

# Package: polr (via r-universe)

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**Title** Polar OpenLayers

**Version** 0.1.1

**Description** A minimal set of bindings to the OpenLayers javascript library, with a focus on polar mapping applications.

**URL** <https://github.com/SCAR/polr/>

**BugReports** <https://github.com/SCAR/polr/issues/>

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**Encoding** UTF-8

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add\_clustered\_points *Add clustered points*

---

## Description

Add clustered points

## Usage

```
add_clustered_points(
  map,
  lon,
  lat,
  cluster_style = NULL,
  cluster_hull_style = NULL,
  marker_style = NULL,
  popup = NULL,
  cluster_options = list(distance = 10, min_distance = 0),
  ...
)
```

## Arguments

map	pol or pol_proxy: map to add the layer to
lon	numeric: longitudes
lat	numeric: latitudes
cluster_style	: a style object as returned by <a href="#">pol_style()</a> for the cluster markers, typically with components text and circle
cluster_hull_style	: a style object as returned by <a href="#">pol_style()</a> for the cluster convex hulls, with components fill and stroke
marker_style	: a style object as returned by <a href="#">pol_style()</a> for single markers (i.e. when a cluster has reduced to a single feature)
popup	character: popups to show, one per point

cluster\_options list: named list with components distance and min\_distance (as for [https://openlayers.org/en/latest/apidoc/module-ol\\_source\\_Cluster-Cluster.html](https://openlayers.org/en/latest/apidoc/module-ol_source_Cluster-Cluster.html))

... : named vector layer options [https://openlayers.org/en/latest/apidoc/module-ol\\_layer\\_Vector-VectorLayer.html](https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html)

**Value**

A pol map object

---

add_cog	<i>Add cloud-optimised geotiff layer</i>
---------	--

---

**Description**

Add cloud-optimised geotiff layer

**Usage**

```
add_cog(map, sources, geotiff_source_options = NULL, ...)
```

**Arguments**

map pol or pol\_proxy: map to add the layer to

sources : either a character vector of one or more URLs, or a list of pol\_geotiff\_source objects

geotiff\_source\_options list: geotiff source options [https://openlayers.org/en/latest/apidoc/module-ol\\_source\\_GeoTIFF.html#~GeoTIFFSourceOptions](https://openlayers.org/en/latest/apidoc/module-ol_source_GeoTIFF.html#~GeoTIFFSourceOptions)

... : named webGL tile source options [https://openlayers.org/en/latest/apidoc/module-ol\\_layer\\_WebGLTile.html](https://openlayers.org/en/latest/apidoc/module-ol_layer_WebGLTile.html)

**Value**

A pol map object

---

add\_fgb *Add a flatgeobuf vector layer*

---

### Description

Add a flatgeobuf vector layer

### Usage

```
add_fgb(map, url, file, style = NULL, popup = NULL, ...)
```

### Arguments

map	pol or pol_proxy: map to add the layer to
url	string: URL to the flatgeobuf. Ignored if file is provided
file	string: path to the flatgeobuf file. Note that file will only work with Shiny, not in standalone htmlwidgets or rmarkdown files
style	: either a style object as returned by <code>pol_style()</code> or a list of flat style properties <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html">https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html</a>
popup	character: popups to show, one per point
...	: named vector layer options <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html</a>

### Value

A pol map object

### References

<https://flatgeobuf.org/examples/openlayers/>

---

add\_geojson *Add a geoJSON vector layer*

---

### Description

Add a geoJSON vector layer

### Usage

```
add_geojson(map, data, file, style = NULL, popup = NULL, data_proj = NULL, ...)
```

**Arguments**

map	pol or pol_proxy: map to add the layer to
data	string: geoJSON data as a string. Ignored if file is provided
file	string: path to geojson file
style	: either a style object as returned by <code>pol_style()</code> or a list of flat style properties: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html">https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html</a>
popup	character: popups to show, one per point
data_proj	string: the projection code of the geojson data. If omitted, it will be derived from the data where possible. If it cannot, the data will not be reprojected to the map's projection
...	: named vector layer options <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html</a>

**Value**

A pol map object

---

add_graticule	<i>Add graticule</i>
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---

**Description**

Add graticule

**Usage**

```
add_graticule(
  map,
  lons = seq(-180, 150, by = 30),
  lats = seq(-90, -40, by = 10),
  nverts = 51,
  xlim = range(lons),
  ylim = range(lats),
  style = NULL,
  no_legend = TRUE,
  ...
)
```

