Weekly report
11.05 - 18.05.2018

➢ start-up of Drell-Yan data taking

Friday, 18.05.2018

Annika Vauth

COMPASS weekly meeting
Friday (1).

**Beam & Trigger**

**Beam tuning** 15h-20h ratio ION2/T6int improved from $\sim 420$ to $\sim 550$

**Veto VI01** 20h hole adjustment from 55mm to 75mm to account for horizontal size of beam, height is still 48mm

**True random** 21h rate adjusted by lowering HV and increasing threshold

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**Target**

**Dipole** slow discharge Friday 23:30 (LHe filling not tuned correctly)
Friday (2).

**Detectors**

- **RW** With high intensity, 100% errors on MurphyTV
  - TCS FIFO full
- **ST03** plane V1 noisy
- **GEM** few percent errors on GEM7-8

**A.O.B.**

- **CASTOR** migration problem since Thursday afternoon very slow. Solved by CASTOR support Friday afternoon
Saturday.

- **Beam & Trigger**
  - **Trigger** Muon beam Saturday for efficiency studies

- **Target**
  - **Polarising** starting Saturday morning
  - **Magnet** Check status, understand what happened

- **Detectors**
  - **DC4** during the night HV trip, required power cycling

- **A.O.B.**
  - **Network** switch near SM1 had to be restarted during the night

A. Vauth | weekly meeting, 18.5.18 | 4/14
Beam & Trigger

Trigger  Low intensity pion beam Sunday morning for efficiency studies

Drell-Yan  nominal beam starting after noon 500mm target, 120E11 on T6

Detectors

RW  Still missing, 100% errors on MurphyTV

MWPC  First missing card on PS01V, then one PS01U

ST03  plane V1 still noisy!

GEM  few percent errors on GEM7-8
Sunday (2).

Target

Polarising until Sunday noon → \sim 80\% polarisation
Monday.

**Target**

*Access* this morning to remove target holder plate (2 mm Al)

**Detectors**

**DC0**
- morning: Missing channels U1, cured by LV cycling
- evening: voltage reduced by 25V to prevent damage by high current

**GEM** errors increased, masked ports in DB → no more GM08XY

**RICH** error on RICH-MAPMT srcID 507 - problem on FE?

[Graph showing voltage levels and current measurements]
Beam

No beam 21:00-21:30, 22:10-23:55, 1:17-??!
main problem: sparks on extraction septum

Detectors

RW  time window adjusted - detector back
tested before beam was gone

A.O.B.

PRM  run is over! Start flushing the TPC with He
Wednesday (1).

**Beam**

Beam back around 18h needed to wait till 18:30 to end access

Access for MWPC shortly afterwards

**Target**

Polarising from 5:45-17:15 (was -76.5% in upstream cell and +75.9% in downstream cell after polarising -80.5% in upstream cell and +79.7% in downstream cell)

**Detectors & Trigger**

Trigger coincidence matrix needed reload after MD, no Veto dead time reading until 22h

GEM ADC re-flashed, GEM08XY working again

RW some FE problems fixed, central parts DR02Y still missing

MWPC lots of work during MD and after, all planes back in operation after 22h

MW1 errors on MTV starting 22h cool looked okay
Wednesday (2).

A.O.B.

air condition maintenance works in 888 done in the morning

PRM run is over! TPC craned out
Thursday.

**Beam conditions / data taking**

- **No beam** from $\sim 10-12$ 10 min access for SciFi-3
- **Alignment** taken from 12-15
- **Drell-Yan** during the rest of the time

**Detectors**

- **MW1** errors went away around 6h
- **SciFi** SciFi-4 latency adjusted
  SciFi-3X LV supply exchanged but still noisy
- **MWPC** PS01 problems starting around 13h had to exclude 460 port 7
  PA03U1 channels missing parts of the evening 452 port 15
- **DC** almost all srcIDs errors in the evening,
  recovered all but one 257 port 14, on DC00U1
Beam conditions / data taking

Drell-Yan data taking

no beam from 9:10 - 10:20 “No beam for 1 hour. CPS access”

Detectors

DC missing most of DC01U2 in the morning, fixed along with DC00U1 257 port 2,3, 14

SciFi 3 access to change LV supply. Looks good!

A.O.B.

Network power switch near SM1 restarted in the night

Inxpool25 for DC0-1 needed rebooting = threshold module, DIM13 error

CASTOR migration problem is back 😞
Data taking summary.

Recorded data:

- drell-yan
- RW back
- alignment
- remove plate
- trigger studies
- d-y, no dipole

run number

spills

A. Vauth | weekly meeting, 18.5.18 | 13/14
Continue data talking!

Access or MD
  ▶ RichWall
  ▶ MWPC
  ▶ SciFi-3X ?

Many thanks to all the detector experts & shift crews!

Next week coordination: Oleg. Have a great week!