

Irradiation Facilities at CYCLONE (HIF – LIF – NIF - GIF)

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Outline

- ✓ HIF Status
- ✓ LIF Status.
- ✓ NIF Status.
- ✓ GIF upgrades.
- ✓ Beam Scheduling.



HIF



- 2008 Utilization : Nearly 1200 h scheduled (51 days).
- 2008 Development : PPAC detectors reliability.
Water cooling system in the vacuum chamber
UI upgrade.
- Foreseen Upgrade : Integration of PLC com with LabView UI
New ECR source study
Upgrade of the motor system.



LIF

Acceptance tests performed on 26 – 27th May

About 125 h used in 2008

✓ Energy:

- o CYCLONE primary energy 65 MeV

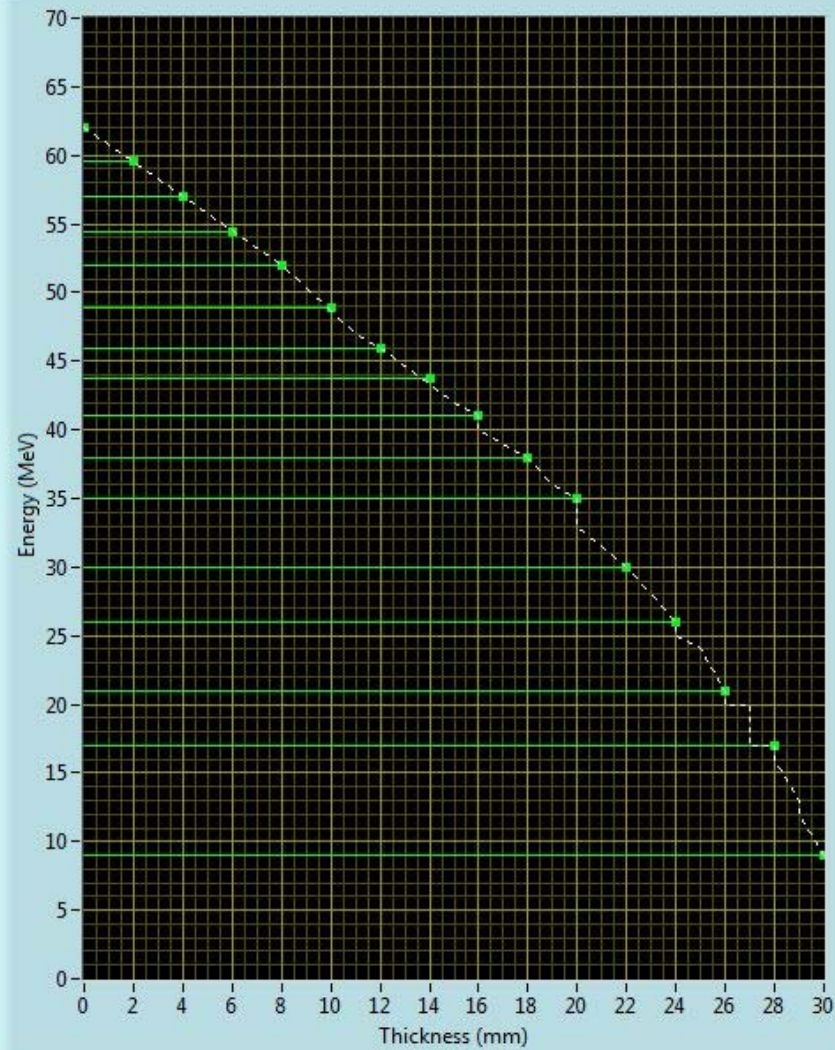
- o DUT energy between 10 and 62 MeV

✓ Flux:

Between a few 10 p/s cm^2 and $5\text{E}8 \text{ p/s cm}^2$



Energy vs Thicness



D1

0,0
2,0
4,0
8,0
16,0

D2

0,0
2,0
4,0
8,0
16,0

D3

0,0
2,0
4,0
8,0
16,0

D4

0,0
2,0
4,0
8,0
16,0

OK

ENERGY

0

62,0
59,5
57,0
54,4
52,0
48,9
46,0
43,7
41,0
38,0
35,0
30,0
26,0
21,0
17,0
9,0

Irradiation of electronic components : Light Ion Irradiation Facility (LIF)

