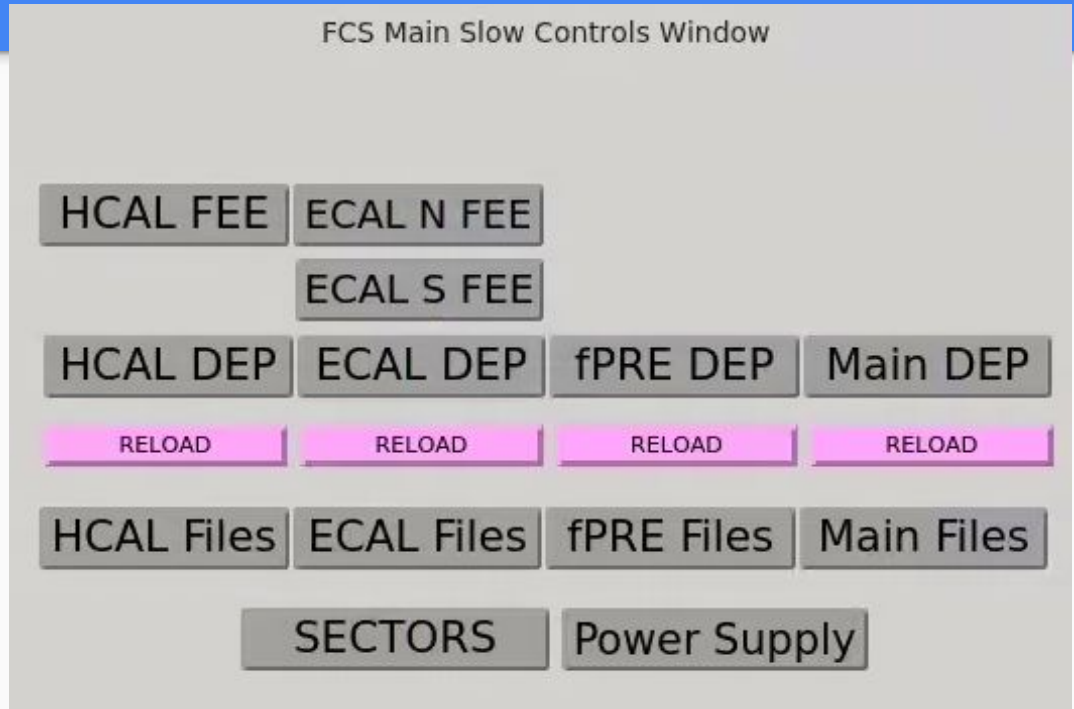


FCS Slow Controls Update - Paul Nord

- Working with Don Isenhowe to review display
 - Get Don connected to slow controls computer
 - Review screens
 - Create documentation (following slides are first draft)
- Integrate STAR logs and STAR alarms
 - Need contact
- Verify control of voltage control crate on/off/reset (this week?)
- New Requests
 -

FCS Main Window

- FEE Boards
 - HCAL
 - ECAL North
 - ECAL South
- DEP Boards
 - HCAL
 - ECAL
 - fPRE
 - Main
- Configuration Files
- Sectors
- Power Supply



FEE Status

- Table of Boards
(click for board info)
- Serial Numbers
- Gain
- Slope
- Slow Controls Map

Boards identified by
[NS]D[Board][Branch]F[Fee]

