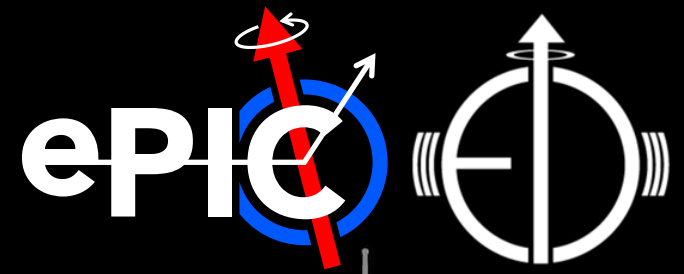




UNIVERSITY OF  
BIRMINGHAM

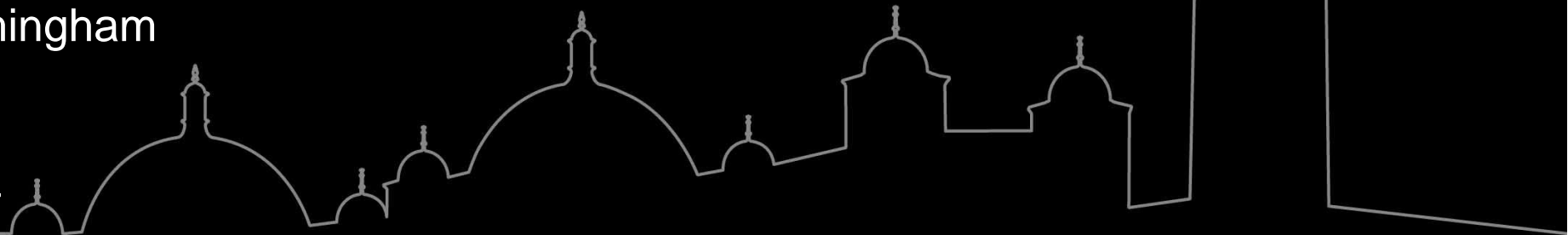


# ePIC SVT RDO geometry & routing

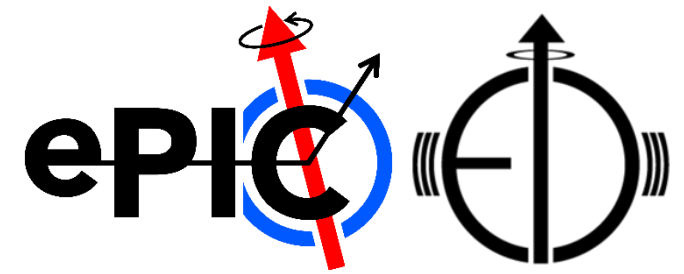
James Glover

EIC-UK Gathering @ Birmingham  
(SVT Working Meeting)