UCL

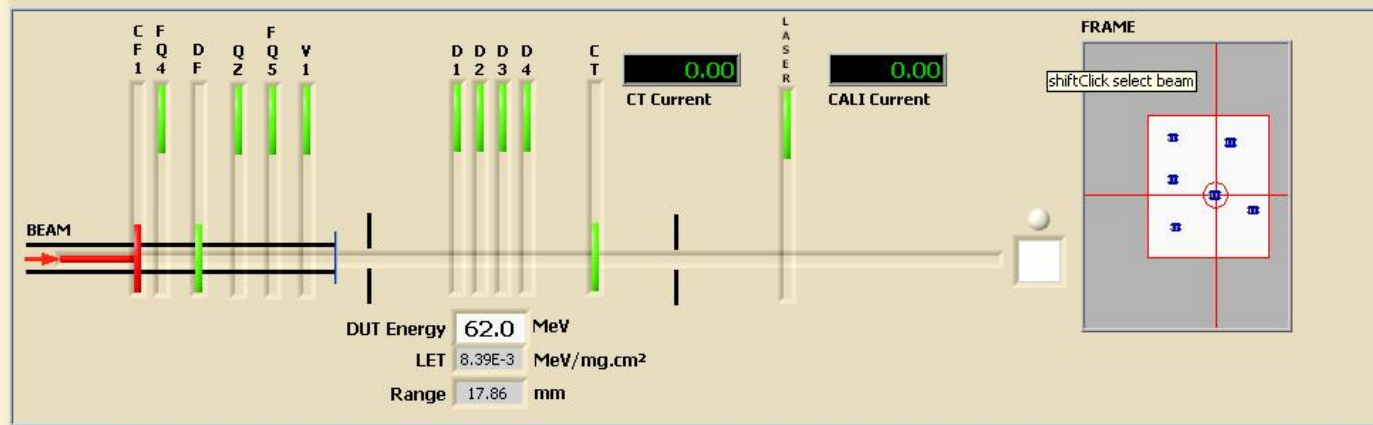


5/09/2008

11:49:28

V 31 3 08

STOP PROGRAM



IRRADIATION BOARD_POSITION CALIBRATION CONFIGURATION



elapsed Time
9
remaining Time
1294967295

☒ Cumulative Mode

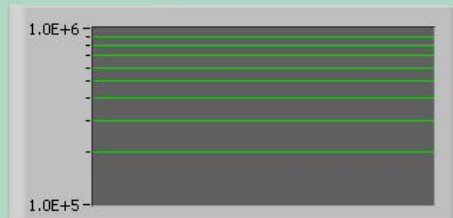
DESIRED FLUENCE
1.00E+9
FLUENCE
0.00E+0

DESIRED TID
134.2
TID
0.000

RUN N°
33

mean FLUX
0.00E+0

FLUX
0.00E+0

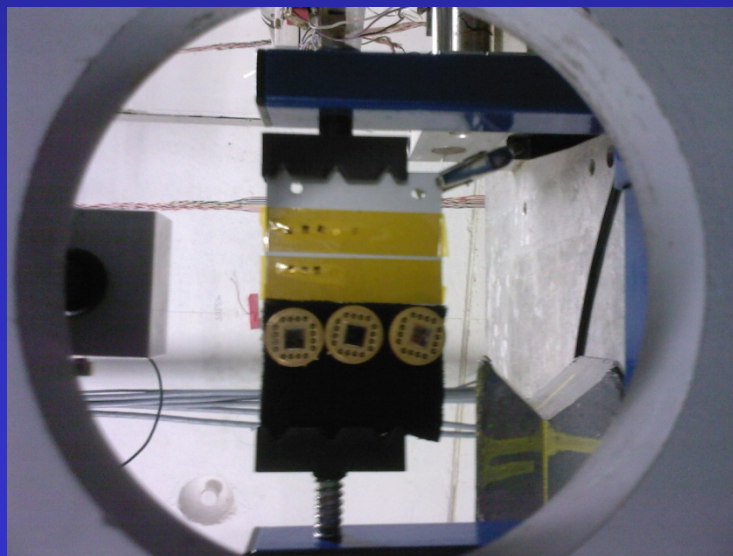
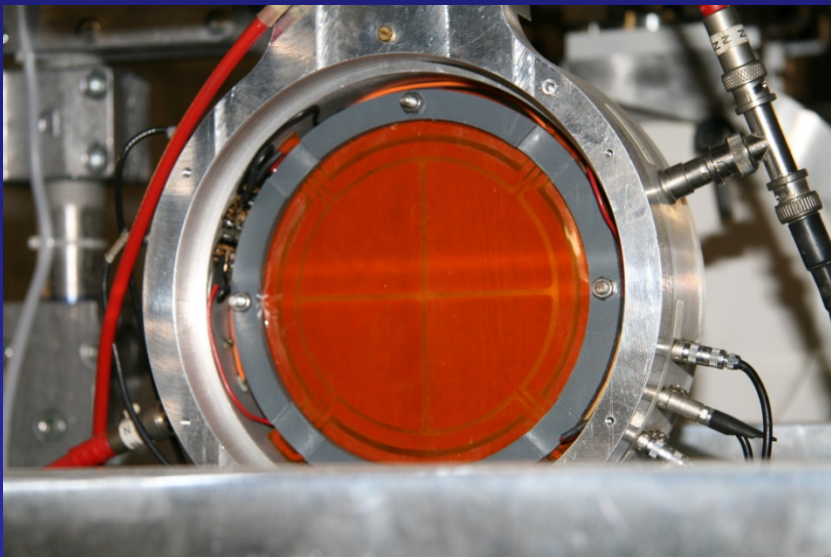


IRRADIATION COMPLETED ...

