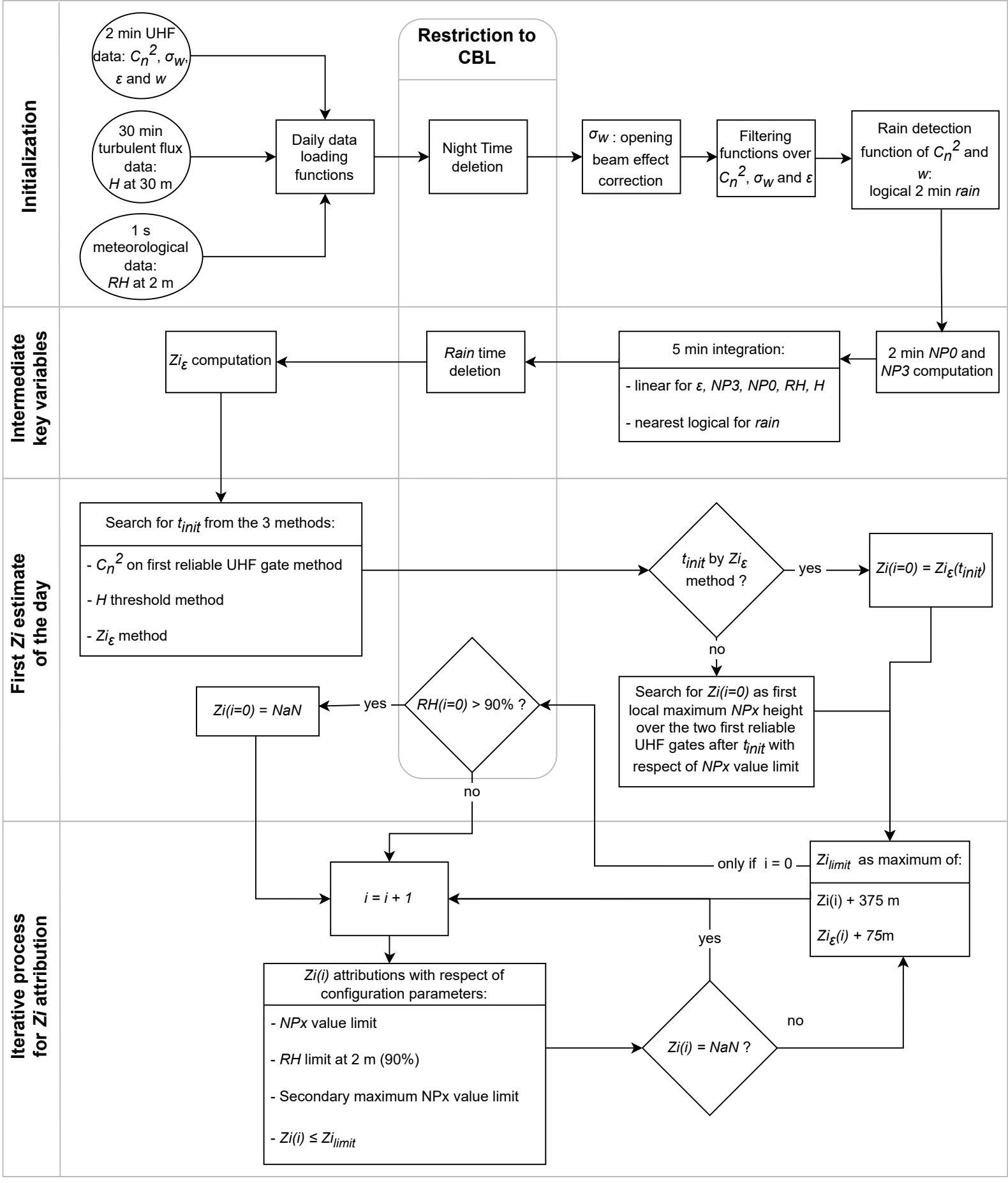
Initialization
2 min UHF data: C_n^2, σ_w, ε and w
30 min turbulent flux data: H at 30 m
1 s meteorological data: RH at 2 m
Daily data loading functions
Restriction to CBL
Night Time deletion
σ_w : opening beam effect correction
Filtering functions over C_n^2, σ_w and ε
Rain detection function of C_n^2 and w: logical 2 min *rain*
Intermediate key variables
2 min *NP0* and *NP3* computation
5 min integration:
- linear for ε, *NP3, NP0, RH, H*
- nearest logical for *rain*
Rain time deletion
Zi_ε computation
First *Zi* estimate of the day
Search for t_{init} from the 3 methods:
- C_n^2 on first reliable UHF gate method
- H threshold method
- Zi_ε method
t_{init} by Zi_ε method ?
yes
$Zi(i=0) = Zi_\varepsilon(t_{init})$
no
Search for $Zi(i=0)$ as first local maximum *NPx* height over the two first reliable UHF gates after t_{init} with respect of *NPx* value limit
$RH(i=0) > 90\%$?
yes
$Zi(i=0) = NaN$
no
Iterative process for *Zi* attribution
$i = i + 1$
Zi_{limit} as maximum of:
Zi(i) + 375 m
$Zi_\varepsilon(i)$ + 75m
only if i = 0
$Zi(i)$ attributions with respect of configuration parameters:
- *NPx* value limit
- *RH* limit at 2 m (90%)
- Secondary maximum NPx value limit
- $Zi(i) \leq Zi_{limit}$
$Zi(i) = NaN$?
yes
no