S117

LOG BOOK

HODO- CATANIA

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SUMMARY

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Pag. 5: Remarks on Electronics
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PROBLEMS
TEST RUN FEBRUARY 1995

1-DETECTORS:

- **Si** NOT WORKING: **#13 (α2-5), #31** (α4-7), **#68** (β3–4)
- **CsI** NOT WORKING: **#31 (γ4-7), #57 (δ2-1)**

2- PREAMPLIFIERS:

NOT Working: **Si :** #4 (α**1-4**) #5 (α**1-5**) #95 (β**6-7**)
The whole group β**3 (#65-#72)**
CsI: #24 (γ**3-8**) #33 (γ**5-1**)
(ALL connected to the new board!!)

NOT Working **: CsI :** #57 (δ**2-1**) #43 (γ**6-3**) #44 (γ**6-4**)
Si : #68 (β3-4) #31 (α4-7)

CABLES OUT PRE (LEMO-CANNON inside Scatt. Chamber):
Si: **#28** (α**4-**4)
CsI: **#25 (**γ**4-1)** #**61** (δ2-5) **#65** (δ**3-1)**
Connected to the pulser cables : (28 Si-->8 test γ **)**
(25 --> 8 test α**)**
(61 --> 7 test γ**)**
(65 --> 7 test α**)**

CABLES INPUT SHAPERS not connected:
Si: **#31** (α**4-7**), **#68** (β3–4)
Csi: #31 (γ**4-7**) **#43** (γ**6-3**) **#44** (γ**6-4**)

3.-STRETCHERS:

NOT WORKING CORRECTLY:

#21(α3-5) (?) #**39** (α5-7) **(?)** **#95** **(**β6–7) **#72** **(**β3–8)

4. -BIAS: High reverse current in the groups: α**4,** β**3,** γ**4** (see later p.6)

5. - PULSER: There is no pulser signal on group α1 (Si #1 to 8)

6. - THERMOMETER: Thermometer #1 Not Working

7. - SET AND CHECK: COOLING on the SPARE P.A. BOX

8. -CHECK SLOT #13 FTDC looks like NOT WORKING (but check also Software)

REMARKS on the ELECTRONICS

****************** **Preamplifiers** **********************

GAIN : 45 mV/MeV

****************** **Amplifiers** ******************************

GAIN (adjusted with pulser at 5. MeV) :

Si : .8 V

CsI : 2.3 V

ATTENUATION : 1 (6 for α_3 , α_4)

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Si Shaping time: 1.5 µsec

CsI Shaping time: 3.0 µsec

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TIMING:

Stretching time: 71.0 µsec

F-QDC Gates: **delay**: 30.0 µsec

width: 150.0 nsec (Si)

350.0 nsec (CsI)

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VETO on the ECL -OR-Mult.:

delay: 6.22 µsec (to respect to the out OR of the module)

width: 13.0 µsec

****

FASTBUS SLOTS :

4 5 6 7 8 9 * 13 14 15 16 * 17 18 19 20

Si CsI Si CsI Si CsI * Time Time Time * Z.C. Z.C. Z.C.

CT GSI MSU * CT GSI MSU* CT GSI MSU

remarks: TIME:out from ZERO CROSSING ; Z.C.:out from DISCR.

MONITOR on the BIAS

10.2.95

" GROUP Cs ACTIVE V0 I0 ; HV-ENABLE ON

	VMON	IMON	V0	V1	I0	I1	RUP	RDW	TRIP
G1	19.9	0.2	20.0	20.0	200.0	200.0	1.0	1.0	1
G2	20.0	0.2	20.0	20.0	200.0	200.0	1.0	1.0	1
G3	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
G4	20.0	10.4	20.0	20.0	200.0	200.0	1.0	1.0	1
G5	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
G6	20.0	0.1	20.0	20.0	200.0	200.0	1.0	1.0	1
D1	20.1	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D2	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D3	20.3	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D4	20.3	0.1	20.0	20.0	200.0	200.0	1.0	1.0	1
D5	20.2	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D6	20.3	0.2	20.0	20.0	200.0	200.0	1.0	1.0	1