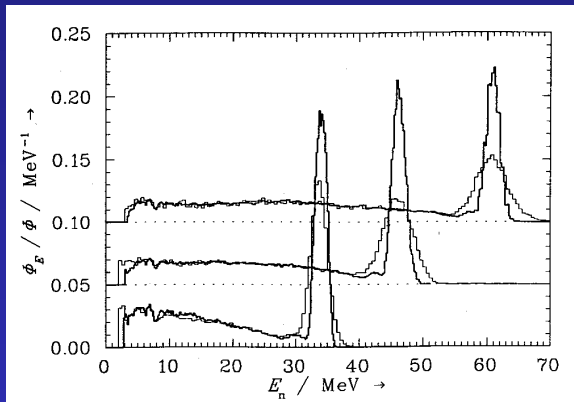
RENO FACTOR
1

<W> Server: localhost



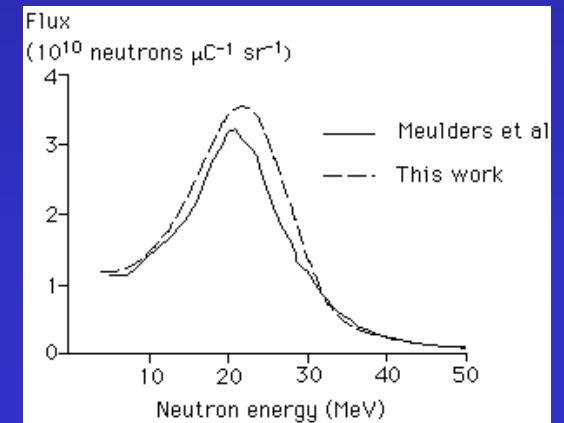


NIF

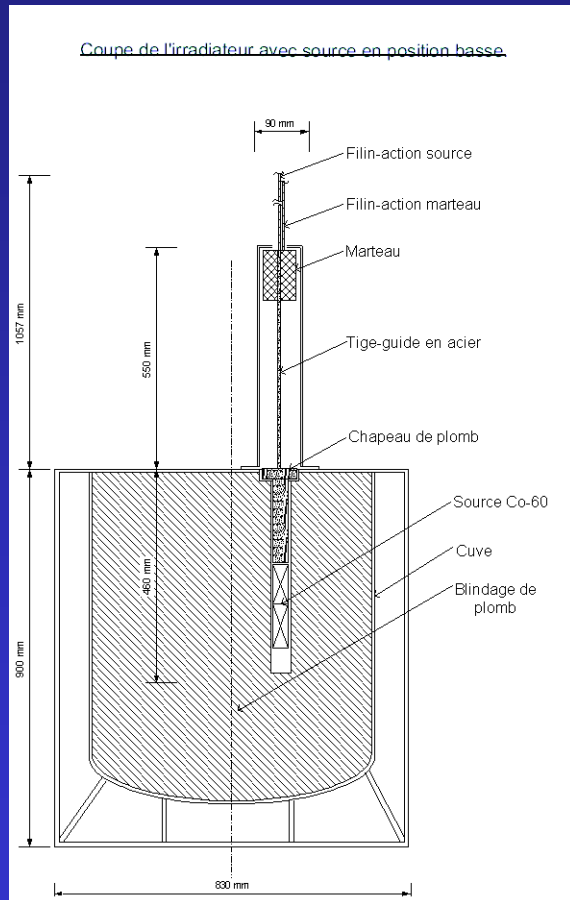


