

# New Weather Data

## IBPSA Project 1 Expert Meeting Montreal (Virtual)

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# Problem

If:

1. Year-long test period and controller needs parameter identification or learning
2. Controller needs  $>1$  year to learn

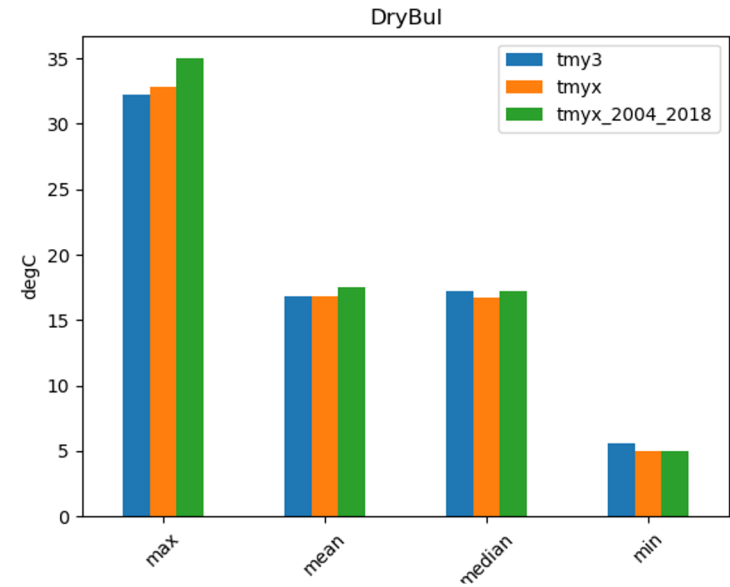
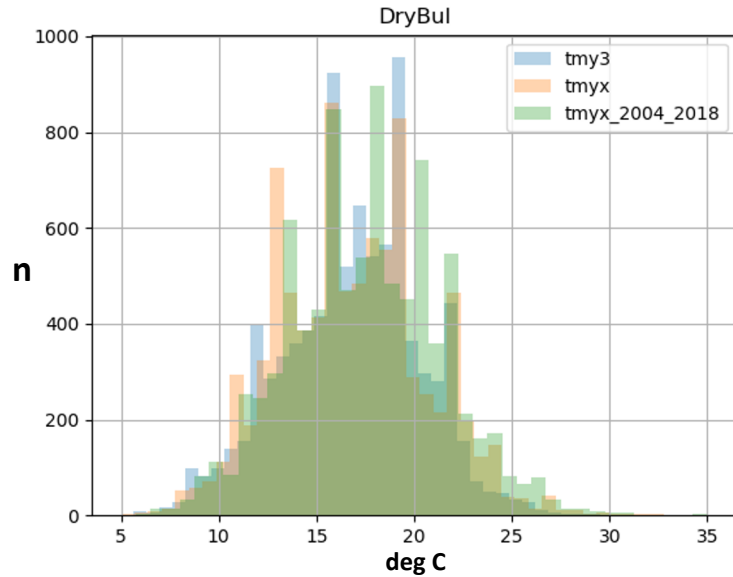
BOPTEST does not provide other weather data than the single test case TMY, which shouldn't be used for both testing and training.

