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ASOS Network / ASOS-AWOS-METAR Data Download

The IEM maintains an ever growing archive of automated airport weather observations from around the world! These observations are typically called 'ASOS' or sometimes 'AWOS' sensors. A more generic term may be METAR data, which is a term that describes the format the data is transmitted as. If you don't get data for a request, please feel free to contact us for help. The IEM also has a one minute interval dataset for US ASOS (2000-) and Iowa AWOS (1995-2011) sites. This archive simply provides the as-is collection of historical observations, very little quality control is done. More details on this dataset are here.

Data Sources: The data made available on this page is sourced from a number of places including: Unidata IDD, NCEI ISD, and MADIS One Minute ASOS.

Tools/Libaries

Python Script Examples
fetch by network
selectively fetch

R Script Examples
A community user has contributed R language version of the python script. There is also a riem R package allowing for easy access to this archive.

This archive contains processed observations up until `2023-12-22T03:31:52Z` . Data is synced from the real-time ingest every 10 minutes.

> Please be patient with this page as it will take a number of seconds to process your request and provide the result.

Select Network | Brazil ASOS ⌄ | Switch to Network

1) Select Station/Network by clicking on location:

If you select no stations, you can download up to a **24 hour period** of all data available from this archive!

Select Widget for BR__ASOS Network

i Station Metadata

Sort Available Stations: ▾

Enter some text here to filter listing below

+ Add Selected   Add All

Selected Stations:

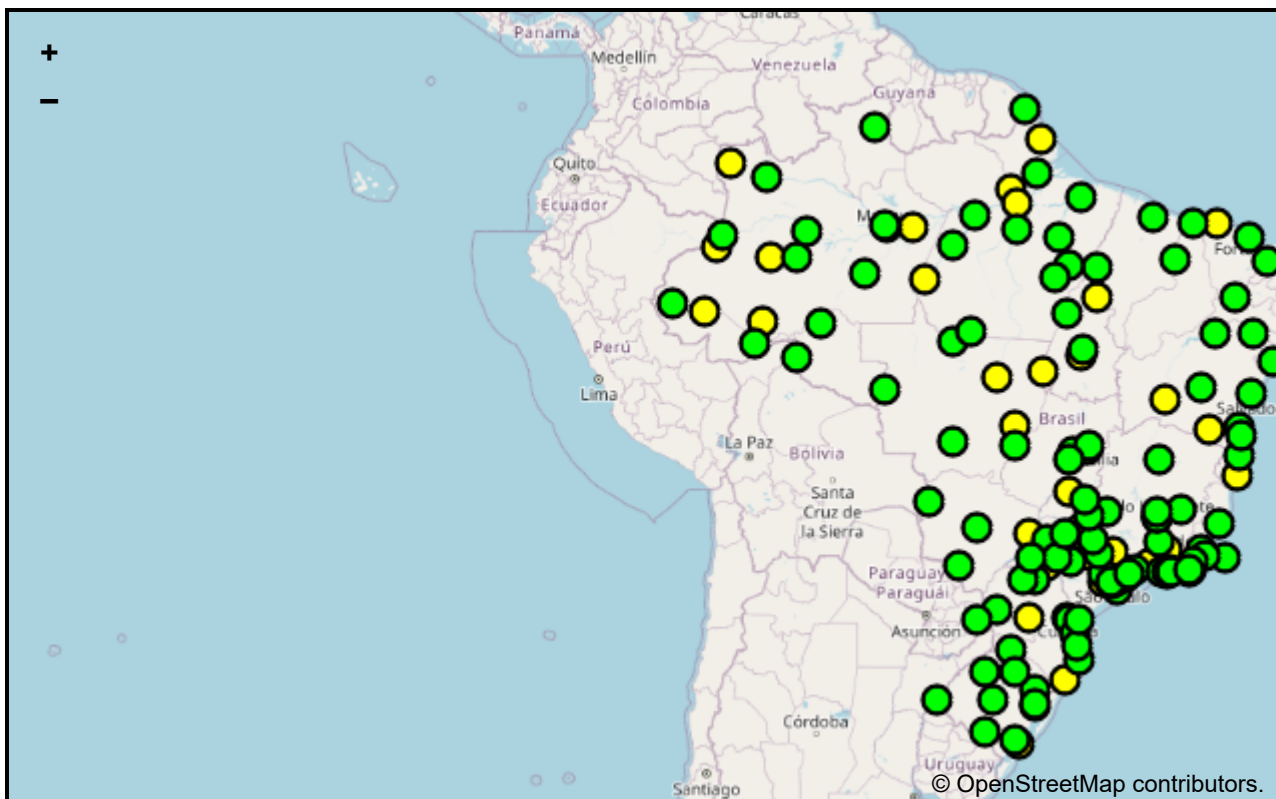[SBAA] Conceicao Do Araguaia (1973-Now)
[SBAF] Rio De Janeiro (1950-Now)
[SBAM] Amapa (1943-2012)
[SBAN] Anapolis (1977-Now)

— Remove Selected   Remove All

Green dots are locations with current data.

2) Select From Available Data:

Note: Precipitation data is unavailable for non-US sites. The Heat Index/Wind Chill value retroactively use current NWS equations.

```
All Available
Air Temperature [F]
Air Temperature [C]
Dew Point [F]
Dew Point [C]
Relative Humidity [%]
Heat Index/Wind Chill [F]
Wind Direction
Wind Speed [knots]
Wind Speed [mph]
```

3) Select Date Range:

Note: These dates define timestamps starting at midnight of the selected timezone. The start date is inclusive and the end date is exclusive.

Start Date:	2019 ˅	Jan ˅	1 ˅
End Date:	2019 ˅	Dec ˅	31 ˅

4) Timezone of Observation Times:

The following options are available for how the observation time is presented.

Coordinated Universal Time (UTC) ˅

5) Download Options:

Data Format: Comma Delimited ˅

Include Latitude + Longitude? Yes ˅

Include Elevation (meters)? Yes ˅

How to represent missing data? Use blank/empty string ˅

How to represent Trace reports? Use 'T' ˅

Save result data to file on computer ˅

6) Limit Report Types

See news item on recent changes made for report types. When in doubt, pick both routine and specials.

☐ **MADIS HFMETAR / 5 Minute ASOS**

☑ **Routine / Once Hourly**

☑ **Specials**

7) Finally, get Data:

| Get Data | Reset |

Download Variable Description
ASOS User's Guide has detailed information about these data variables. The value "M" represents either value that was reported as missing or a value that was set to missing after meeting some general quality control check, or a value that was never reported by the sensor. The METAR format makes it difficult to determine which of the three cases may have happened.

station:
three or four character site identifier
valid:
timestamp of the observation
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 *true* 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

wxcodes:

Present Weather Codes (space seperated)

feel:

Apparent Temperature (Wind Chill or Heat Index) in Fahrenheit

ice_accretion_1hr:

Ice Accretion over 1 Hour (inches)

ice_accretion_3hr:

Ice Accretion over 3 Hours (inches)

ice_accretion_6hr:

Ice Accretion over 6 Hours (inches)

peak_wind_gust:

Peak Wind Gust (from PK WND METAR remark) (knots)

peak_wind_drct:

Peak Wind Gust Direction (from PK WND METAR remark) (deg)

peak_wind_time:

Peak Wind Gust Time (from PK WND METAR remark)

metar:

unprocessed reported observation in METAR format

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