

Hypernuclear Electronic and Cabling Inventory

Bill Henry
8/25/25

Total # of Signals

	Detector	FADC	Low Resolution TDC	High Resolution TDC
HKS	KDC		1280	
	TOF	88		88
	AC	42		
	WC	48		
HES	EDC		1120	
	TOF	116		116
ENGE	PDC		640	
	TOF	48		48
	SciFi		832	

Modules

	Detector	FADC	Low Resolution TDC	High Resolution TDC	TDC 1190	VETROC	FADC F250
HKS	KDC		1280		10		
	TOF	88		88		1	6
	AC	42					3
	WC	48					3
HES	EDC		1120		9		
	TOF	116		116		1	8
ENGE	PDC		640		5		
	TOF	48		48		1	3
	SciFi		832		7		
Total					31	3	23

Cables Needed

Spectrometer	Distance	Ribbon	HV	Distance	Signal
HKS	225'	80	182	145'	178
HES	165'	70	118	85'	116
ENGE	185'	40	50	115'	48
ENGE SciFi	155'	52	?		

On Hall Floor

SHMS HUT

Repeater (16 ribbon)
Repeater (16 ribbon)
Repeater (16 ribbon)
Repeater (16 ribbon)

Repeater (LVDS
to ECL)
Only will work
with SciFi

Caen -> SHV (32 Ch)
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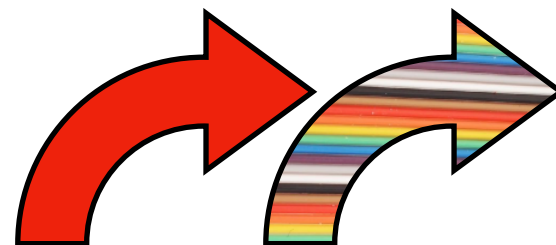
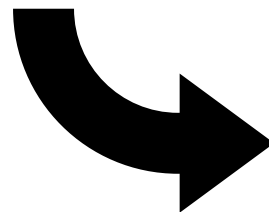
Max current is 1
mA.

Can we route
350 SHV cables
through
penetrations?

Otherwise we
need to go
through SHMS
roof, adds ~50 ft

Or use high
density cables
from ECAL

Signal Cables
from NPS
Patch Panel



Ribbon and HV
cables from floor
penetrations

HKS Crate
KDC (1120 ch)
AC/WC (90 ch)

6 FADC
10 TDC

HV Crate
Caen SY4527

HES CRATE
Drift Chamber
(1120 ch)

9 TDC

Splitter (64 ch)
Splitter (64 ch)
Splitter (64 ch)
Splitter (64 ch)

HODO CRATE
HKS/HES
(252 ch)

