# Monitoring Layout in Control Room

This page summarizes the layout of computers and displays for the target monitoring in the control room.  It is still under adjustment and subject to change.

## Computers and Displays

| Computer | Display | Functions | Status | Note/Question |
|---|---|---|---|---|
| #1 | #1 | Cryo Control Panel | In place. | The Magnet VI will be included in CCP. |
| #2 | #1 | Microwaves + Actuator | In place. | Vibodha will develop the interface (VI). |
| #3 | #1 | QT | In place. | A remote desktop viewer that connects to the QT HMI in the hall. |
| #4 | #1 | PDP (for NMR) | | A VNC viewer that connects to the NMR computer in the hall. |
| | #2 | Strip charts | In place but connected to computer #3 now. | Charts with multiple browser tabs/windows. |

Remaining task/questions:

- Dustin: We need to have all systems setup now with dedicated computers and a local icon on that system, desktop to open the system on that machine to get monitoring up and running.
- Update the Control Room Layout with the other subsystem monitors:  https://seaquest-docdb.fnal.gov/cgi-bin/sso/ShowDocument?docid=7437

## Programs on Computers

This section is to discuss and share the overall configuration about computers and programs that we expect.  The required spec of each program might depend on this configuration.

- Target computer @ control room
  - BOS/EOS/Spill-ID (which detects the hardware BOS/EOS signals to issue the software BOS/EOS/Spill-ID info)
  - Cryogenic control panel (https://github.com/uva-spin/e1039-target-controls/tree/master/Cryo-Control)
  - Microwave frequency calibration (https://github.com/uva-spin/e1039-target-controls/tree/master/Motor%20controller)
  - VIs/projects of all standalone devices
    - To be listed...
- NMR computer @ cryo platform
  - PDP (https://github.com/uva-spin/e1039-target-controls/tree/master/PDP) — Misha found that the measurement accuracy varies with the number of sweeps/event.  It has to be confirmed, to determine how we configure the number and if we have to change it on spill vs off spill.
- Communication between the computers
  - The NMR computer needs BOS/EOS/Spill-ID in real time.  What are the limits of latency/jitter times???
  - If the latency of the TCP/IP communication (<1 ms inside LAN?) meets the requirement, it can be used.
  - If not, probably we have to move the "BOS/EOS/Spill-ID" function to the NMR computer.
- Other components or functions??