

# TRD weekly meeting

## week 33: 14 – 21 August 2017

- Fill summary
- TRD performance
- AOB

# Fill summary

Fill Number ▼	Stable Beams Declared	Filling Scheme Name	Stable Beams Start	Stable Beams End	Stable Beams Duration	Data Taking Duration	Pause Duration	SOR/EOR Duration	Efficiency (%)
6106	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	20/08/2017 16:11:00	21/08/2017 04:51:54	12:40:54	09:10:50	00:02:53	00:09:29	72.39
6105	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	20/08/2017 00:59:28	20/08/2017 04:36:10	03:36:42	02:52:42	00:00:00	00:02:10	79.70
6104	Yes	25ns_1548b_1536_1396_1456_96bpi_17inj	19/08/2017 13:11:11	19/08/2017 22:19:36	09:08:25	07:08:30	00:03:06	00:17:16	78.13
6098	Yes	25ns_1932b_1920_1745_1820_96bpi_21inj	18/08/2017 14:40:18	18/08/2017 16:50:48	02:10:30	01:43:38	00:00:00	00:08:36	79.41
6097	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	17/08/2017 23:42:27	18/08/2017 11:37:48	11:55:21	10:17:50	00:02:08	00:36:04	86.37
6096	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	17/08/2017 17:36:20	17/08/2017 20:48:49	03:12:29	01:58:48	00:01:27	00:08:59	61.72
6094	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	17/08/2017 13:06:02	17/08/2017 14:58:42	01:52:40	01:45:34	00:00:42	00:02:07	93.70
6093	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	17/08/2017 07:30:09	17/08/2017 09:40:41	02:10:32	01:57:39	00:04:22	00:02:09	90.13
6091	Yes	25ns_1740b_1728_1570_1636_96bpi_21inj	16/08/2017 20:20:06	17/08/2017 02:35:25	06:15:19	05:00:29	00:05:12	00:17:49	80.06
6090	Yes	25ns_1548b_1536_1396_1456_96bpi_17inj	16/08/2017 11:09:56	16/08/2017 17:08:57	05:59:01	04:43:47	00:04:08	00:22:30	79.04
6089	Yes	25ns_1356b_1344_1221_1272_96bpi_17inj	16/08/2017 01:06:23	16/08/2017 07:45:00	06:38:37	05:59:53	00:02:38	00:19:38	90.28
6086	Yes	25ns_1356b_1344_1221_1272_96bpi_17inj	15/08/2017 09:56:53	15/08/2017 12:44:32	02:47:39	02:06:20	00:00:22	00:07:09	75.36
6084	Yes	25ns_1164b_1152_1047_1092_96bpi_13inj	14/08/2017 23:36:57	15/08/2017 05:37:32	06:00:35	05:30:52	00:00:43	00:10:40	91.76
6082	Yes	25ns_985b_973_872_908_96bpi_15inj	14/08/2017 14:09:20	14/08/2017 20:11:14	06:01:54	03:47:46	00:02:50	00:38:55	62.94

Long-time fills with different filling schemas.

⇒ Continue with physics fills (filling schemas might change)

# TRD performance

- TRD trigger validation is under inves
  - HJT threshold scan was done (G.W., A.B.):  
fill 6098 (18/08) 1932b, 276348, 2.25 GeV/c:  $257579/28=9199$   
run 212324, 1.75 GeV/c:  $255610/56=4564$   
(target 4250)  
fill 6105 (20/08) 1740b, 276462 (3h), 276506 (5h), 276508 (4h) 1.5 GeV/c,  
  
Sum/Overall average:  $6580106/1997=3295$  (3000 is maximum from Martino, preliminary)  
  
Martino G.: Hence, I propose to keep such a threshold and activate HJT in the upcoming fill.  
  
⇒ under finalization
  - ambient pressure alarms will be reacted after one hour of data taking with the new triggering

# TRD performance

- LMEs

- Stable (4) and one new LME (12-2-1A) observed in fill 6106

- ⇒ ⇒ Tests and patching will be done soon

- Alarms due to increase of line resistance from

- alidcswie060-Channel4 / TRD-SEC12-LV/SEC12L01LV/SEC12L01D1V8: 8.6

- alidcswie062-Channel4 / TRD-SEC12-LV/SEC12L45LV/SEC12L45D1V8: 8.8

- ⇒ threshold will be increased on 0.2

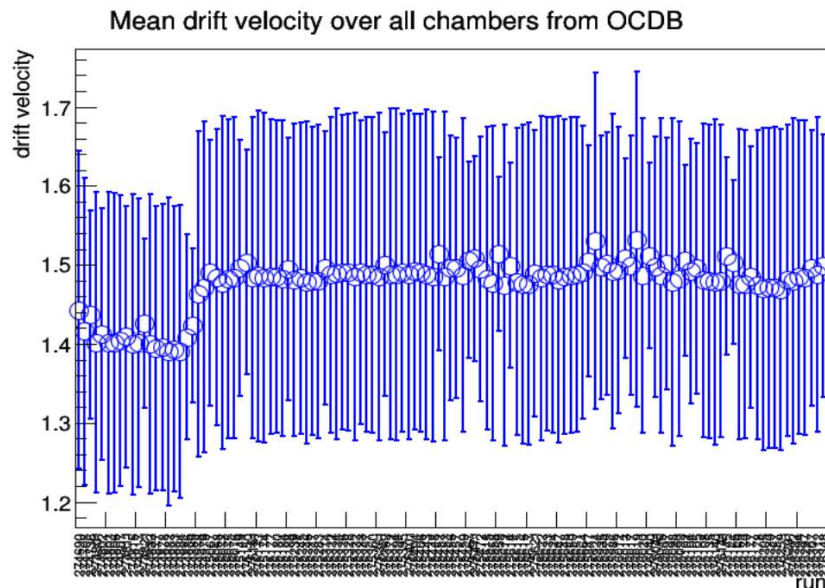
# TRD performance, SORs

- Fill 6104, EOR 276429: TRD busy at HLT mode A runs 276430, 276431 TRD sodNotReceived, next run 276435 OK with HLT mode C:  
Hanz Beck (19/08 15:56) : HLT was switched to mode A, TRD problem might be related.
- Fill 6105. Ionut Cristian (20/08 01:16): 01-0-3 anode HV channel recovered but still showing as tripped in FSM (which induced TRD to be in MIXED) – > DIM server restarted
- Fill 6106. Ionut Cristian (20/08 19:28): FSM miscommunication showing TRD in MIXED. Today, and yesterday night we had problems with TRD HV shown as MIXED in FSM, although the detector looked fine in WinCC panels. After restarting the DIM server, DIM clients and FSM several times, we managed to bring TRD back. Now the detector is included in the PHYSICS run.
- Grazia (RC): For the moment (as a temporary patch) we will call the TRD HV oncall at each Squeeze in order to be ready to react in case of problems. We will remove this instructions when the situation will be stable again.  
  
⇒ Detailed investigation is needed!

# AOB: presentation of TRD performance on RC meeting 22/08

- Reason: the new gas mixture was injected more than two weeks ago and therefore I think you should have the feedback of the last two weeks of operation.

- $v_{drift} \approx 1.49$



- HV is fixed, e-mail from Yv.P.
- Triggers from run 275443 (Martino G.):  
HJT 18000 (4250 (T.D.TRD talk on AW), HNU 1165 (780), HQU 420 (650)  $\implies$  updates are going on
- TRD operation: stable before the weekend.  
 $\implies$  Mixed TRD HV state is under investigation.