14 FADC
2 TDC

HV Crate
Caen SY4527

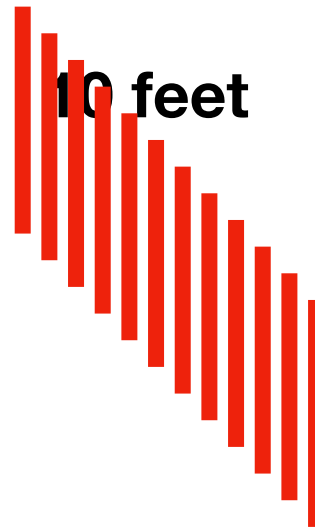
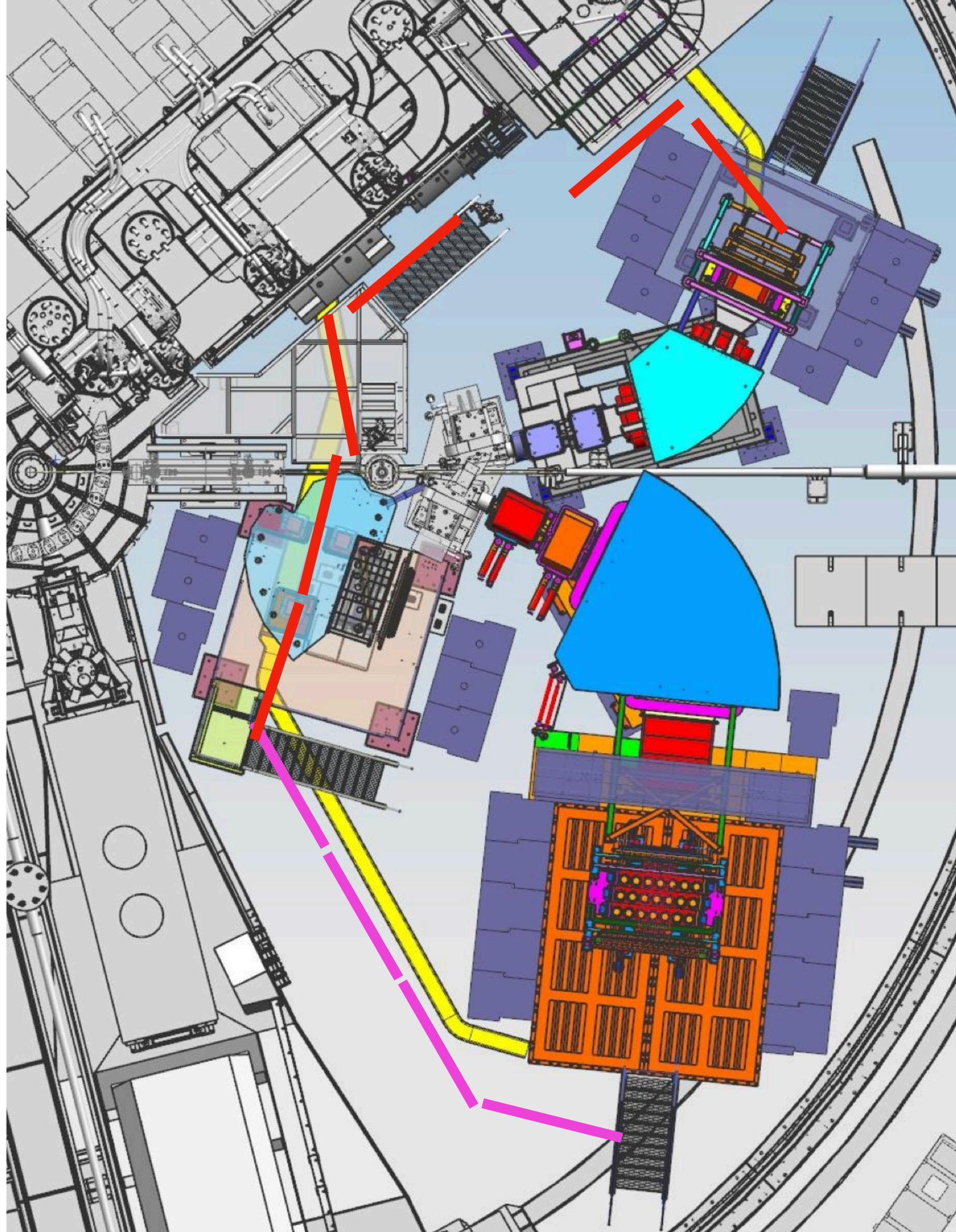
ENGE CRATE
sciFi (832 ch)
hodo (48 ch)
dc (640 ch)

