15 Oct 2012

12:40 Putting in ^{60}Co NT 902, 10 μCi

370 kBq.

13h12: => run 44 of agata started. Co source at the center.
The rate is 2kHz per crystal at the limit of Agata so there is a bit of dead time in the system.

2200 hrs / LYCCA is POWERED ✓

Elog Selection | Experiments Legnaro | Experiments GSI | General | Subsystems | Test | GSI |
2012-04-26 | 2012-08-27-perf-com | 2012-10-01 | 2012-10-01-fs | 2012-10-09 | 2012-10-09-fs |

2012-10-09 Not logged in

AGATA
ADVANCED GAMMA TRACKING ARRAY

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Message ID: **20** Entry time: **Mon Oct 15 23:06:48 2012**

Author:	Pushpendra P. Singh, p.p.singh@gsi.de
Type:	LYCCA
Subject:	LYCCA is powered (2200hrs / 15.10.12)

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LYCCA is powered (2200hrs / 15.10.12)
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LYCCA PMTs voltages / current:
->ToF Start (601 - 616) => 900 volts, 644 microA
->TaStart (500 - 503) => 300 volts, 250 microA (500), and 750 volts, 652 microA (501 - 503)
->ToF Stop (101 - 116, 201 - 216) => 700 volts, 250 microA

DSSD/CsI / HV / leakage current :
--------------------------------------------------------------------------------

