

# Package ‘geomapdata’

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**Type** Package

**Title** Data for topographic and Geologic Mapping

**Version** 1.0-4

**Date** 2007-10-23

**Suggests** GEOmap

**Author** Jonathan M. Lees

**Maintainer** Jonathan M. Lees<jonathan.lees@unc.edu>

**Depends** R (>= 2.10)

**Description** Set of data for use in package GEOmap. Includes world map, USA map, Coso map, Japan Map, ETOPO5

**License** GPL

**Repository** CRAN

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geomapdata-package     *geomapdata*

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## Description

Topographic and Geologic Mapping

## Details

Package: geomapdata  
Type: Package  
Version: 1.0-4  
Date: 2007-10-23  
License: GPL

Set of data for making Maps, Topographic Maps, Perspective plots, geological databases. These include: africa.bdy africa.cil africa.riv asia.bdy asia.cil asia.riv cosogeol cosomap ETOPO5 europe.bdy europe.cil europe.riv faults fujitopo hiways japmap kamaleutmap kammmap meijimap namer.bdy namer.cil namer.pby namer.riv owens samer.bdy samer.cil samer.riv usacity USAmap worldcity worldmap

## Author(s)

Jonathan M. Lees<jonathan.lees.edu> Maintainer:Jonathan M. Lees<jonathan.lees@unc.edu>

## References

Lees, J. M., Geotouch: Software for Three and Four Dimensional GIS in the Earth Sciences, Computers & Geosciences, 26, 7, 751-761, 2000.

## See Also

GEOmap

## Examples

```
## Not run:  
library(GEOmap)  
data(worldmap)  
data(namer.bdy)  
data(namer.riv)  
  
plotGEOmap(worldmap)  
plotGEOmap(namer.bdy , add=TRUE)
```

```
plotGEOmap(namer.riv , add=TRUE)
```

```
## End(Not run)
```

---

africa.bdy

*CIA data base maps*

---

### Description

R structures of CIA data information in GEOmap format

### Usage

```
data(africa.bdy)
```

### Format

**STROKES** list(nam, num, index, col, style, code, LAT1, LAT2, LON1, LON2)

**POINTS** list(lat, lon)

**PROJ** list(type, LAT0, LON0, LAT1, LAT2, LATS, LONS, DLAT, DLON, FE, FN, name)

### Details

bdy=bodies, riv=rivers, cil=civilities (lakes)

### Source

CIA data base

### Examples

```
## Not run:
```

```
library(GEOmap)
data(worldmap)
data(namer.bdy)
data(namer.riv)
```

```
plotGEOmap(worldmap)
plotGEOmap(namer.bdy , add=TRUE)
```

```
plotGEOmap(namer.riv , add=TRUE)
```

```
## End(Not run)
```

```
##
```

---

cosomap

*Coso Geothermal Region Faults and Geology*

---

### Description

Coso Geothermal Region Faults and Geology

### Usage

```
data(cosomap)
```

### Format

List structure:

**STROKES** list(nam, num, index, col, style, code, LAT1, LAT2, LON1, LON2)

**POINTS** list(lat, lon)

**PROJ** list(type, LAT0, LON0, LAT1, LAT2, LATS, LONS, DLAT, DLON, FE, FN, name)

### Details

Details from Tomographic inversion geographic base map.

### References

Lees, J. M., Geotouch: Software for Three and Four Dimensional GIS in the Earth Sciences, Computers & Geosciences, 26, 7, 751-761, 2000.

### Examples

```
## Not run:
```

```
data(cosomap)
data(faults)
data(hiways)
data(owens)
```

```
##
```

```
proj = cosomap$PROJ
plotGEOmapXY(cosomap, PROJ=proj, add=FALSE, ann=FALSE, axes=FALSE)
```

```
plotGEOmapXY(hiways, PROJ=proj, add=TRUE, ann=FALSE, axes=FALSE)
plotGEOmapXY(owens, PROJ=proj, add=TRUE, ann=FALSE, axes=FALSE)
plotGEOmapXY(faults, PROJ=proj, add=TRUE, ann=FALSE, axes=FALSE)
```

```
## End(Not run)
```

---

ETOPO5

*Etopo5 topographic data*

---

### Description

Etopo5 topographic data

### Usage

```
data(ETOPO5)
```

### Format

matrix of world elevation from 0-360 degrees long

### Details

See web site: <http://www.ngdc.noaa.gov/mgg/global/etopo5.HTML>

### References

Data Announcement 88-MGG-02, Digital relief of the Surface of the Earth. NOAA, National Geophysical Data Center, Boulder, Colorado, 1988.