3 FADC
13 TDC

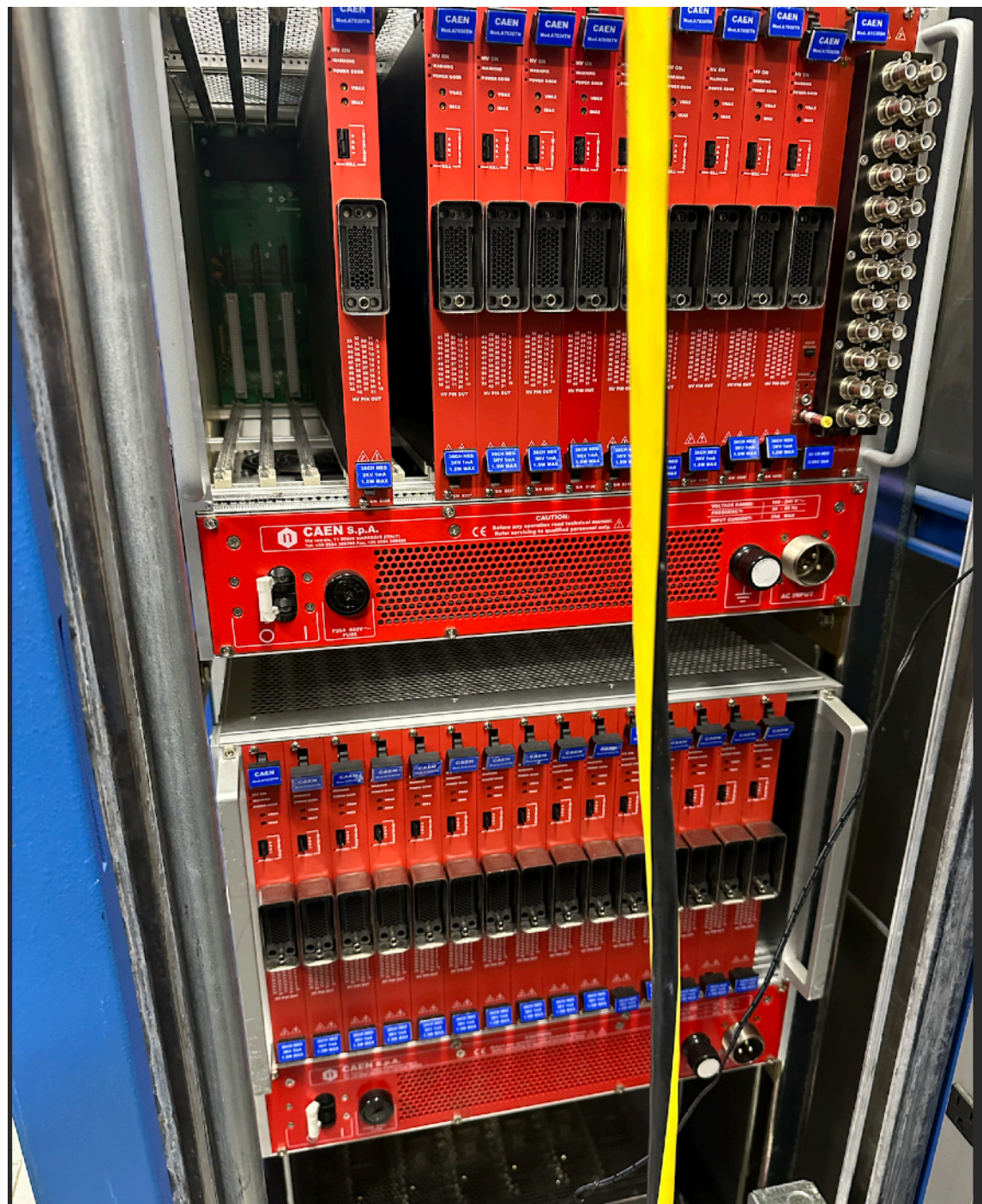
**SHMS HUT to
roof patch
80'**

**Roof Patch to
floor
35'**

**From shms floor
110' to HKS Det.
