METR

VISUALIZACIÓN Y MANEJO DE DATOS METEOROLÓGICOS

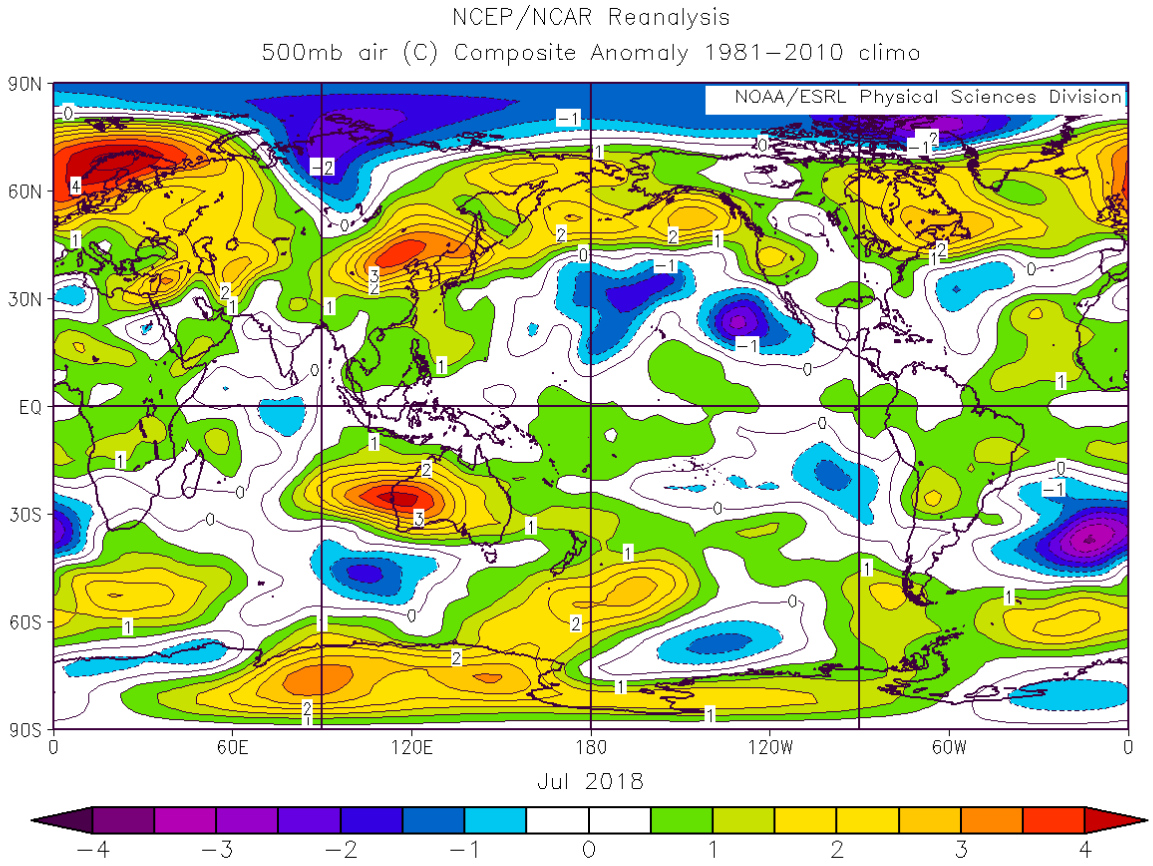
Elio Campitelli

CIMA
CONICET
UBA

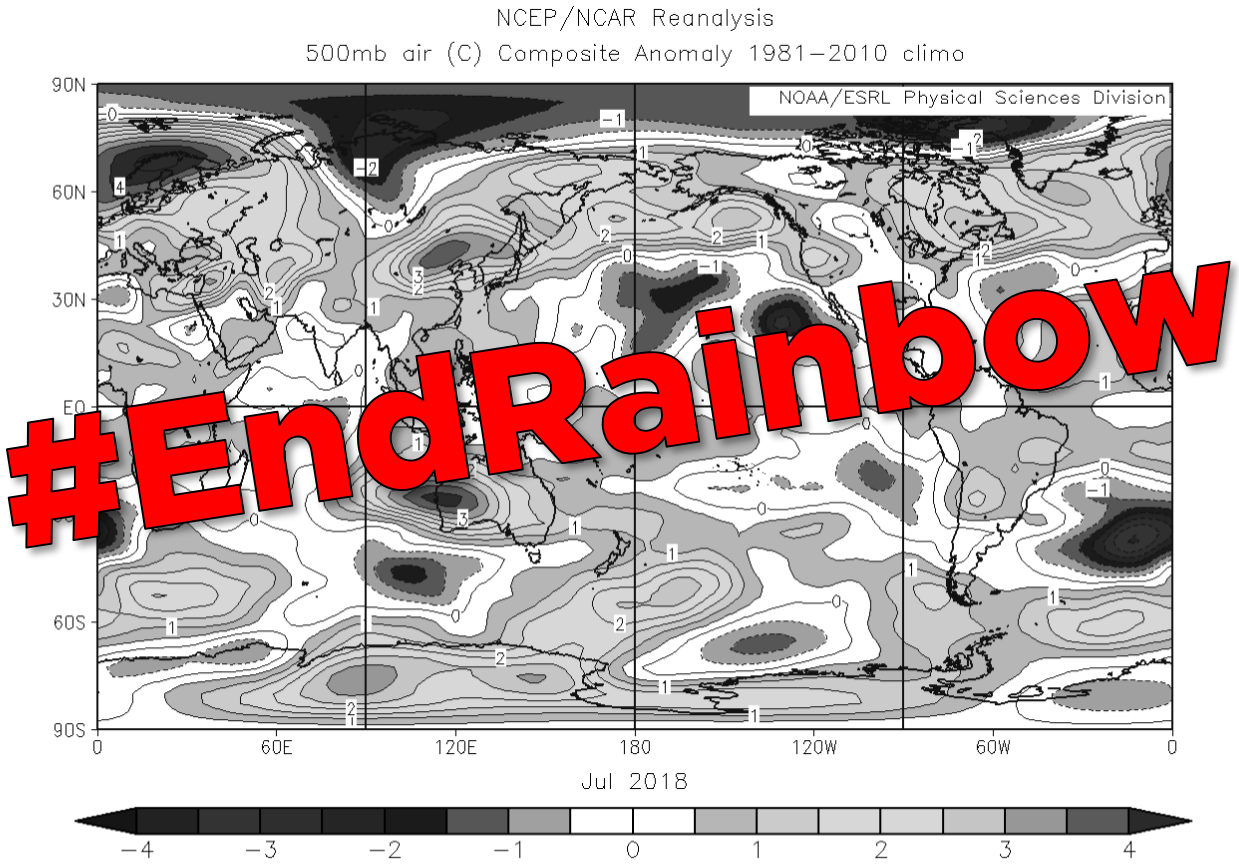
eliocamp

d_olivaw

DIALECTO METEOROLÓGICO



DIALECTO METEOROLÓGICO



ESTADO DEL ARTE

raster: Geographic Data Analysis and Modeling

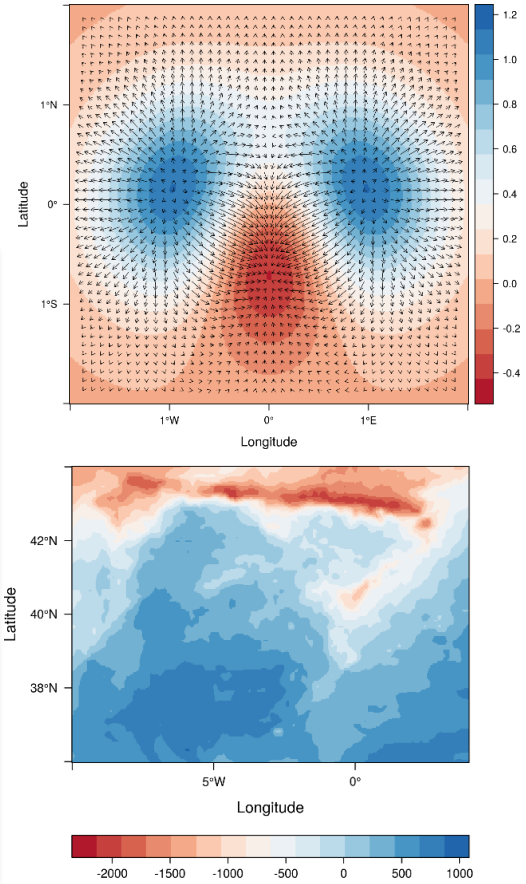
Reading, writing, manipulating, analyzing and modeling of gridded spatial data. The package implements basic and high-level functions. Processing of very large files is supported.

Version:	2.6-7
Depends:	methods, sp (≥ 1.2-0), R (≥ 3.0.0)
Imports:	
LinkingTo:	
Suggests:	
Published:	
Author:	
Maintainer:	
License:	
URL:	
NeedsCompilation:	
SystemRequirements:	
Materials:	
In views:	
CRAN checks:	

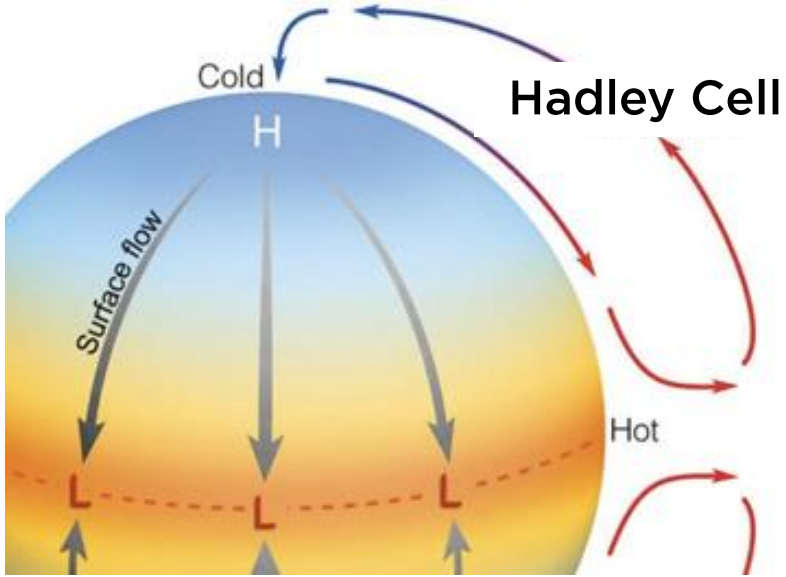
rasterVis: Visualization Methods for Raster Data

Methods for enhanced visualization and interaction with raster data. It implements visualization methods for quantitative data and categorical data, both for univariate and multivariate rasters. It also provides methods to display spatiotemporal rasters, and vector fields. See the website for examples.

Version:	0.45
Depends:	R (≥ 2.14.0), methods, raster (≥ 2.0-12), lattice, latticeExtra
Imports:	stats, utils, parallel, grid, grDevices, RColorBrewer, hexbin, sp (≥ 1.0-6), zoo, viridisLite
Suggests:	rgl, ggplot2, colorspace, dichromat
Published:	2018-06-02
Author:	Oscar Perpinan Lamigueiro [cre, aut], Robert Hijmans [aut]
Maintainer:	Oscar Perpinan Lamigueiro <oscar.perpinan at gmail.com>
BugReports:	https://github.com/oscarperpinan/rastervis/issues
License:	GPL-3
URL:	http://oscarperpinan.github.io/rastervis
NeedsCompilation:	no
Citation:	rasterVis citation info
Materials:	README
In views:	Spatial, SpatioTemporal
CRAN checks:	rasterVis results