" GROUP Si ACTIVE V0 I0 ; HV-ENABLE ON

	VMON	IMON	V0	V1	I0	I1	RUP	RDW	TRIP
A1	34.9	1.4	35.0	35.0	200.0	200.0	1.0	1.0	1
A2	35.0	3.8	35.0	35.0	200.0	200.0	1.0	1.0	1
A3	35.0	1.3	35.0	35.0	200.0	200.0	1.0	1.0	1
A4	25.0	12.8	25.0	25.0	200.0	200.0	1.0	1.0	1
A5	35.0	0.6	35.0	35.0	200.0	200.0	1.0	1.0	1
A6	35.0	0.7	35.0	35.0	200.0	200.0	1.0	1.0	1
B1	35.0	0.3	35.0	35.0	200.0	200.0	1.0	1.0	1
B2	35.0	1.2	35.0	35.0	200.0	200.0	1.0	1.0	1
B3	25.0	13.4	25.0	25.0	200.0	200.0	1.0	1.0	1
B4	25.0	0.5	25.0	25.0	200.0	200.0	1.0	1.0	1
B5	35.0	0.5	35.0	35.0	200.0	200.0	1.0	1.0	1
B6	35.0	0.3	35.0	35.0	200.0	200.0	1.0	1.0	1

15/2/95

GROUP Si ACTIVE V0 I0 ; HV-ENABLE ON

	VMON	IMON	V0	V1	I0	I1	RUP	RDW	TRIP
A1	34.9	1.4	35.0	35.0	200.0	200.0	1.0	1.0	1
A2	35.0	3.4	35.0	35.0	200.0	200.0	1.0	1.0	1
A3	35.0	1.1	35.0	35.0	200.0	200.0	1.0	1.0	1
A4	25.0	13.0	25.0	25.0	200.0	200.0	1.0	1.0	1
A5	35.0	0.8	35.0	35.0	200.0	200.0	1.0	1.0	1
A6	35.0	0.7	35.0	35.0	200.0	200.0	1.0	1.0	1
B1	35.0	0.3	35.0	35.0	200.0	200.0	1.0	1.0	1
B2	35.0	0.9	35.0	35.0	200.0	200.0	1.0	1.0	1
B3	25.0	13.4	25.0	25.0	200.0	200.0	1.0	1.0	1
B4	25.0	0.4	25.0	25.0	200.0	200.0	1.0	1.0	1
B5	35.0	0.5	35.0	35.0	200.0	200.0	1.0	1.0	1
B6	35.0	0.2	35.0	35.0	200.0	200.0	1.0	1.0	1

