

# file format conversion

## 1. Content

- 1. Content
- 2. Introduction
- 3. Images and Documents
  - 3.1. PS to PDF
  - 3.2. PS to PNG
  - 3.3. PS to EPS
  - 3.4. EPS to PNG and cropping
- 4. Data Files
  - 4.1. netCDF versions
  - 4.2. GRIB and netCDF

## 2. Introduction

Here we collect different programmes and programme calls which have the aim to convert a file from one format into another.

Contributions from everybody are welcome 😊 .

## 3. Images and Documents

### 3.1. PS to PDF

**Precondition:** GhostScript is installed

```
ps2pdf -sPAPERSIZE=a4 FILE.ps      # uses gs (GhostScript)
```

**Note:** Look into 'man gs' rather than into 'man ps2pdf' when you look for command line parameters

### 3.2. PS to PNG

**Precondition:** GhostScript is installed

```
ps2raster -A -Tg -Qt2 FILE.ps      # uses GhostScript
```

Parameters:

- -A: cut away the white canvas (= fit bounding box)
- -Tg: transform into color PNG without transparency (=g); G = with transparency; append ' - ' = grey scales
- -Qt2: anti-aliasing ( -Q) setting for text (t) with sub-sampling box size of 2 (2)

### 3.3. PS to EPS

**Precondition:** GhostScript is installed

```
ps2raster -A -Te -Qt2 FILE.ps      # see 'PS to PNG'
```

### 3.4. EPS to PNG and cropping

**Precondition:** ImageMagick is installed

```
# simple (just converting)
convert myEPS.eps -depth 4 -strip foo.png
```

We have a EPS file. We convert it at first. Then we realise that there is white space which can be removed.

```
# with cropping
convert myEPS.eps -chop 49x20+545+35 -crop 580x390+60+23 -depth 4
-strip foo.png

# -chop 50x20+545+35
# remove a horizontal line of the height of 20 pixel starting from
pixel 35 (from the top)
# remove a vertical line of the width of 49 pixel starting from pixel
545 (from left)
# see http://www.imagemagick.org/Usage/crop/#splice for details
#
# -crop 580x390+60+23
# crop the image to the size of 580x390 pixel (x times y)
# crop 60 on the left and 23 on the top
# the remaining difference is cropped from right and bottom
# see for details
http://www.imagemagick.org/script/command-line-options.php?crop
#
# -depth 4
# color depth of 4 for each RGB color (=> 4^3 bit); see for details
http://peterhansen.ca/blog/convert-eps-to-png-with-imagemagick.html
#
# -strip
# drop metadata; see for details
http://peterhansen.ca/blog/convert-eps-to-png-with-imagemagick.html
```

## 4. Data Files

### 4.1. netCDF versions

See <http://linux.die.net/man/1/nccopy> for details on the command 'nccopy' which will be used below. 'nccopy' is one of the standard netCDF command line programmes coming together with 'ncview' and 'ncdump'.

**Use case:** We have a compressed netCDF4 (enhanced) file but our post-processing routines only accept netCDF3 (classic) files.

```
nccopy -k classic results.nc results_classic.nc
# or nccopy -k 1 results.nc results_classic.nc
```

**Use case:** Convert a netCDF3 (classic) file into netCDF4 (enhanced) format (e.g. because of better data compression features).

```
nccopy -k 3 results.nc results_enhanced.nc
# or nccopy -k enhanced results.nc results_enhanced.nc
```

### 4.2. GRIB and netCDF

```
cdo -f nc copy file.grb file.nc      # Convert grib to netCDF:
```