ESTADO DEL ARTE



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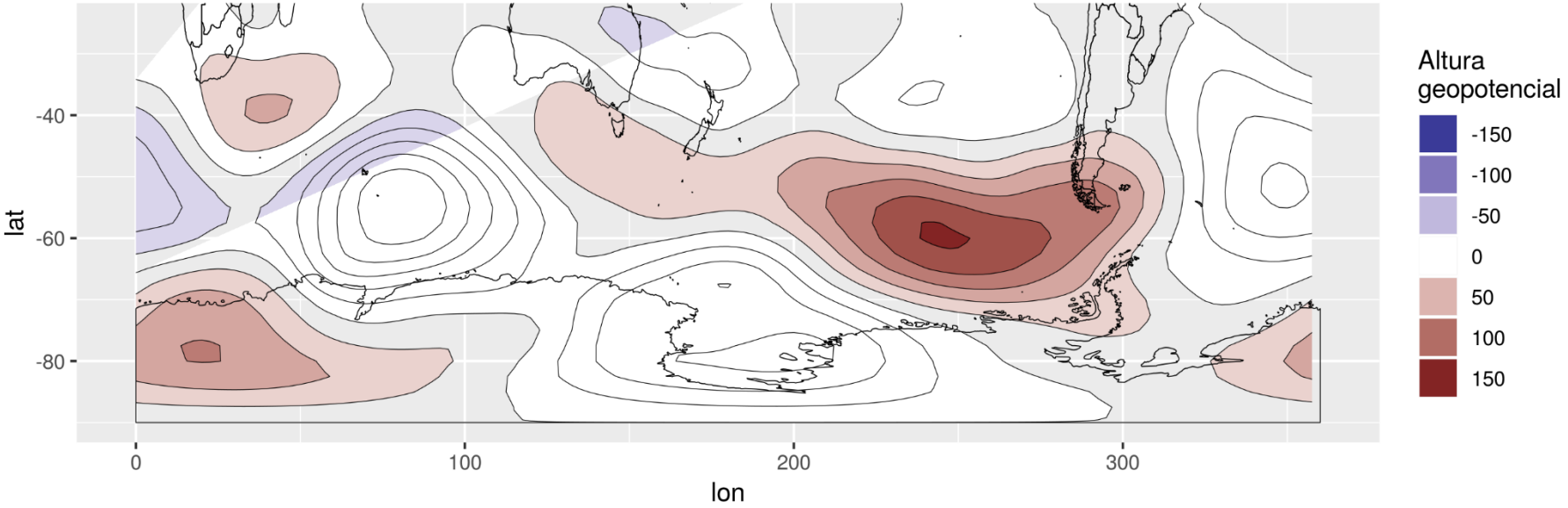
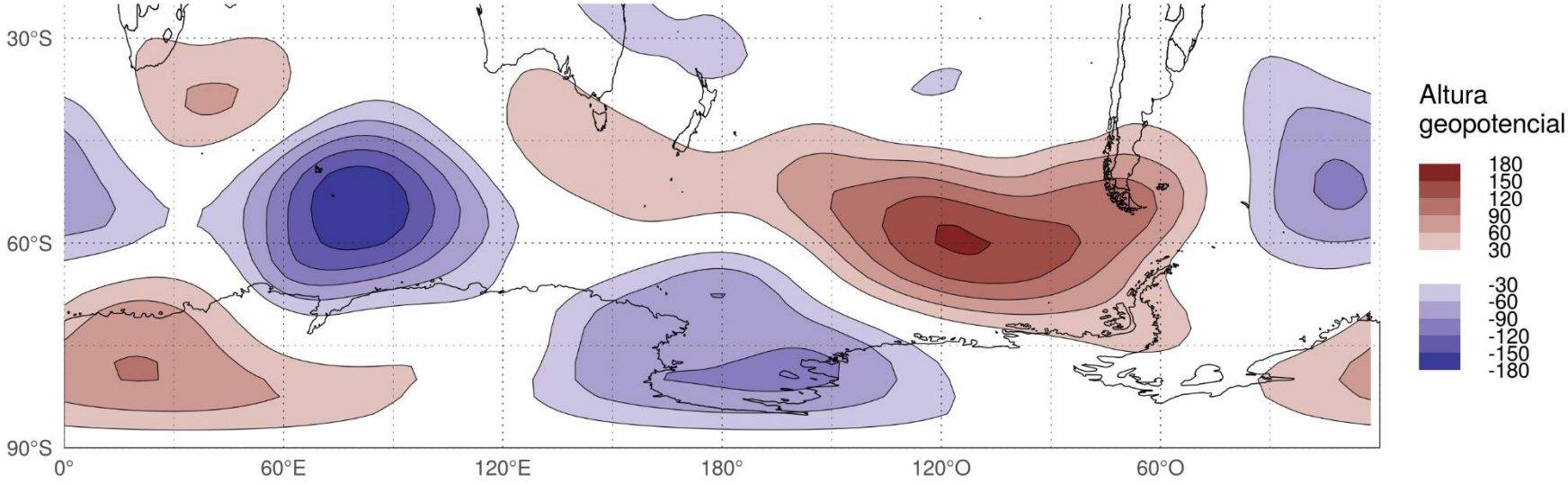


geom_contour_fill()



geom_contour_tanaka()

