

# Update: September 10

WILLIAM HEIDORN  
IOWA STATE UNIVERSITY  
ISU WEEKLY MEETING  
SEPTEMBER 10, 2018

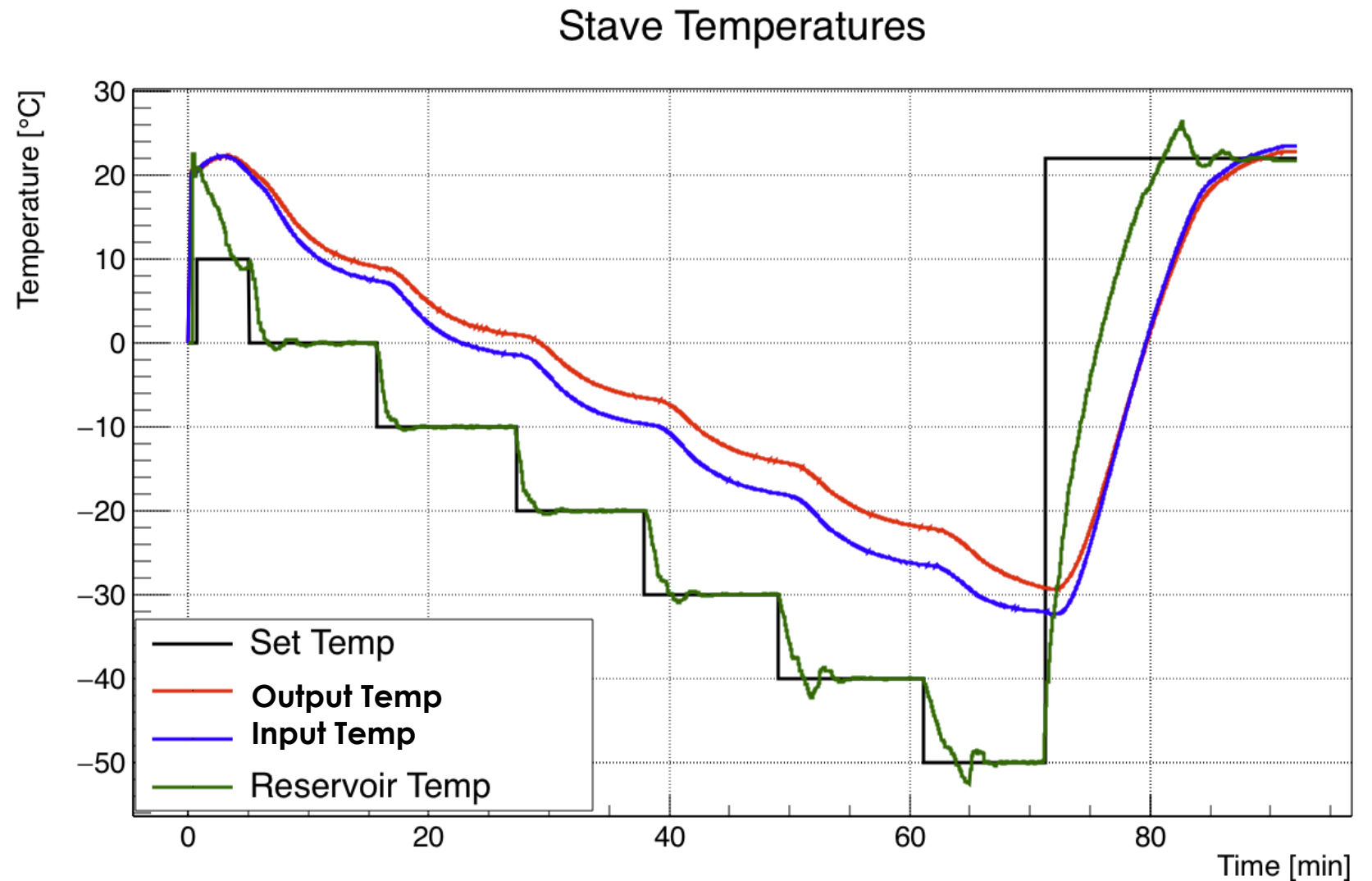


# Current Status

- ▶ Finishing up Chiller Ctrl Code
  - ▶ It currently runs decently... Ironing out the bugs...
  - ▶ Doing tests on flow measurements
  - ▶ Need to develop flow rate controls
    - ▶ User would set flow rate instead of booster pump value
- ▶ Getting finalized Yale work list together
  - ▶ Everything seems to be coming together for this trip
- ▶ On my list to do
  - ▶ Compare Grahams +40C measurements of Stave 2 with our data
  - ▶ Impedance comparisons and descriptive write up of the process
  - ▶ reRead current H->J/Psi Gamma draft paper