Bias CsI wall: -34.9V
Bias DSSD wall: -49.8V
Bias TaDSSD: -49.9V

leakage current:
0/1: -431 nA       1/1: -3090 nA     2/1: -256 nA      3/1: -2130 nA
0/2: -2120 nA      1/2: -1055 nA     2/2: -1635 nA     3/2: -728 nA
0/3: -1990 nA      1/3: -962 nA      2/3: -1273 nA
0/4: -3750 nA      1/4: -263 nA      2/4: -1794 nA     3/4: -2090 nA
```

ELOG V2.7.2-2012

16/10/12

04:36: We finally got the 19 electronic boards running and the AGAVA!!!

↳ we then setup for the PuC calibration!!!

A short first file was taken earlier: it is save in /data/121016-gadea/run0001

↳ we have roughly 15 minutes → 60 counts

05h15: ↳ the 03C has one channel strange: C3 → we will investigate later...

07:57: The source is taken out of the cave.

~~MBS files~~

Close files. run_0002.

16/10/12.

18:05 Start the calibration with ^{54}Ni isomer 150 us 10^+

MBS file open /rida02/oct16-12/data/54Ni-iso-poscal-.lmd

AGATA files

~~19:02 in the middle of the run threshold change~~

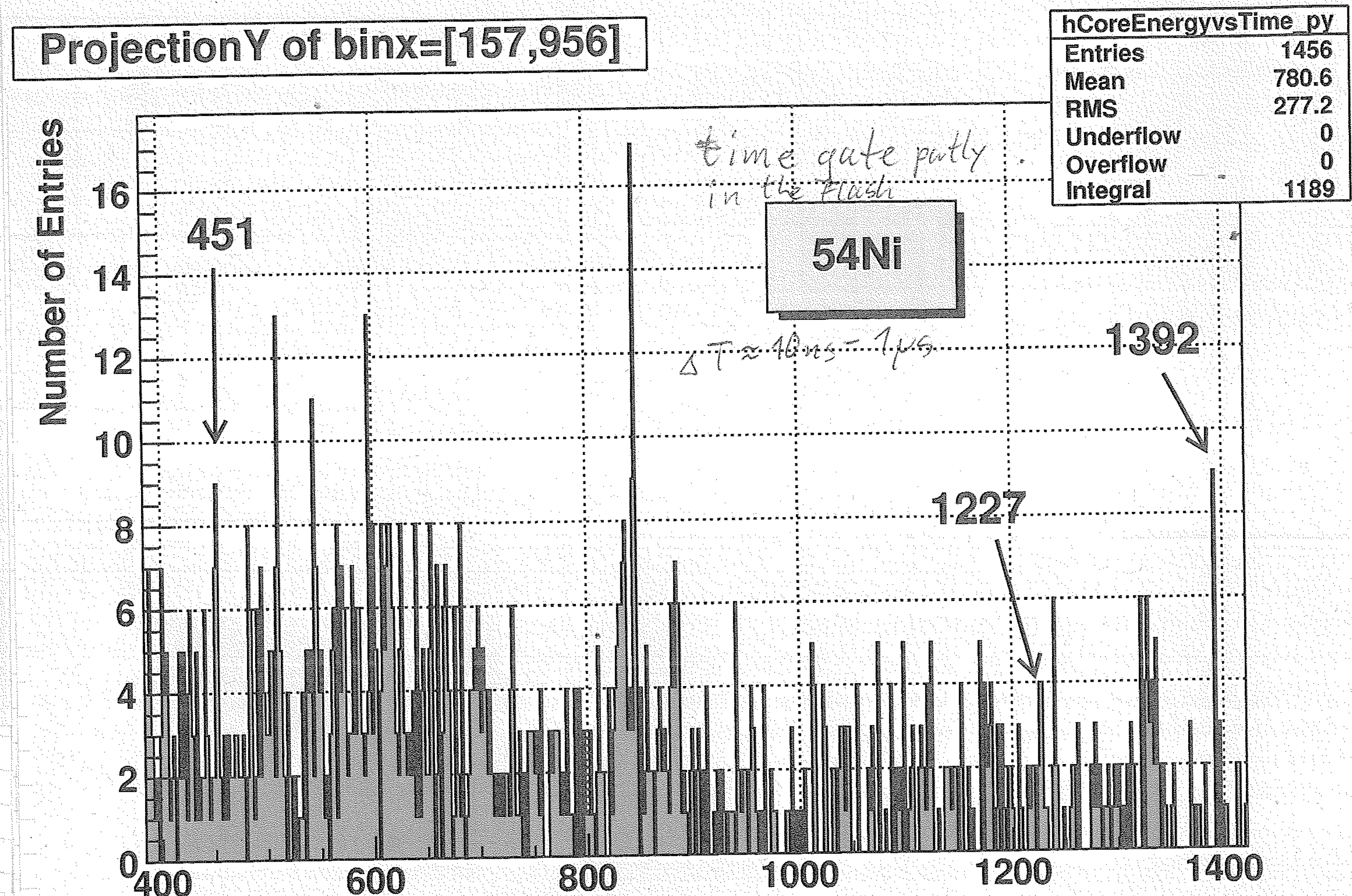
Run file 04. run_0004_54Ni_second in finish in validate all to flush the buffers

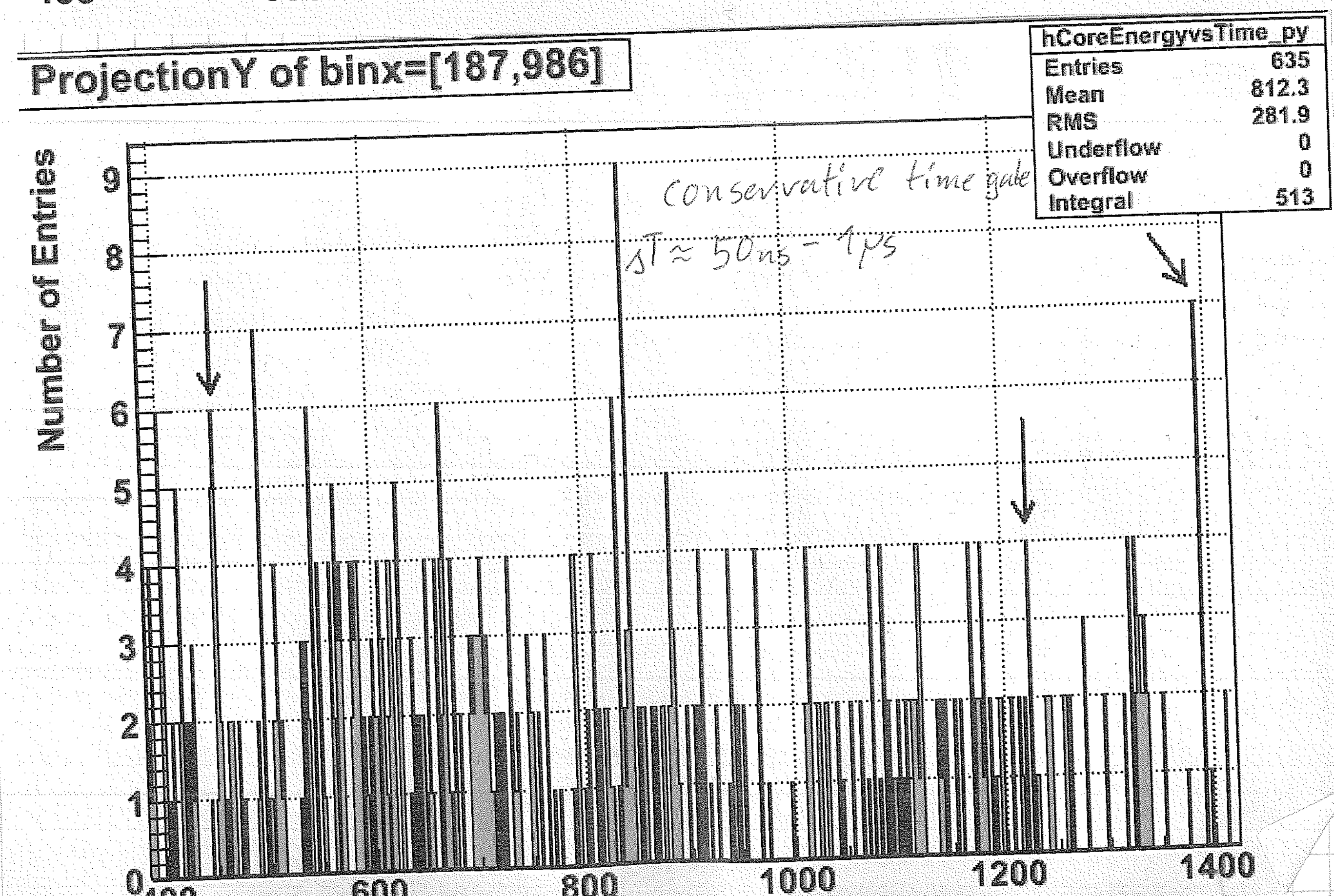
New file open with smaller buffer size

Short run with small buffer size → NOT WORKING
run: 0006
and 0007

New run with ~~old~~ previous size

20^{30} Analysis of ^{54}Ni setting shows expected isomer decay:





21:02: Trigger Scheme for normal measurements: (coulex)

Warning: this assumes that the setup of f_user has been done and is undamaged.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	A1	A2	A3	A4	ena	red
LMU-in:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	A1	A2	A3	A4		
Delay.:		30	40	0	0	0	0	0	27	15	0	0	0	0	0	0	0			0		ena	red
1:	O																					off	0
2:	O					or	or	or	or	or												off	0
3:	C			+																		on	10
4:	C				+																	off	0
5:	C	+																				off	0
6:	C		+		+																	off	0
7:	C		+	+																		off	0
8:	C		+		+				+	+												on	0
9:	C		+	+					+	+												on	0
