Beamline counters and readuot

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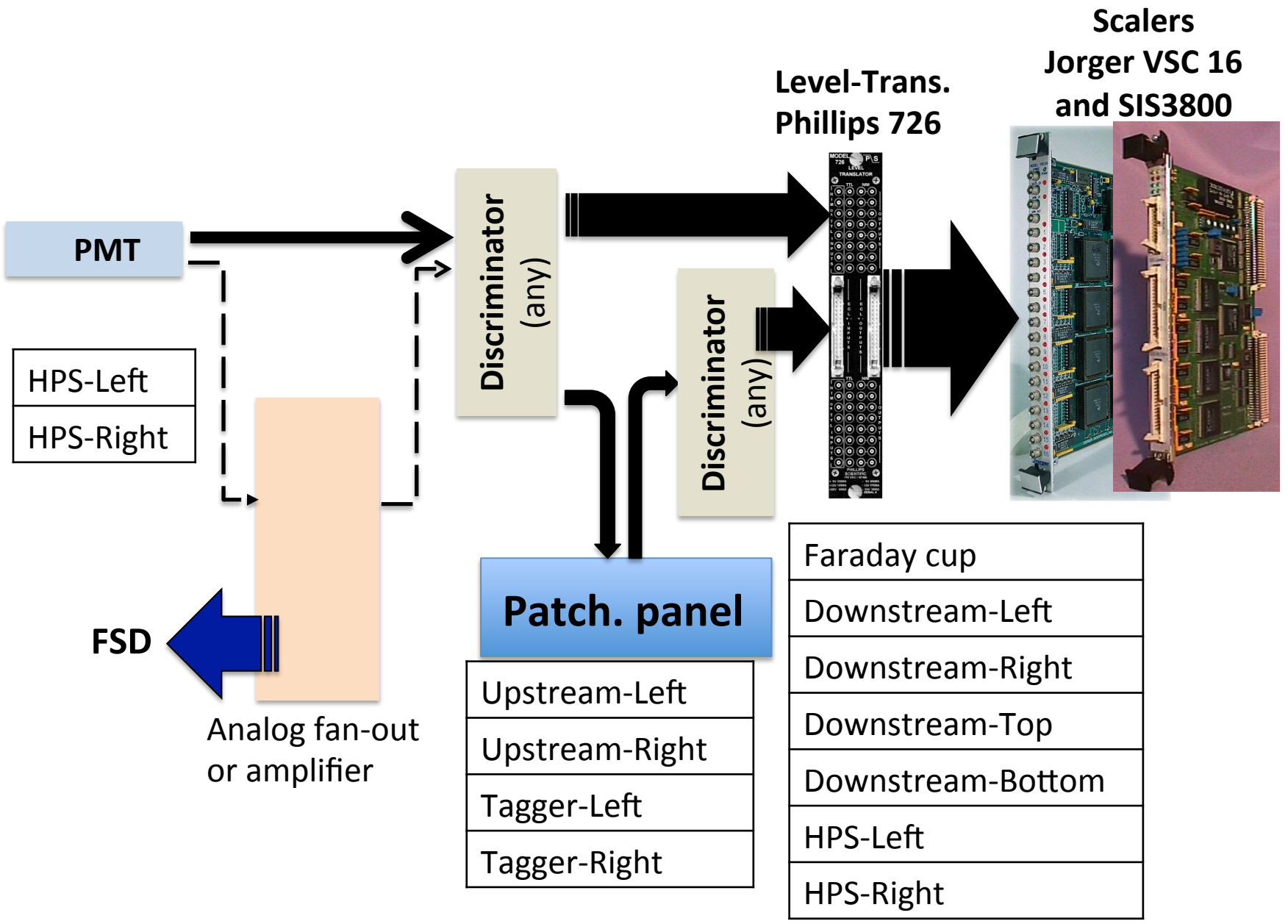
Beam line counters

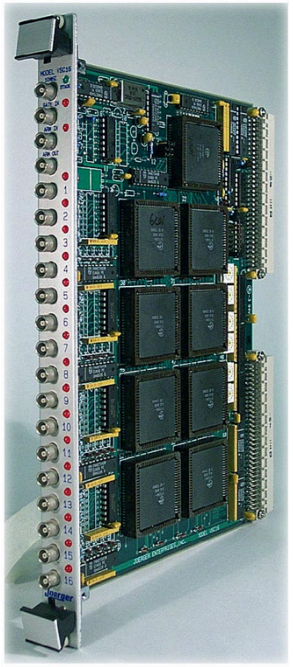
#	Counter	Location	IOC
1	Upstream-Left	10” downstream of the tagger harp	classc1/classc4
2	Upstream-Right	10” downstream of the tagger harp	classc1/classc4
3	Tagger-Left	On the tagger vacuum box, beam left	classc1/classc4
4	Tagger-Right	On the tagger vacuum box, beam right	classc1/classc4
5	Tagger-Top	On top of the tagger vacuum box	classc1/classc4
6	Downstream-Left	Around the beam pipe at the Forward carriage	classc1/classc4
7	Downstream-Right	Around the beam pipe at the Forward carriage	classc1/classc4
8	Downstream-Top	Around the beam pipe at the Forward carriage	classc1/classc4
9	Downstream-Bottom	Around the beam pipe at the Forward carriage	classc1/classc4
10	BLM-1	Downstream of 2H02	accel.
12	BLM-2	Downstream of 2H02	accel.
13	HPS-Left	Around the beam pipe between first frascati and analyzing magnet, beam left	classc1/classc4
14	HPS-Right	Around the beam pipe between first frascati and analyzing magnet, beam right	classc1/classc4
15	ECal_cosm1	Below ECal	classc4
16	ECal_cosm2	Below ECal	classc4