Board = number between 0 and 22

Branch = a, b

Fee = number between 0 and 12

HCAL FEE Boards

N 1wire_id

N Gain

N vslope

N MAP

S 1wire_id

S Gain

S vslope

S MAP

ND0aF0	ND0aF1	ND0aF2	ND0aF3	ND0aF4	ND0aF5	ND0aF6	ND0aF7	ND0aF8	ND0aF9	ND0aF10	ND0aF11	ND0aF12
ND0bF0	ND0bF1	ND0bF2	ND0bF3	ND0bF4	ND0bF5	ND0bF6	ND0bF7	ND0bF8	ND0bF9	ND0bF10	ND0bF11	ND0bF12
ND1aF0	ND1aF1	ND1aF2	ND1aF3	ND1aF4	ND1aF5	ND1aF6	ND1aF7	ND1aF8	ND1aF9	ND1aF10	ND1aF11	ND1aF12
ND2aF0	ND2aF1	ND2aF2	ND2aF3	ND2aF4	ND2aF5	ND2aF6	ND2aF7	ND2aF8	ND2aF9	ND2aF10	ND2aF11	ND2aF12
ND3aF0	ND3aF1	ND3aF2	ND3aF3	ND3aF4	ND3aF5	ND3aF6	ND3aF7	ND3aF8	ND3aF9	ND3aF10	ND3aF11	ND3aF12
ND3bF0	ND3bF1	ND3bF2	ND3bF3	ND3bF4	ND3bF5	ND3bF6	ND3bF7	ND3bF8	ND3bF9	ND3bF10	ND3bF11	ND3bF12
ND4aF0	ND4aF1	ND4aF2	ND4aF3	ND4aF4	ND4aF5	ND4aF6	ND4aF7	ND4aF8	ND4aF9	ND4aF10	ND4aF11	ND4aF12
ND5aF0	ND5aF1	ND5aF2	ND5aF3	ND5aF4	ND5aF5	ND5aF6	ND5aF7	ND5aF8	ND5aF9	ND5aF10	ND5aF11	ND5aF12
ND6aF0	ND6aF1	ND6aF2	ND6aF3	ND6aF4	ND6aF5	ND6aF6	ND6aF7	ND6aF8	ND6aF9	ND6aF10	ND6aF11	ND6aF12
ND7aF0	ND7aF1	ND7aF2	ND7aF3	ND7aF4	ND7aF5	ND7aF6	ND7aF7	ND7aF8	ND7aF9	ND7aF10	ND7aF11	ND7aF12

FEE Board Info

- Board Name
- Gain, Slope, Serial Number
- Channel Status (4 channels)
Raw values, and converted
 - Vset
 - Vcmp
 - Imon
 - Rmon
 - Mon
- Row, Column, ID (physical map)

FCS:ECAL:ND5aF4

gain: 0

vslope: 3366

0x3400000016298D970

CLOSE

	vset	vcmp	imon	rmon	mon	ROW	COL	ID
0	15066	20893	7	41627	46581	11	9	228
1	0	21315	0	47326	34391	11	10	229
2	0	20815	0	47400		12	9	250
3	15068	20758	10	41693	29671	12	10	251

0	1.0031	1.3911	0.0438	3.1767	6.1138			
1	0.0000	1.4192	0.0000	3.6116	-102936.6353			
2	0.0000	1.3859	0.0000	3.6172				
3	1.0032	1.3821	0.0625	3.1817	81.2731			

FEE Summary

Table summarizing group of boards

- Serial Number
- Gain
- Slope
- (other?)

ECAL N Fee Boards - 1wire_id

0xAE000001628A0170	0x9100000162AC1170	0xE800000162A94670	0xF90000016280
ND20aF0	ND20aF1	ND20aF2	ND20aF3
0x35000001629E0A70	0xD200000162B1E970	0x4800000162A7C370	0x680000016280
ND0aF0	ND0aF1	ND0aF2	ND0aF3
0x3100000162A9E170	0x730000016296A570	0x0800000162978570	0x340000016280
ND1aF0	ND1aF1	ND1aF2	ND1aF3
0x8700000162909270	0x170000016291B770	0xBF000001629DDA70	0x530000016290

ND22aF0

0x04000001629F2770

ND5aF0

0xB000000162A22370

ND6aF0

0x0500000162AE3970

ECAL N Fee Boards - vslope

	3366	3366	3366	3366
ND20aF0	ND20aF1	ND20aF2	ND20aF3	
	3366	3366	3366	3366
ND0aF0	ND0aF1	ND0aF2	ND0aF3	
	3366	3366	3366	3366
ND1aF0	ND1aF1	ND1aF2	ND1aF3	
	3366	3366	3366	3366
ND22aF0	ND22aF1	ND22aF2	ND22aF3	
	3366	3366	3366	3366
ND5aF0	ND5aF1	ND5aF2	ND5aF3	
	3366	3366	3366	3366
ND6aF0	ND6aF1	ND6aF2	ND6aF3	
	3366	3366	3366	3366