10:	C		+																			on	10
11:	O																					off	0
12:	O																					off	0
13:	O																					off	0
14:	O																					off	0
15:	O																					off	0
16:	O																					off	0

TPAT: 0x0384 TCAL=off (1.0 Hz) CLOCK=on (10.0 Hz) SPILL-MIMIC=on

The SIS and the agata coin is set to normal (coulex) measurement.

21:30: file open for coulex.
Running overnight on the high momentum setting.
Almost no contamination from Mn observed.

06:00 Stop DAQ
SAS got stucked at the script
which stops Narval
(set action stop)
We restarted manually, by following
the same scrip SAS.
Data have been moved manually in run_0003_52Fe_Coulex

07^{00} Start RUN #10

The script for the watcher

—— 8:00 — CHANGE OF SHIFT ——

09^{18} BEAM STABLE WITH INTENSITIES FROM $2.9 - 3.2 \times 10^9$ ions/spill

FAST RAMPING 3 s spill + 1.64 s ramping

WITH 3.7×10^9 SPILL RATES:

SC21 L	1.7×10^6	(3 sec)
S4	8.7×10^9	(3 sec)
LYCCA	9.0×10^9	"

10^{31} STOP COUNTER MEASUREMENT

17/10/2012

11.09: START ISOMERIC RATIO MEASUREMENT
β- DECAY OF THE 12^+ & 0^+ in ^{52}Fe

Lmd file: ~~/52Fe_12decay~~ /52Fe_12decay_ar_0012

TRIGGERS: FRS (REDUCED) (10)
AGATA (OFF SPILL) (3)

Trig 8 and 10 activated

^{52}Fe implantation (# of counts) at the Scaler.

1.	689674	12:00
2.	2634025	12:04
3.	2416098	12:08
4.	2375214	12:12
5.	2742285	12:16
6.	2.635003	12:20

DO NOT USE THIS SET !!!
...

17/10/2012

12:23 We stop for because we have energy limit is too high for the implantation.

We will put a degrader and start over again the measurement.

ar file 12 was until now. We start again run 13

^{52}Fe Implantation (2nd try with the degrader) 12^+ state 45.9 s decay

r13 files 68 to 72

	# of counts	time
1.	1391679	12:30
2.	2.559552	12:32
3.	2.773776	12:36
4.	2.757.934	12:40
5.	2.718.585	12:44
6.	2.638.296	12:48
7.	2.551.774	12:52
8.	2.632.611	12:56

12:57 STOP 12^+ Measurement

g.s. decay measurement of ^{52}Fe
2h implantation : 160.86×10^6 ions