Connection of PMTs



classc1

OMS VME 44 Stepper Motor Controller, 1 Jorger VSC 16



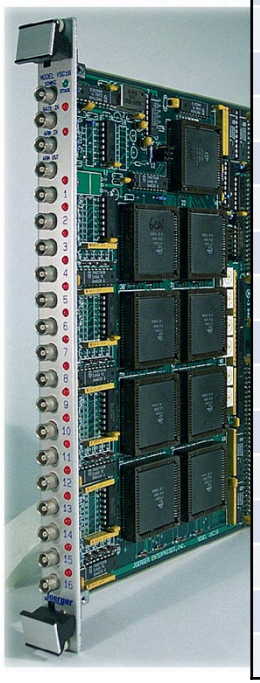
J1

Ch.#	Ch. name
0	10 MHz clock
1	Faraday cup
2	Upstream-Left
3	Upstream-Right
4	Tagger-Left
5	Tagger-Right
6	Tagger-Top
7	Downstream-Left
8	Downstream-Right
9	Downstream-Top
10	Downstream-Bottom
11	HPS-Left
12	HPS-Right
13	-
14	-
15	-

classc4

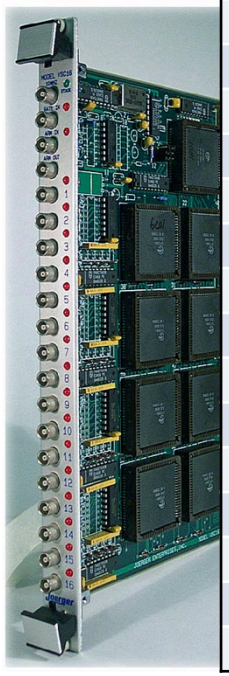
OMS VME 44 Stepper Motor Controller, 2 Jorger VSC 16, 2 SIS3800

J1



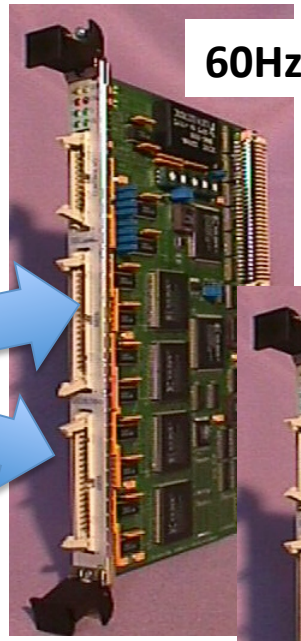
Ch.#	Ch. name
0	10 MHz clock
1	Faraday cup
2	Upstream-Left
3	Upstream-Right
4	Tagger-Left
5	Tagger-Right
6	Tagger-Top
7	Downstream-Left
8	Downstream-Right
9	Downstream-Top
10	Downstream-Bottom
11	HPS-Left
12	HPS-Right
13	ECal_cosm1
14	ECal_cosm2
15	ECal_cosm3

J2

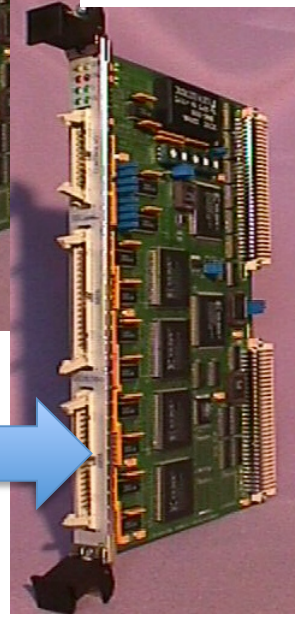


Ch.#	Ch. name
0	10 MHz clock
1	FC
2	ECal_Top-1
3	ECal_Top-2
4	ECal_Top-3
5	ECal_Top-4
6	ECal_Bott-1
7	ECal_Bott-2
8	ECal_Bott-3
9	ECal_Bott-4
10	ECal_cosm1
11	ECal_cosm2
12	-
13	-
14	-
15	-

60Hz



SVT scan



Harp scan files

Columns for 2C21 and
“tagger” (classc1), 2H02A (clasc4)

Ch.#	Ch. name
0	10 MHz clock
1	Faraday cup
2	Upstream-Left
3	Upstream-Right
4	Tagger-Left
5	Tagger-Right
6	Tagger-Top
7	Downstream-Left
8	Downstream-Right
9	Downstream-Top
10	Downstream-Bottom
11	HPS-Left
12	HPS-Right
13	ECal_cosm1 (2H03)
14	ECal_cosm2 (2H03)
15	ECal_cosm3 (2H03)