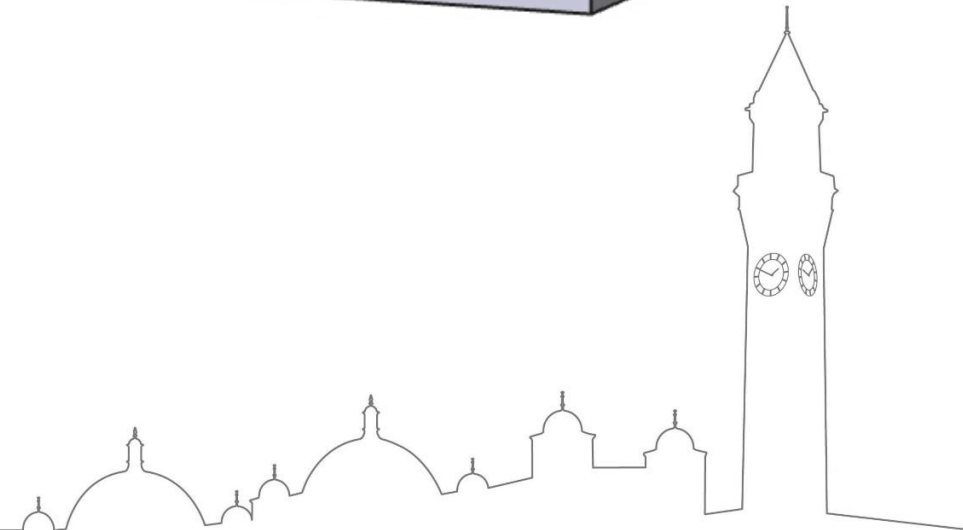
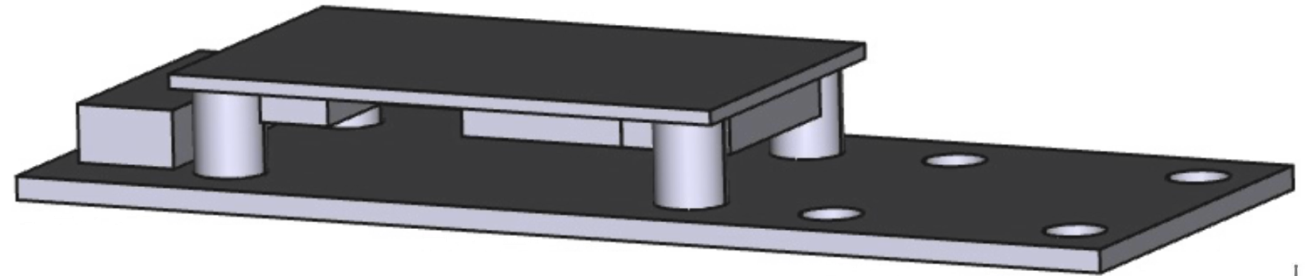
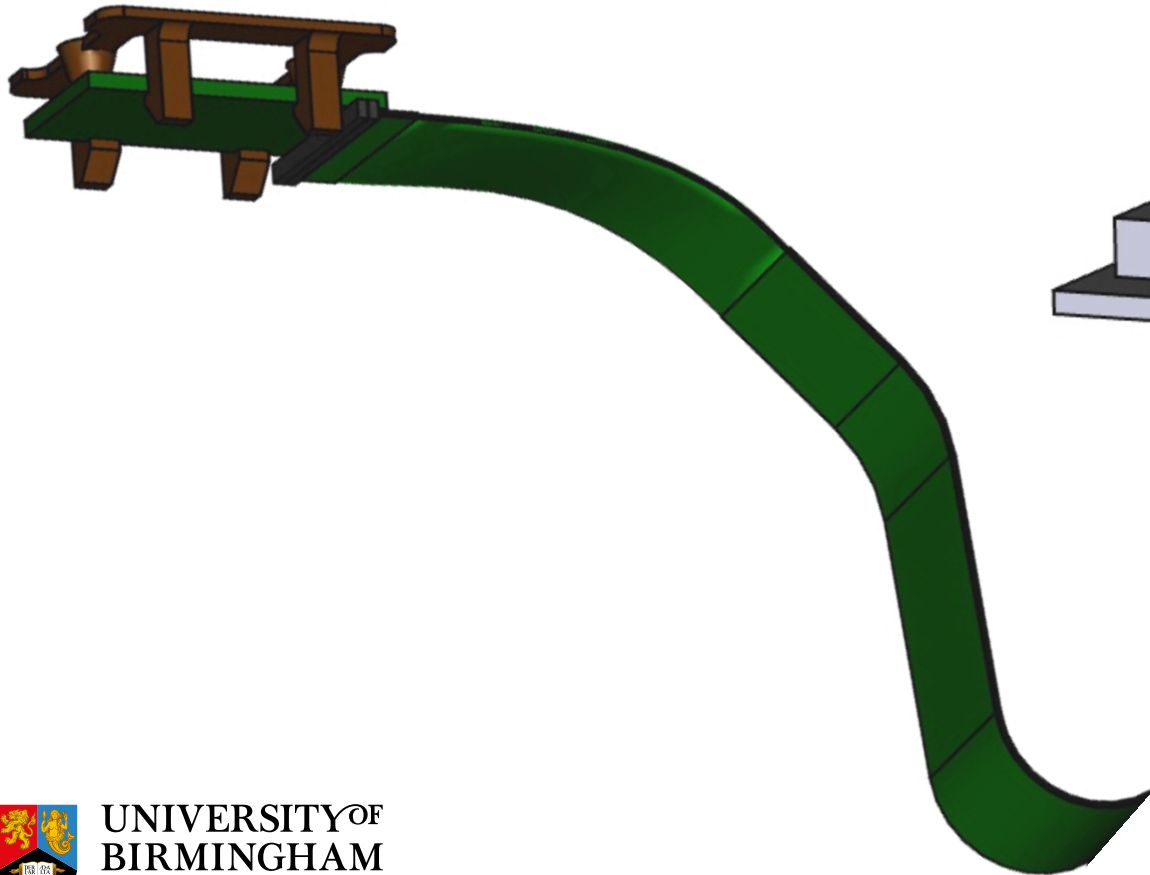
Mon, 18<sup>th</sup> November 2024