70' to Enge Det.
50' to HES Det.**



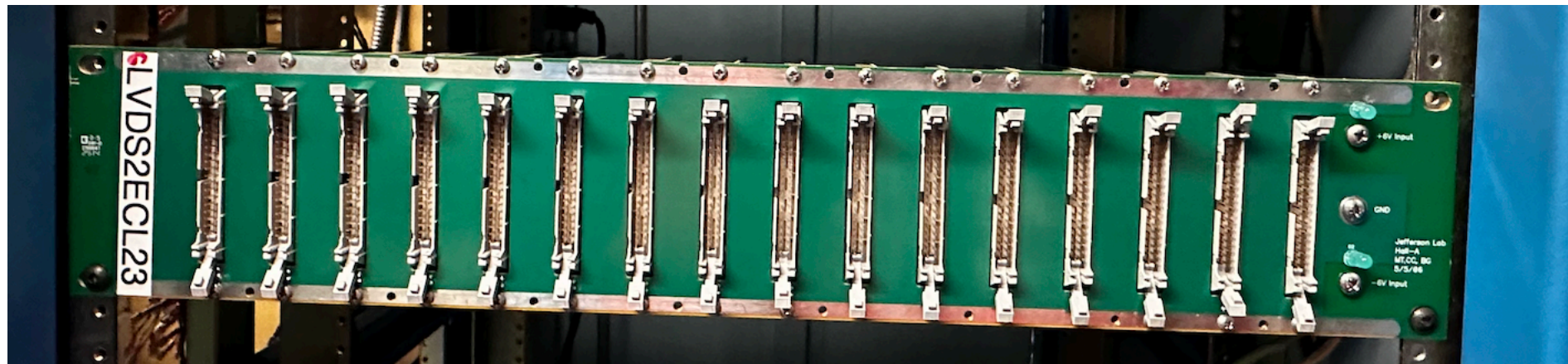
BACKUPS



SHMS Floor penetrations

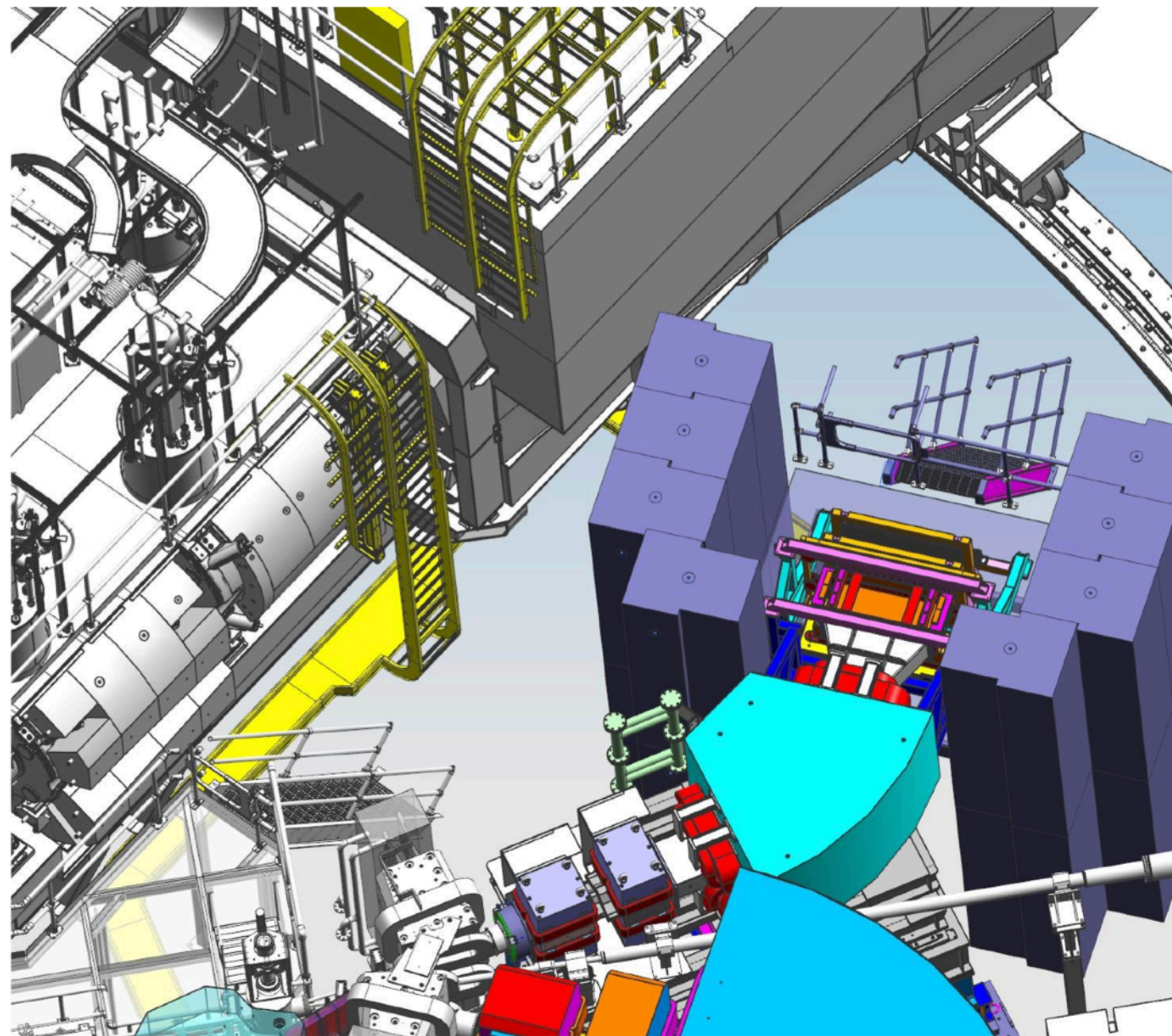
