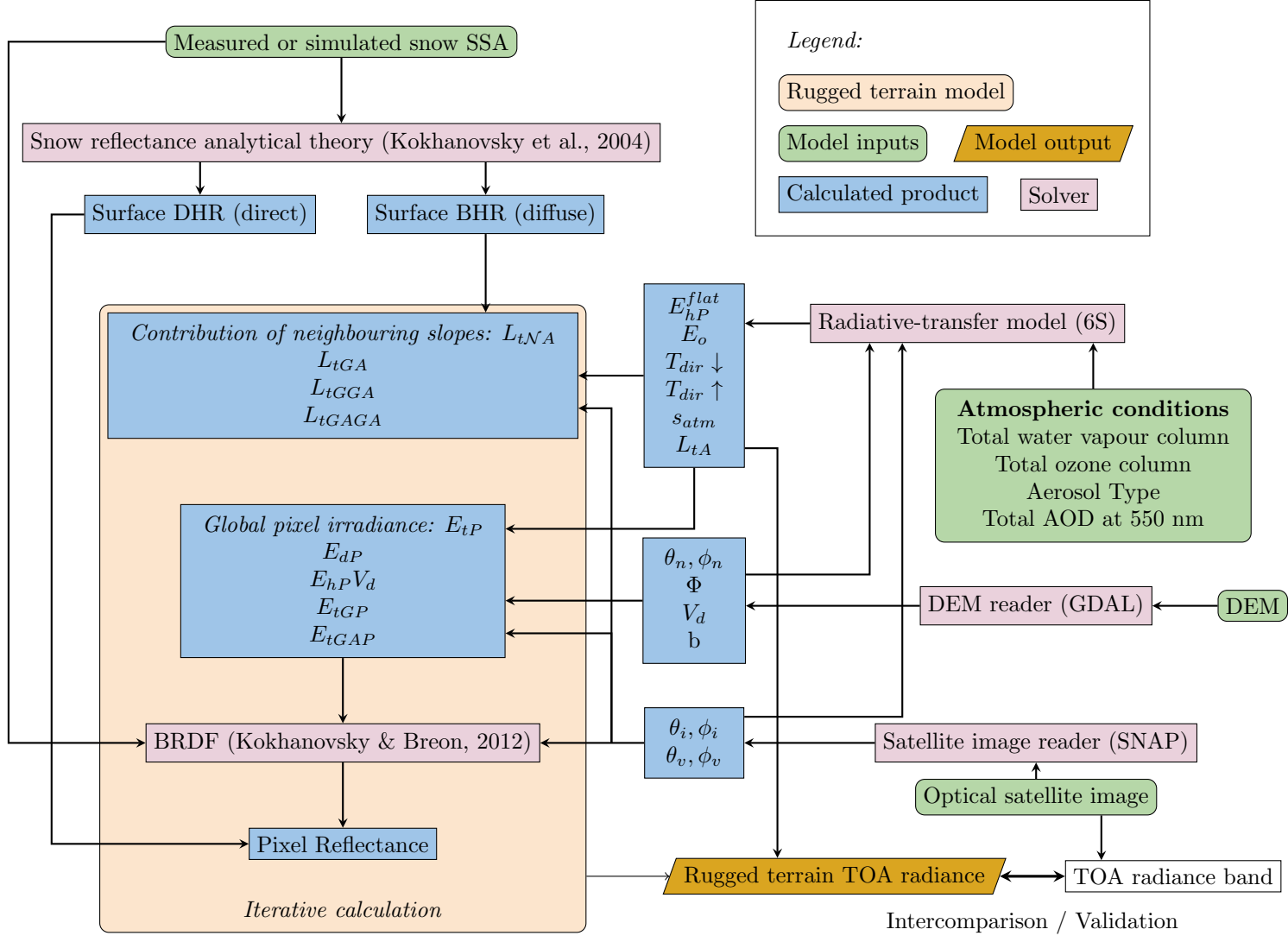
Legend:
Rugged terrain model
Model inputs
Model output
Calculated product
Solver
Measured or simulated snow SSA
Snow reflectance analytical theory (Kokhanovsky et al., 2004)
Surface DHR (direct)
Surface BHR (diffuse)
Contribution of neighbouring slopes: $L_{t\mathcal{N}A}$
L_{tGA}
L_{tGGA}
L_{tGAGA}
E_{hP}^{flat}
E_o
$T_{dir}\downarrow$
$T_{dir}\uparrow$
s_{atm}
L_{tA}
Radiative-transfer model (6S)
Atmospheric conditions
Total water vapour column
Total ozone column
Aerosol Type
Total AOD at 550 nm
Global pixel irradiance: E_{tP}
E_{dP}
$E_{hP}V_d$
E_{tGP}
E_{tGAP}
θ_n, ϕ_n
Φ
V_d
b
DEM reader (GDAL)
DEM
BRDF (Kokhanovsky & Breon, 2012)
θ_i, ϕ_i
θ_v, ϕ_v
Satellite image reader (SNAP)
Optical satellite image
Pixel Reflectance
Rugged terrain TOA radiance
TOA radiance band
Iterative calculation
Intercomparison / Validation