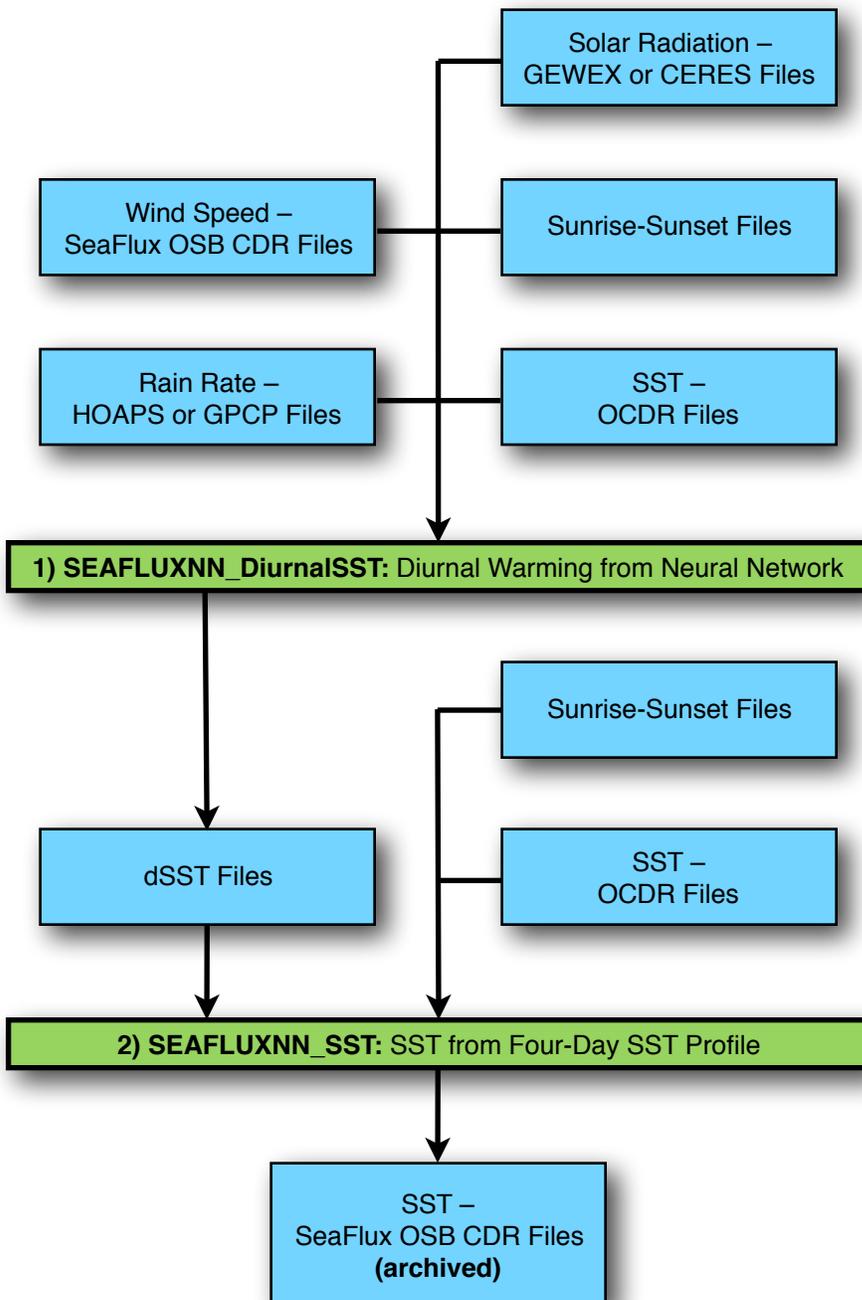


SeaFlux OSB CDR Processing Flow Chart Sea Surface Temperature



Processing Steps

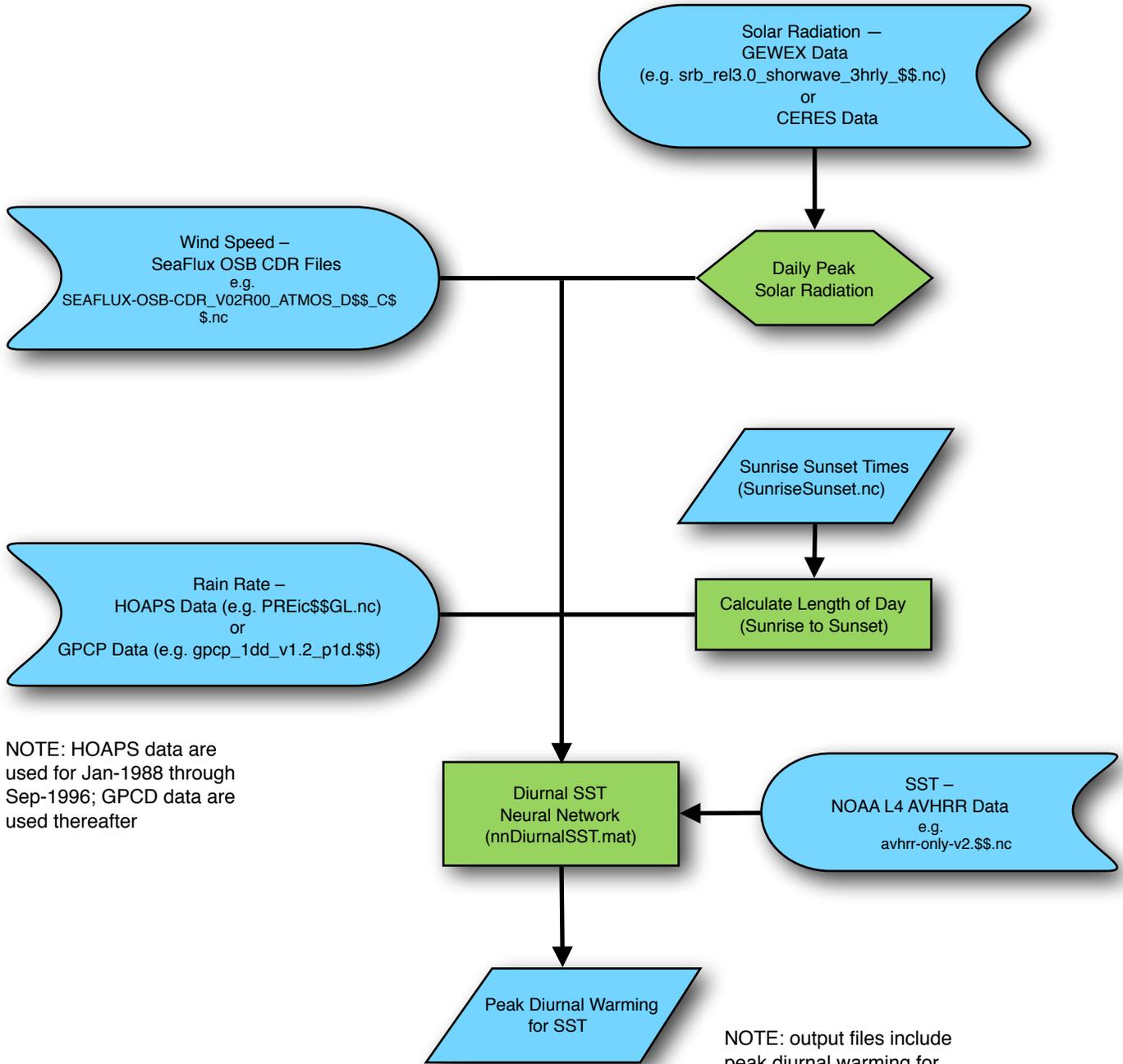
1) SEAFLUXNN_DiurnalSST: Code to calculate peak diurnal warming for sea surface temperature (dSST) from the neural network (NN). Inputs to the NN are daily-averaged wind speed, daily-accumulated rain rate, solar radiation, length of day from sunrise and sunset times, and sea surface temperature. dSST are produced for each day on the same $0.25^\circ \times 0.25^\circ$ grid as used of the SeaFlux OSB CDR.

2) SEAFLUXNN_SST: Code to calculate diurnally-varying sea surface temperature. dSST from step one are compared across four days—two days before and one day after the sample day—superimposing the diurnal cycle onto the foundation SST. Sunrise and sunset times are taken into account along with dSST from the first processing step and SST from satellite observations. Output are the final