

METADATA to MeteoTracker data

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Motivation: This sample data was collected in Valencia, Spain, in October 2023 to obtain data on the variation of meteorological parameters in an urban area and to draw conclusions on the correlations between the dimensions of buildings, green areas and other aspects of urban planning.

Device: The MeteoTracker is developed and marketed by an innovative start-up company (<https://meteotracker.com/>) as a fully portable mini weather station for collecting meteorological and environmental data on the move. The MeteoTracker is very user friendly and simple to set up and operate, and the cost is relatively low. It can be mounted on a vehicle or bicycle with an optional bracket and provides high accuracy temperature and humidity readings. The MeteoTracker multi-sensor implements a patented system that enables high-resolution measurement of meteorological parameters. It connects to a smartphone via Bluetooth and sends readings to an interactive map via the MeteoTracker app (free in the iOS and Android stores) and the data analysis of the measured data can be done using the MeteoTracker dashboard.

Integrated Sensors: This device measures temperature [°C, accuracy +/- 0.1° C], humidity [%, accuracy +/- 0.5%] and air pressure [hPa; accuracy +/- 0.03 hPa] in an operating temperature range down to -55°C and provides GPS and altitude data.

Quality check: The sensor works at speeds above 7 km/h. The dataset is quality checked in terms of speed and the quality column indicates 1: data can be used and 3: data not applicable.

Device Setting: at Meteotracker App: Min distance between two acquisitions: 1m; Min intervall between two acquisitions 1s; X-scrolling points 5; Kr 0.32; m 0.3;

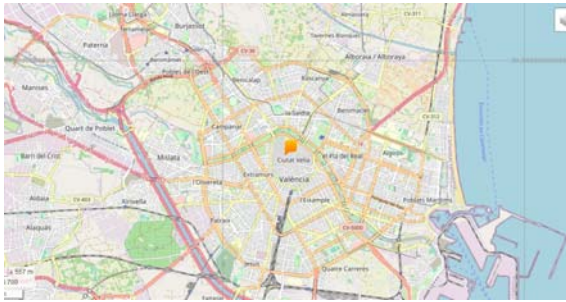
Measured parameter:

- Time in UTC,
- Lat (WGS64) in °(N)
- Lon (WGS64) in °(E)
- Temperature (T) in °C,
- relative humidity (Hum) in %,
- altitude in m,
- atmospheric pressure_mbar,
- Dew-point temperature (DP) in °C,
- Vertical thermal gradient (HDX) in °C/100m,
- Speed in km/h
- radiation
- BT in dBm

Measurement interval: 1 minute

Area: City of Valencia (Spain)

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Date: October 10, 2023 11:42 (UTC) - 13:58 (UTC)

Weather:

(https://www.meteoblue.com/en/weather/historyclimate/weatherarchive/valencia_spain_2509954?fcstlength=-15&year=2023&month=10)

