Package 'nasaweather'

May 10, 2025

Title Collection of Datasets from the ASA 2006 Data Expo

Version 0.1.1

Description Tidied data from the ASA 2006 data
expo, as well as a number of useful other related data sets.

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Depends R (>= 3.1.0)

Encoding UTF-8

LazyData true

RoxygenNote 7.3.2

Contents

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atmos	*Atmospheric data.*

Description

Atmospheric data.

Usage

```
atmos
```

Format

lat,long Location of measurement. Evenly spaced 24 by 24 spatial grid from longitude 113.8W to 56.2W and from latitude 36.2N to 21.2S

year,month 72 points in time; once per month from Jan 1995 to Dec 2000.

surftemp Mean Surface Temperature from Clear Sky Composite (ts): The monthly mean temperature based on the energy being emitted from the Earth's surface under clear sky conditions (in K).

temp Mean Near-Surface Air Temperature (tsa_tovs): The monthly mean temperature of the air near the surface of the Earth (in K).

pressure Mean Surface Pressure (ps_tovs): The monthly mean atmospheric surface pressure at a given location on the Earth's surface. (in mb)

ozone Mean Ozone Abundance (o3_tovs): The monthly mean amount of total ozone in the atmospheric column (in Dobsons)

cloudlow Mean Low Cloud Coverage (ca_low): The monthly mean percent of the sky covered by clouds with cloud top pressure greater than 680 mb or roughly less than 3.24 km.

cloudmid Mean Medium Cloud Coverage (ca_med): The monthly mean percent of the sky covered by clouds with cloud top pressure between 440 - 680 mb or roughly 3.24 to 6.5 km.

cloudhigh Mean High Cloud Coverage (ca_high): The monthly mean percent of the sky covered by clouds with cloud top pressure less than or equal to 440 mb or roughly greater than 6.5 km.

Source

https://community.amstat.org/jointscsg-section/dataexpo/dataexpo2006

borders	*Country borders*

Description

Admin 0 (country) borders for the region

Usage

```
borders
```

Format

country ISO2 country code

long,lat Location

group Grouping variable need to separate islands etc.

Source

http://www.naturalearthdata.com/downloads/50m-cultural-vectors/

elev	*Elevation.*

Description

As of Jan 1998.

Usage

```
elev
```

Format

lat,long Location of measurement. Evenly spaced 24 by 24 spatial grid from longitude 113.8W to 56.2W and from latitude 36.2N to 21.2S

elev Height of location above reference plane (in m)

Source

https://community.amstat.org/jointscsg-section/dataexpo/dataexpo2006

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glaciers   *Glacier locations*

Description

Downloaded by Dianne Cook.

Usage

```
glaciers
```

Format

id A 12-character unique glacier identifier

name 30-character name of the glacier.

lat,long Location of the glacier: "The point on the glacier whose coordinates are given should be in the upper part of the ablation area, in the main stream and sufficiently high so as not to be lost if the glacier retreats"

area The total area of the glacier in a horizontal projection in square kilometers, up to 6 digits.

country 2-character abbreviation for the name of the country or territory in which the glacier is located. These codes are ISO3166 country codes

Source

http://nsidc.org/data/glacier_inventory/

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storms   *Storm tracks data*

Description

Tropical cyclone tracks through the Atlantic Ocean, Caribbean Sea and Gulf of Mexico from 1995 to 2000. Only "named" storms, those which reached tropical storm status or stronger, are included.

Usage

```
storms
```

Format

name Storm Name

year,month,day Date of report

hour Hour of report (0, 6, 12 or 18, in UTC)

lat,long Location of storm center

pressure Air pressure at the storm's center (in millibars)

wind wtorm's maximum sustained wind speed (in knots)

type Storm classification (Tropical Depression, Tropical Storm, Hurricane, or Extratropical)

seasday Day of the hurricane season (days since June 1)

category Saffir-Simpson storm category (estimated from windspeed. -1 = Tropical Depression, 0 = Tropical Storm)

Details

The data originated from the National Hurricane Center's archive of Tropical Cyclone Reports (<https://www.nhc.noaa.gov/>). This dataset was hand-scraped from best track tables in the individual tropical cyclone reports (PDF, HTML and Microsoft Word) by Jon Hobbs.

The Tropical Cyclone Reports had a variety of storm type designations and there appeared to be no consistent naming convention for cyclones that were not hurricanes, tropical depressions, or tropical storms. Many of these designations have been combined into the "Extratropical" category in this dataset.

Author(s)

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