D0 Shift Captain Responsibilities

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Safety

- Safety of personnel and safety of D0 detector.
- Follow appropriate emergency response procedures in emergency situations.

  http://d0server1.fnal.gov/Projects/UpgradeProject/Run_II_Procedures/Index.htm
  - FIRUS (Fire and Utilities) alarms
  - VESDA (High Sensitivity Smoke Detector) alarms
  - ODH alarms
  - Cryogenic leak
  - Ethylene glycol spill from D0 Silicon chiller
  - Possible radiation exposure to personnel
  - Radiation exposure to SMT
    - http://d0server1.fnal.gov/Projects/UpgradeProject/Run_II_Procedures/D0-OP-SMT-010.pdf
  - Severe weather

Training

- Mandatory trainings
  - This session
  - 2 joint shifts with experienced captain
  - Read and understand D0 control room procedures
    - accessible from http://www-d0.fnal.gov/runcoor/runplans/control_room.html
  - D0 Hazard Awareness
  - LOTO 1
  - Radiological Worker
  - Controlled Access
- Ensure that shift crew has required safety training
  - Everybody on shift needs D0 Hazard Awareness and LOTO 1.
  - DAQ and captain need Radiological Worker and Controlled Access in addition.

Shift Captain Responsibilities

- Reports to Run Coordinator
- Serves single point of contact between D0 control room and MCR crew
- Maintains order in the control room
- Understands the run plan and directs shifters accordingly
- Issues orders for
  - Begin/end store
  - Begin/end run
  - Select prescales
- Complete check lists
  - Shift check list
  - Store check list
  - Run check list
  - Direct shift crew to fill their respective check lists
- Make sure that shift turnover meetings address important issues

Shift Captain Responsibilities

- Run ACNET beam monitoring (luminosities, beam halos, BLM monitoring)
- Run vertex examine
- Update electronic logbook
- Perform Global Monitoring duty
- Respond to systems related alarms
  - SES alarms
  - SMT radiation alarms
  - FIRUS and VESDA alarms

Detector Responsibilities

- Direct operation of magnets power supplies by operations shifter
  - Follow the magnet polarities plan in the run plan
- Operate luminosity counters HV according to instructions
  - Usually ramp up/down based on magnets status
  - Take care of HV trips
- Operate Forward Proton Detector according to instructions
  - Call FPD expert when the store luminosity approaches 40E30 to insert pots
  - Lowers HV and retracts pots before the end of the store
- Instruct detector shifters to set HV according to the run plan (SMT and Muons)
- Monitor SMT radiation dose using ACNET
- Make sure experts are contacted if data taking or detector problem cannot be resolved by shifter (~5min during the store)

Access Tasks

- Controlled Access
  - Collision Hall remains interlocked & under AD control, usually < 4 hours
  - All Controlled accesses require prior approval by run coordinator, and presence of a controlled access coordinator
  - Check whiteboard for access requests and consult with run coordinator regarding access in case of Accelerator downtimes (e.g. store lost prematurely)
- Supervised Access
  - Issues and returns supervised access keys
    - Verify safety training
  - Verify everybody entering the collision hall wears a TLD badge and/or pocket dosimeter
  - Make sure nobody without authorization enters the collision hall
  - All tours need prior approval by the run coordinator
- Issue temporary TLD badges