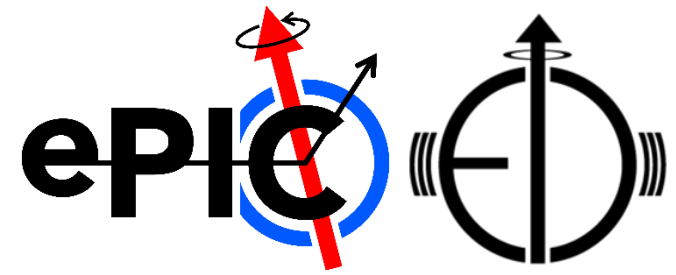
# Current CAD models



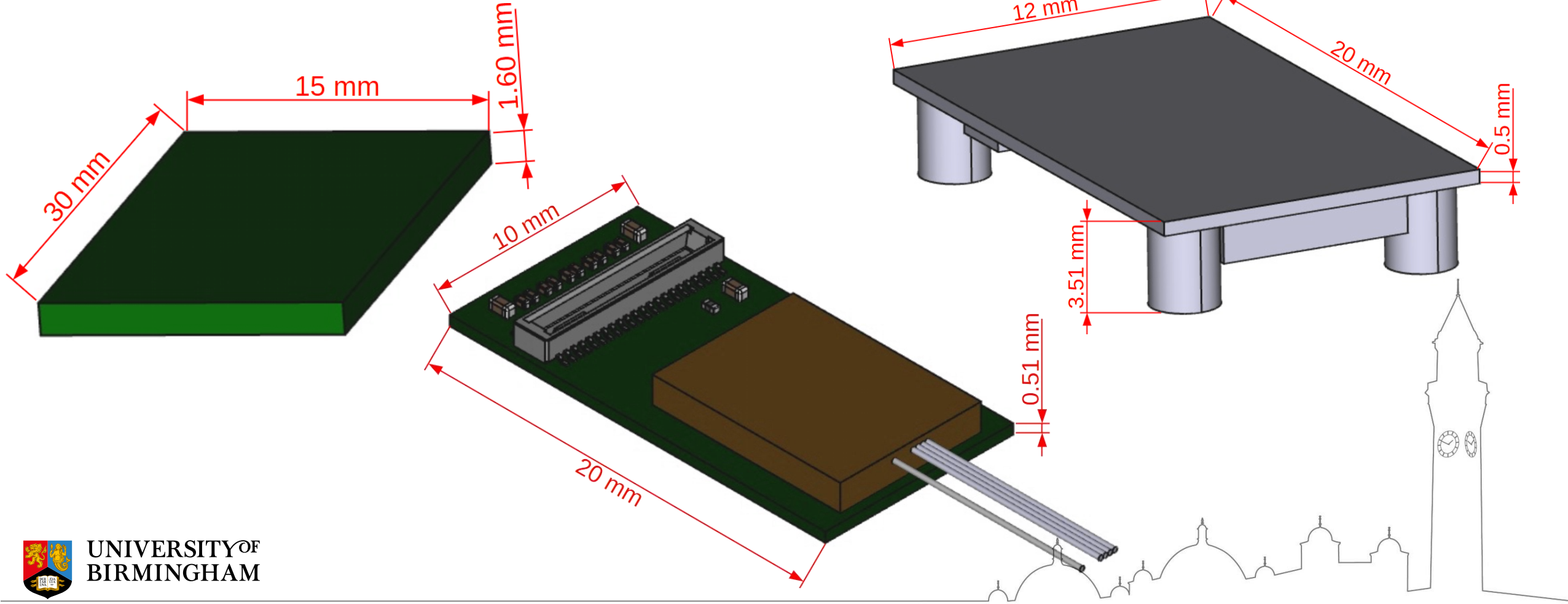
- Both IB and Endcap models have an RDO placeholder.



