

How can I swap the scanning order - ecCodes GRIB FAQ

How do I swap (reverse) the scanning order? for example changing north-to-south to south-to-north

Step-by-step guide

Say you have a GRIB file with scanning order of south-to-north (for latitudes). This means the key "jScansPositively" is 1. You want to change this to north-to-south i.e. jScansPositively should become 0

1. Ensure that the grid geometry of your GRIB message specifies **both** the latitudes:
latitudeOfFirstGridPointInDegrees and latitudeOfLastGridPointInDegrees
2. Check what scanning modes you have in your input file:

```
% grib_ls -p jScansPositively,iScansPositively input.grib
```

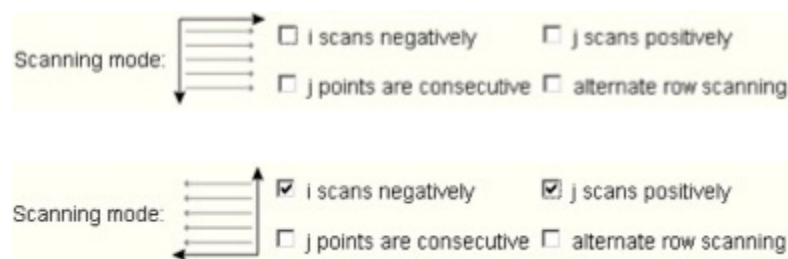
3. Use the grib_set command to swap the scanning order for the latitudes:

```
% grib_set -s swapScanningY=1 input.grib output.grib
```

This changes the order in which the data is stored in the GRIB message

There is also the key "swapScanningX" to do the same task for longitudes (east-to-west changed to west-to-east).

Here is a way of visualising the different scanning orders:



The swapScanningX/Y keys only work for *regular lat/lon grids* and *regular Gaussian grids*. It is not to be used for reduced grids, Lambert, Polar stereographic, Mercator etc



Check the output GRIB file to ensure the data is shown correctly e.g., by plotting it

Related articles

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- [Memory-based access to definition/sample files \(MEMFS\) - ecCodes FAQ](#)
- [How do I use an OR condition \(logical disjunction\) in a where clause - ecCodes GRIB FAQ](#)
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