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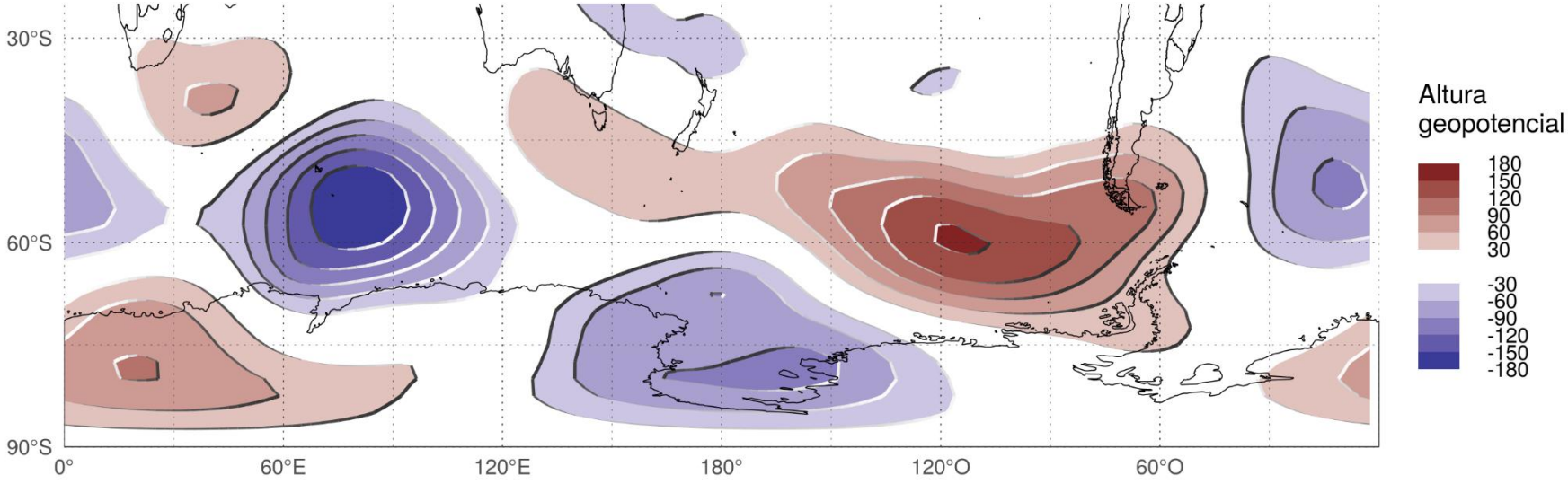
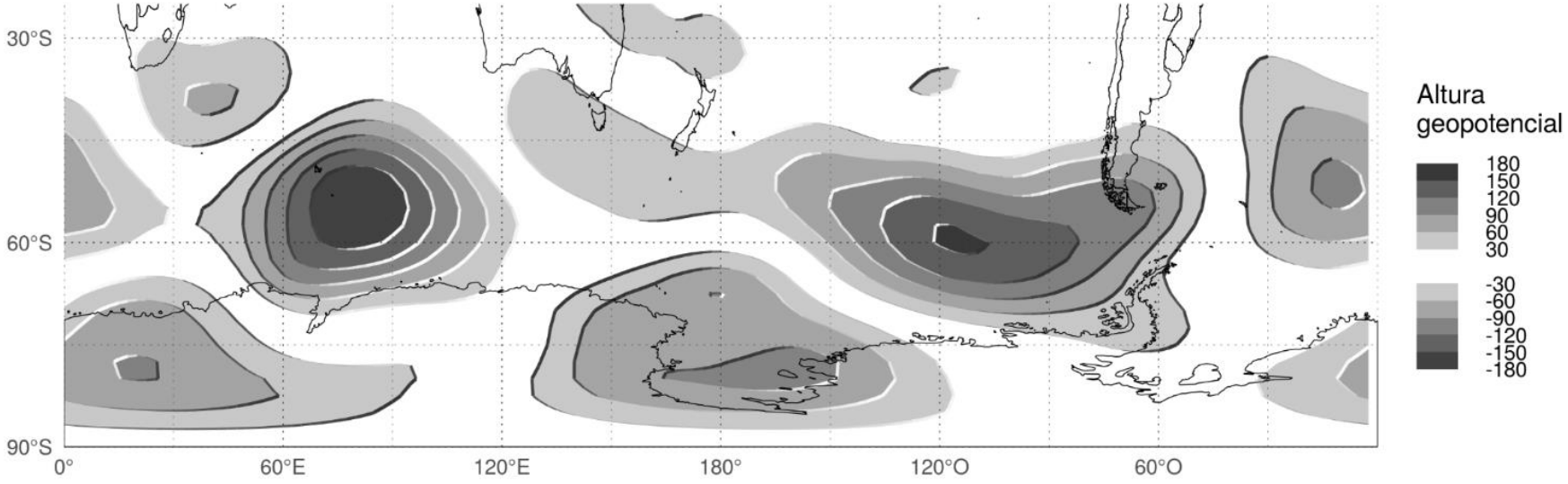
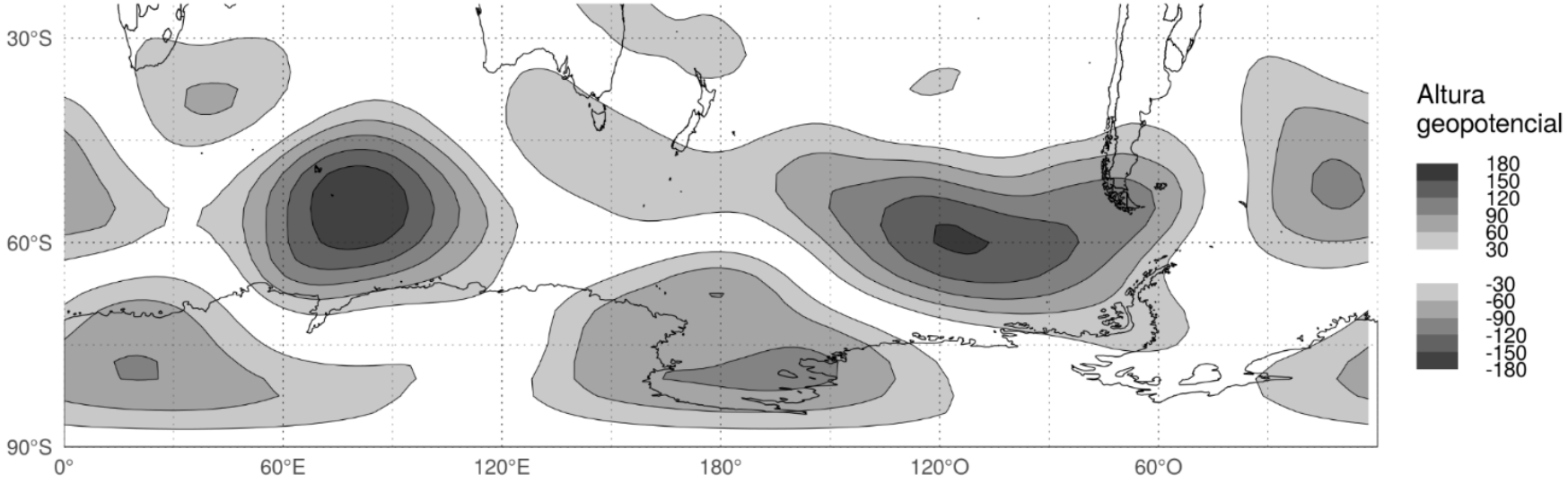


