

04. Mai 2016

Unterg rund LC1 $d = 372 \text{ cm } 0^\circ$

Beschleuniger aus, n-Quelle in Abschirmungen
im Kölle

2016-MAY-10 - 0keV-LC1-F6-1 493960.935

2016-MAY-13 - 0keV-LC1-F6-1 204476.985

HV Set to: 50 kV

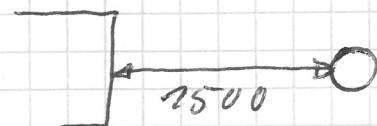
24. Mai 2016

Run 0 : Current Set to: 1 mA

Started at: 17:40

Verantwortlich: R. Nölke

LC1 at 7.5 m from source, 0°



2016-MAY-24 - 0keV-LC1-F6-1

Stop 18:30

Generator off R. Nölke

25. Mai 2016

Verantwortlich R. Nölle
Start NG 09:30
HV : 50 kV
Current : 1 mA

LC1 at 0° , 800 mm



Stopped NG at 11:40

Start NG : 13:31

HV : 40 kV

current : 1 mA.

LC1 at 0° , 1.5 m outside

EJ301-0 at 140° , 2m outside.

Stopped NG at 13:40 Due to Instability

Start at NG : 13:50

HV : 50 kV

Current : 2 mA

LC1 at 0° 1.5 m outside

EJ301-0 at 140° , 2m outside

Stopped at 22:00

(Took measurements ranging from 0° to 70°)

R. Nölle

26. Mai 2016

Vorant wortlich: S. Kharazmi 08:00

Start NG : 08:00

U_{HV} : 50 kV

Current : 2 mA

MS10 : LCI at 0°, 1.5m EJ 301 at 140°, 2m
Stop 09:20
start 09:28

Start NG : 10:59

HV : 50 kV

Current : 2mA

Added lead shield

MS11 : LCI at 0°, 1.5m EJ 301 at 140°, 2m

MS12 LCI at -10°, 1.5m EJ 301 at 140°, 2m

MS13 LCI at -20°, 1.5m EJ 301 at 140°, 2m .

Stop NG • 12:20

Start NG 13:20

MS14 LCI at -30°, 1.5m EJ 301 at 140°, 2m

MS15 LCI at -40° " "

short interrupt → # MS16 LCI at -50°, " " "

MS17 LCI at -60°, " "

Vorant wortlich : R. Nolte 15:40

MS18 LCI at 0°, 1.5m EJ 301 at 140°, 2m

MS19 LCI at 10°, " " "

MS20 LCI at 20°, " " "

MS21 LCI at 80°, " " "

MS22, 23 : error in Daq " " "

MS24 LCI at 90°, " " "

#26 LCI at 30° , 1,5 m, EF 307 at 140° 2m distance
#27 LCI at 40° , " "
#28 LCI at 50° , " "
#29 LCI at 60° , " "
#30 LCI at 70° , " "

BG; LCI at 0° , HV OFF, Rate ~ 60 Hz
WITH lead shield.

Switched off neutron generator at 21.00

May 27

27. Mai 2016

Started NG at ~9 AM, settings 50 kV, 1 mA

Measuring at 0° , high statistics run, Started 9:37

Start measurement in file MAY-27-1.ms

#MS1, file 160527-0937. Approximate rate
 $0.4 - 0.5$ Hz

Vacuum note lich: R. Nolte 09:30

~~#~~ a run with 5000 counts was taken at 12:48:43

NG: stopped at 12:48:

NG: Run at 13:15

#MS2, file 160527-1315 was written at 17:56:

Run with 5074 events.

NG: Stopped at 17:58

R. Nolte

30. Mai 2016

Verantwortlich:

S. Khurana

08:00 Uhr

Start NG: 8:30

U_{tr}: 60 kV → failed 9:30

Current: 2.2 mA

Start Nb at 10:15.

V_{NB}: 56 kV

Current: 2.2 mA

Start data taking at: 10:15.

Stop 16:02

LCT at 4100 mm, 0°



2016- MAY- 30- 2-5 MeV- LCT- FG- 1

verantwortlich: R. Nolte · 15:50

LCT with shadow cone 11m



2016- MAY- 30- 2-5 MeV- LCT- BG- 1

2016 - MAY - 30 - 2-5 MeV - LCT - FG - 2 (57 kV, 22mA)

FG - 3 (57 kV, 1 mA)

R. Nolte

31. Mai 2016

Verantwortlich: Silvin Kharana

08:00

Start Nr.: 09:45

U_{HV} : 50 kV

Current : 2.5 mA

Stop NG at 10:30, put in Bi-207

f - Calibration

²⁰⁷Bi : 2016- MAY- 31- 2.5 MeV- NE213- FG- 1

374.8 s

²²Na : 2016 - MAY_31_ 2.5 MeV_NE213_FG-2

337.9 s

¹³⁷Cs : 2016 - MAY_31_ 2.5 MeV- NE213_FG-3

162.8 s

Backgr.: 2016 - MAY_31_ 2.5 MeV- NE213_FG-4

Pulse - Height Distribution with DD (det. 19)

0°, 2000 mm with lead cap (2mm at front, 1mm on side)

LCA: 2500 mm, -50°

2.5 MeV RT: 15 686.859

2016 - MAY_31_ 2.5 MeV_Ne213_FG-4_MPA

Det 19, HU: 1954.3 V Shb ON

verantwortlich: R. Volte 17:00

Change ADC values to

ADC A 1mV/Ch \rightarrow 4096 Chn

ADC B 6.2mV/Ch \rightarrow 1024 Chn

Change HV to 1700 V Stab OFF

CG = 200

FG = 1.10

LCD Highgain 0.10

LCD CFD 0.05

CFD = 11.80

PMT Stab 7.08 Stab ON

CFD Strobe 4.90 4.95

HV Stab ON = 1702.6 V

16:39 Start Stab ON HV = 1704.0 V

Rate \sim 6000 cps BiDot, \sim 3cm in front
of detector

2016-MAY-31. 2.5 MeV - NE213 - FG-5. MPa

16:51 Stop RT = X 514.942 s

Stab ON HV = 1703.6 V

16:58 $d = 796$ mm from outside lead cage
to outside NG.

