Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018
Intervention at 16h

- Access to solve MWPC and Straw persisting problems
- Problem on MWPC solved
  "We replugged HOT link cable from triplet side and it worked. Triplet was on the Jura side (1st one from the bottom, cable 13)"

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
<th>Good Spills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>159</td>
<td>0</td>
</tr>
<tr>
<td>Trigger test</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Drell-Yan</td>
<td>2338</td>
<td>2326</td>
</tr>
<tr>
<td>Total</td>
<td>2497</td>
<td>2326</td>
</tr>
</tbody>
</table>

11 runs with +200 spills!
General comments

Persisting problems

- RichWall: LOAD -A 2006 and LOAD -A 432 fixed the problem;
- Gesica problem on MicroMegas: Power cycle of pccofe15 + off/on LV + LOAD -A PORT fixed the problem;
- MWPC;
- Straw;
- Connection lost in DCS (Voltage MM, DC ...) powercycle of pccoffe solved the problem (problem not critical, so shifters don’t worry! See the coin plot).

Intervention 30/09 information on Muon Wall

- At 09h26: MW1 Station 1 and 2 Under voltage: required access;
- At 11h16: access created, Mod. A734N of C.A.E.N Mod. SY527 changed for MW1: problem solved!
Other run type

- Detector test: CEDAR pressure scan
- Trigger test: trigger efficiency + measured of veto dead time
- Daq test
Target comment

During 01/10 - 02/10 : Evenning /Night shift (16h to 08h)

Stop data taking at 22:00 : Target problem with He4 primary pump

- He4 pumps stopped : it was triggered by low oil level in the primary pump ;
- Technicians were called to refill → fixed at Midnight (with 3 L).

Thanks to the target group for their work!

Maintenance needed

- Jean-Michel Fossaert came (03/10) to analyse the situation ;
- No maintenance of pump since 2013 ;
Good spill during the week

2018-09-28 to 2018-10-05
T6 intensity on E11 (number of proton integrated vs time)

Target problem

Polarization

Today

T6 intensity/E11 (protons) integrated: 2018-09-28 10:59:59 - 2018-10-05 11:00:00

SPS
COMPASS
DY Run type
Thank you very much!

Good luck to the next Weekly Coordinator: Krzysztof Kurek!
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018

September 28 and 29 - Prévessin
1st Day:

- **Polarization** -69.09 % upstream, +75.48 % downstream
- No beam yesterday during 9h
- Since, very smooth data taking
From 8h30 to 14h56: no beam;

At 11h30: we created an access for a COMPASS visit;

At 15h45: polarization -69.09 % upstream, +75.48 % downstream (previous -67.27 +75.09)

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
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<tr>
<td>Trigger test</td>
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<tr>
<td>Drell-Yan</td>
<td>69</td>
<td>29</td>
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<tr>
<td>Total</td>
<td>1456</td>
<td>98</td>
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</table>
At 17h21: DY data taking with 2-spill structure
At 18h28: Errors SrcID 259 DC04Y1, a reload solved problem

Lower rates in DC04Y1:

Beam information
- SC 40.8s, 2 spills
- T6 intensity 127.4

<table>
<thead>
<tr>
<th>Run type</th>
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<tr>
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<tr>
<td>Drell-Yan</td>
<td>1159</td>
<td>1112</td>
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<tr>
<td>Total</td>
<td>1659</td>
<td>1112</td>
</tr>
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</table>

4 runs with + 200 spills

LOAD -A 259 recovered the situation:
29/10: Night shift (00h to 8h)

- At 02:39: "noise"? on HC01
- At 7h15: reloading of SrID
- 380 PMM (100% MurphyTV error): problem solved

**Beam information**

- SC 40.8s, 2 spills (except btw 02h15 and 03h15:1 spill/cycle)
- T6 intensity 120.8

<table>
<thead>
<tr>
<th>Run type</th>
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<th>Good Spills</th>
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<tr>
<td>Trigger test</td>
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<td>0</td>
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<tr>
<td>Drell-Yan</td>
<td>1747</td>
<td>1738</td>
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<tr>
<td>Total</td>
<td>1747</td>
<td>1738</td>
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</table>

9 runs with + 200 spills
At $\approx 12h$ : DC01 HV was lost during 10 min and MM HV during $< 5$ min.

A. Magnon notes : threshold signal lost for DC0,1,4 this morning bwt 4h45 and 8h08 and 09h08 and 10h16.
29/10 : Day shift (08h to 16h)

- At $\approx 12h$ : DC01 HV was lost during 10 min and MM HV during $< 5$ min.

- A. Magnon notes : threshold signal lost for DC0,1,4 this morning bwt 4h45 and 8h08 and 09h08 and 10h16.
29/10 : Day shift (08h to 16h)

- At ≈ 12h : DC01 HV was lost during 10 min and MM HV during < 5 min.