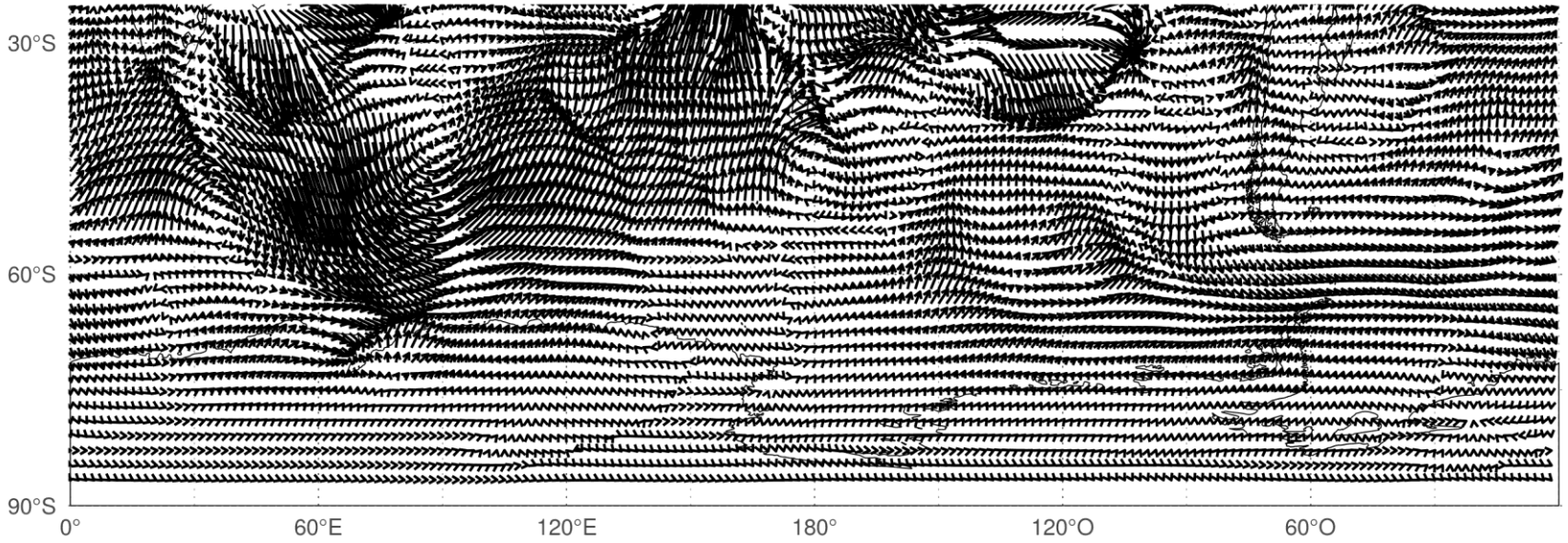
geom_contour_tanaka()



geom_contour_tanaka()

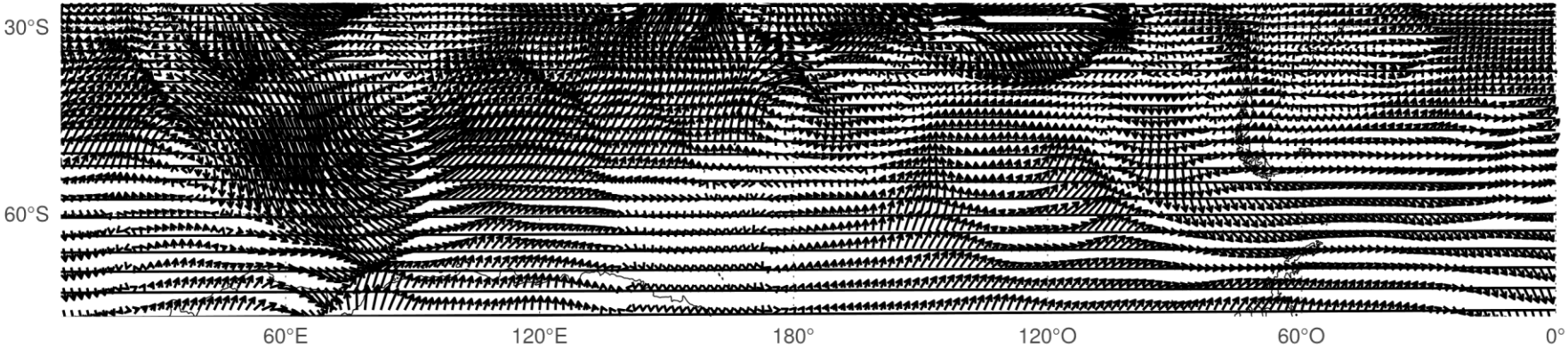


geom_vector()

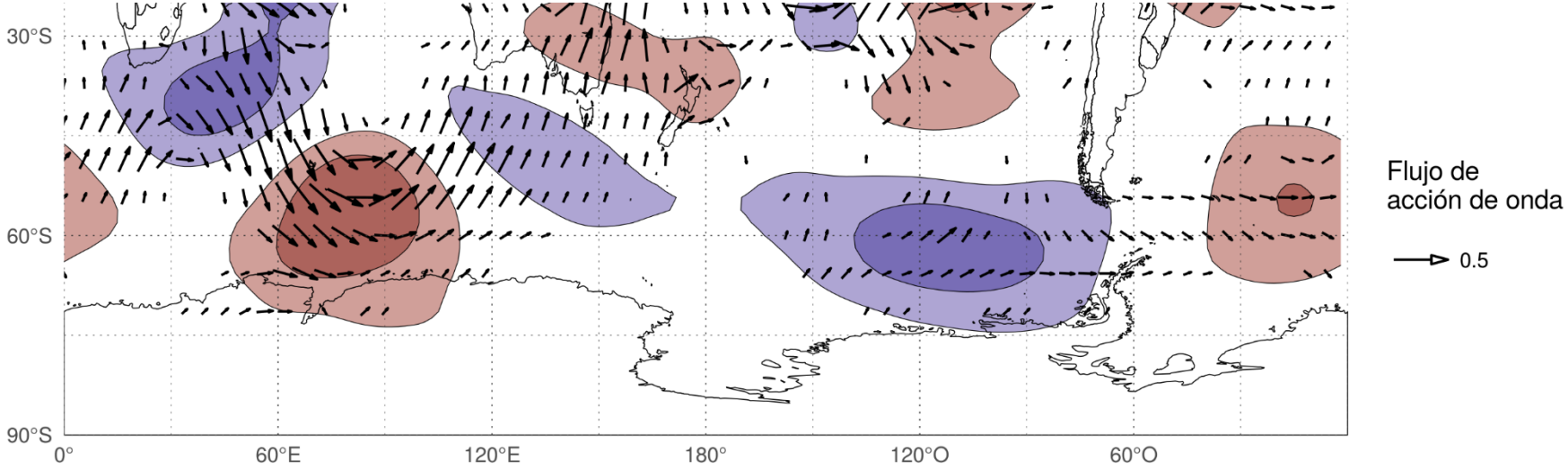



```
ggplot(data, aes(lon, lat)) +
   geom_segment(aes(xend = lon + scale*u, yend = lat + scale*v),
                arrow = my_arrow)
```