CDR files for SST in NetCDF using the same spatial and temporal sampling as SeaFlux OSB CDR files: 3-hourly for each day and $0.25^\circ \times 0.25^\circ$ grid.

NOTE: Quality control measures are enacted to remove nonphysical values.

1) SEAFLUXNN_DiurnalSST

NOTE: GEWEX data are used for Jan-1988 through Feb-2000; CERES data are used thereafter—Syn1deg product when available and FLASHFlux when not

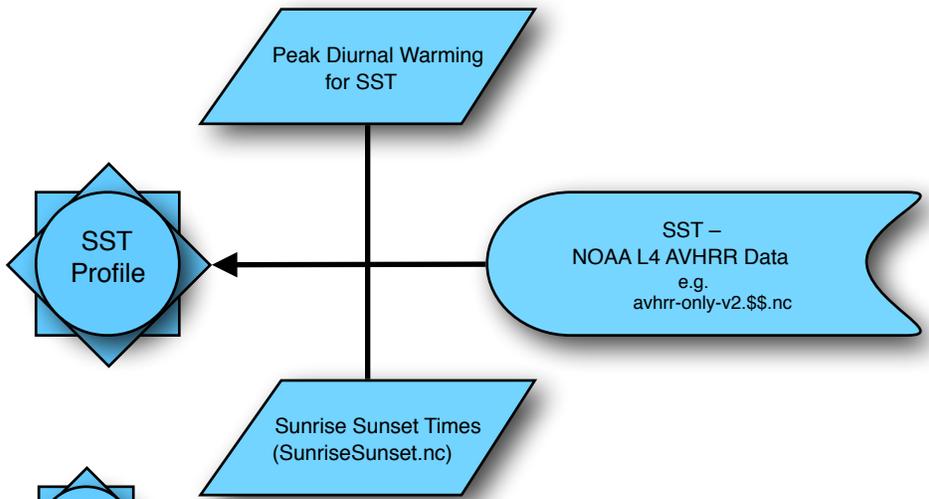


NOTE: HOAPS data are used for Jan-1988 through Sep-1996; GPCD data are used thereafter

NOTE: output files include peak diurnal warming for each day on the 0.25° x 0.25° SeaFlux OSB grid

2) SEAFLUXNN_SST

NOTE: an SST profile is compiled for each day of the data record and includes peak diurnal warming (from step 1) above), SST (from AVHRR observations), and sunrise and sunset times.



NOTE: data are repeated at the edges of the temporal record as needed to generate a self-contained and complete data record.