GROUP Cs

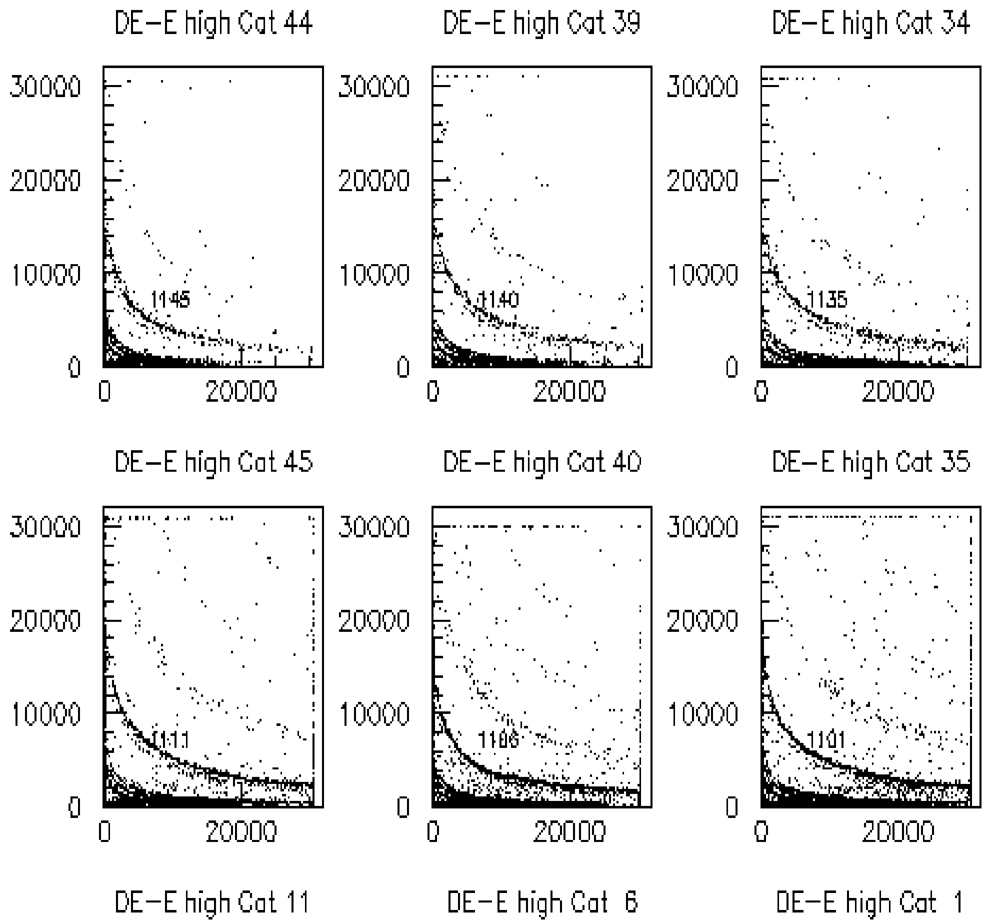
G1	19.9	0.2	20.0	20.0	200.0	200.0	1.0	1.0	1
G2	20.0	0.3	20.0	20.0	200.0	200.0	1.0	1.0	1
G3	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
G4	20.0	10.4	20.0	20.0	200.0	200.0	1.0	1.0	1
G5	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
G6	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D1	20.1	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D2	20.0	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D3	20.3	0.0	20.0	20.0	200.0	200.0	1.0	1.0	1
D4	20.3	0.1	20.0	20.0	200.0	200.0	1.0	1.0	1
D5	20.2	0.1	20.0	20.0	200.0	200.0	1.0	1.0	1
D6	20.3	0.1	20.0	20.0	200.0	200.0	1.0	1.0	1

To connect to the BIAS controller:

>***connect KP3HBIAS*** (from a VT100 terminal)

$***BIAS*** (from a VAXSTATION Directory: [RACITI])

Typical DE-E
for Pb+Au at 100 MeV/u



GENERAL INFORMATIONS

BEAM: ^{207}Pb (100 MeV/u, 1000MeV/u)
beam current (10^6 part./spill at 100 MeV, $5*10^5$ part./spill at 1 GeV)
1 spill= 5 sec.

TARGETS: **Cu** (**460** mg/cm^2)
Au (**74.9** mg/cm^2)

–δ–**Electrons brass shields** on the HODO
thickness: **25 μm** and **50 μm**
(25 large angle , 50 forward ones) NO SHIELDS on #22-27 and 70-75

VACUUM: $3* 10^{-5}$ torr

Cooling MACHINE : setted at 5^0
Temperature measured: T2= 21.2^0 T3= 14.4^0 T4= 13.3^0
T2 at the Hodoscope (?)
T3 at Preamps Box BOTTOM
T4 at Preamps Box TOP

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Particle	Range (Si 300μm)	PunchThrough (6cmCsI)	ΔE(Si)
p	6. MeV	144,7 MeV	.3 MeV
d	8.	193.6	.4
t	9.	227.5	.5
^{3}He	9.	517.9	1.12
α	24.	582.7	1.25
^{6}Li	42.	1107.6	2.42

WARNINGS

1-When POWER on the Preamplifiers is switched ON at the same time switch ON the COOLING MACHINE as well.

2 -No BIAS on the detectors when:

(i) Beam focusing

(ii) Vacuum operations (Pumping or Air filling)

HODO CT DET Numbers and Groups