CRDC 1 Anode
Amplifier (Tennelec TC241)
Uni. OUT
C- Gain 10
F- Gain 5.1
T- Gain 5
Fast OUT
R2C2515
E1: CRDC 1 Anode
CRDC 2 Anode
Amplifier (Tennelec TC241)
R2C2512
E2: CRDC 2 Anode
Canberra LTO
Hodoscope 16-31
40 ns
Hodoscope 0-15
40 ns
R1C1254
CRDC1
CRDC2
Fan-In / Out (EGN LF 4000)
to stop TAC CRDC1
to ALM CRDC1
to SUMS and MTDC
to stop TAC CRDC2
to ALM CRDC2
to SUMS and MTDC
EXT2 (UNPLUGGED)
R1C4511
to ULM (A)
E1 up 5800 trigger
E1 down
A1900
OBJ SCI
R1C4265
to MIs + MTDC #15 + MTDC #1
Variable Amplifier (LeCroy 612AL)
E1 up
E1 down
E0.1??
X1: From OBJ SCI
1 Right
2 Right
3 Left
4 Left
5 Left
6 Left
7 Left
R2C258
Splitter AFL (NSCL)
E1 up
E1 down
1-01
to F09A
R1C3512
MCD-16 (Mesytec)
CRDC1
CRDC2
R1C2501
E1: NIM-ECL (NSCL)
E1 up 5800 trigger
E1 down
A1900
OBJ SCI
RF
CRDC1
CRDC2
ANODE
OBJ SCI
Hodoscope 0-31
5800 Trigger
R1C2552
To Scaler and MTDC
1: E1 up
2: E1 down
3: OBJ SCI
4: RF
5: CRDC 1 an.
6: CRDC 2 an.
7-15: Hodosc.
16: 5800 trigg
B5: TOC Start
B5: TOC Start
B13: Fast Clear
B4: CCFC gate
to th CFD (LeCroy 4413)
to Phillips TDC
1,2
1,3
Veto
gate
Clear and Gate to F09A
R1C1520
B2 Live Trigger
B3: ADC Gate
B4: CCFC Gate
B5: TOC Start
B6: Coinc. Reg. Gate
B8: Live Trigger
B9: trig 1
B10: trig 2
B11: trig 3
B12: trig 4
B13: Fast Clear
B15: Go
CC-USB
(Wiener)
R2C1524
to ULM (C)
B3: ADC gate
MTDC-32
(Mesytec)
E1: up
E2: down
3: RF
4: OBJ SCI
5: RF
6: CRDC 1 anode
7: CRDC 2 anode
11: Hodosc.
12: 5800 trigg
Trig 0
R2C1523
to ULM (C)
A1: 5800 trigger source (E1 up)
A2: Secondary trigger source
A3: Gretina clock (/4)
A4: External source 2
A5: Gretina synch (Fast Patch 3)
A6: Gretina clock (Fast Patch 1)
C1: VM-USB (E1 dbusy 1)
C2: CC-USB (15.02 (Time stamp clock))
C6: CC-USB (15.02 (Time stamp latch))
ULM
(LeCroy 2367)
I/O A
I/O B
I/O C
R1C1527
B2: Live Trigger
B3: ADC Gate
B4: CCFC Gate
B5: TOC Start
B6: Trigger Register Gate
B8: Live Trigger
B9: trig 1
B10: trig 2
B11: trig 3
B12: trig 4
B13: Fast Clear
B16: Time stamp clock
C4: Time stamp clock
C5: Time stamp latch
D1: 5800 source
D2: Secondary source
D5: 5800 trigger
D6: Ext. trigg. 1
D7: Ext. trigg. 2
D8: Ext. trigg. 3
D9: Second trigg.
D10: Live trigg.
D11: Live pulser
D12: Raw pulser
D13: Live pulser
D14: Raw pulser
D15: 10 Hz
D16: 1 Hz
Scaler
(LeCroy 4434)
1-16
17-32
R1C5516
17: E1 up
18: E1 down
19: A1900
20: OBJ SCI
21: RF
22: RF
23: CRDC 1 anode
24: CRDC 2 anode
29: Hodosc.
32: 5800 trigg
TAC
(ORTEC 566)
Start
Stop
OUT
R2C250
5800 Trigger-200 ns
62: From OBJ SCI CFD dGAt
R2C253
5800 Trigger
60: From Galotte CFD dGAt
R2C263
B5: TOC Start
CRDC 2 Anode
R2C260
B5: TOC Start
CRDC 1 Anode
R2C262
5800 Trigger
R2C256
5800 Trigger
A1900
R1C2564
5800 Trigger
R1C2558
B13 Fast Clear
B4: CCFC gate
1: E1 up (det.