72 hours scheduled in 2008

About 250 hours scheduled in 2008

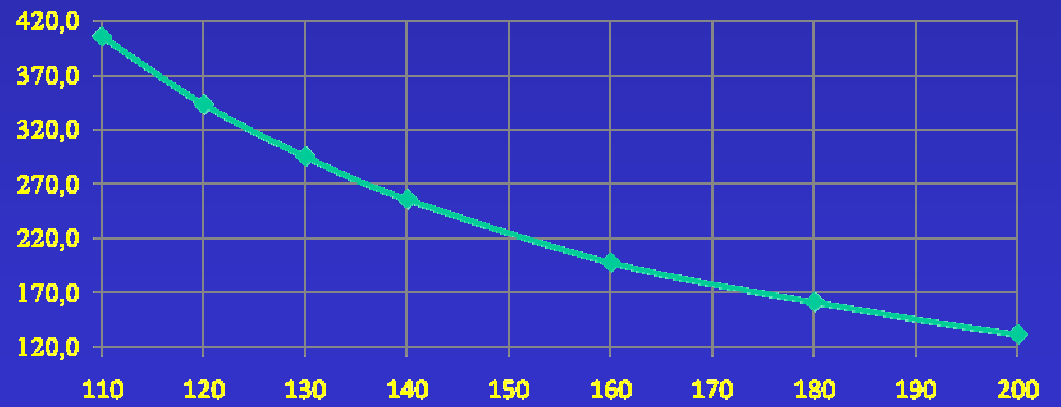
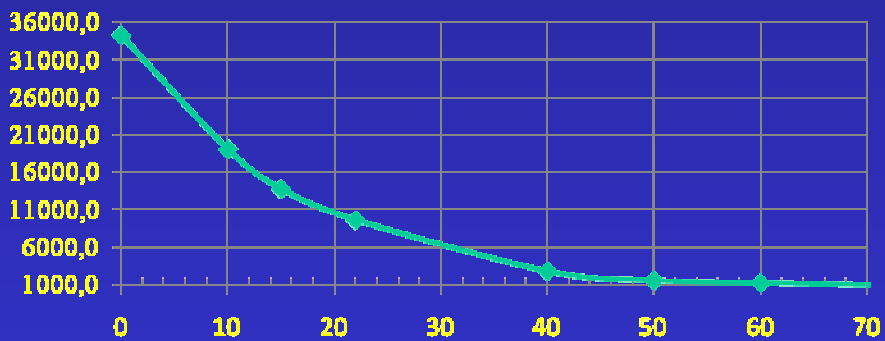
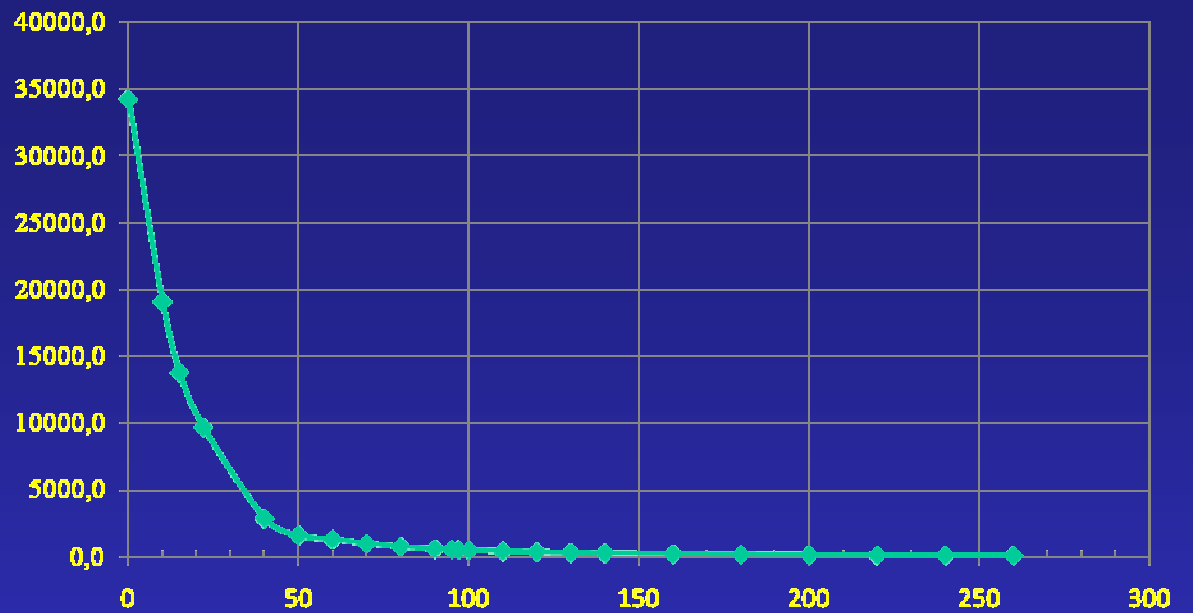