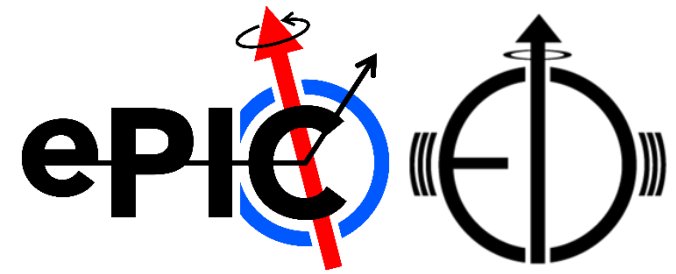
# Comparisons with VTRx+



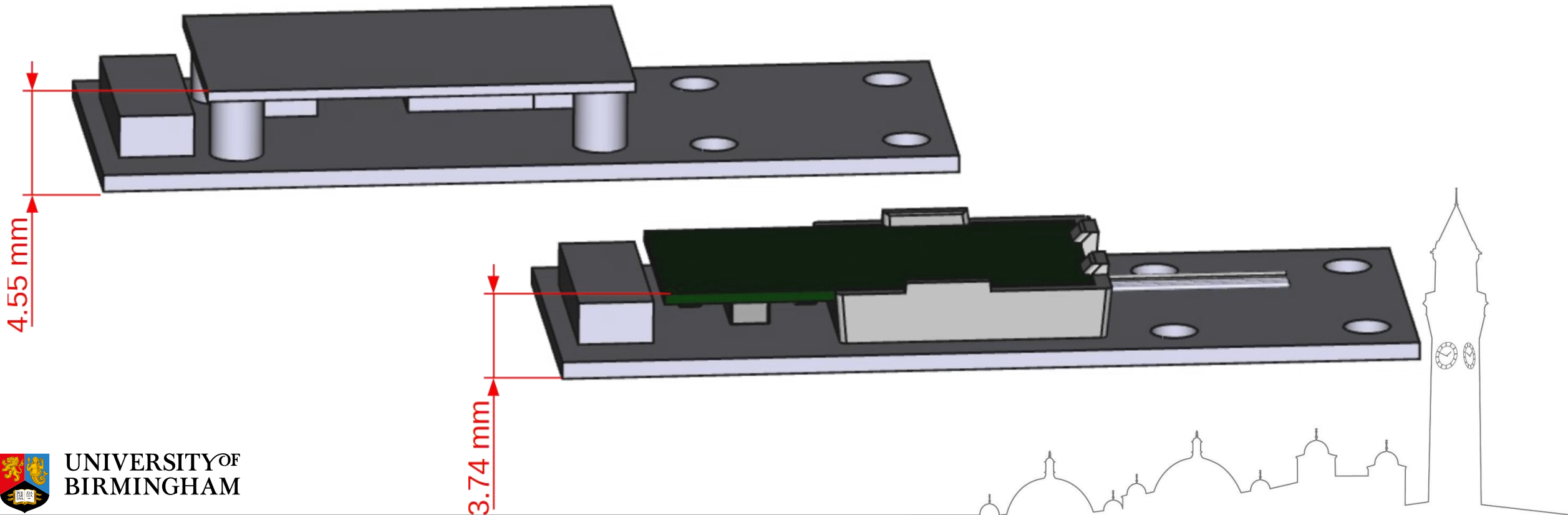
- None quite match the real dimensions of the VTRx+.