geom_vector()



geom_vector()




```
ggplot(data, aes(lon, lat)) +
   geom_vector(aes(dx = u, dy = v), skip = 2, min.mag = 0.05)
```

geom_streamline()

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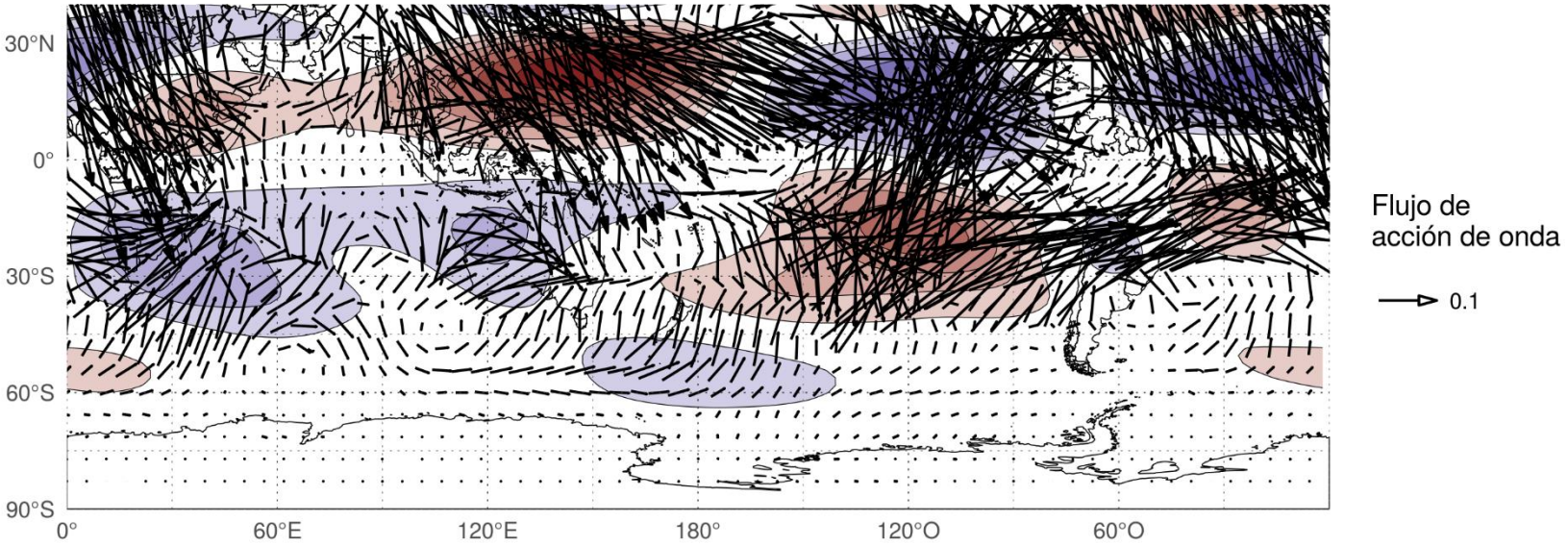

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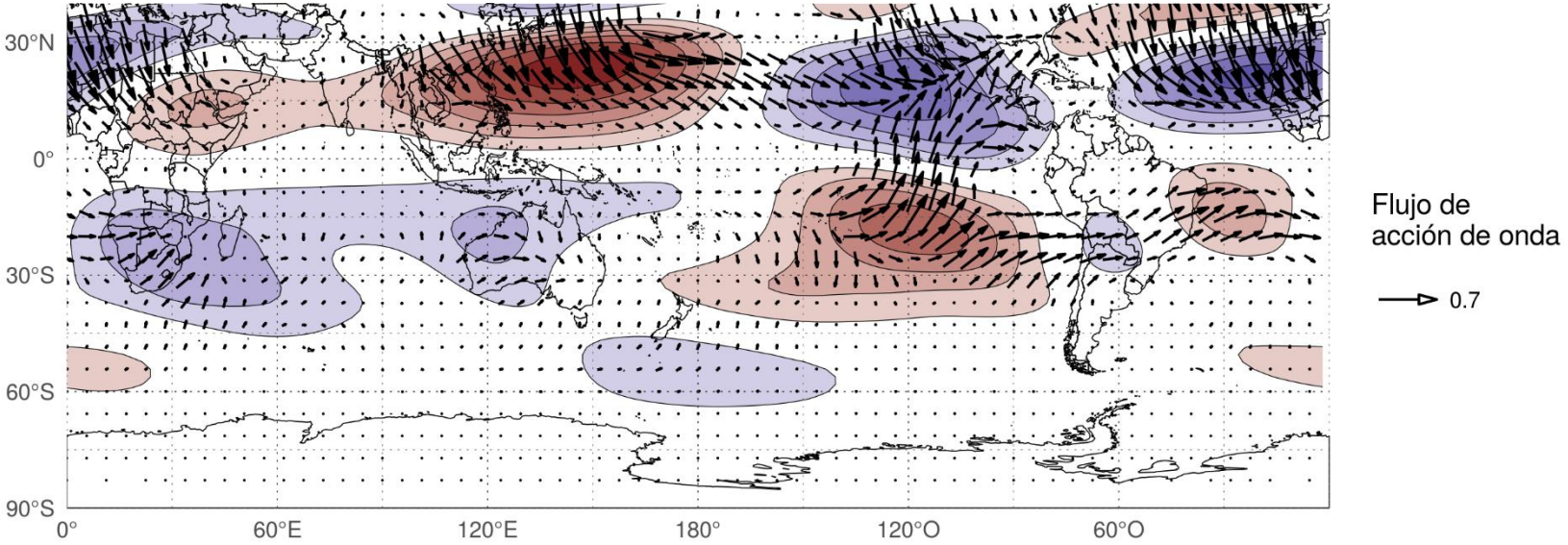

