

Operations Report : EB 9/10/15

# Activities in cycle 2015/02

- ▶ 24/7 shift coverage for entire cycle.
- ▶ Operations have mostly been providing support for the magnet team
- ▶ Some data has been taken, when the opportunity arose
- ▶ Paul Hodgson will be at RAL regularly to help co-ordinate Ops. He is not MOM and is not on-call.
- ▶ Hope to do the mythical Activation run on October 18<sup>th</sup>. This may be our last chance before 2016.

Datataking period	Description	Amount of data
September 11th	<ol style="list-style-type: none"> <li>1. Magnetic field alignment SSU ON                             <ul style="list-style-type: none"> <li>- Pion reference beam</li> <li>- <math>3\pi</math> 240 MeV/c Muon beam</li> <li>- <math>6\pi</math> 240 MeV/c Muon beam</li> </ul> </li> <li>2. Tracker timing studies Pion reference beam</li> </ol>	12 hours continuous data taking  125K Triggers in TOF1
September 21th	<ol style="list-style-type: none"> <li>1. Cooling channel optics study - Pion reference beam without DS</li> </ol>	12 hours continuous data taking
September 23th	<ol style="list-style-type: none"> <li>1. Cooling channel optics study - <math>3\pi</math> 140 MeV/c Pion beam</li> </ol>	10K target pulses
September 26th	<ol style="list-style-type: none"> <li>1. TOF Calibration (TOF1 trigger)                             <ul style="list-style-type: none"> <li>- 250 MeV/c Electron beam</li> <li>- 160 MeV/c Electron beam</li> </ul> </li> <li>2. Pion reference beam (TOF2 trigger)</li> <li>3. Tracker timing studies</li> <li>4. Ckov momentum scan - Various pion beams (210 – 420 MeV/c)</li> <li>5. Beam polarisation measurement with EMR - D1 current is fixt. D2 momentum scan in order to select different decay angles in the CM system</li> <li>6. Magnetic field remnant study - <math>3\pi</math> 140 MeV/c Muon beam - <math>3\pi</math> 240 MeV/c Muon beam - 300 MeV/c Muon beam</li> </ol>	30K target pulses 25K target pulses  10K target pulses  125K Triggers in TOF1  24K target pulses in total  150K Triggers in TOF2  10K target pulses in total
September 30th		
October 7th	<ol style="list-style-type: none"> <li>1. Cerenkov momentum scan - Various momenta Pion beams</li> <li>2. SSU E-C-E coils at full current - <math>3\pi</math> 140 MeV/c Muon beam</li> </ol>	203K TOF1 triggers  67k TOF1 triggers

# Comments

- ▶ Updated version of run control appears to be stable. We don't have to kill RC between runs now.
- ▶ eLog is being used better now. An online shift check list has been introduced for shifters to fill in during the shift.
- ▶ onRec and onMon are also relatively stable, although there are still some issues to work on :
  - ▶ several minor things to investigate (writing of some information to the CDB, review of the ALH limits, some empty histograms in onRec )
- ▶ In general, when running has happened it has happened reasonably smoothly

# Issues

- ▶ Decay solenoid is still causing trouble :
  - ▶ for half of this user period it could only be set by hand. This was fixed yesterday
  - ▶ in recent runs the PSU tripped due to overheating and ramped to zero. Problem is not understood.
- ▶ Power supply for PPS crates was found to operating at threshold due to blown fuses in the PSU (a known issue). Fuses replaced but a better solution will be needed if more load is placed on the PPS (e.g. RF permit system)
- ▶ Tracker is still in commissioning mode. This, plus work on the CR systems, led to the deletion of a calibration file which stopped work for 3 hours last week. We need to be better at putting information like this in the CDB.

# Training

- ▶ Current system of providing training a couple of days before shift blocks begin seems to work well with appropriate oversight
- ▶ Relies on the availability of the trainers (currently Craig and Mike).
- ▶ Full PPS/Beamline/Control room training has not been possible since access to CR is needed (and running has been minimal)
- ▶ Training status stored on CHEESE now
- ▶ Will continue this format during production running.

# Shifts in November

- ▶ Shift planning proceeding in conjunction with discussion with Mark
- ▶ Seems clear that 24/7 shifting in November is not justifiable
- ▶ Requirements : maintain some level of support service as well as the capability to take data if the situation arises. Cannot plan on continual data taking.
- ▶ Shifters currently used for Hall closures / Controlled access / Monitoring).
- ▶ Proposal :
  - ▶ MOM + experienced personnel (Victoria / Paul H) act as core oversight (the last two are **not** on-call)
  - ▶ Backed up by two on-call shifters from 8am to 8pm (?)

# Comments

- ▶ All shifters will need to be sourced, as far as possible, from on-site personnel.
- ▶ There aren't that many on-site personnel and I am concerned we are putting a significant burden on a small number of people.
- ▶ Another problem, if data-taking capability is to be maintained, is the availability of a BLOC. Only 5 at the moment, with 2.5 on-site intermittently.
- ▶ Either allocate BLOC support at RAL in shifts over the user cycle. Possibly offer BLOCs shift credit in exchange.
- ▶ Or : roster BLOCs at home institute, and have sufficient warning of running that they can travel to RAL when needed.
- ▶ The BLOC pool should be expanded

# Shifts in December

- ▶ Less clear as December activities depend on progress in November
- ▶ Continue November format, but put in place capability to add two extra shifters from UK institutes if serious data-taking is likely?
- ▶ Probably still won't be able to run 24/7 on short notice, but 16 / 5 might be possible.