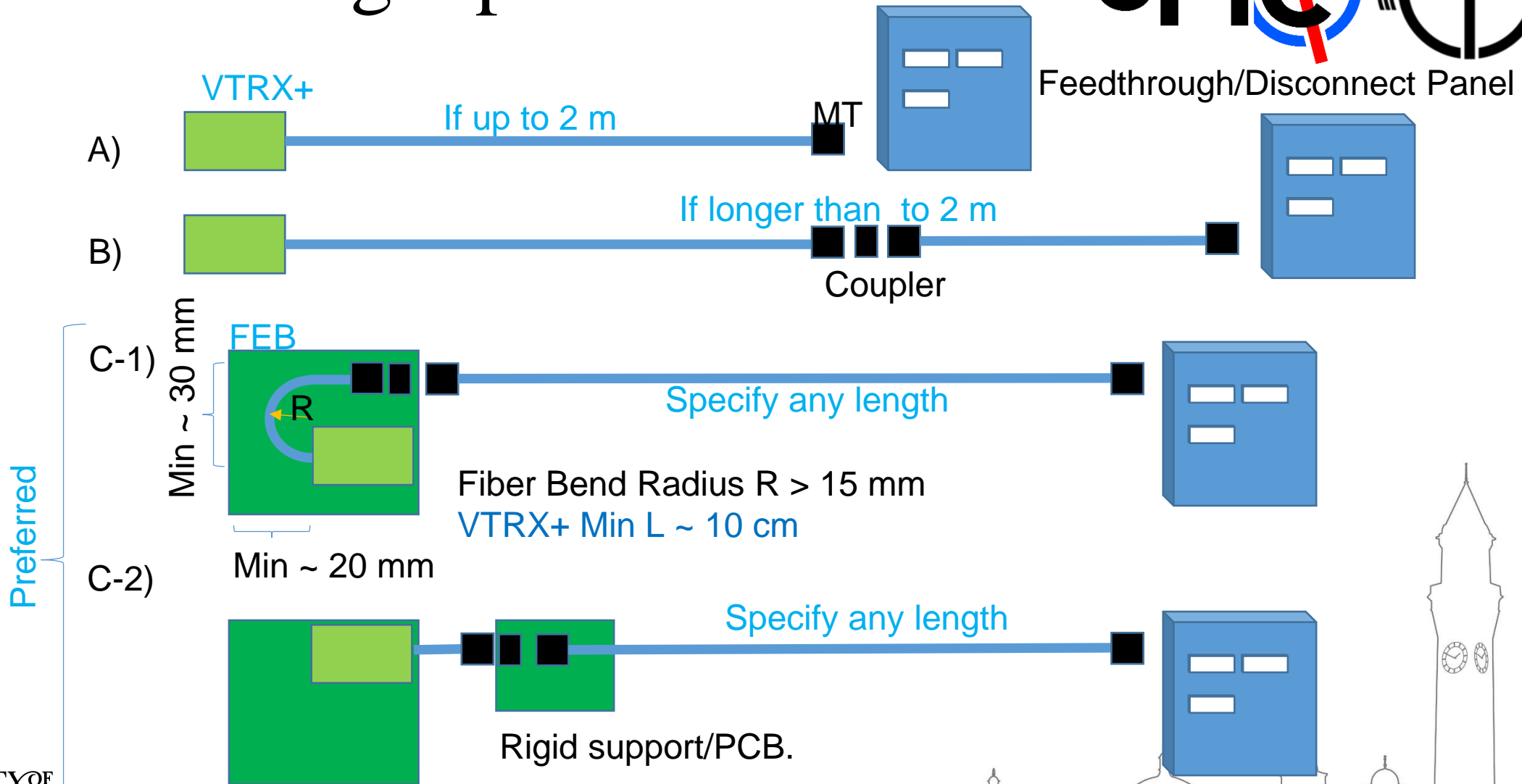
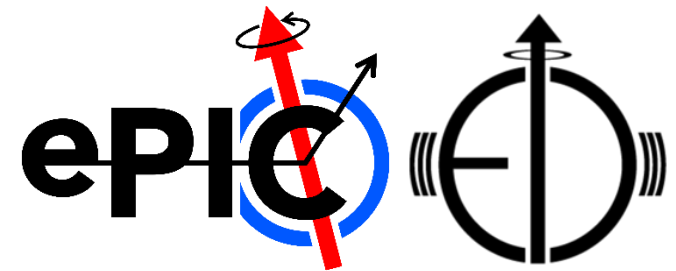
# Endcap's VTRx+ with stand-offs