0^+ ^{52}Fe g.s. 8.27 h decay

^{52}Fe g.s. Measurement STARTED 13:00 r14 0073 file

IMPLANTATION TILL 14:58

AT 14:58 THE LMD MBS FILE WAS CLOSED

15:00 ONLY DECAY MEASUREMEN STARTED

r14 file 101

For those measurements the 14ABC were not in the trigger & does not affect the measurement

17:30 STOP DECAY MEASUREMENT r14 file 111

17h32: - CFD put at 60 mV

- trigger 3, 8, 9, 10 . 3 and 10 reduced

17h40m STARTED COULEX MEASUREMENT

AGATA file ~~8~~ ar15

MBS file 112

NOTE: THE MBS FILE HAS A WRONG NAME ^{52}Fe_dec_ar15 !!

TO BE RENAMED IF NECESSARY

- TARGET : HORIZONTAL 400 mg Au
- TRIGGER : 3 (RED10), 8, 9, 10 (RED10)

22:30: We discover there are no valuable events on AGATA => one of the ATO(RA4B) crashed. With Damien on phone, we restarted and opened new files for AGATA and MBS

MBS: RUN133
AGATA: RUN 15

AGATA RUN 17 } good new runs
MBS RUN 134 }

AGATA RUN 16 IS CRAP!

OBS: AGATA RUN 17 and MBS RUN 134 were started not at the same time: MBS RUN134 was started five minutes later...

18/10/12

8:30 gain of STM 0/0, chanels 1/2 was at 0, modified to normal 9

8:33 gain of STM 1/0, channels 1/2 was at 244, modified to normal 8

9:20 We closed the file AGATA RUN 17 as well as MBS

10:42 RUN 18 has been closed

10:45 RUN 19 is on...

17.53 START RUN 20

19/10/2012

8:25 STOP RUN 20 due to AGATA 01B problems

8:40 STAR RUN# 21

Summary:
Dino discovered remotely that 01B was firing like hell (~100 kHz); he stopped this channel. 01C is also having troubles; should remove LV to cluster #01 !!!

Stopped run but DAQ hung for unknown reasons; data were moved manually to directory run_0020. Had to kill narval and restart it.

9:00 STOPPED RUN# 21

— PARASITIC BEAM FROM 9:00 TO 11:00

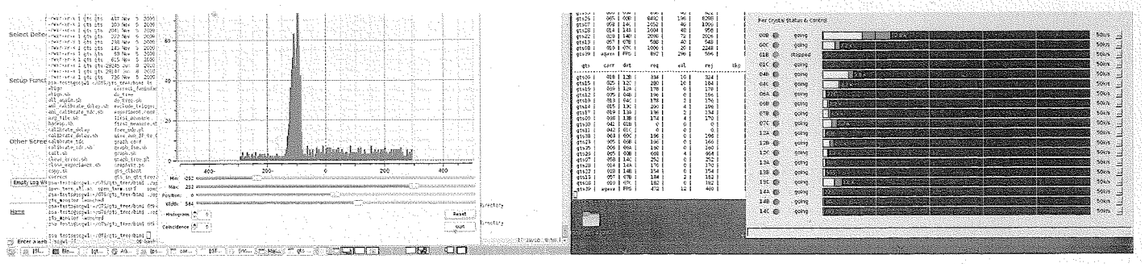
NOTE: FROM ABOUT 6 CLUSTER 1 HAD ONE DETECTOR WITH THE P.A. RINGING.

SINCE WE ARE USING ANALOGUE CFD TO BUILD THE FRS-AGATA COINCIDENCE, THERE WILL BE A LARGE AMOUNT OF RANDOM COINCIDENCES. IT HAS BEEN SEEN IN THE TRIGGER SPECTRUM A DOUBLE PEAK PROBABLY ORIGINATED BY THIS RANDOM COINCIDENCES.