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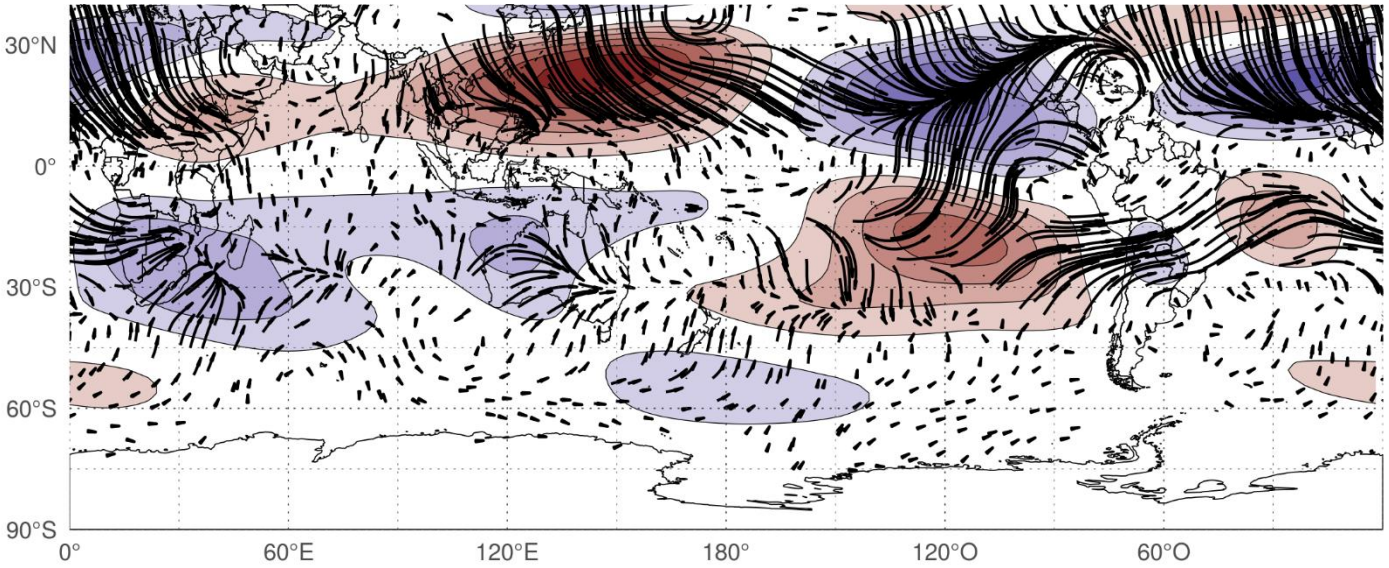
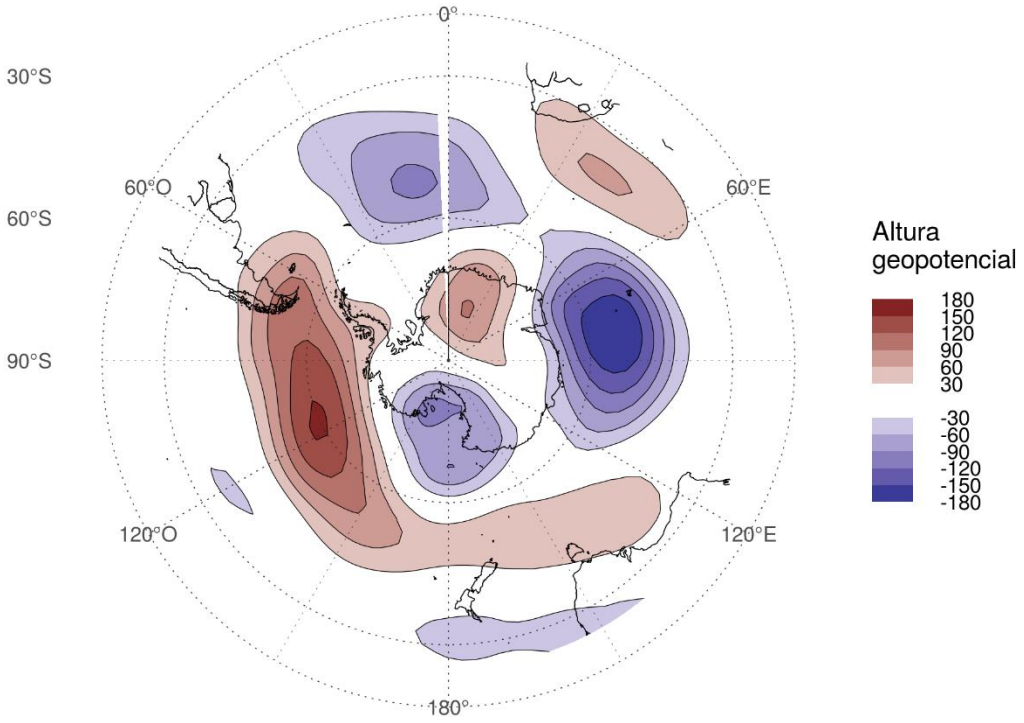


library(ggperiodic)