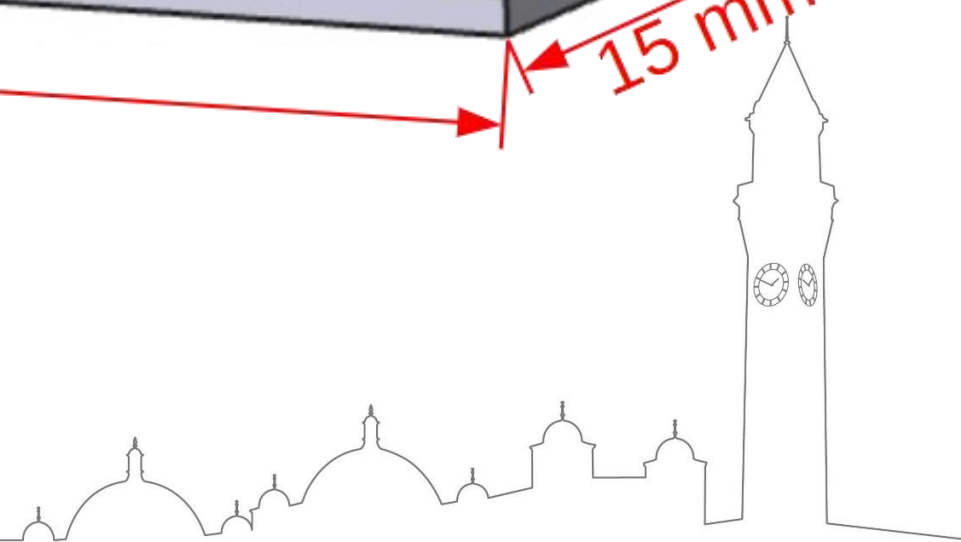
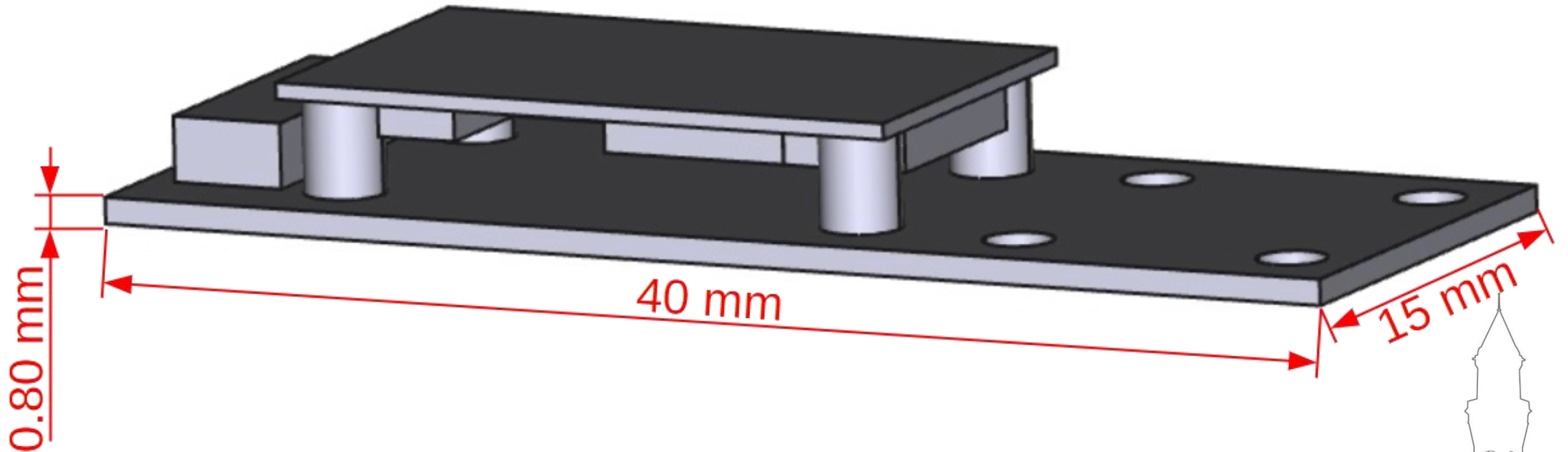
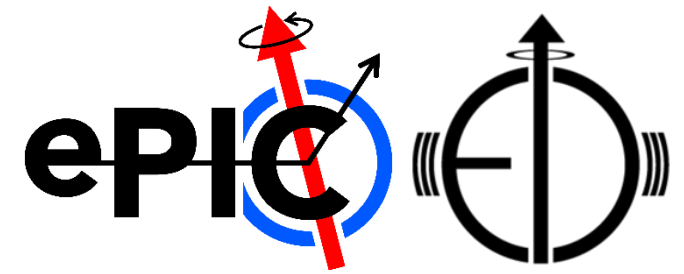
- The endcap model has 3 mm stand-offs raising their VTRx+ from the RDO board, however the CERN-made clip could be used.