CONTINUES NOTE ⇒ SEE DRAWINGS.
ANTIC_INPUT01 (9:11:41) AND SCAL_INPUT02 (9:12:23)

2012-10-19

PROBLEM (SEE TEXT)



DURING ANALYSIS THE PROBLEM HAS TO BE TAKEN INTO ACCOUNT.

11:35 START RUN# 23

14:35 STOP RUN #23 FILE 0278.lmd in MBS

- IN THE LAST HOURS WE HAVE SEEN FREQUENT SPIKES IN THE BEAM SPILL STRUCTURE. THIS CAUSES PROBLEMS IN THE DETECTORS. IT WAS DECIDED TO CHANGE THE EXTRACTION MODE OF THE SIS. IT WILL TAKE ~1 HOUR. CENTERING OF THE BEAM IS REQUIRED.

15:20 BEAM IS BACK WITH NO SPIKES
3 SEC SPILLS OF 4.3×10^9 INT
START RUN # 24
15:25 STOP RUN# 24
BEAM WAS LOST

2012-10-19

16:08 Run 24 started and stopped due to problems with design of 12A
Run 25 is junk!

16:24 Start Run 26

22:21 Noticed that MBS has crashed.
Happened max 15 min ago.

22:22 Stop Run 26 Run_0026_Fe52

22:25 Stephane found that FRS VME crate failed due to "fan error".

22:35 I restart the system; slits ±2mm at S1 and NO FRS CRATE
& slits small at S1 to lower rate at S4 to assure that the FRGA of the SIS module takes the pilse shape properly.

22:44 Start Run 27 without the FRS VME crate

20/

12:15 STOP RUN27
FRS VME CRATE REPLACED AND RECABLED !!!
12:30 START

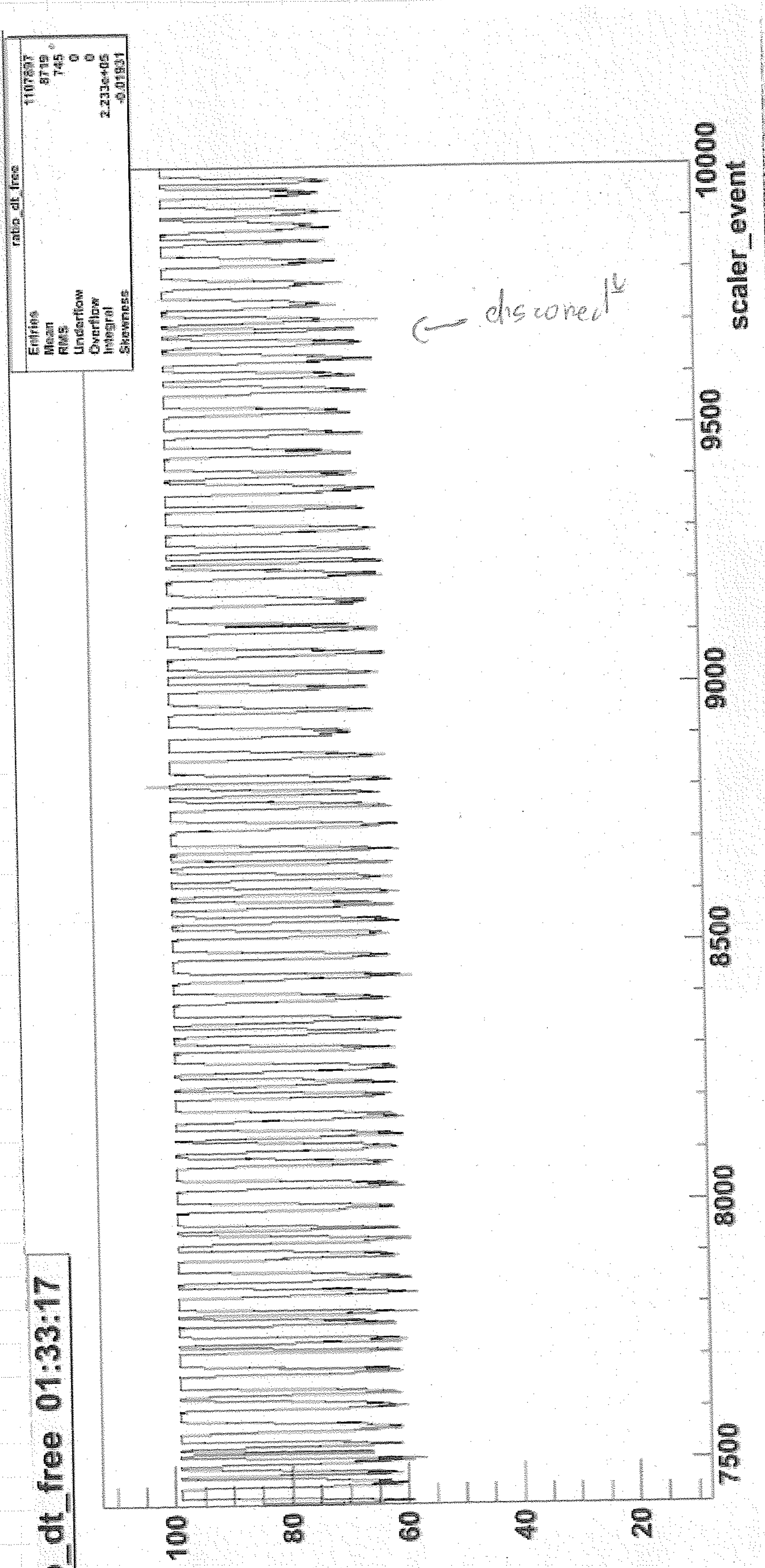
12:33: open agata run 28
MBS run 319
} after changing the VME crate.

Changed the extract time = 5s!
Beam Intensity 6.3×10^9 !!!

DECIDED TO INCREASE THE EXTRACTION TIME TO COPE WITH THE HIGHER BEAM INTENSITY.

01:35 → Noticing that we had some times a hudge dead-time from the user crate. I disconnected TPCS2 and SC21 L/R from the mhTDC which improved the dead time: → see picture

This done at lmd file 323.



11:45 ALL OK, BEAM INTENSITY STILL ~ 6×10^9 IN AVERAGE.

13.26 We have a problem with the LYCCA PMT TOF-TARGET that it seems that it's tripped.
The line for the channel #U500 is marked with the red color.
Error message: Current too high

15:34: files are closed (for analysis reason).
