**README (100-km resolution)**

Ice\_Op : Timing (day) of the sea-ice opening (i.e. when the sea-ice cover < 10%). If Ice\_Opening=1 & Ice\_Closing =365, no annual sea-ice cover at the station (source : Takuvik)

Ice\_Cl : Timing (day) of the sea-ice formation (i.e. when the sea-ice cover > 10%). If Ice\_Opening=1 & Ice\_Closing =365, no annual sea-ice cover at the station. (source : Takuvik)

Ice\_Dur : Annual sea-ice free period (day) when the sea-ice cover < 10% (source : Takuvik)

Ice : Daily satellite-derived sea ice concentration (0 to 1) (source : NSIDC)

Temperature\_MODIS (8D) : Aqua MODIS Sea Surface Temperature (11μ daytime ; source : NASA)

PAR (8D): Photosynthetically Available Radiation (einstein/m2/day). It is the mean daily photon flux

Euphotic layer (8D) : Depth of the bottom of the euphotic layer (m) (source : GlobColour)

KD490\_Morel (8D) : Diffuse attenuation coefficient at 490 nm (m-1) Morel’s algorithm (source : GlobColour)

KD490\_Lee (8D) : Diffuse attenuation coefficient at 490 nm (m-1) Lee’s algorithm (source : GlobColour)

Chlorophyll (8D) : Chlorophyll concentration (mg/m3) – CHL1 product (source : GlobColour)

POC (8D) : Particulate Organic Carbon (mg/m3). NASA algorithm (source : GlobColour)

PIC (8D) : Particulate Inorganic Carbon (mol/m3). NASA algorithm (source : GlobColour)

BBP (8D) : Particulate back-scattering coefficient at 443 nm (m-1) GSM merging algorithm (source : GlobColour)

CDM (8D) : Coloured dissolved and detrital organic materials absorption coefficient at 443 nm (m-1), GSM merging algorithm (source : GlobColour)

TSM (8D) : Total suspended matter concentration (g/m3), MERIS Case 2 water algorithm (Doerffer et al. 2007).

Northward\_wind (v,1D) : (m/s, Source CERSAT)

Eastward\_wind (u,1D) : (m/s, Source CERSAT)

Surface\_downward\_northward\_stress (v,1D) : (PA, Source CERSAT)

Surface\_downward\_eastward\_stress (u,1D) : (PA, Source CERSAT)