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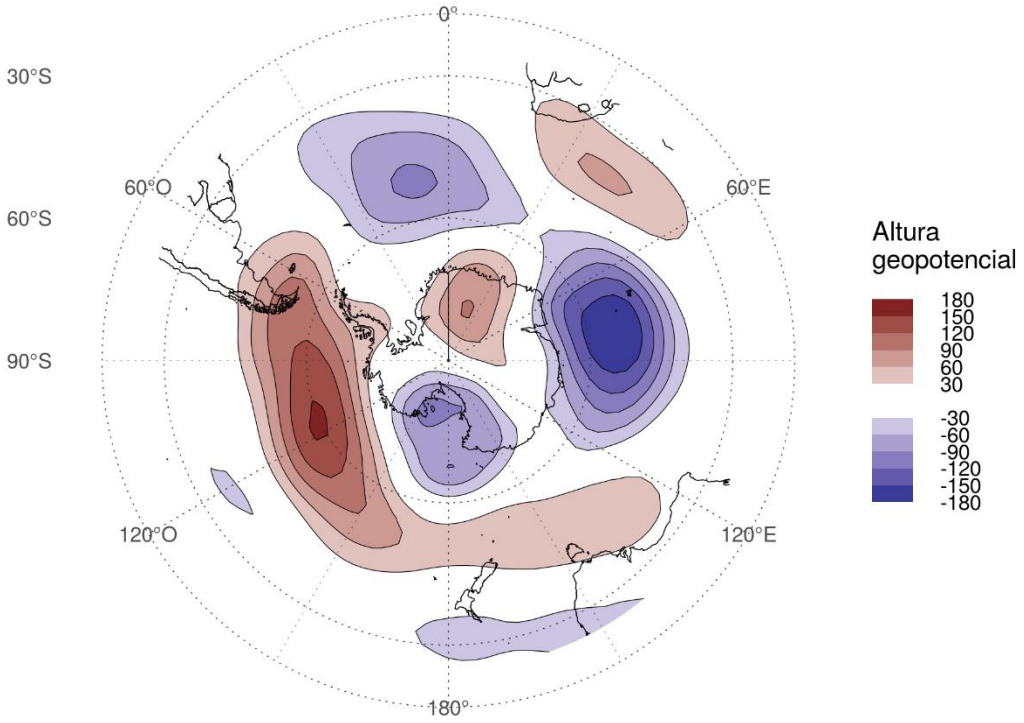

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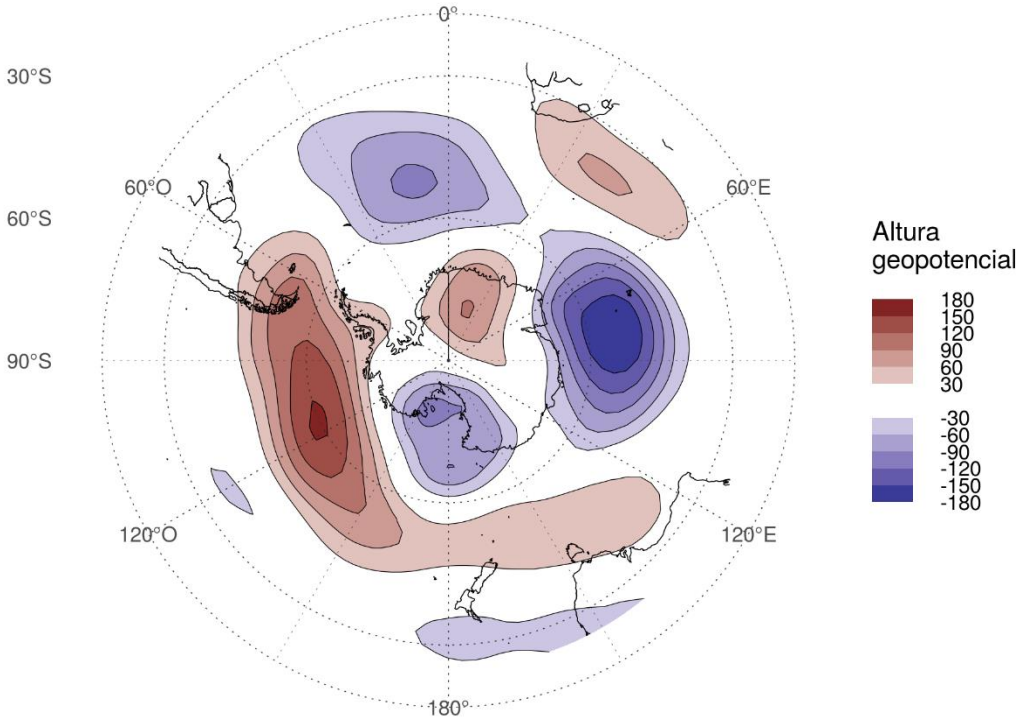


```
data <- ggperiodic::periodic(data, lon = c(0, 360))
```

ReadNetCDF()

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```
nc <- nc_open("psi.mon.mean.nc")

lon   <- ncvar_get(nc, "lon")
lat   <- ncvar_get(nc, "lat")
level <- ncvar_get(nc, "level")
time  <- ncvar_get(nc, "time")

stream <- ncvar_get(nc, "psi", start = c(1, 16, 4, 1),
                    count = c(-1, 79, 1, -1), collapse_degen = FALSE)
dimnames(stream) <- list(lon = lon, lat = lat[16:(16+79-1)],
                         level = level[4], time = time)

stream <- reshape2::melt(stream)
```

ReadNetCDF()

```
stream <- ReadNetCDF("psi.mon.mean.nc",
                     subset = list(level = 0.2101, lat = -90:60))
```

```
      lon     lat  level        psi       time
1: 0.000 59.9986 0.2101 -130896128 1948-01-01
2: 1.875 59.9986 0.2101 -130666440 1948-01-01
3: 3.750 59.9986 0.2101 -130443560 1948-01-01
4: 5.625 59.9986 0.2101 -130222264 1948-01-01
5: 7.500 59.9986 0.2101 -129993216 1948-01-01
6: 9.375 59.9986 0.2101 -129735152 1948-01-01
```

OTRAS FUNCIONES

- geom_text_contour()
- stat_subset()
- EOF()
- ImputeEOF()
- Interpolate()
- Derivate()
- FitWave(), BuildWave() y FilterWave()
- FitLm()
- GeostrophicWindw()
- Funciones termodinámicas:
  - IdealGas()
  - ClausiusClapeyron() …

FUTURO

github.com/eliocamp/metR/issues

eliocamp.github.io/metR

eliocamp.github.io/codigo-r