The G_{E}^{n} Polarized Target Watch List

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This page is intended to summarize some of the main parameters to watch when being on shift. Some of them require action.

- **Nose level** (aka target chamber level) should be between 50% and 90%. It is controlled by the run valve in the electronics rack. When turning on/off the microwaves, the level will change faster than before and needs close attention. The nose level is monitored on pc2hallc and can also be seen on the level meter in the target rack (monitored by camera).
- **Updating slow controls** should be checked on pc2hallc. If the data presented are older than the current time by 2 minutes, the time stamp for the Time of Last Update will flash red. This can happen when the NMR control on pc1hallc is neither in Take Data nor in Monitor mode. Make sure, that whenever you pause the polarization measurement to keep the NMR polarization measurement in Monitor mode.
- **Magnet liquid helium level LL 91111** should be between 60% and 85%, and is normally around 75%. If there are larger deviations from the setpoint (75%), please call an expert.
- **Buffer dewar liquid helium level LL 91101** should be between 60% and 90%, and is normally around 80%. If there are problems, please call an expert.
- **Magnet liquid nitrogen level LL91110** is slowly decreasing from around 100% to around 30%, when a new refill should be started. This is done by opening the pre-cool valve SV91110 until the temperature reading TP91110 shows 77 K, then opening the fill valve SV91111 and afterwards closing SV91110.
- **EIO temperatures** on pc2hallc should be below 32°C. If increasing or over 32°C, please call an expert.
- **Q-meter temperatures** on pc2hallc should be below 30°C. If increasing or over 30°C, please call an expert.
- **Main flow** should be below 32 SLPM during microwave irradiation. If microwaves are off, it shoudl be lower, typically around 10 SLPM.
- **Microwave frequency** should be monitored for drifts. Keep in mind, that with changing target polarization and with accumulated beam charge the optimal microwave frequency shifts. One can try small changes via the Bellows Position Panel while monitoring the EIP frequency counter. Usually, only small adjustments are necessary and advisable. Keep in mind, that the klystron cavity tuning features a hysterises, that is, when changing the direction of the frequency adjustment from increase to decrease, or vice versa, only after a small time the frequency actually changes.