**Arguments**

map	pol or pol_proxy: map to add the layer to
lons	numeric: longitudes for meridional lines
lats	numeric: latitudes for parallel lines
nverts	numeric: number of discrete vertices for each segment

xlim	numeric: maximum range of parallel lines
ylim	numeric: maximum range of meridional lines
style	: either a style object as returned by <code>pol_style()</code> or a list of flat style properties: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html">https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html</a>
no_legend	logical: if TRUE, don't include this layer in the layer switcher legend
...	: named vector layer options <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html</a>

**Value**

A pol map object

**See Also**

`graticule::graticule()`

---

add\_layer\_switcher      *Add layer switcher*

---

**Description**

Add layer switcher

**Usage**

```
add_layer_switcher(map, target_id)
```

**Arguments**

map	pol or pol_proxy: map to add the layer switcher to
target_id	string: ID of the html element to add the switcher to. If missing, the switcher will be placed inside the map pane

**Value**

A pol map object

---

add_points	<i>Add points</i>
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---

**Description**

Add points

**Usage**

```
add_points(map, lon, lat, style = NULL, popup = NULL, ...)
```

**Arguments**

map	pol or pol_proxy: map to add the layer to
lon	numeric: longitudes
lat	numeric: latitudes
style	: either a style object as returned by <a href="#">pol_style()</a> or a list of flat style properties: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html">https://openlayers.org/en/latest/apidoc/module-ol_style_flat.html</a>
popup	character: popups to show, one per point
...	: named vector layer options <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Vector-VectorLayer.html</a>

**Value**

A pol map object

---

add_wms_tiles	<i>Add WMS tile layer to a map</i>
---------------	------------------------------------

---

**Description**

Add WMS tile layer to a map

**Usage**

```
add_wms_tiles(  
  map,  
  url,  
  layers,  
  wms_params = NULL,  
  tile_wms_options = list(),  
  ...  
)
```

**Arguments**

map	pol or pol_proxy: map to add the layer to
url	string: URL to the WMS server
layers	character: WMS layer names to include
wms_params	list: params of <a href="https://openlayers.org/en/latest/apidoc/module-ol_source_TileWMS-TileWMS.html">https://openlayers.org/en/latest/apidoc/module-ol_source_TileWMS-TileWMS.html</a> . The LAYERS, TILED, and some other elements are set automatically
tile_wms_options	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_source_TileWMS-TileWMS.html">https://openlayers.org/en/latest/apidoc/module-ol_source_TileWMS-TileWMS.html</a>
...	: named tile layer options <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Tile-TileLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Tile-TileLayer.html</a>

**Value**

A pol map object

---

add\_wmts\_from\_capabilities

*Add WMTS tile layer to a map from a WMTS server capabilities endpoint*

---

**Description**

Add WMTS tile layer to a map from a WMTS server capabilities endpoint

**Usage**

```
add_wmts_from_capabilities(map, url, layer, wmts_options = list(), ...)
```

**Arguments**

map	pol or pol_proxy: map to add the layer to
url	string: URL to the WMTSCapabilities.xml document
layer	string: layer name
wmts_options	named list: other WMTS options as per <a href="https://openlayers.org/en/latest/apidoc/module-ol_source_WMTS.html#optionsFromCapabilities">https://openlayers.org/en/latest/apidoc/module-ol_source_WMTS.html#optionsFromCapabilities</a>
...	: named options as per <a href="https://openlayers.org/en/latest/apidoc/module-ol_layer_Tile-TileLayer.html">https://openlayers.org/en/latest/apidoc/module-ol_layer_Tile-TileLayer.html</a>

**Value**

A pol map object

---

pol *Create a polar OpenLayers map object*

---

### Description

Create a polar OpenLayers map object

### Usage

```
pol(
  view_options = list(),
  control_options = list(zoom = TRUE, rotate = FALSE),
  width = NULL,
  height = NULL,
  elementId = NULL
)
```

### Arguments

view_options	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_View.html#~ViewOptions">https://openlayers.org/en/latest/apidoc/module-ol_View.html#~ViewOptions</a> . By default the projection will be set to "EPSG:3031" (Antarctic polar stereographic)
control_options	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_control_defaults.html#~DefaultsOptions">https://openlayers.org/en/latest/apidoc/module-ol_control_defaults.html#~DefaultsOptions</a>
width, height	: Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended
elementId	string: element ID

---

pol-shiny *Shiny bindings for pol*

---

### Description

Output and render functions for using pol within Shiny applications and interactive Rmd documents.

