CIS gridded ice chart product – see file CIS2aice.py for data manipulation and analysis. Sea ice analysts of CIS produce ice charts for different polygons of sea ice sharing similar properties from visual interpretation of synthetic aperture radars (SAR) imagery (Tivy et al., 2011). This data is discretized on a 10 x 10 km EASE grid from May 1982 to December 2020. Note that land masks vary between ice charts resulting in variability in sea ice extent in fully covered ice regions. Total sea ice concentration is reported using the World Meteorological Organization "egg code". CIS ice charts have monthly and weekly temporal resolution during winter and summer respectively prior to 2005; the temporal resolution is weekly all year round thereafter. One sampling point was used per region to see if data was available for each week of the year from May 1982 to December 2020.

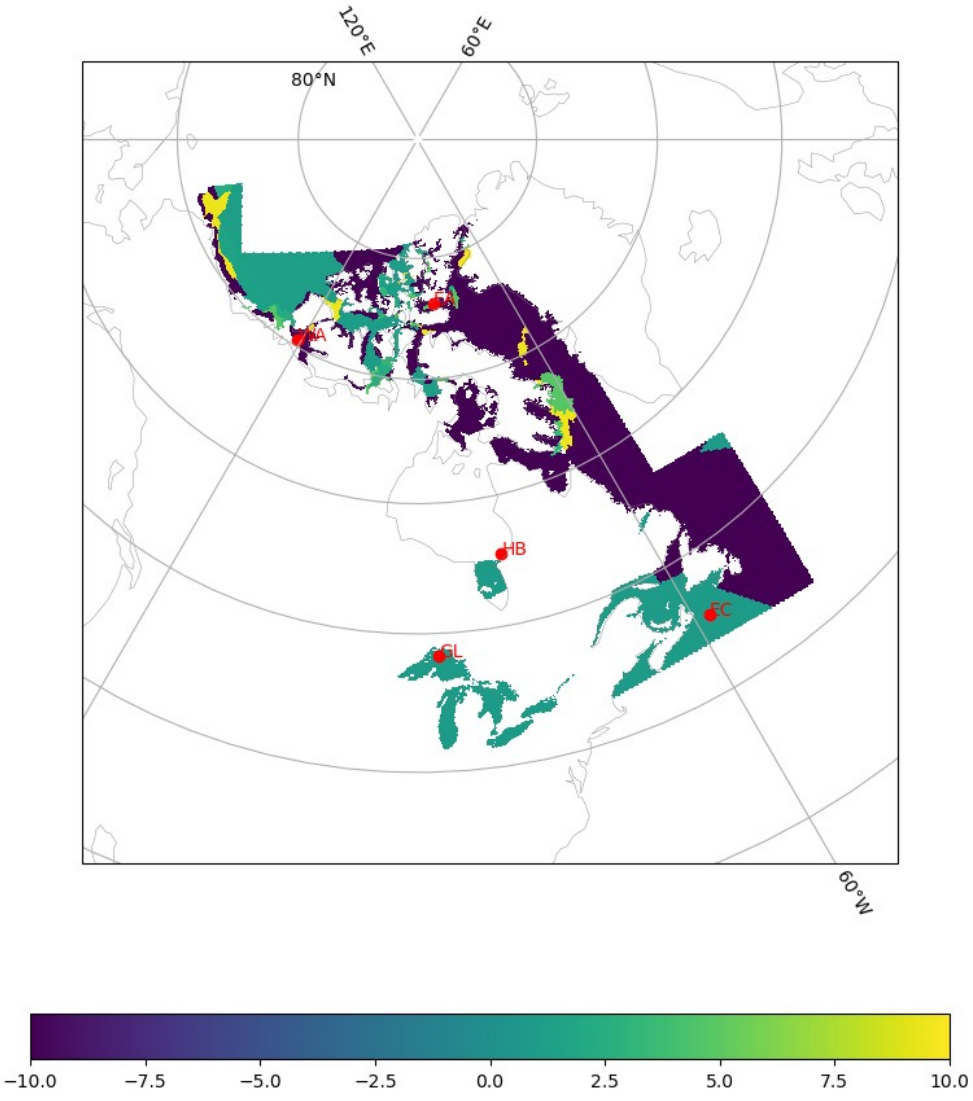

Figure 1: Sea ice concentration on the 1991-08-06 with sampling points to verify data availability in Western Arctic (WA), Eastern Arctic (EA), Hudson Bay (HB), Grand Lakes (GL) and East Coast (EC).

Data availability matrices: color indicate the data is available at that week of the year.