DEP Boards

- Table of Boards
(Click for board info)
- Summary Tables of Information
 - Temperature
 - Rate
 - Sector
 - Serial Number
 - Mask
 - Time Updated
 - Fee State
 - Rdo

Boards identified by:
[NS]D[Board Number]

HCAL DEP Boards

ND0	ND1	ND2	ND3	ND4	ND5	ND6	ND7	ND8
SD0	SD1	SD2	SD3	SD4	SD5	SD6	SD7	SD8
Temp	Rate	Sector	1wire_id	Mask	time	fee_state	rdo	

DEP Board Info

- Board Name
- Alive
- Temperature
- Update Time
- Rts
- Fee_state
- Serial Number, Firmware
- Clock
- Sector
- RDO
- Mask

FCS:HCAL:ND0

CLOSE

alive	1
temp_c	40.6
ht_rate	5822755.0000
time	01/14/2021, 12:09:33
rts_id	30
fee_state	PHYSICS
1wire_id	0x00674F76
firmware	1.001 00000000 00000000 00000000
clock	TCD
sector	4
rdo	1
mask	0x1FFFFFFFFF

0x00674F76

DEP Board Summary

Table of values for group of Boards

- Value (Temperature, rate, etc)
- Timestamp when last update received

HCAL DEP Boards - temp.

40.6	38.4	36.2	35.0
01/14/2021, 12:22:24	01/14/2021, 12:22:24	01/14/2021, 12:22:24	01/14/2021, 12:22:24
ND0	ND1	ND2	ND3
42.9	40.8	36.7	37.6
01/14/2021, 12:25:28	01/14/2021, 12:25:28	01/14/2021, 12:25:28	01/14/2021, 12:25:28
SD0	SD1	SD2	SD3

SECTORS (computers for DEP Boards)

- Table of Sector Status
 - State of system
 - CPU Usage
 - Event Rate
 - Uptime
 - Run Number
 - Time status data last updated

The Sectors send a status update to slow controls every 30 seconds.

FCS SECTORS			
	1	2	3
c_state	READY	READY	READY
cpu_usage	0	0	0
events	101	101	101
uptime	00d:22h:40m	00d:22h:40m	00d:22h:40m
run	1106805	1106805	1106805
time	01/14/2021, 11:48:09	01/14/2021, 11:47:57	01/14/2021, 11:48:09
	7	8	9
c_state	READY	READY	READY
cpu_usage	0	0	0
events	101	101	101
uptime	00d:22h:40m	00d:22h:40m	00d:22h:40m

Voltage Control (Wiener Crate, 40 channels, 6.5 V)

- Control
 - ON
 - OFF
 - Reset Trips
 - (Set Voltage) DISABLED
- Slots (5), Voltage Outputs (8)
 - On/Off Indicator
 - Status Text
 - Voltages
 - Current
 - Temperature
 - Chart buttons open stripcharts

Status updates every 5 seconds.

Activity light blinks when status updates.

FCS LV STAR

Uninhibit Switch	Status	Sense V	Term V	Current	Temp.	Group
u0	● 1 80 outputOn(0)	6.248	7.338	2.274	46	0
u1	● 1 80 outputOn(0)	6.250	7.038	1.670	46	0
u2	● 1 80 outputOn(0)	6.250	7.335	2.267	46	0
u3	● 1 80 outputOn(0)	6.247	7.018	1.675	44	0
u4	● 1 80 outputOn(0)	6.257	7.339	2.269	44	0
u5	● 1 80 outputOn(0)	6.248	7.042	1.680	41	0
u6	● 1 80 outputOn(0)	6.247	7.332	2.266	40	0
u7	● 1 80 outputOn(0)	6.258	7.043	1.679	36	0

Chart Chart Chart Chart

Voltage, Current, Temperature Strip Charts

Chart buttons on the Voltage Control will open a display of voltage, current, or temperature.

8 channels are split into two 4-channel displays.

Horizontal axis is 60 minutes.

