Cryo Control Panel (CCP)

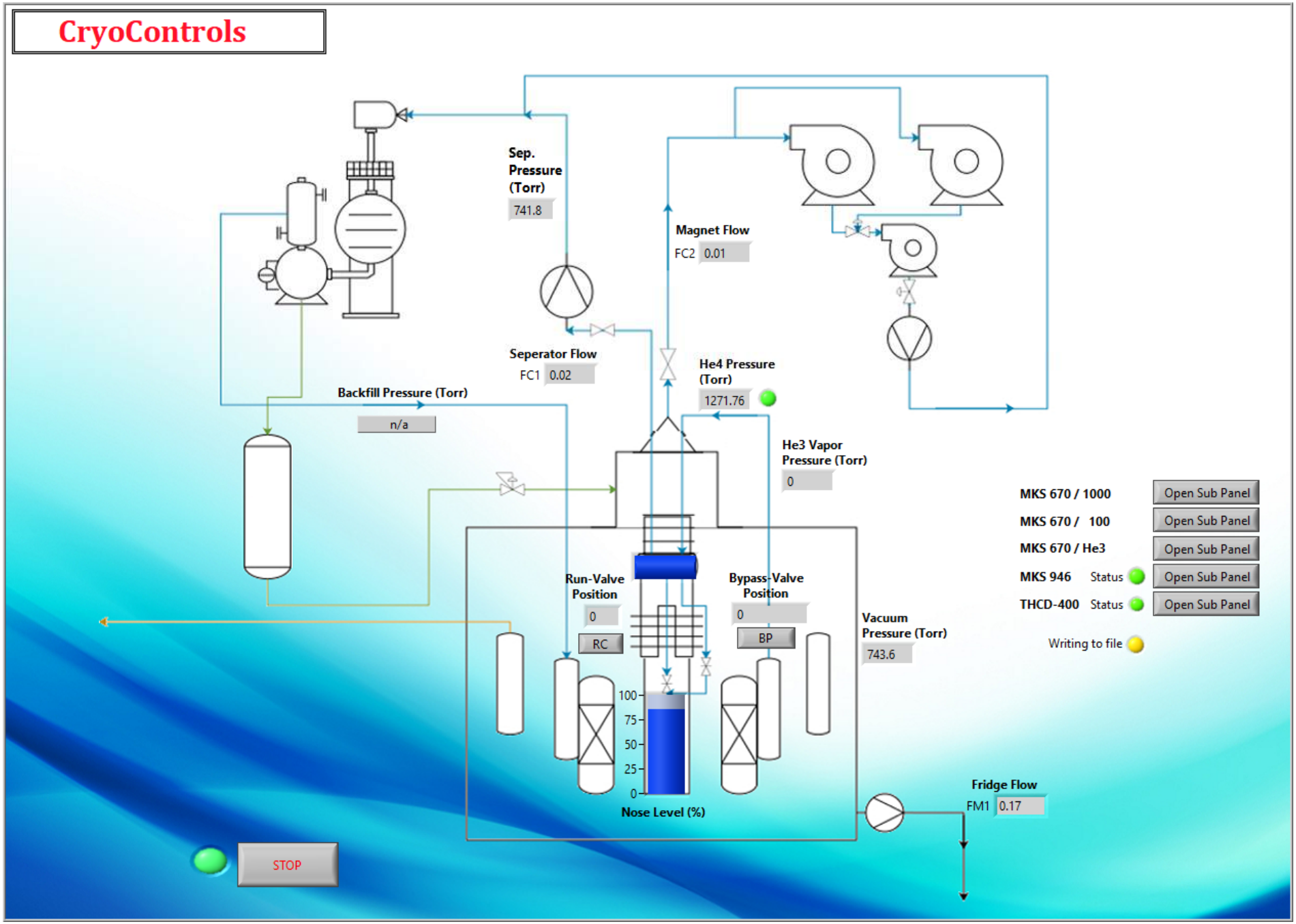
- List of devices on Confluence page:

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

- VIs on GitHub repository:

  https://github.com/uva-spin/e1039-target-controls/tree/devel_cryo_control_panel/Cryo-Control

- Updates
  - Rearranged the main panel
  - Integrated THCD 400 into CCP
  - Enabled AMI 1700 in CCP
  - Collected the info on run & bypass valves
- Plans
  - Run & bypass valve
    - Install the motors, the potentiometers and the control box in the hall tomorrow (Th)
    - Implement basic control functions in CCP
  - THCD 400
    - Connect 2×HFC
  - MaxiGauge
    - MaxiGauge is powered off now. OK to power it on?