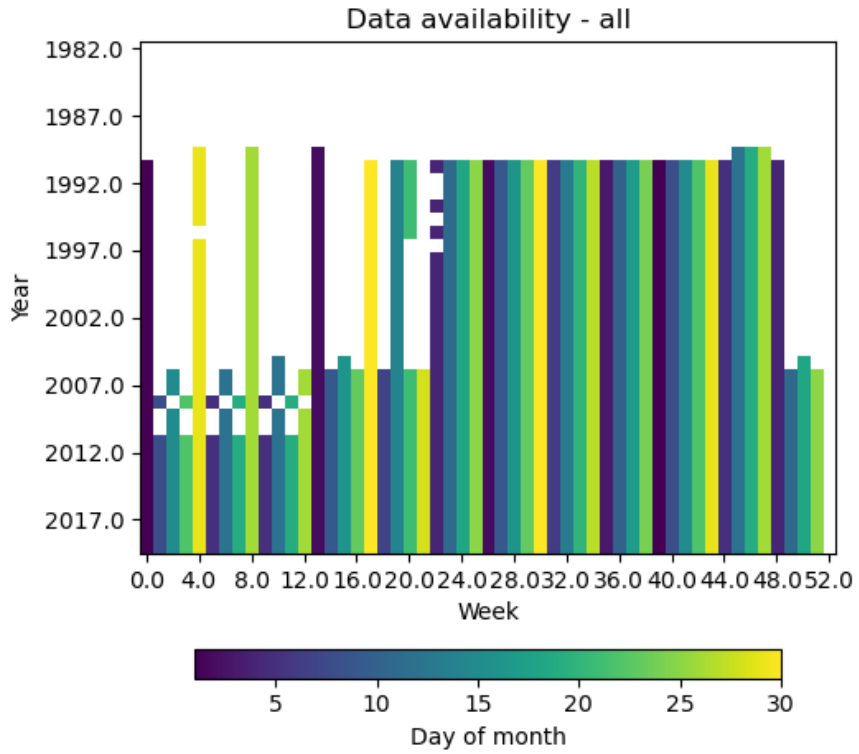

Figure 2: Data availability matrix for all regions.

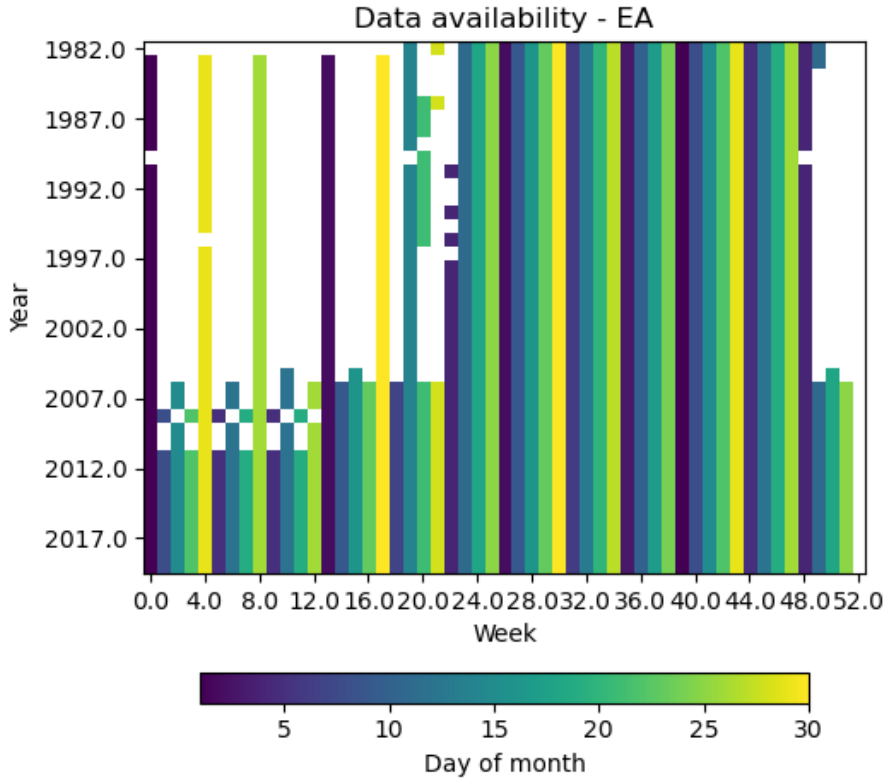

Figure 3: Data availability matrix for Eastern Arctic (EA)