SVT wire (classc4)

Ch.#	Ch. name
0	10 MHz clock
1	FC
2	ECal_Top-1
3	ECal_Top-2
4	ECal_Top-3
5	ECal_Top-4
6	ECal_Bott-1
7	ECal_Bott-2
8	ECal_Bott-3
9	ECal_Bott-4
10	ECal_cosm1
11	ECal_cosm2
12	-
13	-
14	-
15	-

Old Format

2C21 Current (nA): IPM2C21A.VAL: 9.931968
2C24 Current (nA): IPM2C24A.VAL: 9.983333
2H01 Current (nA): IPM2H01.VAL: 1.435891
2C21 X position (mm): IPM2C21A.XPOS: 0.020913
2C24 X position (mm): IPM2C24A.XPOS: 0.092501
2H01 X position (mm): IPM2H01.XPOS: 0.000000
2C21 Y position (mm): IPM2C21A.YPOS: 0.035515
2C24 Y position (mm): IPM2C24A.YPOS: -0.034913
2H01 Y position (mm): IPM2H01.YPOS: 0.000000
Tagger Current (Amps): TMIRBCK.VAL: 1927.099976
Faraday Cup Current (nA): scaler_calc1.VAL: 0.064175
Beam Energy (MeV): MBSY2C_energy.VAL: 5561.901855
2C21 H corrector BDL (gauss-cm): MBC2C21H.BDL: 8037.420898
2C21 V corrector BDL (gauss-cm): MBC2C21V.BDL: -722.333740
2C22 H corrector BDL (gauss-cm): MBC2C22H.BDL: -6100.000000
2C23 V corrector BDL (gauss-cm): MBC2C23V.BDL: -404.999939
~~post-target H corrector BDL (gauss-cm): MDN2H01H.BDL: 0.000000~~
~~post-target V corrector BDL (gauss-cm): MDN2H01V.BDL: 0.000000~~
~~Hall B duty factor (%): IGL1I00HALLBDF.VAL: 100.000000~~
~~Raster Status (1=running, 0=stopped): raster_status_ttl: 0.000000~~
~~OTR-1 status (0=out, 1=in): otr1: 0.000000~~
~~OTR-2 status (0=out, 1=in): otr2: 0.000000~~
~~faraday electronics gain: fcup_slope: 9256.000000~~
~~SLM electronics gain: slm_slope: 4167.122559~~
~~faraday electronics offset: fcup_offset: 0.000000~~
~~SLM electronics offset: slm_offset: 3786.000000~~

New Format

```
#                    2C21 Current (nA):          IPM2C21A.VAL: 9.931968
#                    2C24 Current (nA):          IPM2C24A.VAL: 9.983333
#                    2H00 Current (nA):           IPM2H00.VAL: 1.435891
#                    2H01 Current (nA):           IPM2H01.VAL: 1.435891
#                    2H02 Current (nA):           IPM2H02.VAL: 1.435891
#                 2C21 X position (mm):         IPM2C21A.XPOS: 0.020913
#                 2C24 X position (mm):         IPM2C24A.XPOS: 0.092501
#                 2H00 X position (mm):          IPM2H00.XPOS: 0.000000
#                 2H01 X position (mm):          IPM2H01.XPOS: 0.000000
#                 2H02 X position (mm):          IPM2H02.XPOS: 0.000000
#                 2C21 Y position (mm):         IPM2C21A.YPOS: 0.035515
#                 2C24 Y position (mm):         IPM2C24A.YPOS: -0.034913
#                 2H00 Y position (mm):          IPM2H00.YPOS: 0.000000
#                 2H01 Y position (mm):          IPM2H01.YPOS: 0.000000
#                 2H02 Y position (mm):          IPM2H02.YPOS: 0.000000
#                   Tagger Current (Amps):          TMIRBCK.VAL: 1927.099976
#                Faraday Cup Current (nA):       scaler_calc1.VAL: 0.064175
#                     Beam Energy (MeV):      MBSY2C_energy.VAL: 5561.901855
#           2C21 H corrector BDL (gauss-cm):          MBC2C21H.BDL: 8037.420898
#           2C21 V corrector BDL (gauss-cm):          MBC2C21V.BDL: -722.333740
#           2C22 H corrector BDL (gauss-cm):          MBC2C22H.BDL: -6100.000000
#           2C23 V corrector BDL (gauss-cm):          MBC2C23V.BDL: -404.999939
#           2H00 H corrector BDL (gauss-cm):          MBC2H00H.BDL: 8037.420898
#           2H00 V corrector BDL (gauss-cm):          MBC2H00V.BDL: -722.333740
#           2H02 H corrector BDL (gauss-cm):          MBC2H02H.BDL: -6100.000000
#           2H02 V corrector BDL (gauss-cm):          MBC2H02V.BDL: -404.999939
```