run_0028.
lmd_0392

Open just after...

15:51: Question at the CsI wall.
lmd 0333: not the same counting rate ≠ the CsI.
lmd 0285. Cocktail

Cable wrongly connected.
ΔE CsI reversed with Hector.

21.10.2012

12:15 Crystal OOC -> "Backpressure flag activated" unable to resolve it by selecting "Drain"

12:55 Stopping NARVAL
current file name: run_0030_Fe52_c04_Au_forward

on 20/10/2012 ~ 20:00 somebody named the current run as #10 which is wrong. (it should be #29)

12:55 run NARVAL

file name is run_run-0032_Fe52-cou-Au-forward

! The folder run_run-0031_Fe52-cou-Au-forward is empty

Crystal OOC is O.K. now

15:40 Crystal OOC -> "Backpressure flag Activated"

~~Sp~~ stopping ~~ne~~ NARVAL

file 32 stopped (MBS file #505)

16:45 Run NARVAL

new file 0033_

15

18:00 BEAM STOPPED.

22:25 BEAM START

MEASUREMENT WITH EMPTY FRAME (2 HOURS)

HORIZONTAL TARGET SET TO FRAME (POSITION -56)

TRIGGER RATE WITHOUT TARGET ~ 800 events/s DURING SPILL

00:30 Close files #524 ongoing run #34

Put beam Au Target

00:35 open file 52Fe_cou-ar35-0525.lmd

02:25 BEAM STABLE WITH INTENSITY 6.0 - 6.2 x 10^9 ions/spill

FRS RATES: SC21 ~ 2MHz S641 L/R ~ 1.8×10^5 MUSIC41 ~ 3.5×10^5

MUSIC42 ~ 3.5×10^5 DSSD WML ~ 1.25×10^5

SPILL 5sec. RAMPING 1.6s REPETITION ~ 6.6s

04:45 Crystal OOC : backpressure flag activated
the same problem as before

Stopped taking data at 04:24

The last file : 52Fe_cou_a235_0544

04:48 Stopping NARVAL

05:12 Run NARVAL

file name is run_0036_Fe52_cou_~~Au~~-forward

last file : 52Fe_cou_a236_0545

05:17 Crystal OOC status OK

06:49 Close all runs #552 ongoing run #36

END OF BEAM SHIFT

06:54 Start new run for Background measurment

Trigger 3 no reduction

6:58 START RUN #37 → Activity Measurement

Trigger set to 3 only.

LMU-in:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	A1	A2	A3	A4		
Delay.:	30	40	0	0	0	0	0	27	15	0	0	0	0	0	0	0				0	ena	red
1: O																					off	0
2: O					or	or	or	or	or												off	0
3: C			+																		on	0