### Usage

```
polOutput(outputId, width = "100%", height = "400px")
renderPol(expr, env = parent.frame(), quoted = FALSE)
```

**Arguments**

outputId	output variable to read from
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.
expr	An expression that generates a pol
env	The environment in which to evaluate expr.
quoted	Is expr a quoted expression (with quote())? This is useful if you want to save an expression in a variable.

---

pol_colourmap	<i>Create a colour palette to use with a raster</i>
---------------	---

---

**Description**

Create a colour palette to use with a raster

**Usage**

```
pol_colourmap(col, range = c(0, 1), breaks, with_nodata = TRUE)
```

```
pol_colormap(col, range = c(0, 1), breaks, with_nodata = TRUE)
```

**Arguments**

col	character: vector of hex colour strings
range	numeric: data range, noting that by default a layer's values are scaled to the range 0-1
breaks	numeric: optional vector of breaks, same length as col. If not provided, breaks will be equally spaced across range
with_nodata	logical: if TRUE, the layer's "nodata" (missing) value will be shown as transparent

**Value**

An object of class pol\_colourmap

---

pol\_geotiff\_source      *Create a geotiff source*

---

### Description

Provides an alternative way of specifying a geotiff source to use in `add_cog()`, giving more control beyond just the source URL.

### Usage

```
pol_geotiff_source(url, overviews, min, max, nodata, bands)
```

### Arguments

url	string: URL
overviews	character: overview URLs
min	numeric: minimum source data value
max	numeric: maximum source data value
nodata	numeric: the source data value representing "no data"
bands	numeric: band numbers to be read from (numbered starting from 1)

### Value

An object of class `pol_geotiff_source`

### References

[https://openlayers.org/en/latest/apidoc/module-ol\\_source\\_GeoTIFF.html#~SourceInfo](https://openlayers.org/en/latest/apidoc/module-ol_source_GeoTIFF.html#~SourceInfo)

---

pol\_proxy      *Modify a pol object inside a Shiny app*

---

### Description

Modify a pol object inside a Shiny app

### Usage

```
pol_proxy(  
  outputId,  
  session = shiny::getDefaultReactiveDomain(),  
  deferUntilFlush = TRUE  
)
```

**Arguments**

outputId	string: the ID of the map
session	the Shiny session object to which the map belongs; usually the default value will suffice.
deferUntilFlush	logical: if TRUE then wait until the outputs are next updated to apply changes to the map

---

 pol\_style

*Style*


---

**Description**

Style

**Usage**

```
pol_style(
  fill = NULL,
  image = NULL,
  icon = NULL,
  shape = NULL,
  circle = NULL,
  stroke = NULL,
  text = NULL,
  z_index = NULL
)
```

**Arguments**

fill	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Fill-Fill.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Fill-Fill.html</a>
image	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Image-ImageStyle.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Image-ImageStyle.html</a>
icon	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Icon-Icon.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Icon-Icon.html</a>
shape	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_RegularShape-RegularShape.html">https://openlayers.org/en/latest/apidoc/module-ol_style_RegularShape-RegularShape.html</a>
circle	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Circle-CircleStyle.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Circle-CircleStyle.html</a>
stroke	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Stroke-Stroke.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Stroke-Stroke.html</a>
text	list: <a href="https://openlayers.org/en/latest/apidoc/module-ol_style_Text-Text.html">https://openlayers.org/en/latest/apidoc/module-ol_style_Text-Text.html</a>
z_index	integer: z index

**Value**

An object of class `pol_style`

**References**

[https://openlayers.org/en/latest/apidoc/module-ol\\_style\\_Style.html](https://openlayers.org/en/latest/apidoc/module-ol_style_Style.html)

**See Also**

[add\\_geojson\(\)](#)

**Examples**

```
mystyle <- pol_style(stroke = list(color = "green"))
```

---

polr

**polr**

---

**Description**

A minimal set of bindings to the OpenLayers javascript library, with a focus on polar mapping applications.

**Author(s)**

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- Stefan Kuethe <crazycapivara@gmail.com> (Author of <https://github.com/crazycapivara/openlayers/>, of which polr is a reimplement and extension (of a sort)) [contributor]
- OpenLayers contributors (OpenLayers javascript library) [contributor]

**See Also**

Useful links:

- <https://github.com/SCAR/polr/>
- Report bugs at <https://github.com/SCAR/polr/issues/>

---

remove_layer	<i>Remove a layer</i>
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---

**Description**

Remove a layer

**Usage**

```
remove_layer(map, layer_name)
```

**Arguments**

map	pol or pol_proxy: map to remove the layer from
layer_name	string: name of the layer. layer_name must have been provided when adding the layer (e.g. along the lines of add_wms_tiles(..., name = "My Layer"))

**Value**

A pol map object

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