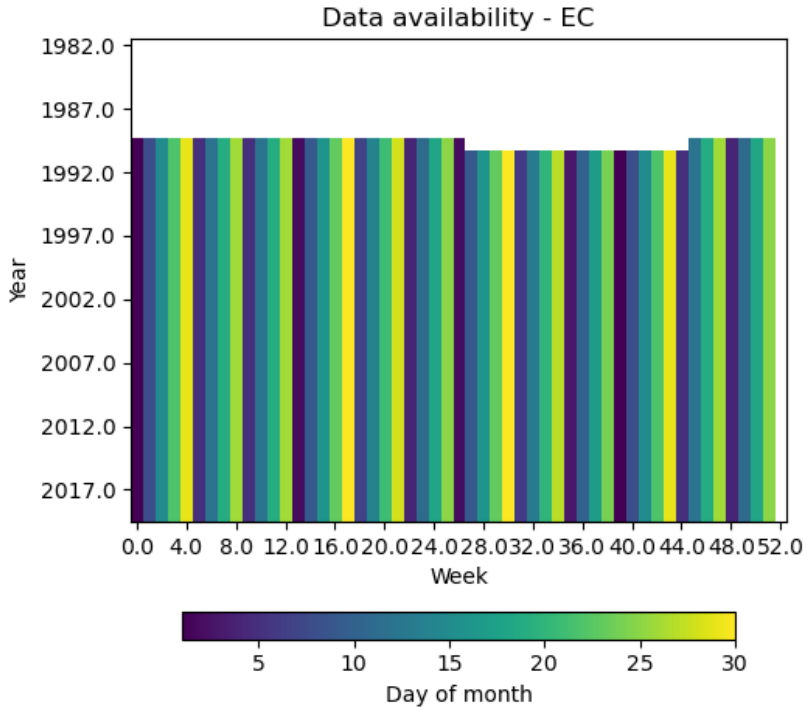

Figure 4: Data availability matrix for East Coast (EC)

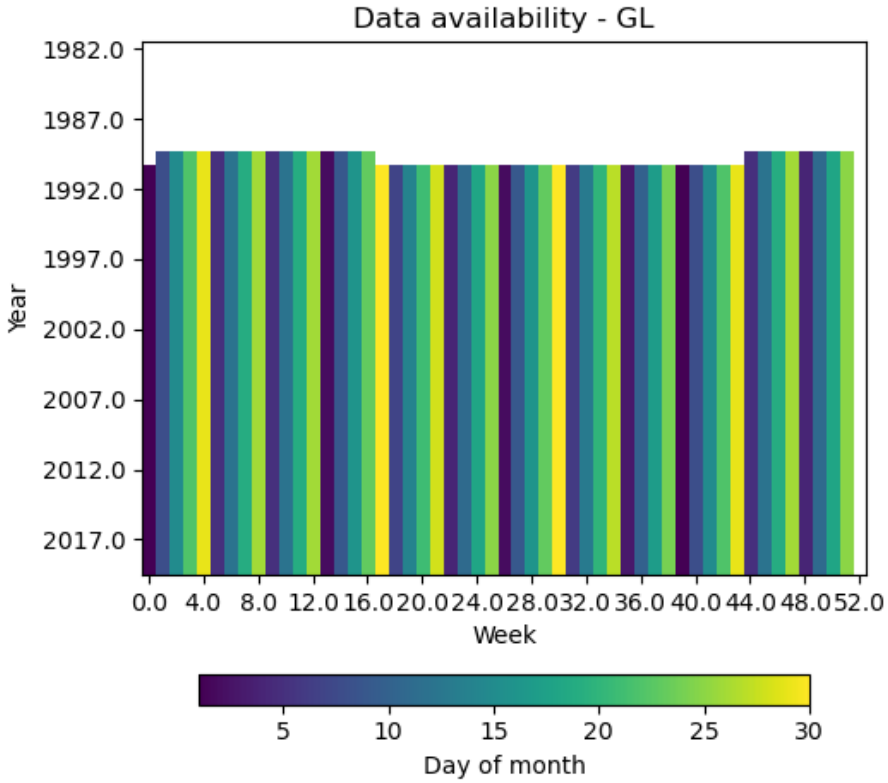

Figure 5: Data availability matrix for the Grand Lakes (GL)