# Potential Solution

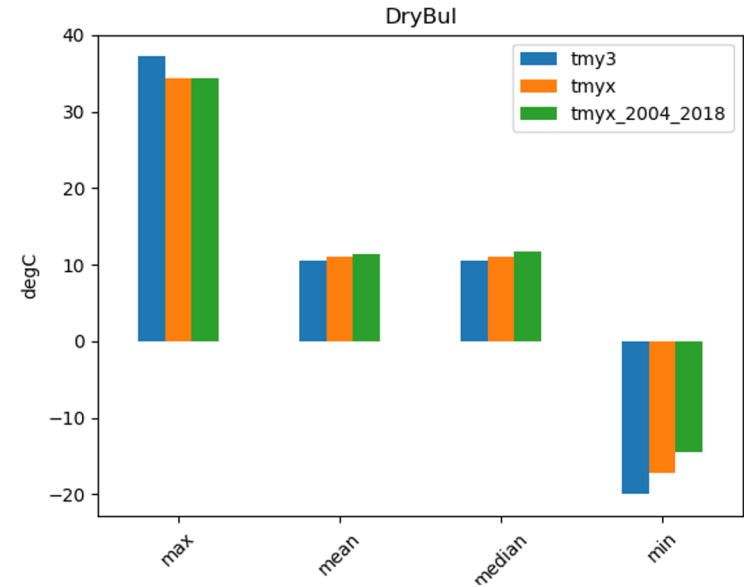
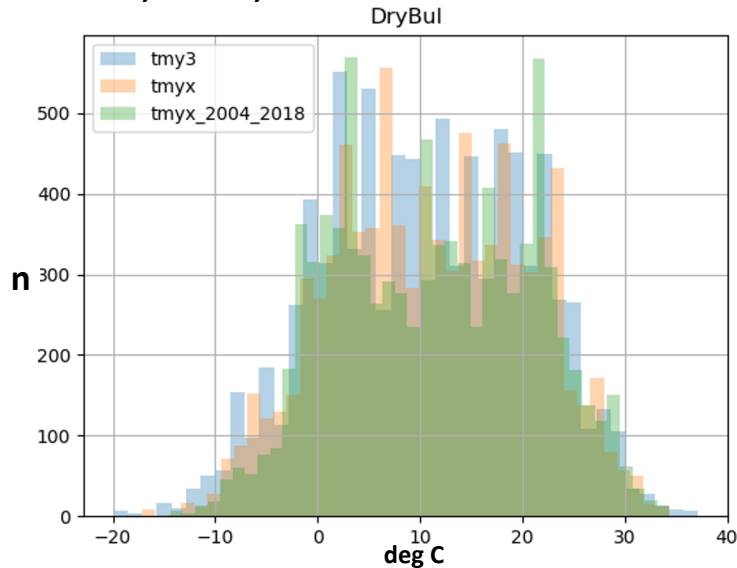
- “TMY” - Typical Meteorological Year
  - Basis for *.epw* files in EnergyPlus
  - Basis for *.mos* files in  
IBPSA.BoundaryConditions.WeatherData.ReaderTMY  
3
- New types of “TMY”:
  - TMY - period of data 1948-1980
  - TMY2 - period of data 1961-1990
  - TMY3 - period of data 1976-2005 or 1991-2005
  - TMYx - period of data 1946-2018
  - TMYx.2004-2018 - period of data 2004-2018
  - See <http://climate.onebuilding.org/>
- Could TMY3 be used for training, and TMYx be used for testing? Or other combination?

# Data Comparison - Dry Bulb Temperature

Los Angeles, CA, USA

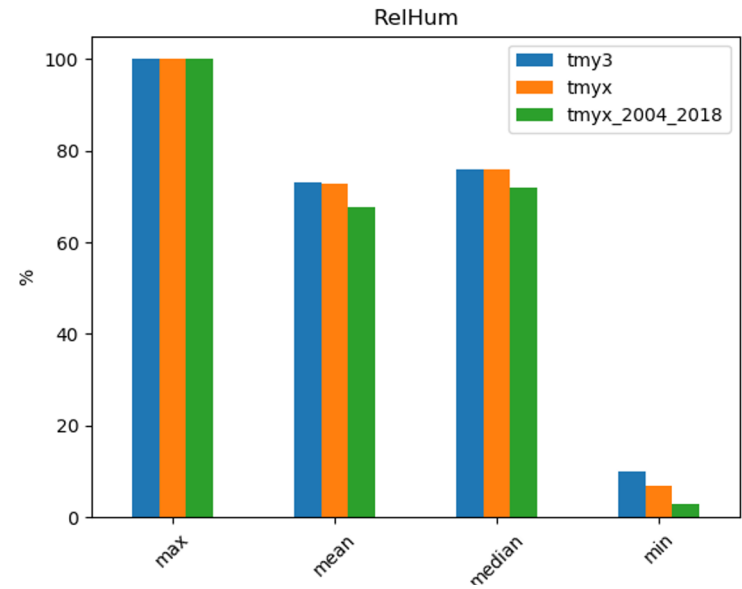
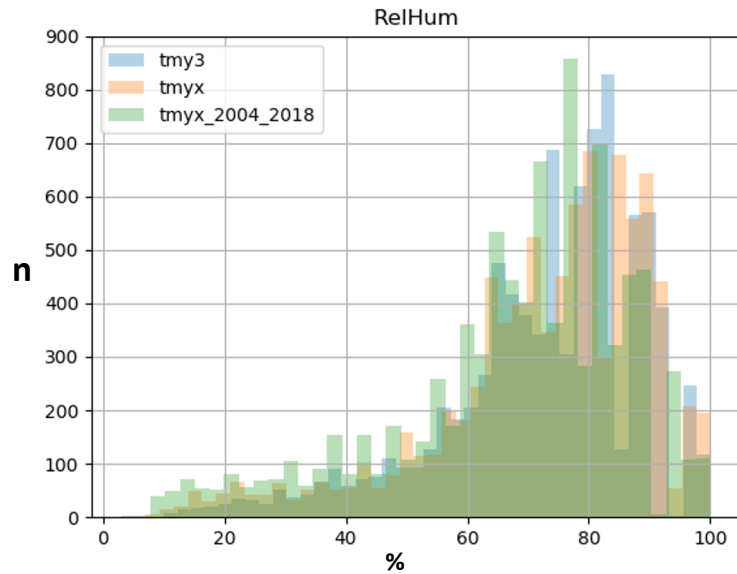