- A. Magnon notes : threshold signal lost for DC0,1,4 this morning bwt 4h45 and 8h08 and 09h08 and 10h16.
29/10 : Day shift (08h to 16h)

- At \( \approx 12h \) : DC01 HV was lost during 10 min and MM HV during < 5 min.

- A. Magnon notes : threshold signal lost for DC0,1,4 this morning bwt 4h45 and 8h08 and 09h08 and 10h16.

**Beam information**

- SC 28.8s, 2 spills

**Software information by A. Kveton**

"Since BeamMon is computationally expensive, it makes sense to run it on pccorc30, which has the most resources out of all the pccorc machines. I installed the missing lib for fast fourier transform and modified the script so it does not tunnel to pccorc35 any longer."

<table>
<thead>
<tr>
<th>Run type</th>
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<tr>
<td>Trigger test</td>
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<td>0</td>
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<tr>
<td>Drell-Yan</td>
<td>1480</td>
<td>1475</td>
</tr>
<tr>
<td>Total</td>
<td>1475</td>
<td>1481</td>
</tr>
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</table>

C-J. Naïm September 28 and 29, 2018
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm
CEA/Saclay - LLR/Ecole Polytechnique
28/09/2018 to 05/10/2018

September 29 and 30 - Prévessin
29/10 : Evening shift (16h to 00h)

- At 17:03: "I changed the references for all trigger/veto related cool plots to 286390" by Moritz.
- At 20h07: High error rate on SrcID 432 (RW1): "GeSiCa: spill was skipped" on port 0 GeoID 5 and (mostly) 6.

**Beam information**
- 16:30 LHC filling: SC 37.2s, 1 spill
- 17:39 LHC filling finished: SC 28.8s, 2 spills
- 18:55 LHC filling: SC 37.2s, 1 spill
- 19:54 LHC filling finished: SC 28.8s, 2 spills

<table>
<thead>
<tr>
<th>Run type</th>
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<th>Good Spills</th>
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<tr>
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<td>0</td>
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<tr>
<td>Drell-Yan</td>
<td>1534</td>
<td>1509</td>
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<tr>
<td>Total</td>
<td>1534</td>
<td>1509</td>
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</table>

5 runs with +200 spills!

C-J. Naïm
September 29 and 30, 2018
30/10 : Night shift (00h to 08h)

- At 02h44 : Same problem previous day : connection lost for DC04 Thres. but solved with powercycle of pccofe20.
30/10 : Night shift (00h to 08h)

- At 02h44 : Same problem previous day : connection lost for DC04 Thres. but solved with powercycle of pccofe20.
- At 05h41 : problem on MM port 380 : simple on/off of LV and LOAD -A 380 didn’t work. LOAD of pccofe15 solved the problem. Ref.[22/09 - 14/09]

Beam information
- SC 28.8s, 2 spills
- T6 intensity 119.0

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
<th>Good Spills</th>
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<tbody>
<tr>
<td></td>
<td>7</td>
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</tr>
<tr>
<td>Trigger test</td>
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<td>0</td>
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<tr>
<td>Drell-Yan</td>
<td>1581</td>
<td>1521</td>
</tr>
<tr>
<td>Total</td>
<td>1588</td>
<td>1521</td>
</tr>
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</table>

7 runs with +200 spills!

C-J. Naïm  
September 29 and 30, 2018
30/10 : Day shift (08h to 16h)

- At 09h26 : MW1 Station 1 and 2 Under voltage : required access

**Intervention information**

- At 11h16 : access created, Mod. A734N of C.A.E.N Mod. SY527 changed for MW1 : problem solved !

- At 13:44 : MWPC in nominal HV
30/10 : Day shift (08h to 16h)

- At 09h26 : MW1 Station 1 and 2 Under voltage : required access

**Intervention information**

- At 11h16 : access created, Mod. A734N of C.A.E.N Mod. SY527 changed for MW1 : problem solved !

- At 13:44 : MWPC in nominal HV

**Beam information**

- SC 32.4s, 2 spills
- T6 intensity 123.2

<table>
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<th>Run type</th>
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<tr>
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<td><strong>Drell-Yan</strong></td>
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<td>603</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1348</td>
<td>603</td>
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</table>

5 runs with +200 spills !
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018

September 30 and 1 October - Prévessin
30/09 : Evenning shift (16h to 00h)

→ Very good shift !

