



TPC commissioning runs

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Mauro Caravati

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- The data taking program
- The up to now data taking campaign
- Usefull informations

The data taking program

- **Single phase** (done)

- laser runs vs V_{bias} X SPE AND waveform studies
- source runs + background vs V_{bias} X Resolution study
- source runs + background vs E_{drift} X LY and Quenching
- runs at different source position X geometrical response study
- runs X exsotic study (e.g. Alessandro effect)

- **Double phase** (to be done)

- runs X gas pocket formation study and optimizzation
- source runs + background vs E_{drift} X LY AND S2 (S1) studies
- source runs + background vs $E_{\text{electrolum}}$ X S2 (S1) studies

The up to now data taking campaign

Run Number	SER	Events	Run Type	Vbias	Times	HHV	Gas Pocket	Channel Map	Comments
792		100k	laser	top = 34 bottom = 68	t_start: 15:36 t_stop: 16:01	A = 50 V R = -25 V K = -250 V	OFF	channelmapping_Na	E_drift = 50 V/cm Potentiometer = 12.0
793	792	50k	Background	top = 34 bottom = 68	t_start: 16:08 t_stop: 16:15	A = 50 V R = -25 V K = -250 V	OFF	channelmapping_Na	E_drift = 50 V/cm threshold as 778
794	792	100k	Am241	top = 34 bottom = 68	t_start: 16:21 t_stop: 16:39	A = 50 V R = -25 V K = -250 V	OFF	channelmapping_Na	E_drift = 50 V/cm threshold as 778 Front
795		100k	laser	top = 34 bottom = 68	t_start: 17:07 t_stop: 17:32	A = 100 V R = -50 V K = -500 V	OFF	channelmapping_Na	E_drift = 100 V/cm Potentiometer = 12.0 (after noise adjustment in bottom channels)
796	795	60k	Background	top = 34 bottom = 68	t_start: 17:36 t_stop: 17:45	A = 100 V R = -50 V K = -500 V	OFF	channelmapping_Na	E_drift = 100 V/cm threshold as 778
797	795	100k	Am241	top = 34 bottom = 68	t_start: 17:48 t_stop: 18:08	A = 100 V R = -50 V K = -500 V	OFF	channelmapping_Na	E_drift = 100 V/cm Front threshold as 778

From ReD-Run DB

- **only in single phase** (i.e. boiler switch off)
- nine days of data taking (from 05 december)
- 98 runs with different V_bias – E fields – source position
 - 35 laser run (100k events)
 - 18 background (50k events)
 - 42 Am241 (100k events)
 - 1 pulser – Cs137 – Ba133

Usefull information

Here the on line runs data base:

<https://docs.google.com/spreadsheets/d/1nOHoC6s6uFP5HAYPTEmambwFxtTo43ctW9sF6GGZeyg/edit#gid=0>

All raw data are on Roma 3 cluster:

- ask Simone (simone.sanfilippo@roma3.infn.it) for credentials
- lot of runs already processed (in .root form)

Instructions for data analysis (by Nicola):

- [Setting of the data analysis environment \(DocDB #3082\)](#)
- [more here \(DocDB #2950\)](#)