ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR- UND MEERESFORSCHUNG

Pymor - Time average

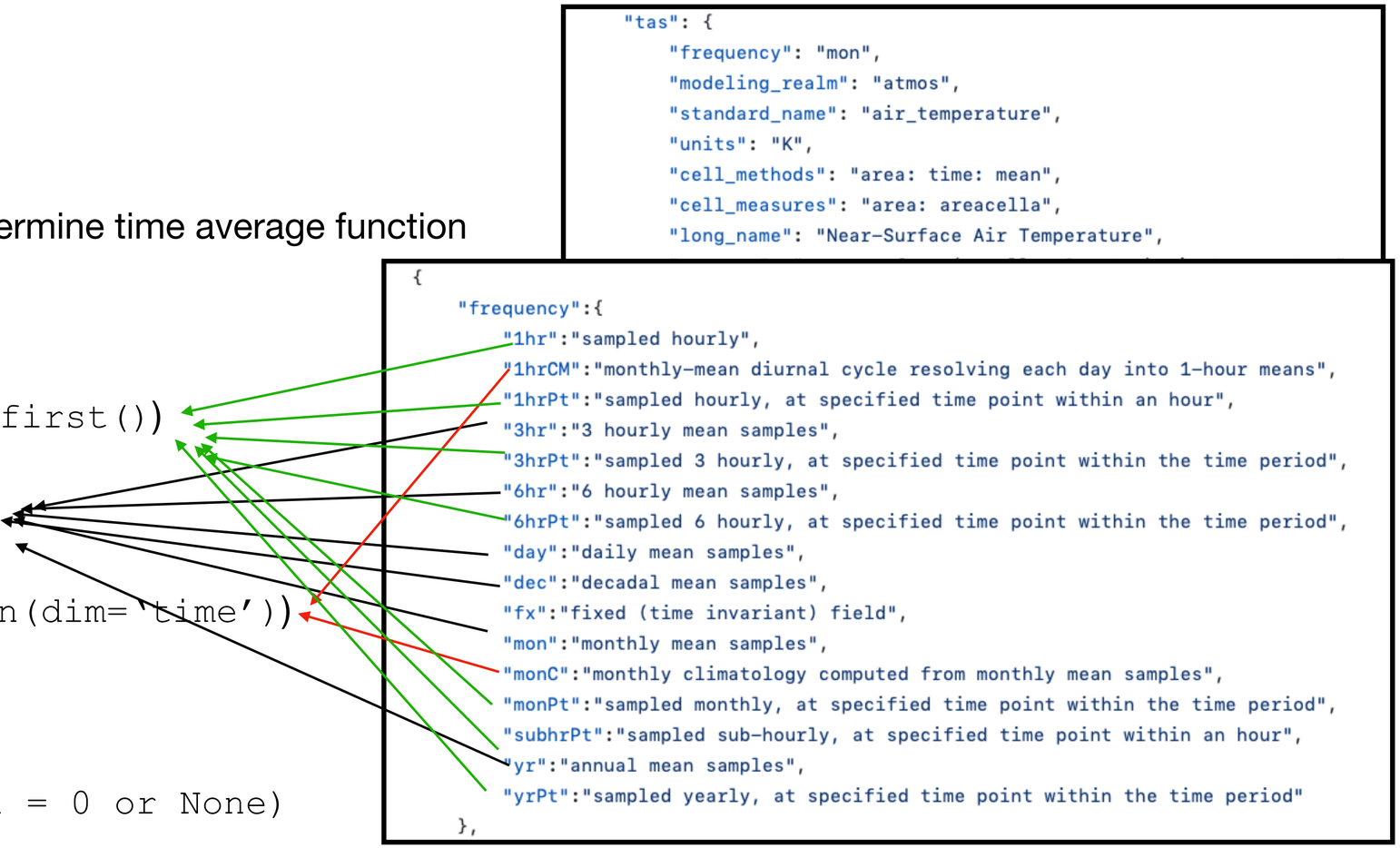
Pavan

HELMHOLTZ

Time average

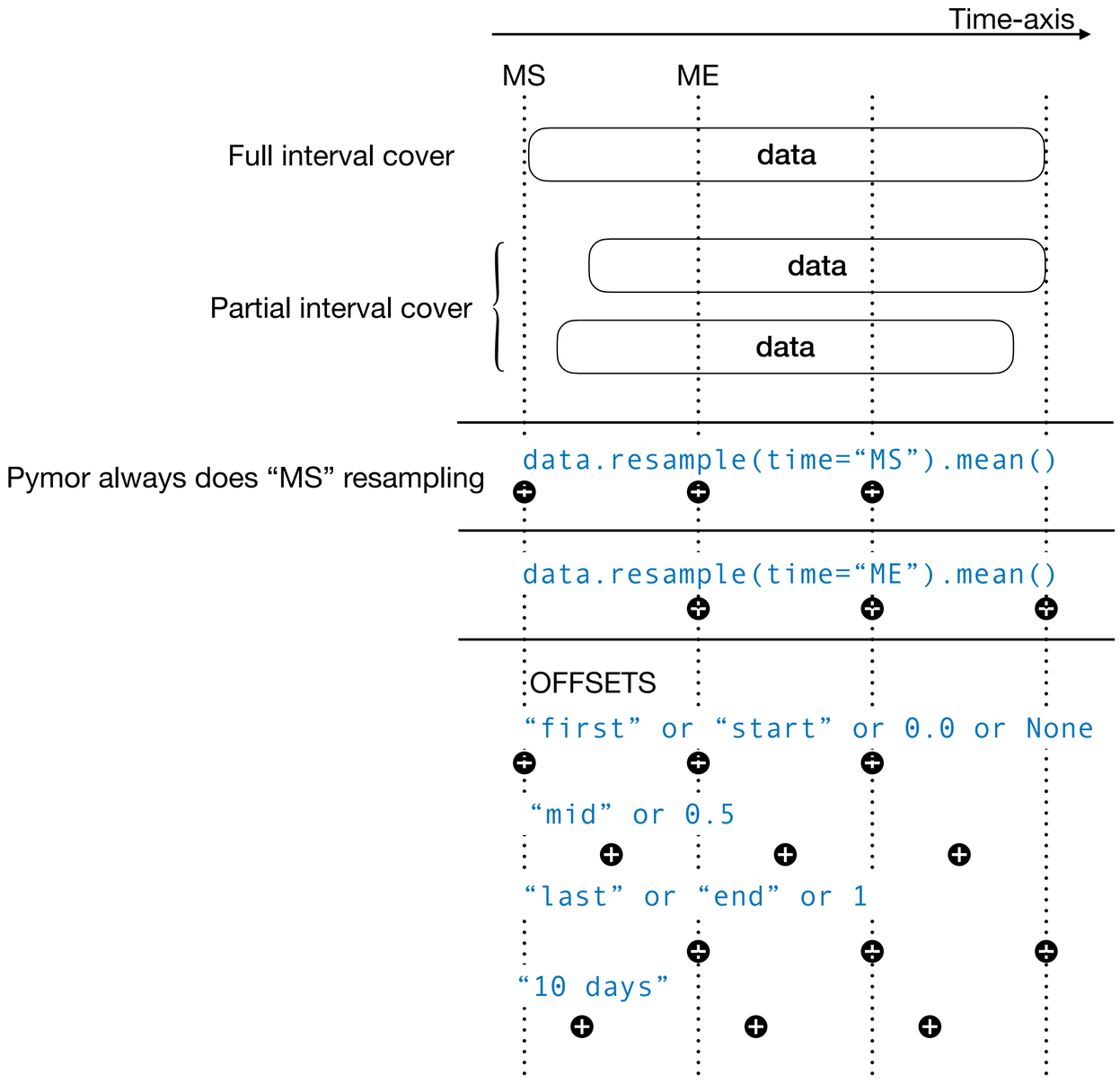
- Uses frequency string from table to determine time average function
- Time average methods:
  - Instantaneous (`da.resample(…).first()`)
  - Mean (`da.resample(…).mean()`)
  - Climatology (`da.groupby(…).mean(dim='time')`)

`Fx` is a special case. (`approx_interval = 0 or None`)

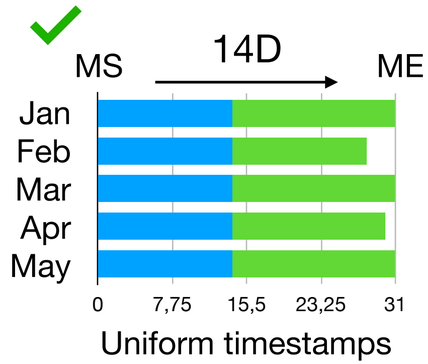


Time average - Resampling

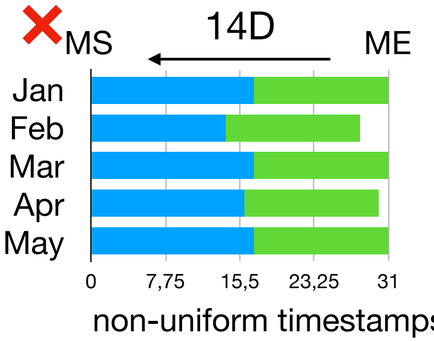
Monthly frequency



- Always does “month start” in monthly averaging
- Date offsets is possible using `adjust_timestamp` parameter
- Date offset options
  - `first`, `mid`, `start`
  - 0.0 - 1.0
  - 14D (offset by days)
- Date offset are w.r.t to MS



Uniform timestamps



non-uniform timestamps

Time average

Q: If source data is already at monthly frequency, is time-averaging step needed in the pipeline when targeting monthly table?

A: Not really. If it is included then the frequency of output data is the same but the time-stamps get adjusted to Month-Start interval.