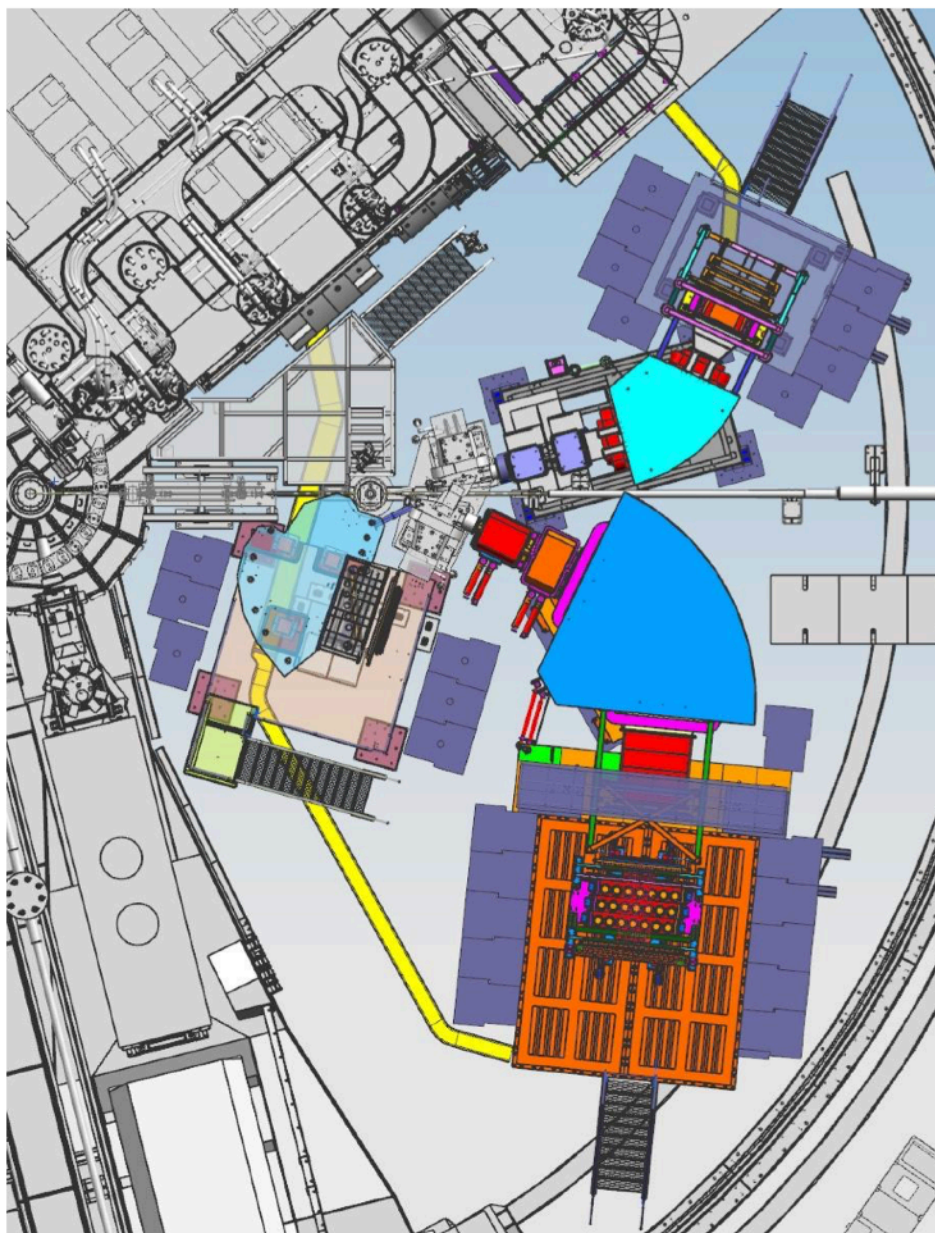


**CDET repeaters (LVDS -> ECL)
Won't work with drift chambers?**





Cabling to SHMS hut



Cabling to SHMS hut