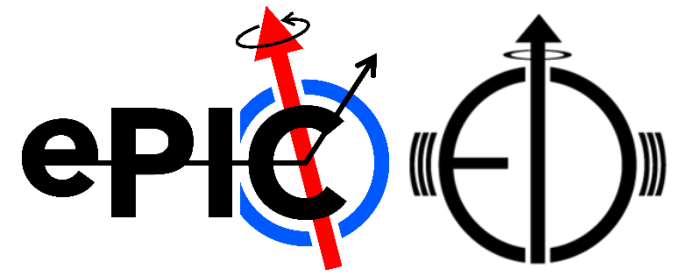
# VTRX+ Routing Options



# Endcap's RCO board



# VTRx+ Length Options



Choose Total Length (cm)
5.5
7.7
10
12
15
20
21.5
25
30
32.5
35
40
49
50
65
84
100
200

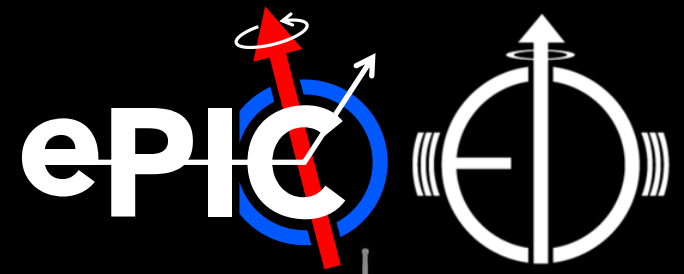
Extra cost due to “sacrificial” fiber needed (for CERN’s test set up).

- **Total Length** is the length of the fiber pigtail plus the length of the VTRx+ PCB (2 cm) and the length of the MT fiber connector (1 cm):  $L = \text{fiber length} + 3 \text{ cm}$ .



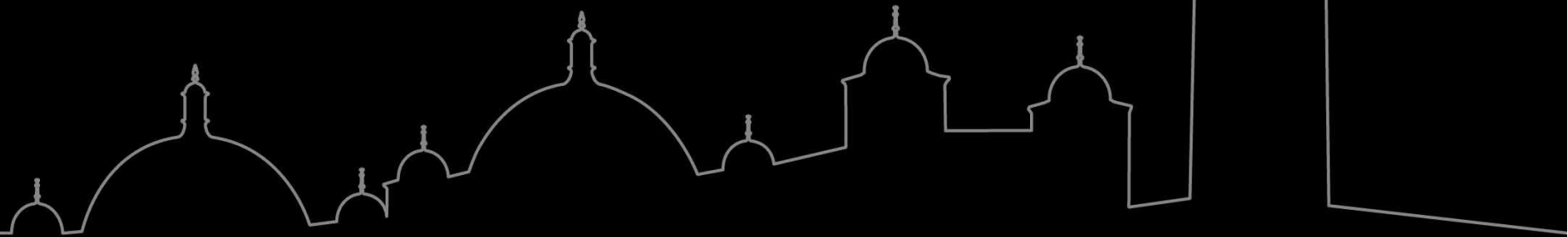


UNIVERSITY OF  
BIRMINGHAM



# Thank you very much!

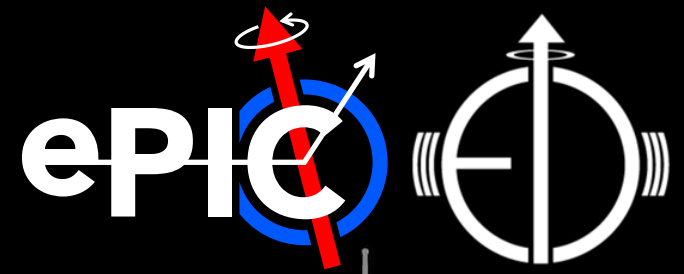
Any questions?



