- How to read the Format

The data is recorded in the NetCDF4 format, which is a widely-used self-describing format developed at Unidata (http://www.unidata.ucar.edu/software/netcdf/software.html). A number of data viewers and manipulation tools are available for the NetCDF format. Please see the tool list (http://www.unidata.ucar.edu/software/netcdf/software.html).

If you use Python3, you can read the NetCDF data with such descriptions as bellow;

```
from os import chdir
import netCDF4 as ncf

chdir("Write an absolute path of the directory where you have downloaded the data")

nc0 = ncf.Dataset("nwind20000412.nc", "r")
lon = nc0.variables[“lon"][:] [deg.]
lat = nc0.variables["lat"][:] [deg.]
alt = nc0.variables["alt"][:] [km]
time = nc0.variables["time"][:] [Universal Time]

uu = nc0.variables[“zonal”][:,:,:,:] # eastward positive [m/s]
vv = nc0.variables[“meridional”][:,:,:,:] # northward positive [m/s]
ww = nc0.variables[“vertical"][:,:,:,:] # upward positive [m/s]

nc0.close()
```

- nwindyyyymmdd.nc: neutral winds on dd mm yyyy
- xmgiyyyymmdd.nc: magnesium ion density on dd mm yyyy
- vnpyyyymmdd.nc: zonal ion velocity driven by the neutral winds on dd mm yyyy
- vnryyyymmdd.nc: vertical ion velocity driven by the neutral winds on dd mm yyyy
- vntyyyymmdd.nc: meridional ion velocity driven by the neutral winds on dd mm yyyy
- velmyyyymmdd.nc: meridional ion velocity on dd mm yyyy
- velvyyyymmdd.nc: vertical ion velocity on dd mm yyyy
- velzyyyymmdd.nc: zonal ion velocity on dd mm yyyy