# New ChillerCtrl Code Plots

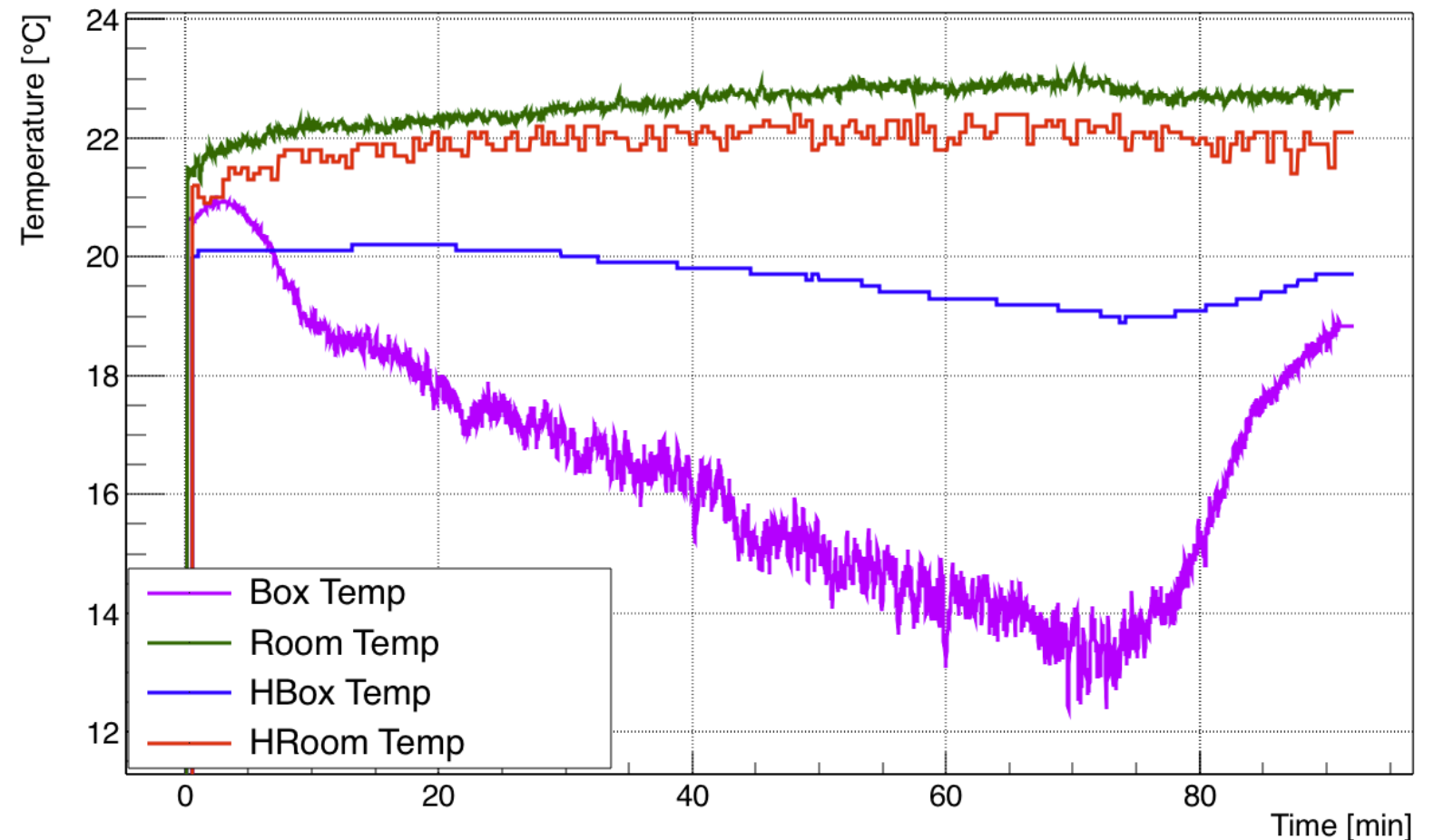
- ▶ Now measure chiller reservoir temp
- ▶ Shows how the chiller goes to set temps



# New ChillerCtrl Code Plots cont.

- ▶ New Measurements of Hbox and Hroom!
  - ▶ Hbox: Temperature at the humidity sensor in the enclosure
  - ▶ Hroom: Temp probe in room also connected to humidity probe
- ▶ The two box temperatures are very different
  - ▶ BoxTemp has nitrogen convection cooling it!

## Condition Temperatures



# Flow Measurements

- ▶ Found that there was noise in flow measurements
  - ▶ Attempted to remove it all with a capacitor in parallel with the input signal
  - ▶ Average is taken
    - ▶ Measured every 2 seconds
    - ▶ 3 are average for each reported value

