

# Check if 1 minute precipitation data is also shifted by 1 hour before 2000

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1 # Load libraries
import matplotlib.pyplot as plt

from wetterdienst.provider.dwd.observation import DwdObservationRequest

INFO: Wetterdienst cache directory is /Users/benjamin/Library/Caches/wetterdienst

2 # Load 10 minute data
request_10_minutes = DwdObservationRequest(
    "precipitation_height",
    "10_minutes",
    start_date="199911100000",
    end_date="199911110000"
).filter_by_station_id(1048)

df_10_minutes = request_10_minutes.values.all().df

3 # load 1 minute data
request_1_minute = DwdObservationRequest(
    [("rwh_01", "precipitation")],
    "1_minute",
    start_date="199911100000",
    end_date="199911110000"
).filter_by_station_id(1048)

df_1_minute = request_1_minute.values.all().df

# resample to 10 minute data
# doesn't really matter how the bins are considered because the 1 hour shift
# would be more visual then 10 minute bin diff
df_1_minute_agg = df_1_minute.set_index("date").resample("10min").sum().reset_index()

4 # plot data
fig, ax = plt.subplots()

df_10_minutes.plot("date", "value", ax=ax, label="10 minute", color="blue")
df_1_minute_agg.plot("date", "value", ax=ax, label="1 minute", color="green")

plt.show()
```