Beam information

- 17:35 SC 28.8s, 2 spills
- 19:40 LHC filling: SC 37.2s, 1 spill
- 21:13 LHC filling finished: SC 28.8s, 2 spills
- 23:51 no beam: PS POPS tripped

<table>
<thead>
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<th>Good Spills</th>
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<td>1606</td>
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<tr>
<td>Total</td>
<td>1647</td>
<td>1606</td>
</tr>
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</table>

8 runs with +200 spills !
30/09: Night shift (00h to 16h)

- Change needed of Sci-Fi references
30/09 : Night shift (00h to 16h)

- Change needed of Sci-Fi references

**Beam information**

- SC 28.8s, 2 spills
- T6 intensity 120.8

<table>
<thead>
<tr>
<th>Run type</th>
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<tr>
<td>Trigger test</td>
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<td><strong>Drell-Yan</strong></td>
<td><strong>1878</strong></td>
<td><strong>1768</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1889</strong></td>
<td><strong>1768</strong></td>
</tr>
</tbody>
</table>

8 runs with +200 spills!
01/10 : Day shift (08h to 16h)

Persisting problems gives 100.0% errors in MurphyTV

- RW SourceID 432 (see 62101) fixed by LOAD - A 2006 and LOAD - A 432 (NB : non-fatal problem)
- MM SourceID 380,381 (see 62110) fixed by power-cycling pccofe15 (reseting Gesica)

Beam information

- SC 31 s, 1 spills
- T6 intensity 132.2

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
<th>Good Spills</th>
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<td></td>
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<tr>
<td>Trigger test</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Drell-Yan</strong></td>
<td><strong>844</strong></td>
<td><strong>834</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>875</strong></td>
<td><strong>843</strong></td>
</tr>
</tbody>
</table>

1 runs with +200 spills
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018

October 1 and 2 - Prévessin
01/10 : Evening / Night shift (16h to 08h)

Stop data taking at 22:00 : Target problem

- He4 pumps stopped: it was triggered by low oil level in the primary pump;
- Technicians were called to refill → fixed at Midnight (with 3 L)
- Polarization in progress since this night.

Thanks to the target group for their work!

C-J. Naïm
October 1 and 2, 2018
01/10 : Evening /Night shift (16h to 08h)

Stop data taking at 22:00 : Target problem

- He4 pumps stopped : it was triggered by low oil level in the primary pump ;
- Technicians were called to refill → fixed at Midnight (with 3 L)
- Polarization in progress since this night.

Thanks to the target group for their work!

Maintenance needed

- A technician came this morning to analyse the situation ;
- No maintenance of pump since 2013 ;
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018

October 2 and 3 - Prévessin
01/10 : Evening shift (16h to 00h)

- At 19h22: we created an access;
- MWPC problem solved at 21h40 during this access (PA05U1 SrcID 454 port 6: the port reincluded in database).

**General comment**

- At 21h00: for the new period the veto timing for the LAST and LASLAST was shifted by -1.4ns;

**Beam information**

- No beam
- Trigger efficiency
Night shift (00h to 08h)

- At 00h58: polarization -66.68% upstream, +73.42% downstream: we went to dipole;
Weekly coordination
2018 Drell-Yan data taking

C-J. Naïm

CEA/Saclay - LLR/Ecole Polytechnique

28/09/2018 to 05/10/2018

October 3 and 4 - Prévessin
01/10: Evening shift (16h to 00h) MD

- At 15h40: microwave stopped -69.5% upstream and +75.8% downstream
- At 20h: new problem on MWPC SrcID 460 p12
01/10: Evening shift (16h to 00h) MD

- At 15h40: microwave stopped -69.5% upstream and +75.8% downstream
- At 20h: new problem on MWPC SrcID 460 p12

Beam information
- Low intensity (40mm)

General comment, run type:
- DAQ test
- Detector test: CEDAR pressure scan at low Intensity
- Trigger test
Night shift (00h to 08h)

- At 01h01 : Drell-Yan run (High intensity)

Beam information
- SC 28.8s, 2 spills
- T6 intensity 117.3

General comment, run type :
- Persisting errors on MWPC and STRAW

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
<th>Good Spills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector test</td>
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<td>Drell-Yan</td>
<td>1364</td>
<td>1344</td>
</tr>
<tr>
<td>Total</td>
<td>1394</td>
<td>1371</td>
</tr>
</tbody>
</table>

4 runs Drell-Yan with + 200 spills

C-J. Naïm
October 3 and 4, 2018
Day shift (08h to 16h)

Intervention

At 12h46: we created an access to solve the persisting errors on MWPC and STRAW:

- MWPC: checking on the CATCH side (SrcID 460, port 12) did not help but a power cycle solved the problem (in the first time);
- STRAW: cleaning the connection port 12 on the catch side of SrcID 322 solved the problem for now;
- ECAL2: cleaning the connection solved the problem (reading problem not LV)

Beam information

- SC 40.8s, 1 spill
- T6 intensity 120.5

Comments

Some noise in MA02X3 since yesterday

C-J. Naïm

October 3 and 4, 2018
### Day shift (08h to 16h)

<table>
<thead>
<tr>
<th>Run type</th>
<th>Recorded Spill</th>
<th>Good Spills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>169</td>
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<tr>
<td>Drell-Yan</td>
<td>629</td>
<td>601</td>
</tr>
<tr>
<td>Total</td>
<td>792</td>
<td>601</td>
</tr>
</tbody>
</table>

1 run Drell-Yan with + 200 spills
Drell-Yan Data are taking (I hope it will smooth !) ;
(Same) MWPC problem is still here : access after this DM ;
Greg Mattson will do data analysis of CEDAR.