

















Proposal for the shifts organization

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Guiding principles

- Produce a fixed and evaluable scheme
- Reduce and optimize the amount of time covered in monitoring to gradually transit to an alarm-based monitoring:
 - \rightarrow Not always the alarms are issued, or issued in time \rightarrow need more work to validate them but we anyway should start the transition
- Evaluation system to take into account different aspects of the monitoring (experts, exc.)
- Not all "expert" shifts have the same commitment: e.g. we <u>must</u> have a gas system and HV expert who gives the availability to react promptly, while a milder commitment is asked to the DAQ/Midas and Cloud System experts
- No need for scheduled in-person shifters, but they could still be needed if called by the Run Coordinator (RC)
- Effort to be shared among different institutions. The rule to assign a certain number of Shift-Equivalent Units (SEU) still under development.

Current proposal: remote shifts

- Two remote shifts per day:
- $8:00 \rightarrow 15:00$

 $16:00 \rightarrow 23:00$

- → 1h "blindness" in early afternoon
- → 9h "blindness" in the night
- Shifter's **duties**:
 - Follow LIME instructions (slide #2 and slide #3)
 - This document must be kept updated by the RC
 - Morning shifter:
 - → Fe calibration once every two days
 - Afternoon shifter:
 - → Other service-related duties (e.g. stop& restarting the rconsole)

Remote Shifter to-do-list [1 / 2]

- If you are the 6-12 shifter, you are in charge of the daily calibration [see Slide #37]
- Periodically check on the MIDAS control page:

History -> Trigger Rate [Report if it's 0 for a long period]

History -> Trigger Module Rate [10 Hz in ped runs, ~1Hz in std runs, ~10 Hz during daily calib.]

[LIME pressure following the set point]

[Report if > -17 °C] History -> Sensor Temperature History -> Oxygen [Report if > 450 ppm]

History -> Humidity [Report if RH calibrated > 2.0]

[Report & Restart if any program is down]

Gas System -> Total Flow, Chamber Pressure, Recirculation Flow [Report if measured≠demand]

Gas System -> He Bottle Pressure, CF4 Bottle Pressure [Report if < 15 bar]

PMT HV

[Report if measured much different from demand] **GEM HV** [Report if measured much different from demand]

Remote Shifter to-do-list [2 / 2]

- 3. Periodically check on the **Grafana** control page:
 - Storage -> run_number [Report if not increasing with time]
 - Storage -> local_stored [Report if different from 1 since a long (> 2h) period]
 - Storage -> cloud_stored [Report if different from 1 since a long (> 2h) period]
 - Storage -> tape stored [Report if different from 1 since a long (> 2h) period]
 - [Report if not 1.40GB for regular runs and 380 MB for ped runs]

Current proposal: in person and expert shifts

- In person shifts are organized, if needed (e.g. to swap the recovery bottle), by the RC
- Expert shifts: 24 h shifts
 - → Type A experts:
 - DAQ && MIDAS
 - © Cloud services (Grafana, Middleware, AutoReco, Midas2Cloud, etc.)
 - **Type B** expert:
 - HV && Gas System
- Expert shifter duties:
 - Type A: Giving support to the remote shifters (as they should be able to solve the issues by themselves)
 - Type B: Being ready to promptly react and act on their sub-system

Current proposal: evaluation of the shifts

• Remote daily shift from Monday to Friday: 1 SEU

• Remote daily shift from Saturday to Sunday: 1.5 SEU

• Fe calibration: 0.5 SEU

• In person shift: 1.5 SEU

• Type A Expert shift: 0.2 SEU

• Type B Expert shift: 0.5 SEU

- Total SEUs in one month [30 days, 4 weekends] to be shared among institutions:
 - → 99 SEU = 72 SEU (remote shifts + Fe calibs) + 12 SEU (Type A experts) + 15 SEU (Type B experts)

Current proposal: status

- The idea of producing this proposal was born in the SC meeting of last Tuesday
- It will be submitted and eventually approved at the next SC meeting
- The idea is to implement this scheme and eventually fine tune it after a "commissioning" period of e.g. 1 month