Package 'riem'

September 10, 2016

Type Package

Title Accesses Weather Data from the Iowa Environment Mesonet

Version 0.1.1

Description Allows to get weather data from Automated Surface Observing System (ASOS) stations (airports) in the
whole world thanks to the Iowa Environment Mesonet website.

License GPL (>= 2)

LazyData TRUE

Imports httr (>= 1.1.0), lubridate (>= 1.5.6), tibble, jsonlite (>= 0.9.19)

RoxygenNote 5.0.1

URL http://github.com/ropenscilabs/riem

BugReports http://github.com/ropenscilabs/riem/issues

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

Encoding UTF-8

NeedsCompilation no

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rOpenSci, see https://github.com/ropensci/onboarding/issues/39.)

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Repository CRAN

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R topics documented:

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riem_measures   *Function for getting weather data from one station*

Description

Function for getting weather data from one station

Usage

```
riem_measures(station = "VOHY", date_start = "2014-01-01",
  date_end = as.character(Sys.Date()))
```

Arguments

station	station ID, see riem_stations()
date_start	date of start of the desired data, e.g. "2000-01-01"
date_end	date of end of the desired data, e.g. "2016-04-22"

Details

The data is queried through https://mesonet.agron.iastate.edu/request/download.phtml.

Value

a data.frame (tibble tibble) with measures, the number of columns can vary from station to station, but possible variables are

- station: three or four character site identifier
- valid: timestamp of the observation (UTC)
- tmpf: Air Temperature in Fahrenheit, typically @ 2 meters
- dwpf: Dew Point Temperature in Fahrenheit, typically @ 2 meters
- relh: Relative Humidity in
- drct: Wind Direction in degrees from north
- sknt: Wind Speed in knots
- p01i: One hour precipitation for the period from the observation time to the time of the previous hourly precipitation reset. This varies slightly by site. Values are in inches. This value may or may not contain frozen precipitation melted by some device on the sensor or estimated by some other means. Unfortunately, we do not know of an authoritative database denoting which station has which sensor.
- alti: Pressure altimeter in inches
- mslp: Sea Level Pressure in millibar
- vsby: Visibility in miles
- gust: Wind Gust in knots

- skyc1: Sky Level 1 Coverage
- skyc2: Sky Level 2 Coverage
- skyc3: Sky Level 3 Coverage
- skyc4: Sky Level 4 Coverage
- skyl1: Sky Level 1 Altitude in feet
- skyl2: Sky Level 2 Altitude in feet
- skyl3: Sky Level 3 Altitude in feet
- skyl4: Sky Level 4 Altitude in feet
- presentwx: Present Weather Codes (space seperated), see e.g. [this manual](http://www.ofcm.gov/fmh-1/pdf/H-CH8.pdf) for further explanations.
- metar: unprocessed reported observation in METAR format

Examples

```
## Not run:
riem_measures(station = "VOHY", date_start = "2000-01-01", date_end = "2016-04-22")

## End(Not run)
```

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riem_networks   *Function for getting ASOS and AWOS networks*

Description

Function for getting ASOS and AWOS networks

Usage

```
riem_networks()
```

Value

a data.frame (tibble tibble) with the names and codes of available networks.

Examples

```
## Not run:
riem_networks()

## End(Not run)
```

---

riem_stations   *Function for getting stations of an ASOS network*

Description

Function for getting stations of an ASOS network

Usage

```
riem_stations(network = NULL)
```

Arguments

network   A single network code, see riem_networks() for finding the code corresponding
                 to a name.

Details

You can see a map of stations in a network at https://mesonet.agron.iastate.edu/request/download.phtml.

Value

a data.frame (tibble tibble) with the id, name, longitude (lon) and latitude (lat) of each station in the
network.

Examples

```
## Not run:
riem_stations(network = "IN__ASOS")

## End(Not run)
```

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