

Operations Discussion

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Operations Procedures Discussion

- Meeting in December – during running
- Discuss various issues that had come up during run prep and running
- Changes due to the incorporation of the PPS into daily running
- Changes due to new target controller and associated interlocks
- Led to updates to procedures
 - Key storage/use
 - Target operation rules
 - New startup/shutdown checklists
 - Controlled access better defined

New Beam Control

- Muon Beam Permit is last step in search/secure/preparation of Hall for running
- Muon Beam Permit key is required to be in MLCR key press to get Muon Beam Permit
- Can **NOT** lower target frame without Muon Beam Permit
- Can **NOT** turn on D1 and D2 without Muon Beam Permit
- Controlled Access **DROPS** Muon Beam Permit
- Beam **CANNOT** get into Hall during Controlled Access – target frame automatically raises, D1 and D2 turn off

Beam to Hall Questions

- Do we need to close beamstop when access Hall?
 - Actions:
 - put film badges in Hall where naturally walk
 - put film badges up on new north mezzanine and by Decay Solenoid PS
 - **Decision: close beamstop when access for now**
- Can we take beam to DSA with beamstop closed and Hall open?
 - Possibly we could discuss ground floor level work could continue while beam to DSA; However – have line of sight into DSA from upper mezzanines
 - **Decision: No beam to DSA while working in Hall**
 - **Decision: Take out Muon Test Key (PPS key) from panel and keep locked in red box**

Target

- **New target controller includes interlocks to prevent problems**
- **MUCH easier to operate**
- **New target operating points – were optimized by Target specialists in November**
- **Using beam bump in ISIS routinely now**
- **Target operations documentation and checklists have been updated**

New Target Operation Policies

- **Policy:**

- No changes to target timing
- Do not need to perform Target Calibration every 10k pulses
- Official loss limit is 4V in Sector7 (when using beam bump)
- Target Frame Enable key returns to ISIS at end of each day of running
- Target System Enable key (allows target to pulse) kept by MOM
 - locked in red box overnight
- Target laser keys remain in place

- **Future:**

- need to get MICE beam loss readout to agree w/ISIS beam loss readout
- Get ISIS beam position

PPS

- **Require 2 people in Hall for search and secure**
- **Need fence along beamline to close off crossing over (PPS designed for later beam configurations)**
- **Lock Muon Test key in red box**
 - Prevents beam to DSA
- **Lock Muon Beam Permit key in red box**
 - Prevents beam to Hall
- **Lock RF Permit key in red box**
- **Red box key held by MOM**
- **Backup red box key held by ISIS – accessible w/o MOM in case MOM unavailable during running and sends delegate for startup**

PPS – Controlled Access Policy

- Need 3 people – 1 on door control in MLCR, 2 enter Hall
- Leave Q789 ON
- Close beamstop
- Use same sign-in sheet as always for consistency
- Hold on to key when in Hall – keep on person – non-transferable
- Take walkie-talkie into Hall during access
- First person into Hall not proceed past entryway alone
- MLCR person on door does **NOT** leave when personnel are on access

Additions for Operations with PPS

- **Find out if ISIS can broadcast to MICE Hall**
- **Hall Shielding key in panel in MLCR = Emergency OPEN Hall key**
- **Put extra “Cancel Search” key by the box at Hall entrance by MLCR so can easily cancel search if necessary**

Training

- Now that PPS operational – need training regime
- Needs to be part of:
 - MOM training
 - BLOC training
 - Shifter training – only qualify as Shift Leader with PPS training certification
- Need register of people trained to use PPS
- Has become evident that we need better-defined and better-executed Shifter training
- Need fill shifts only with sufficiently trained personnel
- Ideally – have database with relevant training status

Operations Needs

- **New magic spreadsheet**
- **New takeover of G4Beamline**
- **Proper training**
- **Documentation to be (remain) current**
- **Documentation of changes to procedure**