

Anode voltage scan for TPC

A.Lebedev, BNL, 07.15.09.

Following an advise from TPC review we did anode voltage scan during low luminosity pp2pp run.

Here a list of runs and voltages for inner and outer sector. I checked a validity of appropriate voltages through Slow Control Archive.

For TPC analysis special trigger -> VPDMB was chosen, other TPC events were taken with pp2pp

| Date | Time | Run# | Voltage, V | # events | # events | Comments |
|-------|-------------|----------|-------------|----------|----------|----------|
| | In/Out | | Inner/Outer | pp2pp | VPDMB | |
| 07.02 | 00:53 01:04 | 10183008 | 1120/1390 | | 250K | |
| | 01:07 01:18 | 10183009 | 1100/1390 | | 250K | |
| | 01:22 01:34 | 10183011 | 1080/1390 | | 250K | |
| | 01:35 01:41 | 10183012 | 1060/1390 | | 124K | |
| | 01:44 02:03 | 10183013 | 1135/1390 | 778K | 179K | |
| | 02:04 02:17 | 10183014 | 1135/1390 | 484K | 117K | |
| | 02:20 03:12 | 10183015 | 1135/1390 | 2M | 472K | |
| | 03:13 04:08 | 10183016 | 1135/1390 | 2M | 492K | |
| | 04:10 05:09 | 10183017 | 1135/1390 | 2M | 504K | |
| | 05:23 06:19 | 10183018 | 1135/1390 | 2M | 456K | |
| | 06:27 07:27 | 10183020 | 1135/1390 | 2M | 473K | |
| | 07:29 08:32 | 10183021 | 1135/1390 | | 482K | |
| | 08:55 09:07 | 10183026 | 1040/1390 | | 198K | |
| | 09:10 09:46 | 10183027 | 1135/1390 | 1.39M | 255K | |
| 07.02 | 09:53 11:24 | 10183028 | 1135/1390 | | 618K | |
| | 11:27 11:45 | 10183029 | 1020/1390 | | 250K | |
| 07.02 | 11:49 12:07 | 10183030 | 1135/1345 | | 250K | |
| | 12:09 12:27 | 10183031 | 1135/1325 | | 250K | |
| 07.02 | 14:20 15:34 | 10183037 | 1170/1390 | 2M | 437K | |
| | 15:35 15:42 | 10183038 | 1170/1390 | 160K | 35K | |
| 07.02 | 18:52 18:59 | 10183052 | 1135/1270 | | 150K | |
| | 19:03 19:15 | 10183053 | 1135/1240 | | 250K | |

| | | | | | | | |
|-------|-------|-------|----------|-----------|-------|------|---------|
| 07.02 | 19:17 | 19:30 | 10183054 | 1135/1220 | | 250K | |
| | 19:32 | 19:45 | 10183055 | 1135/1195 | | 250K | |
| 07.02 | 19:55 | 20:09 | 10183056 | 1060/1390 | | 250K | |
| | 20:12 | 20:25 | 10183057 | 1000/1390 | | 250K | |
| 07.02 | 20:33 | 20:42 | 10183058 | 1120/1390 | | 250K | |
| | 20:46 | 20:59 | 10183059 | 1120/390 | | 210K | |
| 07.02 | 23:22 | 23:37 | 10183071 | 1120/1390 | | 250K | |
| | 23:39 | 23:55 | 10183072 | 1100/1390 | | 250K | |
| 07.03 | 01:30 | 01:47 | 10184004 | 1080/1390 | | 250K | |
| | 01:50 | 02:06 | 10184005 | 1060/1390 | | 250K | |
| 07.03 | 02:08 | 02:26 | 10184006 | 1040/1390 | | 250K | |
| | 02:28 | 02:38 | 10184007 | 1020/1390 | | 250K | |
| 07.03 | 02:43 | 02:44 | 10184008 | 1170/1390 | | 3.1K | pp2pp |
| | 02:52 | 03:11 | 10184009 | 1135/1345 | | 250K | |
| 07.03 | 03:12 | 03:16 | 10184010 | 1135/1325 | | 41K | |
| | 03:17 | 03:27 | 10184011 | 1135/1325 | | 250K | |
| 07.03 | 03:33 | 03:47 | 10184012 | 1135/1300 | | 181K | |
| | 04:09 | 04:52 | 10184016 | 1170/1390 | 1.85M | 297K | pp2pp |
| 07.03 | 04:53 | 05:43 | 10184017 | 1170/1390 | 2M | 318K | pp2pp |
| | 05:45 | 06:36 | 10184018 | 1170/1390 | 2M | 457K | pp2pp |
| 07.03 | 06:37 | 07:28 | 10184019 | 1170/1390 | 2M | 475K | pp2pp |
| | 07:30 | 08:24 | 10184020 | 1170/1390 | 2M | 473K | pp2pp |
| 07.03 | 08:25 | 08:30 | 10184021 | 1170/1390 | 181K | 43K | pp2pp |
| | 08:46 | 08:59 | 10184024 | 1135/1240 | | 250K | |
| 07.03 | 09:03 | 09:16 | 10184025 | 1135/1220 | | 250K | |
| | 09:19 | 09:32 | 10184026 | 1135/1195 | | 250K | |
| 07.03 | 09:35 | 09:44 | 10184027 | 1135/1270 | | 168K | |
| | 09:47 | 10:52 | 10184028 | 1170/1390 | | 978K | bad run |

