Metadata S5

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Exploring controls on the timing of the phytoplankton bloom in western Baffin Bay, Canadian Arctic

Elementa: Science of the Anthropocene

- Description of:

Data S5: Forcing fields for light.

The forcing fields are given for the location of the Qikiqtarjuaq sea ice camp (67.4797°N, -63.7895°E) for 2016. Each binary file contains 365 values each consisting in a four-bytes float in big-endian. The units of the values are µmol photons m^{-2} s^{-1}. The 365 values correspond to the 365 days of a year. The files were generated with gud_1d_35+16/input_noradtrans/input/process_data_gud_par.ipynb.

- Files:
    - 1D_GDPS_PAR_y2016.365.32bits.bin: Forcing field for photosynthetically active radiation (PAR) irradiance just below open water (I_w). It was calculated from the model output of CGRF (Smith et al., 2014, https:doi.org/10.1002/qj.2194).
    - 1D_obs_PARice_EXP0_y2016.365.32bits.bin: Forcing field for photosynthetically active radiation (PAR) irradiance just below sea ice (I_i) for the reference simulation (EXP-0). It was calculated from observations at the Qikiqtarjuaq sea ice camp in 2016 (Massicotte et al., 2019, https://doi.org/10.17882/59892).
    - 1D_obs_PARice_EXP1_1_1_y2016.365.32bits.bin: Forcing field for photosynthetically active radiation (PAR) irradiance just below sea ice (I_i) for the simulation with opaque snow but translucent bare ice (EXP-2.1). It was calculated from observations at the Qikiqtarjuaq sea ice camp in 2016 (Massicotte et al., 2019, https://doi.org/10.17882/59892).
    - 1D_obs_PARice_EXP1_1_2_y2016.365.32bits.bin: Forcing field for photosynthetically active radiation (PAR) irradiance just below sea ice (I_i) for the simulation with opaque snow and opaque bare ice (EXP-2.2). It was calculated from observations at the Qikiqtarjuaq sea ice camp in 2016 (Massicotte et al., 2019, https://doi.org/10.17882/59892).