

04. Mai 2016

Unterg rund LC1 $d = 372\text{ cm}$ 0°
Beschleuniger aus, n-Quelle in Abschirmungen
im Koffer

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

2016-MAY-13 - 0 keV - LC1 - FG-1 204476.485

HV Set to: 50 kV

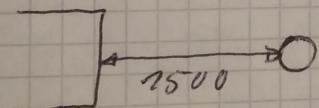
24. Mai 2016

Run 0 : Current Set to: 1 mA

Started at: 17:40

Verantwortlich: R. Nolte

LC1 at 7.5m from source, 0°



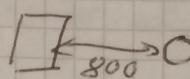
2015-MAY-29 - 0 keV - LC1 - FG-1

Stop 18:30

Generator off R. Nolte

25. Mai 2016

Verantwortlich R. Nolte
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 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. Nolte

26. Mai 2016

Verantwortlich: 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 08:20
Start 08:28

Start NGt : 10:55

HV : 50 kV

Current : 2mA

Added lead shield

MS11 : LCI at 0°, 1.5m EJ301 at 140°, 2m

MS12 LCI at -10°, 1.5m EJ301 at 140°, 2m

MS13 LCI at -20°, 1.5m EJ301 at 140°, 2m .

Stop NG • 10:20

Start NG 13:20

MS14 LCI at -30°, 1.5m EJ301 at 140°, 2m

MS15 LCI at -40°, " "

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

MS17 LCI at -60°, " "

Verantwortlich : D. Nofre 13:40

MS18 LCI at 0°, 1.5m EJ301 at 140°, 2m

MS19 LCI at 10°, " "

MS20 LCI at 20°, " "

MS21 LCI at 30°, " "

MS22, 23 : error in Daq " "

MS24 LCI at 40°, " "

#26 LCT at 80° , 1.5 m, EJ307 at 140° 2m distance
#27 LCI at 90° , " "
#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

#MS2, file 160527_0937. Approximate rate
 $0.4 - 0.5$ Hz

Verantwortlich: 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

#MS3, 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_{irr}: 60 kV → failed 9:30

Current: 2.2 mA

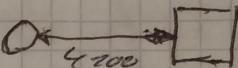
Start NB at 10:15.

V_{NB}: 56 kV

Current: 2.2 mA

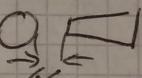
Start data taking wr: 10:15.

Stop 16.02

LCT at 4100 mm, 0° 

2016-17AY-30-2-5 MeV-LCT-FG-1

verantwortlich: R. Nolte - 15:50

LCT with shadow cone mm 

2016-17AY-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 Khurana

08:00

Start NG: 09:45

U_{HV} : 50 kV

Current : 2.5 mA

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

8- Calibration

²⁰⁷Bi : 2016-05-31_2.5MeV_NE213-FG-1

374.8 s

²²Na : 2016-05-31_2.5MeV_NE213-FG-2

337.9 s

¹³⁷Cs : 2016-05-31_2.5MeV_NE213-FG-3

162.8 s

Backgr.: 2016-05-31_2.5MeV_NE213-FG-4

Pulse - Height distribution with DD (det. 19)

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

LL1: 2500 mm, -50°

2.5 MeV RT: 15 686.859

2016-05-31_2.5MeV_NE213-FG-4.MPR

Det 19, HU=1954.3 U Shb ON

Charge ADC values to

ADC A 1mV/Ch \rightarrow 40% Chn

ADC B 4mV/Ch \rightarrow 1024 Chn

Charge HU to 1450 V Stab OFF

CG = 200

FG = 1.10

CCD High gain 0.10

CCD (FD) 0.05

CEO = 11.80

PMT Stab 7.08 Stab ON

(FD) Stab 6.90 6.95

HU Stab ON = 1702.6 V

16:39 Start Stab ON HU = 1704.0 V

Rate \sim 6000 cps Bi 207, \sim 3cm in front
of detector

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

16:51 Stop RT = 514.942 s

Stab ON HU = 1703.6 V

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

Stab ON HU = 1710.8 V

RT = 691.688 s

FG-6

7

[2016 MAY 31 2.5MV_NEZB_FG]

HV, Stab ON = 1867.1V (1926)

chain by factor 2 increased

F.I. saved as : 2016-MAY-31-2.5MV-NEZB_R
≈ 20:00

NG Operation stopped 20:00

P. Nolte

Ballyg.

Beach

γ -Calibration w/o Pb cap

31 Mai 2016

31. Mai 2016

Bi-207 2016-05-31_2-5 MeV_NE213_FG-8

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

Na-22 2016-05-31_2-5 MeV_NE213_FG-9

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

Cs-137 2016-05-31_2-5 MeV_NE213_FG-10

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

Bklyg. 2016-05-31_2-5 MeV_NE213_FG-11

$$t_c = 577.89 \text{ s}$$

Background w/ lead caps

2016-05-31_2-5 MeV_NE213_FG-12

R. Wölle

01. Juni 2016

Verantwortlich : Silvia Khurana

Start NG : 08:10

U_{14V} : 50 kV

Current : 25 mA

Using NE213 in same configuration as yesterday:

0°, F94 mm. File:

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

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

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 ~0004%

Voltages NE213 -926; ~1876.0; Stab. 0V.

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

Run time:

#7 (LC1) counts:

File name Purdue counter: 160601-1341.dat

verantwortlich: R. Nolte 13:00

NG stopped 20:00

R. Nolte

02.Juni 2016

Background at new position:

2016-JUN-02-25MeV-NE213-FG-1

Posit: 40 000 s

Verantwortlich: Silvia Khurana

Start NG : 8:10

U_{HV} : 40 kV

Current : 0.5 mA

08:05 acquisition of Perkin detector 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

→ 17.5 h → ETA 20.00

10:57 LC1 1015 → 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 NG : 21:20

Data file 2016-JUN-02-25MeV-NE213-FG-2

R. Nolte

03. Juni 2016

Verantwortlich : Silvin Khurana

Start NG : 08:10

UHV : 50 kV

Current : 0.5 mA

Verantwortlich R. Wolte 08:30

08:07 Stopped BG or Pulse out.

08:57 Started measurement. Rate ~ 0.2 Hz
 $\rightarrow \sim 7$ h

10:18 LC1 1028

13:06 LC1 3220

15:49 LC1 5317

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

Change to 50 kV, 2 mA

1609 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. Wolte

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_2-5MeV_NE213_F6_1
 $t_c = 868.76\text{s}$

Cs-137: 2016-JUN-04_2-5MeV_NE213_F6_2
 $t_c = 586.58\text{s}$

Bi-207 2016-JUN-04_2-5MeV_NE213_F6_3
 $t_c = \cancel{300} 356.16\text{s}$

Na-22 2016-JUN-04_2-5MeV_NE213_F6_4
 $t_c = 868.74\text{s}$