2: E1 down (det.
9: E1 up del.
10: E1 down
12: Gretina gamma OR (Fast P.2)
13: Cyclotron RF
14: OBJ SCI del.
15: RF SCI del.
ADC
(Phillips 7164)
Gate
B3: ADC gate
94-04 Target
1: CRDC1 anode
2: CRDC2 anode
3: TAC E1 (CRDC1)
4: TAC E1 (CRDC2)
7: TAC OBJ SCI (E1)
8: TAC OBJ SCI (Galotte E1)
TAC(E1)-Hodoscope
R1C1520
ADC
(Phillips 7164)
Gate
Live Trigger
Hodoscope 1-16
R1C158
ADC
(Phillips 7164)
Gate
Live Trigger
Hodoscope 17-32
R1C157
ADC
(Phillips 7164)
Gate
Live Trigger
Ion Chamber (from Shaper Amplif.)
R1C156
ERA
(LeCeroy 4300B)
Clear
Gate
B13 Fast Clear
B4: CCFC gate
1: E1 up (200 ns)
2: E1 dbusy (200 ns)
R1C1518
TDC
(Phillips 7186H)
Common
B5: TOC Start
1-16
R1C1523
Net Controller (CAEN V288)
Serial line to CAEN vhapens hodoscope + ion chamber
R2C1521
C4: Time stamp clock
C5: Time stamp latch
XLM (ZTEC)
1-16
A
B
C
D
R1 - R2C1514
PPACs
XLM72 V
R1C1516
XLM72 H
R2C1510
1: Live Trigger
2: CRDC 1 Anode
XLM72 W
R2C1511
1: Live Trigger
2: CRDC 2 Anode
XLM
(ZTEC)
R1C1517
Out
Hodoscope
CRDC
Gretina
Cyclotron RF
5800 Trigger
E1 up
E1 down
OBJ SCI
OBJ SCI Target
Det # 3 target
Det # 4 target
Gretina gam OR if ast Patch -2
ET up
ET down
Galotte
Hodoscope
RF_SCI
RF_SCI
ECL signals (Flat cable)
Hodos: 0-31 OR E1 up (5800 trig)
CC-USB: 02
to Off with OR
R1C1254
Gate Generator (NSCL)
Where am I?
to Phillips TDC
B5: TOC Start
B6: Coinc. Reg. Gate
B8: Live Trigger
B3: ADC Gate
to ALM CRDC1
to ALM CRDC2
to Fast patch-4: MasterLive (target area)
to MTDC trig0
to ADC Gate
R1C2510
to start TAC CRDC1
to start TAC CRDC2
B3: ADC Gate
B2: Live Trigger
62: From OBJ SCI CFD dGAt
to ALM CRDC1
to ALM CRDC2
to SUMS and MTDC
to start TAC OBJ
to MTDC and scaler duplication
R1C2511
to scaler + MTDC
to TAC
Where am I?
B8: Live Trigger
CRDC 1 Anode
B6: Coinc. Reg. Gate
B5: TOC Start
B3: ADC Gate
B2: Live Trigger
B4: CCFC gate
B15: Go
CC-USB: 02
R1C2510
B8: Gen. more trigg. five signals
1-4 to XLM CRDC1
5-8 to XLM CRDC2
9-16 Gates to ADC Hodos.
9 to ULM CC-USB: 01.02
10 to VM-USB: 01.02
11 to ULM CC-USB: 01.02
Logic Unit- Phillips 754
Start TAC (E1 OBJ)
AND
Start TAC (E1 RF)
R2C2514
Where am I?
Fast patch #1: 12.5 MHz Gretina clock
Gretina synch: Fast Patch 3
Hodosc 0-31
R1C4510
Gate Generator (NSCL)
Fast patch #1
Gretina synch
to TAC
to Scalers and MTDC
to Anticosmic: Hodos.
to Start TAC Hodos.
R2C2513
to Phillips TDC
Logic Unit- Phillips 754
to MTDC + scalers
NOT(B6: Coinc. Reg. gate)
5800 Trigger (100 ns)
5800 Trigger
Hodoscope 0-31
AND(Hodoscope (0-31, NOT(5800 Trigger)))
NOT(5800 Trigger)
R1C1556
Coinc. Register (LeCroy 4448)
1-16
A
B
C
Gate
B6 Live Trigger
R1C1515
5800 Trigger
B5: TOC Start
CRDC 2 Anode
R2C258
5,6
7,8
7
8