

Short description of the Matlab code.

netCDF2geotif.m

The file "netCDF2geotif.m" contain a Matlab code to convert netcdf file into geotiff file.

ice2mass.m

The file "ice2mass.m" convert the netcdf file "Greenland_dhdt_icevol_1kmgrid.nc"

from elevation changes in ice equivalent to water equivalent. Output file name is "Greenland_dhdt_mass_1kmgrid.nc"

The code "ice2mass.m" apply correction due to firn compaction, elastic vertical land motion and glacial isostatic adjustment retrieved from the files "Greenland_dhdt_firn_1kmgrid.nc", "Greenland_dhdt_elas_1kmgrid.nc", and "Greenland_dhdt_GIA_1kmgrid.nc".

Users may replace and use their own firn compaction model , elastic vertical land motion and glacial isostatic adjustment model. However, make sure the grid point align with the current input files.

RUN_fit_poly_ver1_final.m

The file "RUN_fit_poly_ver1_final.m" estimate the parameters from equation 2 to 4 from Khan et al. (2024) in ESSD. It uses input data file "input_data.txt" and the function "fit_poly.m".