vpdmb bad run!!! - >voltage drop 1170->1135 after ~10'

| | | | | | | | |
|-------|-----------------------------------|-------|----------|-----------|-------|------|---------------|
| 07.03 | 10:55 | 11:54 | 10184030 | 1135/1390 | 2M | 451K | pp2pp |
| | 11:55 | 12:53 | 10184031 | 1170/1390 | 2M | 440K | pp2pp bad run |
| | voltage jump 1135->1170 at ~12:00 | | | | | | |
| 07.03 | 12:54 | 13:53 | 10184032 | 1170/1390 | 2M | 425K | pp2pp |
| | 13:54 | 14:53 | 10184033 | 1170/1390 | 2M | 410K | |
| 07.03 | 14:53 | 14:54 | 10184034 | 1170/1390 | .3K | | pp2pp |
| | 19:05 | 19:07 | 10184049 | 1000/1390 | | 30K | |
| 07.03 | 19:46 | 20:02 | 10184050 | 1000/1390 | | 250K | |
| | 20:04 | 20:38 | 10184051 | 1135/1170 | | 500K | |
| 07.03 | 20:41 | 20:44 | 10184052 | 1170/1390 | | 32K | |
| | 20:50 | 21:11 | 10184053 | 1170/1390 | | 250K | |
| 07.03 | 21:12 | 21:33 | 10184054 | 1170/1390 | | 250K | |
| | 23:34 | 23:42 | 10184068 | 1170/1390 | | 113K | |
| | | | | | | | |
| 07.04 | 00:29 | 00:30 | 10185001 | 1170/1390 | 27K | | pp2pp |
| | 00:42 | 01:28 | 10185004 | 1170/1390 | 2M | | pp2pp |
| 07.04 | 01:29 | 02:16 | 10185005 | 1170/1390 | 2M | | pp2pp |
| | 02:17 | 03:10 | 10185006 | 1170/1390 | 2M | | pp2pp |
| 07.04 | 02:43 | 02:44 | 10185013 | 1170/1390 | 10K | | pp2pp |
| | 04:54 | 04:59 | 10185014 | 1170/1390 | | 74K | |
| 07.04 | 05:28 | 06:14 | 10185018 | 1170/1390 | 2M | | pp2pp |
| | 06:19 | 07:04 | 10185019 | 1170/1390 | 2M | | pp2pp |
| 07.04 | 07:05 | 07:48 | 10185020 | 1170/1390 | 2M | 157K | pp2pp |
| | 07:58 | 08:32 | 10185023 | 1170/1390 | 1.46M | 112K | pp2pp |

We have voltage steps for

Inner, V 1000, 1020, 1040, 1060, 1080, 1100, 1135, 1170

Outer, V 1170, 1195, 1220, 1240, 1270, 1300, 1325, 1345, 1390