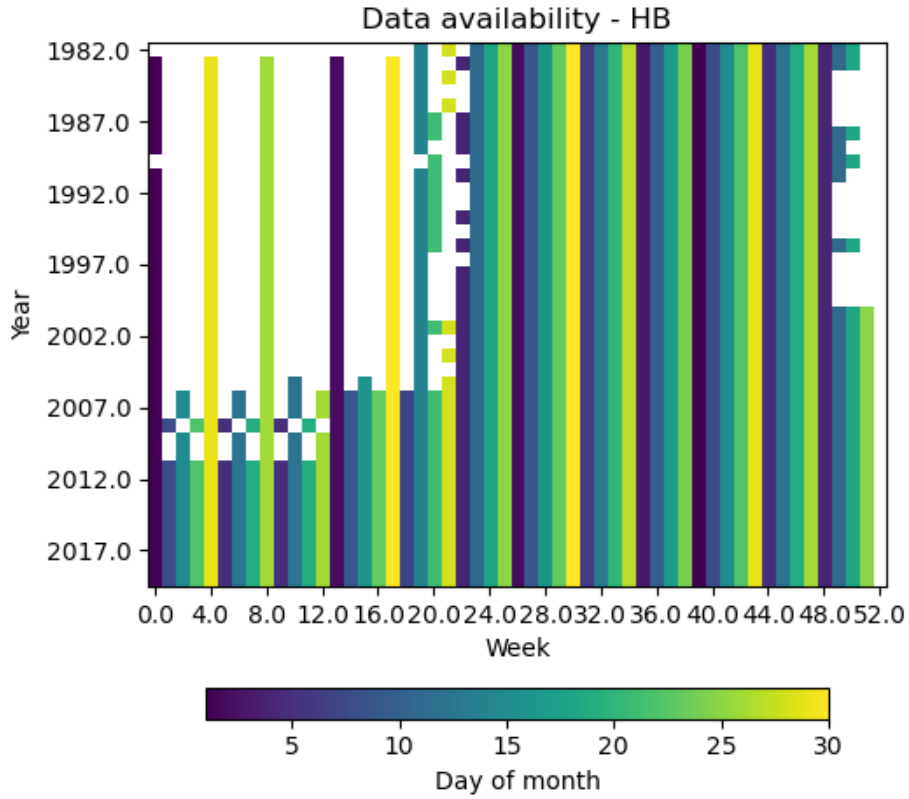

Figure 6: Data availability matrix for the Hudson Bay (HB)

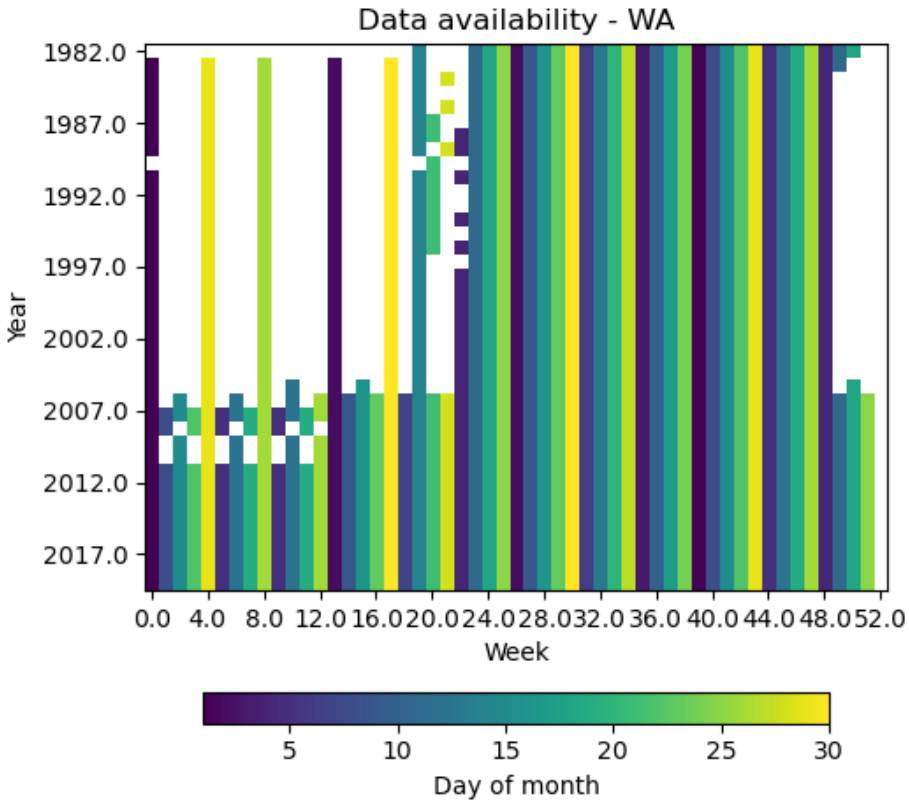

Figure 7: Data availability matrix for the Western Arctic (WA)