Package ‘nasaweather’

August 29, 2016

Title Collection of datasets from the ASA 2006 data expo
Version 0.1
Description This package contains tidied data from the ASA 2006 data expo, as well as a number of useful other related data sets.
Depends R (>= 3.1.0)
License GPL-3
LazyData true

URL http://github.com/hadley/nasaweather,
      http://stat-computing.org/dataexpo/2006/

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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

http://stat-computing.org/dataexpo/2006/
### borders

<table>
<thead>
<tr>
<th>Description</th>
<th>Country borders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin 0 (country) borders for the region</td>
<td></td>
</tr>
</tbody>
</table>

#### 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/

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### elev

<table>
<thead>
<tr>
<th>Description</th>
<th>Elevation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of Jan 1998.</td>
<td></td>
</tr>
</tbody>
</table>

#### 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

http://stat-computing.org/dataexpo/2006/
## 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/

## storms

### Storm tracks data

**Description**

Tropical cyclone tracks through the Atlantic Ocean, Caribbean Sea and Gulf of Mexico from 1995 to 2005. 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** Storm’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)

Details

The data originated from the National Hurricane Center’s archive of Tropical Cyclone Reports (http://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)

Jon Hobbs
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