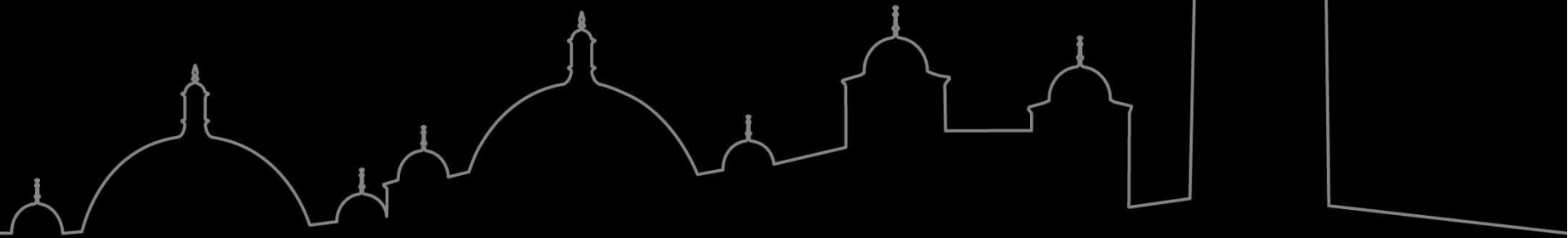




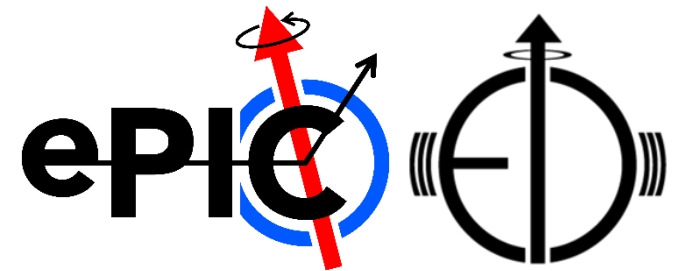
UNIVERSITY OF  
BIRMINGHAM



Additional (support) slides



# VTRx+ Length Options (details)



Choose Total Length (cm)
5.5
7.7
10
12
15
20
21.5
25
30
32.5
35
40
49
50
65
84
100
200

□ **Total Length** is the length of the fiber pigtail plus the length of the VTRX+ PCB (2 cm) and the length of the MT fiber connector (1 cm):  $L = \text{fiber length} + 3 \text{ cm}$ .

Extra cost due to “sacrificial” fiber needed (for CERN’s test set up).

## Long Lead Procurement Order (5500):

Sub-Detector	Qty	Total Length (cm)
SVT	2000	
dRICH	1500	
MPGDs	1000	
TOFs	400	
pfRICH	136	
RP	128	
OMD	72	
BO Tracker	168	
Lumi-PS	72	
various	24	

## Needed:

Sub-Detector	Qty	Total Length (cm)
SVT	1579	
MPGD EE	64	
MPGD HE	64	
MPGD IB	128	
MPGD uRwell	384	
TOF Disk	212	
TOF Barrel	288	
dRICH	1242	
pfRICH	68	

Electron side Sub-Detector	Qty	Total Length (cm)
SVT	790	
MPGD EE	64	
MPGD IB	64	
TOF Barrel	144	
pfRICH	68	

Hadron side Sub-Detector	Qty	Total Length (cm)
SVT	790	
MPGD HE	64	
MPGD IB	64	
MPGD uRwell	384	
TOF Disk	212	
TOF Barrel	144	

Deadline for pigtail lengths (not a hard deadline) but needed 6 months in advance of delivery (minimum).  
Something needed in Dec '24.