

# LCW Flow Monitor

## ▶ Hardware

- ▶ Kobold C34P Magneto-Inductive Flowmeter
- ▶ Arduino @ Magnet rack
- ▶ Prepared by Zulkaida and Waqar

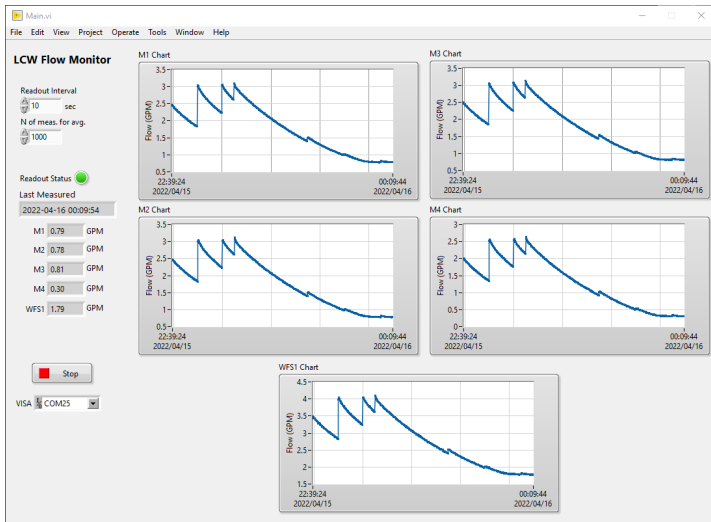
## ▶ Software

- ▶ [https://github.com/uva-spin/Temperature-Pressure-VIs/tree/main/LCW\\_Flow\\_Monitor](https://github.com/uva-spin/Temperature-Pressure-VIs/tree/main/LCW_Flow_Monitor)
- ▶ Based on `Test-VIs/Flow-Meter-Testing`

## ▶ Conversion from voltage (V) to flow (GPM)

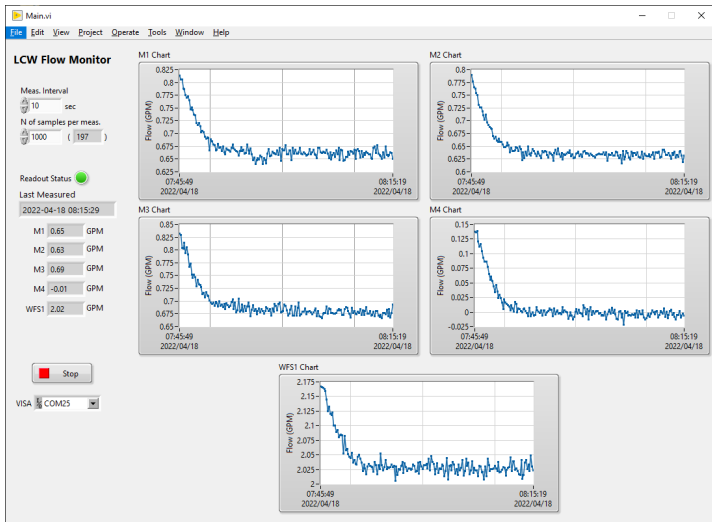
- ▶  $F = 1.42 \cdot V - 0.3$
- ▶ The constants were estimated by eye

## ► Readout record — last weekend



► Jumps and decays repeatedly. Any idea?

## ► Readout record — last Monday



- Stable, where the jumps disappeared somehow
- Went high every time a measurement started. Any idea?

# Thermocouple (TC) for Annealing & Microwave

## ▶ Hardware

- ▷ Two TCs from annealing control system
- ▷ Two TCs from microwave control system
- ▷ Ethernet DAQ for TC: MCC E-TC @ slow-control rack

## ▶ Software

▷ <https://github.com/uva-spin/Temperature-Pressure-VIs/tree/main/AnnealingAndMicrowaveTC>

### ▷ Alarm-signal output

- ▷▷ When any of microwave TCs goes out of a temperature range
- ▷▷ The 1st digital channel (DIO0) outputs the TTL-high signal (5 V)
- ▷▷ The signal will be sent to the microwave control box
- ▷▷ The 5th digital channel (DIO4) reads back the signal for confirmation

# Cryo Control Panel: CCP

## ▶ List of devices on Confluence page:

<https://confluence.its.virginia.edu/display/twist/Slow+Controls#SlowControls-CryoControlPanel:CCP>

- ▷ Conditions of devices & VIs expected for the FNAL review in early April

## ▶ VIs on GitHub repository:

[https://github.com/uva-spin/e1039-target-controls/tree/devel\\_cryo\\_control\\_panel/Cryo-Control](https://github.com/uva-spin/e1039-target-controls/tree/devel_cryo_control_panel/Cryo-Control)

- ▷ One sub-folder per device

## ▶ Updates

- ▷ Included the binary gas analyzer (BGA244)
- ▷ Updated FP of MaxiGauge
- ▷ Updated FP of MKS 946
- ▷ Confirmed the set-point function of THCD-400
- ▷ Included MaxiGauge in CCP
- ▷ Implemented a common sub-VI for logging