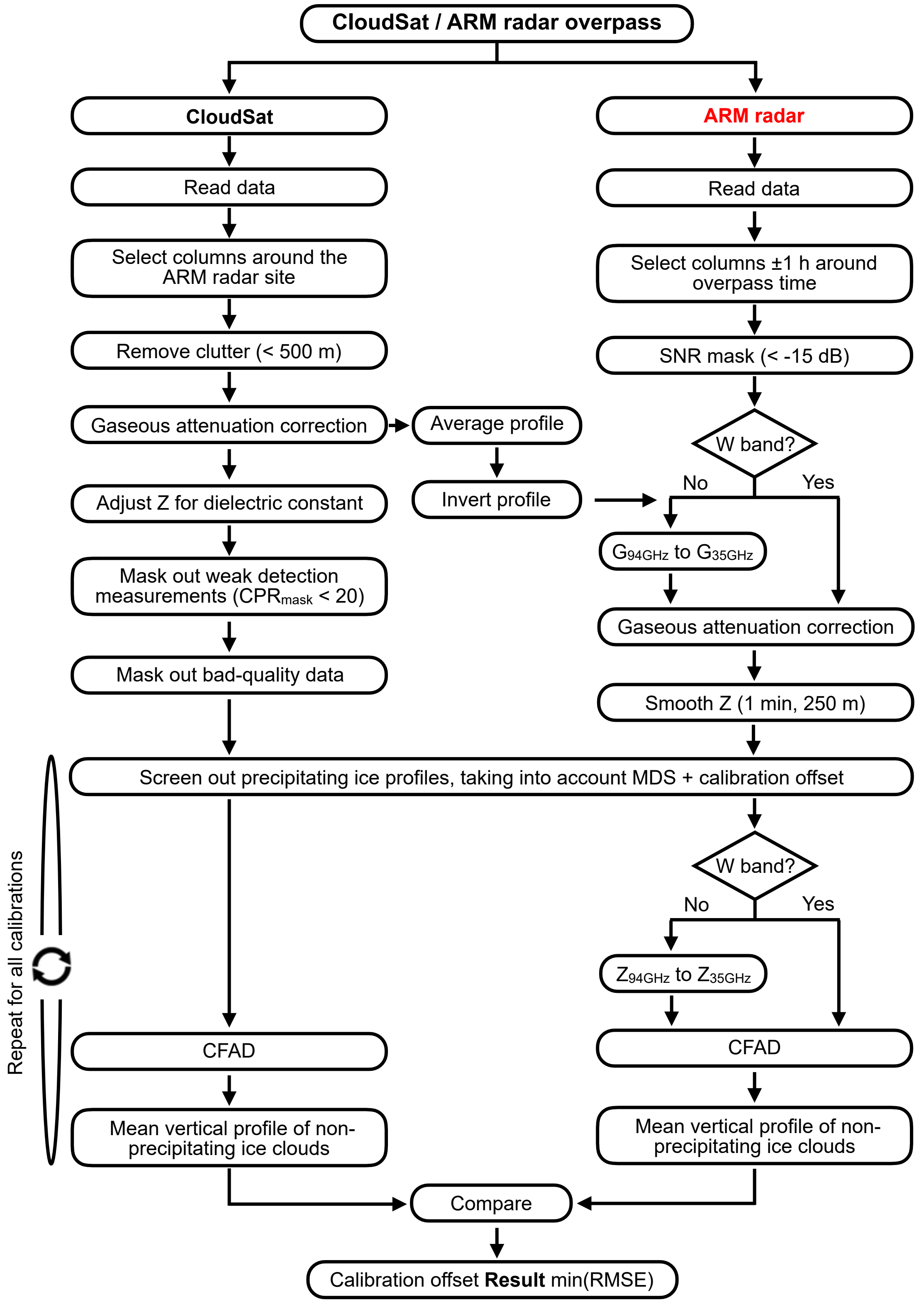
CloudSat / ARM radar overpass
CloudSat
ARM radar
Read data
Read data
Select columns around the ARM radar site
Select columns ±1 h around overpass time
Remove clutter (< 500 m)
SNR mask (< -15 dB)
Gaseous attenuation correction
Average profile
W band?
No
Yes
Adjust Z for dielectric constant
Invert profile
G94GHz to G35GHz
Mask out weak detection measurements (CPRmask < 20)
Gaseous attenuation correction
Mask out bad-quality data
Smooth Z (1 min, 250 m)
Screen out precipitating ice profiles, taking into account MDS + calibration offset
Repeat for all calibrations
W band?
No
Yes
Z94GHz to Z35GHz
CFAD
CFAD
Mean vertical profile of non-precipitating ice clouds
Mean vertical profile of non-precipitating ice clouds
Compare
Calibration offset Result min(RMSE)