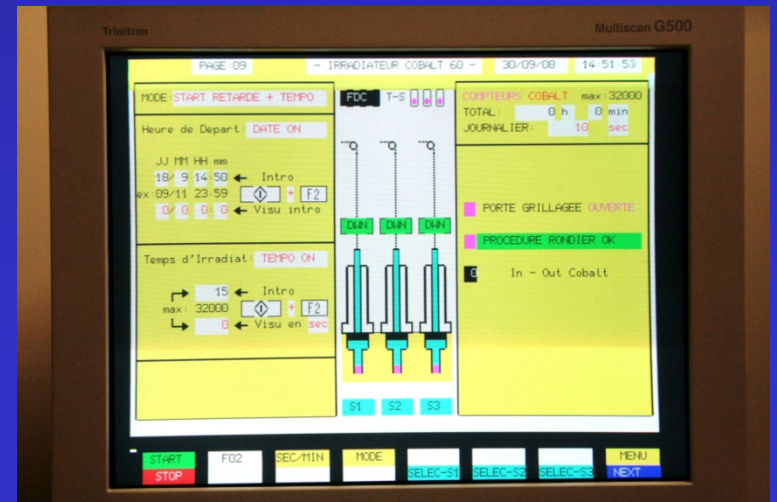
GIF



19.003 GBq (513,6 Ci)
on Oct 1st 2008







Beam Scheduling

- o HIF : One 5 days period per month (Monday 8 AM to Friday 12 PM).
- o LIF : Two 3 days periods per 6 months.
- o NIF : On request.
- o GIF : All the time.



