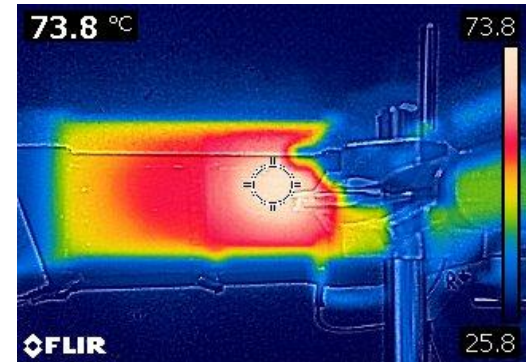
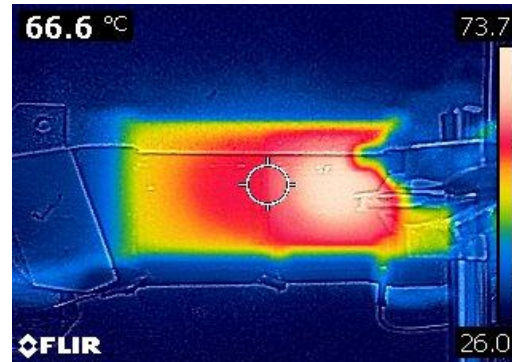
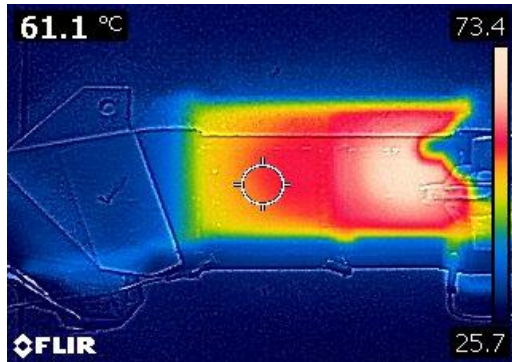


8/23/2022 Update

Refresher

- Wanted to improve accuracy of temperature measurements
- Averaged measurements over stove instead of using a single measurement



RVC 4mm, 1 cfm, 0.5 W/cm²
left, center and right measurements

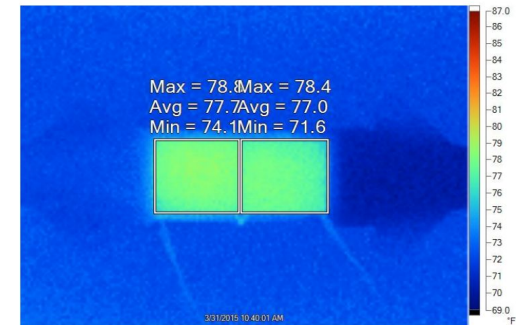
Refresher

- More vigilant with remeasuring the dark temperature
- Previously assumed that the dark temperature was constant (the room temp)
- Now we would remeasure the dark temperature every time we would change the air flow (de facto every several minutes)

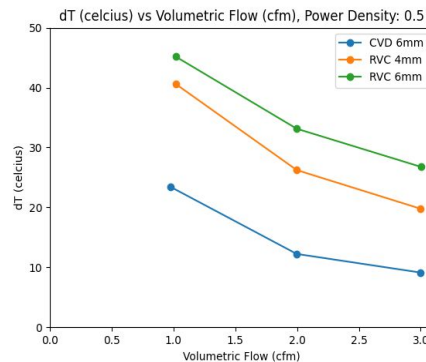
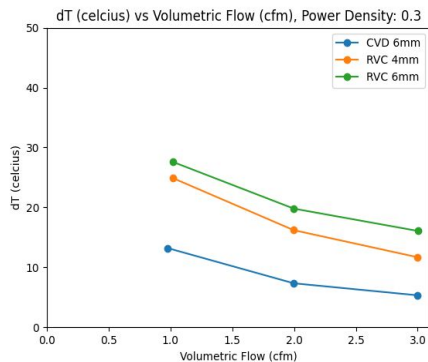
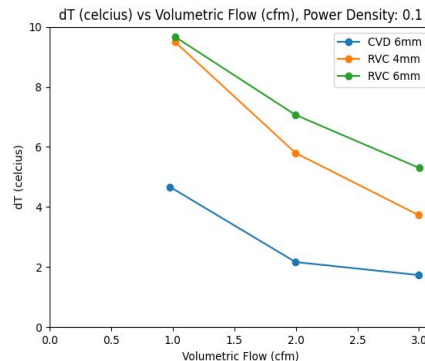
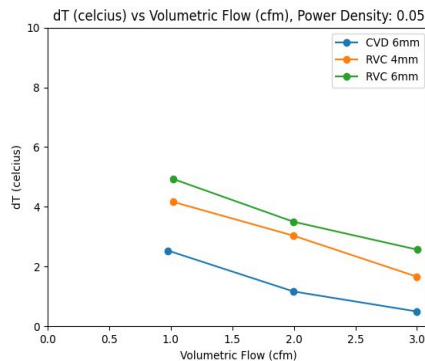
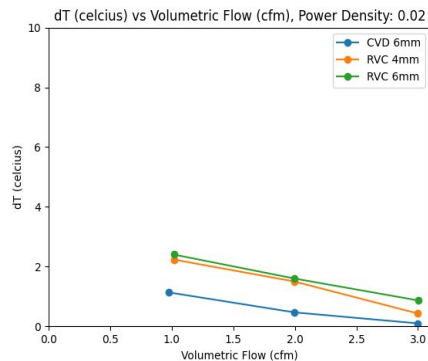
Dark – heaters off



