

Creating stereographic data from regular lat lon data

Met3D supports various projection types that are available in the 'proj' library. If the user intends to explore these features, then the regular lat lon grid first needs to be regridded onto the appropriate projection and then visualized in Met3D.

This remapping can be done as outlined below, for example from regular lat lon to stereographic using CDO command

```
cdo -P 4 -O remapbil,${TARGETGRIDFILE} ${INFILE} ${OUTFILE}
```

where **-P 4** – Number of pthreads to speed up the processing (here **4**).

remapbil – CDO operator to do remapping to a particular grid defined in the **TARGETGRIDFILE**.

TARGETGRIDFILE – A text file containing the target grid description, for example

```
gridtype = projection
gridsize = 25600
xsize = 160
ysize = 160
xname = xc
xlongname = "x coordinate of projection (eastings)"
xunits = "km"
yname = yc
ylongname = "y coordinate of projection (northings)"
yunits = "km"
xfirst = -8000
xinc = 100
yfirst = 8000
yinc = -100
grid_mapping = Polar_Stereographic_Grid
grid_mapping_name = polar_stereographic
straight_vertical_longitude_from_pole = 0.f
latitude_of_projection_origin = 90.f
standard_parallel = 70.f
false_easting = 0.f
false_northing = 0.f
semi_major_axis = 6378273.f
semi_minor_axis = 6356890.f
proj4_string = "+proj=stere +a=6378273 +b=6356889.44891 +lat_0=90 +lat_ts=70 +lon_0=0"

# distances in km and grid res from here: https://nsidc.org/data/polar-stereo/ps_grids.html
# other example grid, see: https://code.mpimet.mpg.de/projects/cdo/embedded/index.html#x1-130001.3
```