Stab ON HV = 1710.8 V

RT = 691.688 s

[FG-6]

7

[2016-MAY-31, 2.5MHz - NE213. FG7]

HU, Start ON = 1867.1V (1926)

Gain by factor 2 increased

File saved as : 2016-MAY-31-2.5MHz-NE213-FG7
≈ 20:00

NG operation stopped 20:00

D. Nolte

~~902 May 16~~

31. Mai 2016

γ -Kalibration w/o Pb cap

Bi-207 2016-07AY-31-2-5TeV-NE213-FG-8

$$t_c = 223.81 \text{ s}$$

Na-22 2016-07AY-31-2-5TeV-NE213-FG-9

$$t_c = 616.67 \text{ s}$$

~~Bi FG
-7~~ Cs-137 2016-07AY-31-2-5TeV-NE213-FG-10

$$t_c = 520.36 \text{ s}$$

Bdkg. 2016-07AY-31-2-5TeV-NE213-FG-11

$$t_c = 577.99 \text{ s}$$

Background w. th lead cap

2016-07AY-31-2-5TeV-NE213-FG-12

R. Wodke

01. Juni 2016

Verantwortlich : Silvia Khurana

Start NG : 08:10

U_{thr} : 50 kV

Current : 25 mA

Using NE213 in same configuration as yesterday:

0°, 794 mm. File:

2016 - MAY - 31 \ 2016 - JUN - 01 - 2 - 5MeV - NE213 - FG1.mpr

NG at 50 kV, 2.5 mA; LC1 at -50°, 2500 mm.

Moved NE213 to +150°, same distance

Moved LC1 to 0°, 1500 mm

Moved arm 1 to -140° and attached Purdue counter. Moved to 2000 mm (without lead shield)

Checked signals w/ scope. Looks good. Rate ~100 Hz

Voltages NE213 - 1926; -1076.0; Stab. 0V.

File name: 2016 - MAY - 31 \ 2016 - JUN - 01 - 2 - 5MeV - NE213 - FG2.mpr

Run time:

#F (LC1) counts:

File name Purdue counter: 160601-1341.dat

verantwortlich: R. Nolte 13:00

N6 stopped 20:00

R. Nolte

02. Juni 2016

Background at our position:

2016-JUN-02-2-5 MeV-NE213-FG-1

Pulse: 40 000 s

Verantwortlich: Silvia Khurana

Start Nr : 8:10

U_{HV} : 40 kV

Current : 0.5 mA

08:05 acquisition of Preamplifier stopped.

DAQ of NE213 stopped @ RT of 40 000 s

08:27 measurement started. Trig. rate ~ 130 Hz

LC1 trig. rate ~ 0.15 Hz

09:39 LC1 522. Rate ~ 0.12 Hz

→ 11.5 h → ETA 20.00

10:57 LC1 1016 → ETA 20.45 (Rate at start
somewhat higher)

11:35 LC1 1255 → ETA 21⁰⁰

13:04 LC1 1829 → ETA 21⁰³ ± 11 min

14:27 LC1 2367 → ETA 21⁰⁸ ± 8 min

16:04 LC1 2969 → ETA 21¹⁷ ± 5.7 min

New method ETA

21:23 ± 7 min.

Stopped Nr : 21:20

- Data file 2016-JUN-02-2-5 MeV-NE213-FG-2

R. Nolte

03. Juni 2016

Verantwortlich : Silvin Khurana

Start NG : 08:10

U_{HV} : 50 kV

Current : 0.5 mA

Verantwortlich R. Wolfe 08:30

08:07 Stopped BG on Purane det.

08:57 Started measurement. Rate $\sim 0.2 \frac{\text{Hz}}{\text{s}}$ $\rightarrow \sim 7\text{h}$

10:18 LC1 1080

13:06 LC1 3220

15:49 LC1 5317

Saved file to 2016-JUN-03-2-5-MeV-NE213-FG1.MPA

Change to 50 kV, 2 mA

16:09 Start measurement

17:44 LC1 5067

Saved to 2016-JUN-03-2-5-MeV-NE213-FG2.MPA

and changed name in preset

18:07 Started new measurement

18:53 1026 counts

Saved to 2016-Jun-03-2-5-MeV-NE213-FG3.MPA

Stopped NG at 21:30

Started Bkg at 21:35

R. Wolfe

Stopped Bkg at 14:15

Saved to 2016-Jun-03-2-5-MeV-NE213-FG4.MPA

04. Juni 2016

γ -calibration w/o lead caps

Background 2016-JUN-04_2-517eV_NE213_F6-1

$$t_c = 868.16 \text{ s}$$

Cs-137: 2016-JUN-04_2-517eV_NE213_F6-2

$$t_c = 586.58 \text{ s}$$

Bi-207 2016-JUN-04_2-517eV_NE213_F6-3

$$t_c = \cancel{300} 356.16 \text{ s}$$

Na-22 2016-JUN-04_2-517eV_NE213_F6-4

$$t_c = 868.14 \text{ s}$$