Boston, MA, USA

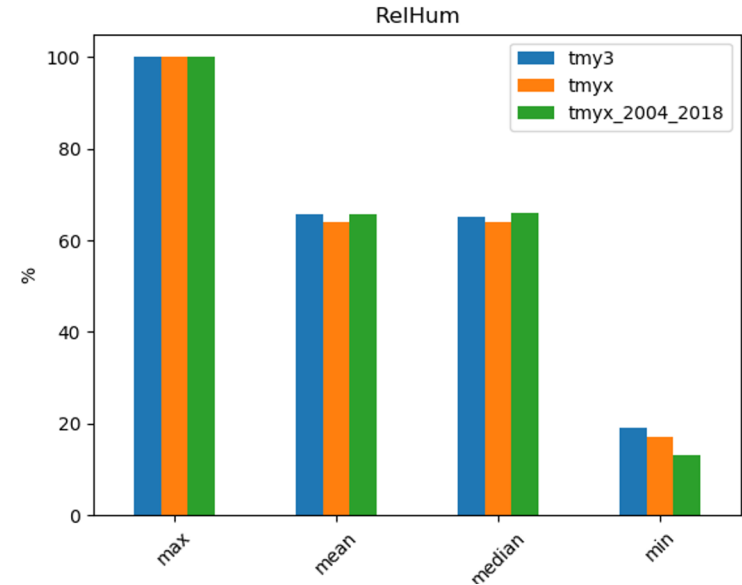
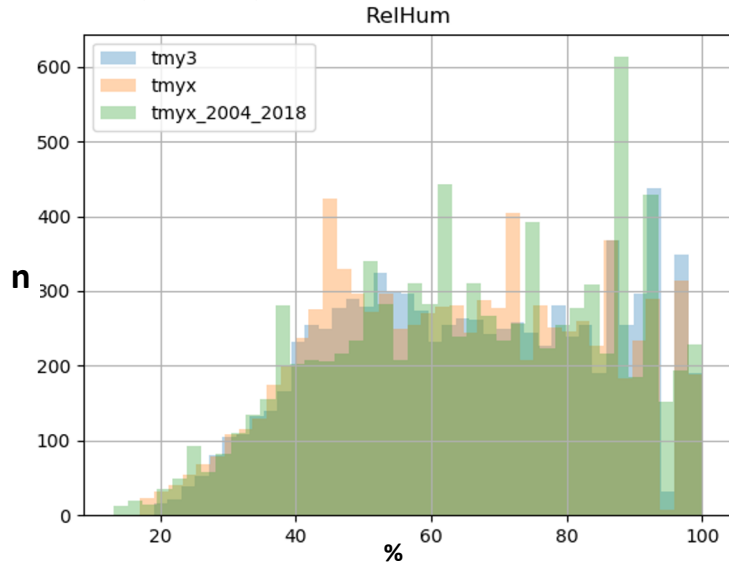