Bright – heaters on

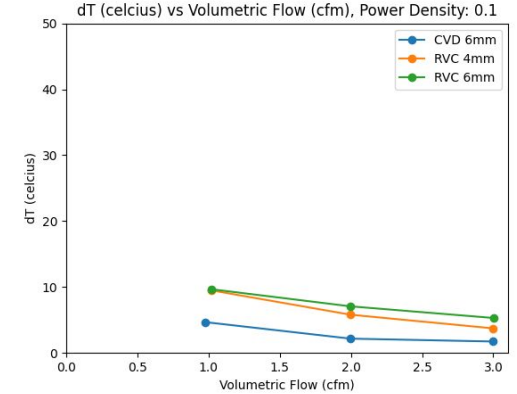
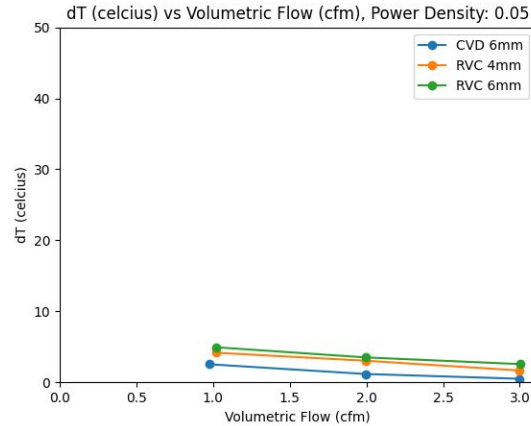
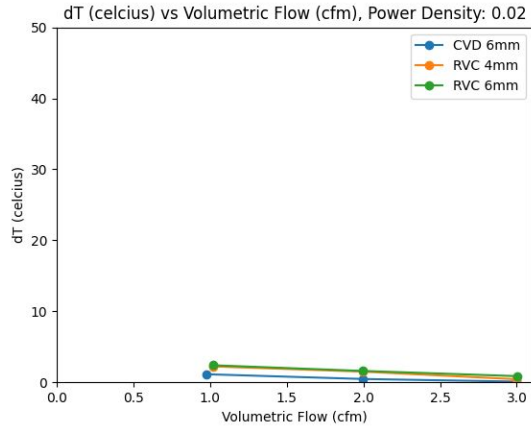


dT vs Q per power densities at different staves



Notes: Power density in W/cm², for top plots dT scale goes from [0,10] while bottom plots are from [0,50] for readability

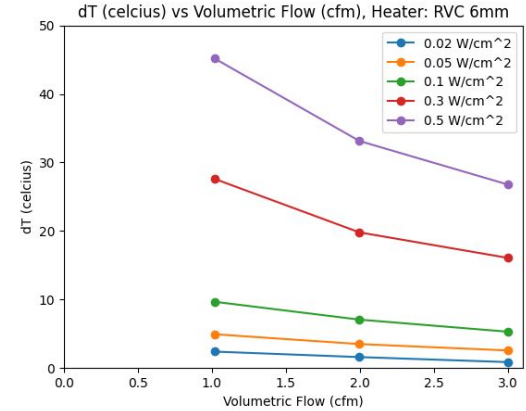
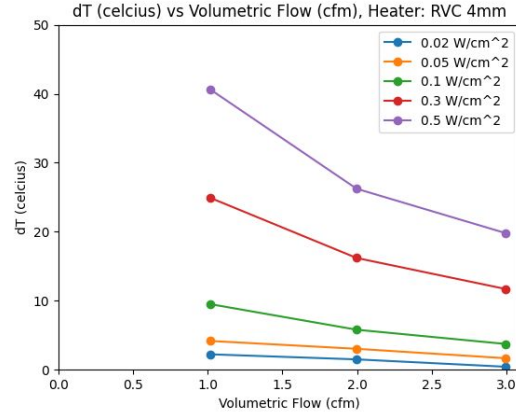
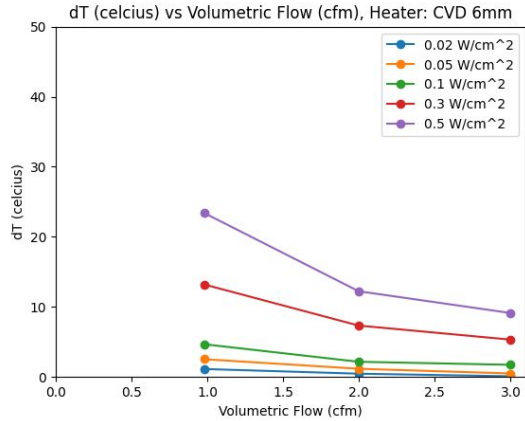
dT vs Q per power densities at different staves 8/15/2022



Data for all 5 plots: Stave Tests Avg: rows 69-121

Notes:

dT vs Q per stave at different power densities



Hold stave type constant as opposed to the power densities shown in the last slide

Summary and What's Next

- After improving our setup and procedure, we retook data that can be used to compare the foams' performances
- Further improving setup: eliminating small leaks, make procedure more consistent
- Next want to measure temperatures near the inlet/outlet
 - Air cooling doesn't cool stave evenly, would be beneficial to place high power density parts where the air cooling is most effective.

.5m RVC stave 3cfm,
500 mW/cm²