CryoControls
Sep. Pressure (Torr)
741.8
Magnet Flow
FC2 0.01
Seperator Flow
FC1 0.02
He4 Pressure (Torr)
1271.76
Backfill Pressure (Torr)
n/a
He3 Vapor Pressure (Torr)
0
MKS 670 / 1000
MKS 670 / 100
MKS 670 / He3
MKS 946 Status
THCD-400 Status
Open Sub Panel
Writing to file
Run-Valve Position
0
RC
Bypass-Valve Position
0
BP
Vacuum Pressure (Torr)
743.6
100
75
50
25
0
Nose Level (%)
Fridge Flow
FM1 0.17
STOP

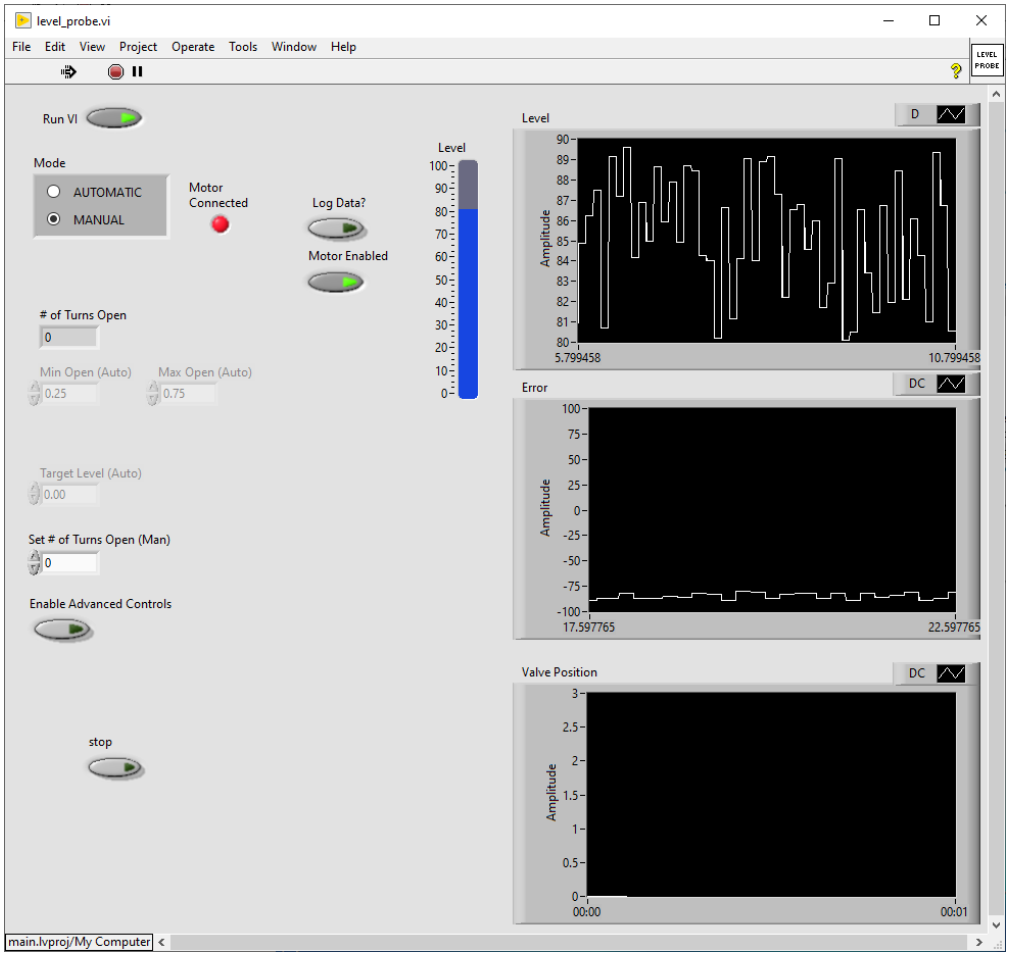
THCD 400: Flow Controller

- Readout channels (at present)
  - One with flow meter (HFM)
  - Two with no device
- Original (standalone) VIs:
  `Temperature-Pressure-VIs/THCD_400_VIs/`
- Integrated VIs: `Cryo-Control/THCD_400/`
  - Sub panel in CCP ≈ Original main panel

AMI 1700: He Level Probe

- Readout channel (at present)
  - One with dummy circuit
    $\Longrightarrow$ Level = 100% ($V_m = 0$ V)
- Problem in network communication
  - COM port ID had changed somehow!?
  - Use of Ethernet port? Didn't work yesterday probably due to 10BASE-T
- Updates on VIs
  - `level_probe.vi` was reused
  - He level is being read out at 1 Hz (Temporarily the reading is shifted at random so that we see it is being updated)

Sub Panel



Run Valve & Bypass Valve

Thanks to Vibodha for the information provided

- Devices
  - Motors: AM ST5-S
  - ADC for potentiometer: MCC USB-202
- VIs: `Cryo-Control/level_probe.vi`, `bypass.vi` & `subvi_motor/`
  - The RS-232 commands used in the original VIs are compatible with AM ST5-S
    - As tested by Harsha
    - To be reused as much as possible
  - Valve position
    - Measured by the motor itself in the original VIs
    - To be accessed via MCC USB-202 in the new VIs
  - Automated control of run valve
    - Implemented in `level_probe.vi`, based on PID VI
    - To be reused