4: C				+																	off	0
5: C	+																				off	0
6: C		+		+																	off	0
7: C		+	+																		off	0
8: C		+		+				+	+												on	0
9: C		+	+					+	+												on	0
10: C		+																			on	10
11: O																					off	0
12: O																					off	0
13: O																					off	0
14: O																					off	0
15: O																					off	0
16: O																					off	0

Close file 38 and relaunch 39 with new gen-conf.py parameters:

=> WriteDataMask =10 (before was ?)

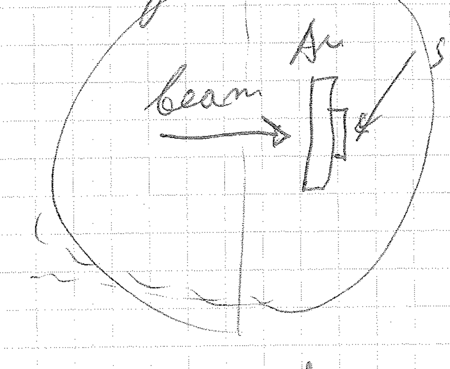
WriteDataRange 4000 25000 (before was #)

↳ Run 39 saved. It seems the write data range was to high

↳ we will start again this night.

Now start run 40 with Eu located in

2:52 ^{152}Eu calibration. The source is in the middle of the Au target (400 mg/cm²), downstream position,



15:00 ^{152}Eu AGATA run started (will be AGATA run 40)

15:04 " *lmd run started (#574)

15h29 file close. Rate too high for Agata

15h49 Eu calibrat° file open.

Trigger: ancillary with width of 10 µs

↳ dach 1000 Hz. →

17h00 File 40 closed → Eu forward - in front Au target ↗ corresponds to RF 41 in MBS/LMD

17h21 => File open, Eu in front of the Au target in central pos°

↳ this will be file 42 in Narval

18h10 → stop the run because of wrong 12A rate due to auto fill

18h20 → open file: 18h50 → file closed, Agata run 43.

19h00 => we start the Co calibration with validate all as a trigger.

19:01: lmd file open, no data. reduct° 2⁵.

Co in central pos, after gold target.

19h05 → close everything, no save

put Co source on the back of the chamber (to high data rate → Back pressure)

19h10: open again

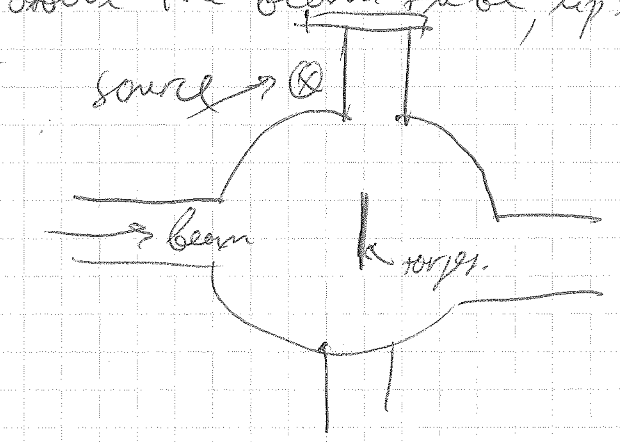
23-10-2017

9:36: open run 0045.

no lmd data at the moment.

no upper threshold, .

The Pt-C source is above the beam tube, upstream from the secondary target



Test upper threshold

4B 12C 14B	not cutting the 6 MeV line until 800 mV

Pass threshold @ 500 mV.