### Examples

```
## Not run:
library(GEOmap)
data(ETOPO5)

data(fujitopo)
data(japmap)
PLOC=list(LON=c(137.008, 141.000),LAT=c(34.000, 36.992),
          x=c(137.008, 141.000), y=c(34.000, 36.992) )
```

```
JAPANtopo = subsetTOPO(ETOPO5, PLOC)
```

```
d1 = dim(JAPANtopo$z)
```

```
JAPANtopo$z = JAPANtopo$z[ , d1[2]:1 ]

image(JAPANtopo, col=terrain.colors(100), asp=1 )
plotGEOmap(japmap, add=TRUE)

## End(Not run)
```

---

fujitopo

*Topographic DEM of Japan*

---

### Description

Topography in Japan

### Usage

```
data(fujitopo)
```

### Format

**lat** latitude  
**lon** longitude  
**z** elevation

### Details

This data comes as triplets of LAT-LON-Z

### Source

Japan Meteriological Society

### Examples

```
## Not run:
library(GEOmap)
data(fujitopo)
data(japmap)

PLOC=list(LON=range(fujitopo$lon), x=range(fujitopo$lon), LAT=range(fujitopo$lat), y=range(fujitopo$lat))
```

```
#### with projectionplotGEOMap(japmap, add=FALSE)

PROJ = setPROJ(type=2, LAT0=mean(PLOC$y) , LON0=mean(PLOC$x) )

plotGEOMapXY(japmap, PROJ=PROJ, LIM=c(min(PLOC$LON), min(PLOC$LAT),
max(PLOC$LON), max(PLOC$LAT)), add=FALSE)

xy = GLOB.XY(fujitopo$lat, fujitopo$lon, PROJ)

points(xy$x, xy$y, pch=".", col="pink")

## End(Not run)
```

---

kammap

*Maps in GEOMap*

---

## Description

Maps of Kamchatka, Kamchatka and Aleutians, Meiji Seamounts, Japan

## Usage

```
data(kammap)
```

## Format

List structure:

**STROKES** list(nam, num, index, col, style, code, LAT1, LAT2, LON1, LON2)

**POINTS** list(lat, lon)

**PROJ** list(type, LAT0, LON0, LAT1, LAT2, LATS, LONS, DLAT, DLON, FE, FN, name)

## Details

Boundary of Kamchatka, Aleutians and Meiji Seamounts.

## Examples

```
## Not run:  
library(GEOmap)  
data(kammap)  
plotGEOmap(kammap)  
  
## End(Not run)
```

---

usacity

*City Locations and Populations(USA)*

---

## Description

point data set showing cities locations and populations.

## Usage

```
data(usacity)
```

## Format

**name** name of city  
**lat** latitude  
**lon** longitude  
**p** population

## Details

World cities have no population (yet).

## Examples

```
## Not run:  
library(GEOmap)  
data(USAmap)  
  
data(usacity)  
s=list()  
s$x=c(230.515290931,295.314341808)  
s$y=c(27.1303332212,49.7820066148)  
  
plotGEOmap(USAmap)  
  
rect(s$x[1], s$y[1], s$x[2], s$y[2])  
  
plotGEOmap(USAmap, LIM=c(s$x[1], s$y[1], s$x[2], s$y[2]) )
```

```
points(usacity$lon[usacity$p>10000],usacity$lat[usacity$p>10000], col='red')
```

```
## End(Not run)
```

---

worldmap

*Global Maps*

---

### Description

Global Maps of World and details of U.S.

### Usage

```
data(worldmap)
```

### Format

List structure:

**STROKES** list(nam, num, index, col, style, code, LAT1, LAT2, LON1, LON2)

**POINTS** list(lat, lon)

**PROJ** list(type, LAT0, LON0, LAT1, LAT2, LATS, LONS, DLAT, DLON, FE, FN, name)

### Details

USAmap includes world as well as USA.

### Examples

```
## Not run:
library(GEOmap)
data(worldmap)
data(namer.bdy)
data(namer.riv)

plotGEOmap(worldmap)
plotGEOmap(namer.bdy , add=TRUE)

plotGEOmap(namer.riv , add=TRUE)

## End(Not run)
```

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