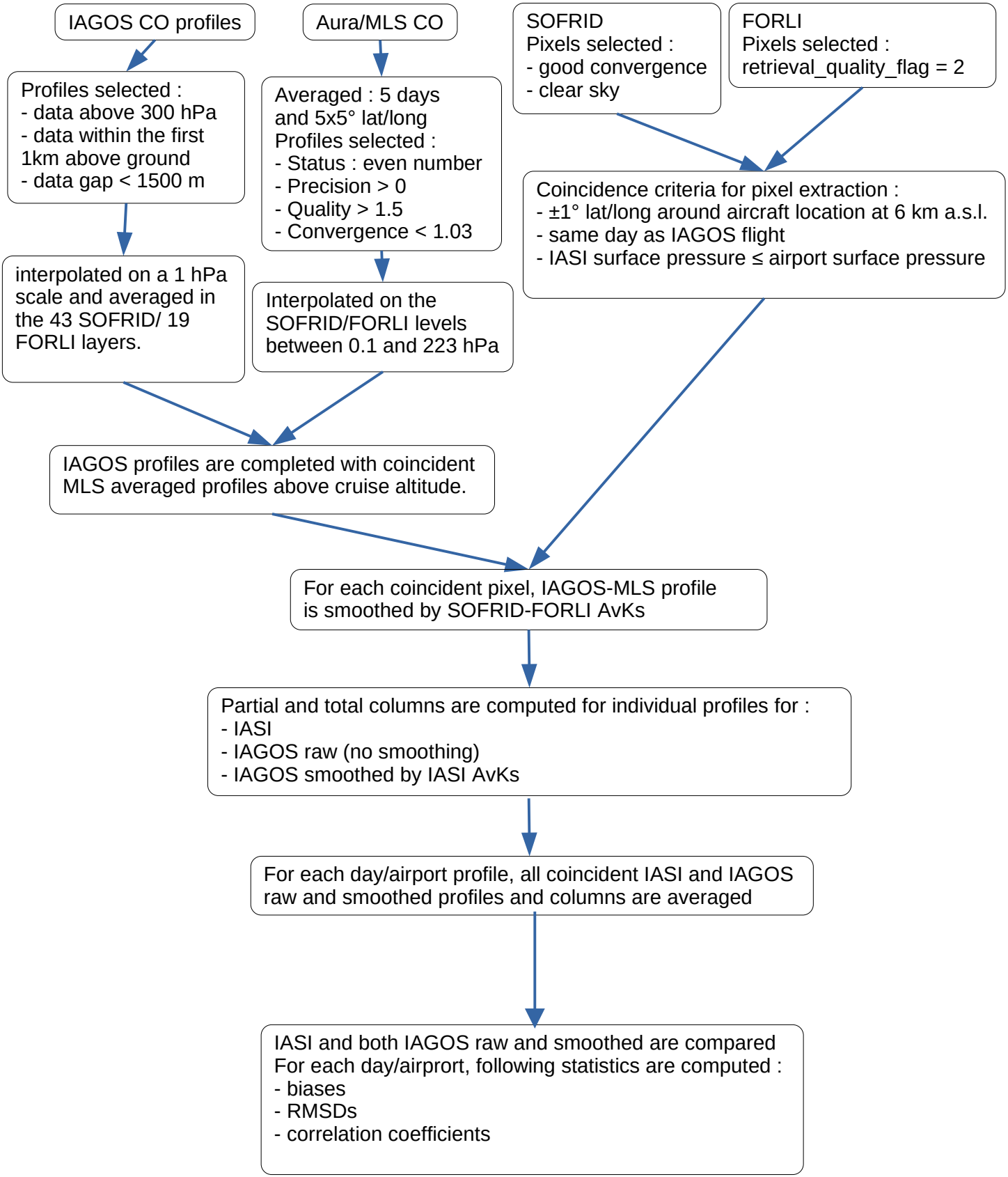
IAGOS CO profiles
Aura/MLS CO
SOFRID
Pixels selected :
- good convergence
- clear sky
FORLI
Pixels selected :
retrieval_quality_flag = 2
Profiles selected :
- data above 300 hPa
- data within the first 1km above ground
- data gap < 1500 m
Averaged : 5 days and 5x5° lat/long
Profiles selected :
- Status : even number
- Precision > 0
- Quality > 1.5
- Convergence < 1.03
Coincidence criteria for pixel extraction :
- ±1° lat/long around aircraft location at 6 km a.s.l.
- same day as IAGOS flight
- IASI surface pressure ≤ airport surface pressure
interpolated on a 1 hPa scale and averaged in the 43 SOFRID/ 19 FORLI layers.
Interpolated on the SOFRID/FORLI levels between 0.1 and 223 hPa
IAGOS profiles are completed with coincident MLS averaged profiles above cruise altitude.
For each coincident pixel, IAGOS-MLS profile is smoothed by SOFRID-FORLI AvKs
Partial and total columns are computed for individual profiles for :
- IASI
- IAGOS raw (no smoothing)
- IAGOS smoothed by IASI AvKs
For each day/airport profile, all coincident IASI and IAGOS raw and smoothed profiles and columns are averaged
IASI and both IAGOS raw and smoothed are compared
For each day/airprort, following statistics are computed :
- biases
- RMSDs
- correlation coefficients