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## Los Angeles, CA, USA

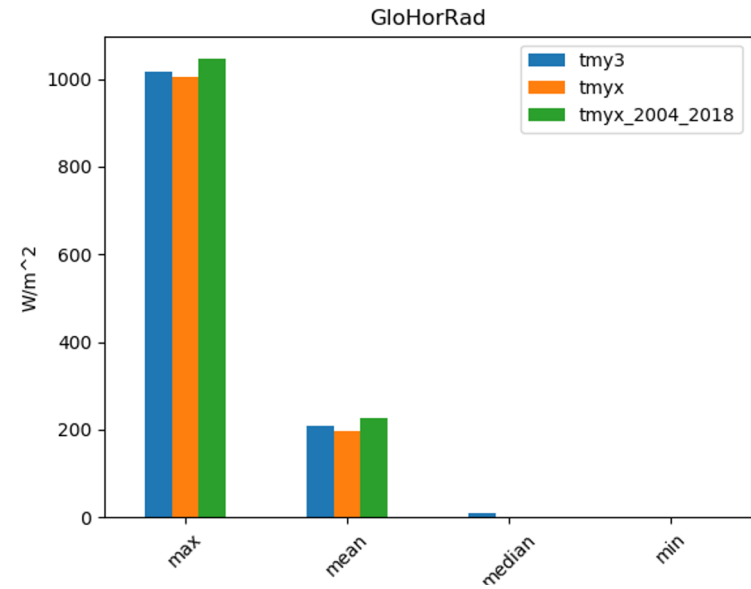
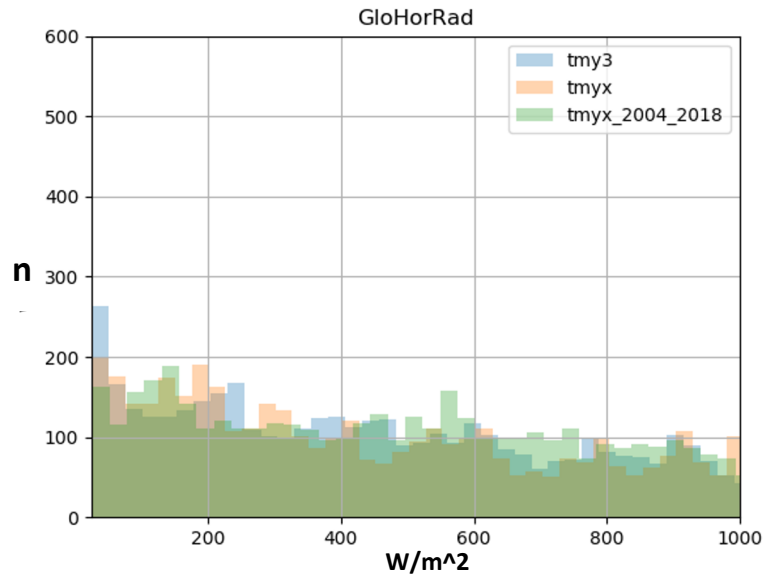


## Boston, MA, USA

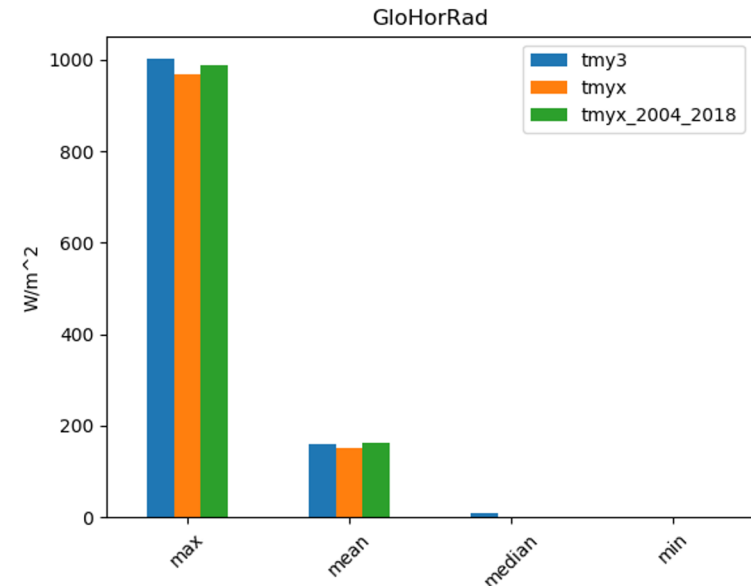
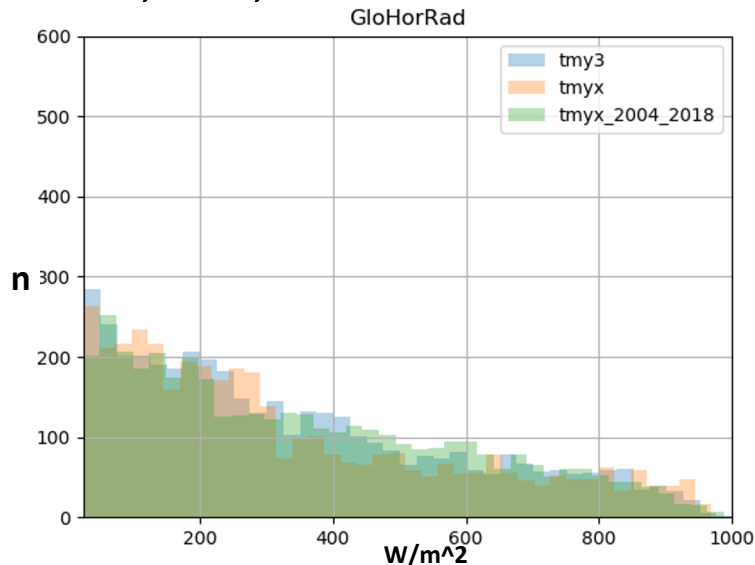


# Data Comparison - Global Horiz. Radiation

## Los Angeles, CA, USA



## Boston, MA, USA



# Proposal and Discussion

- Use different versions of TMY for particular location?
  - Download from <http://climate.onebuilding.org/>
- Select one for testing and others for training?