



应用于反应堆中微子TPC探测器 研究进展

祁辉荣

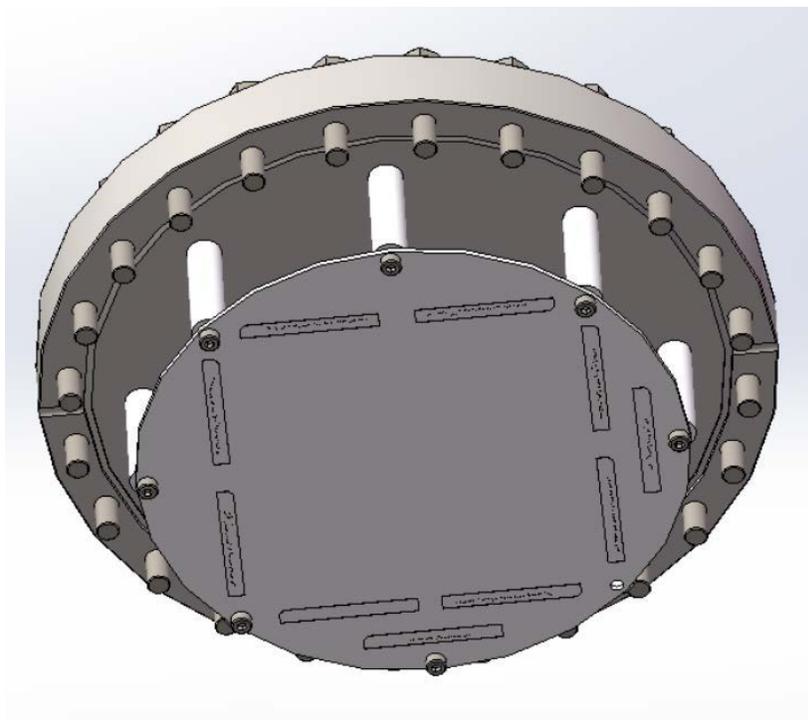
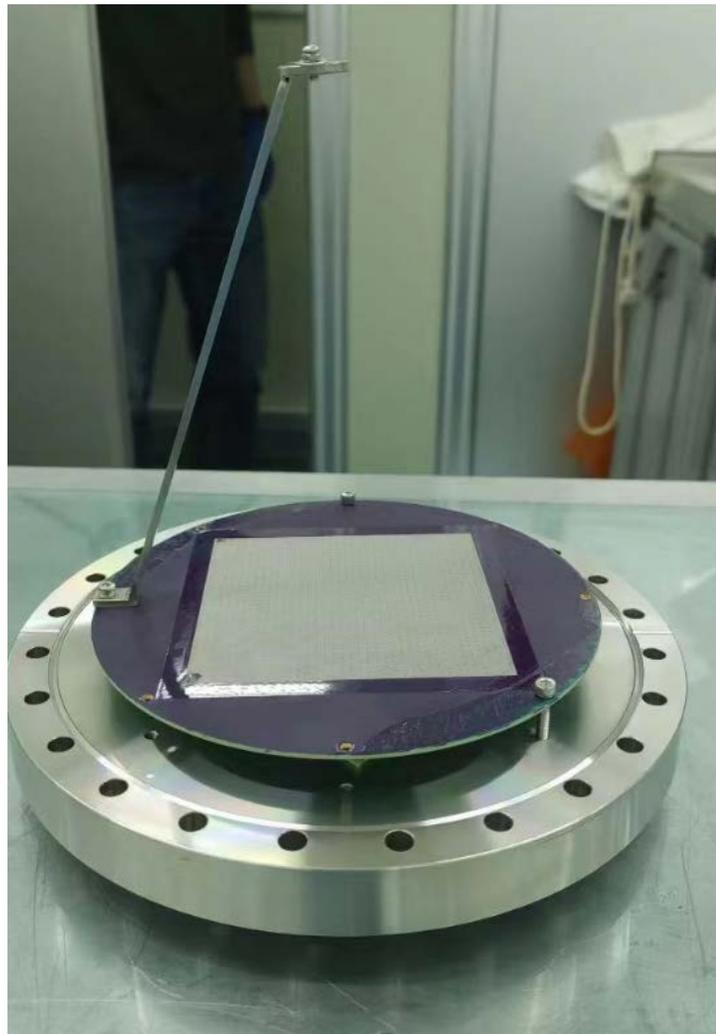
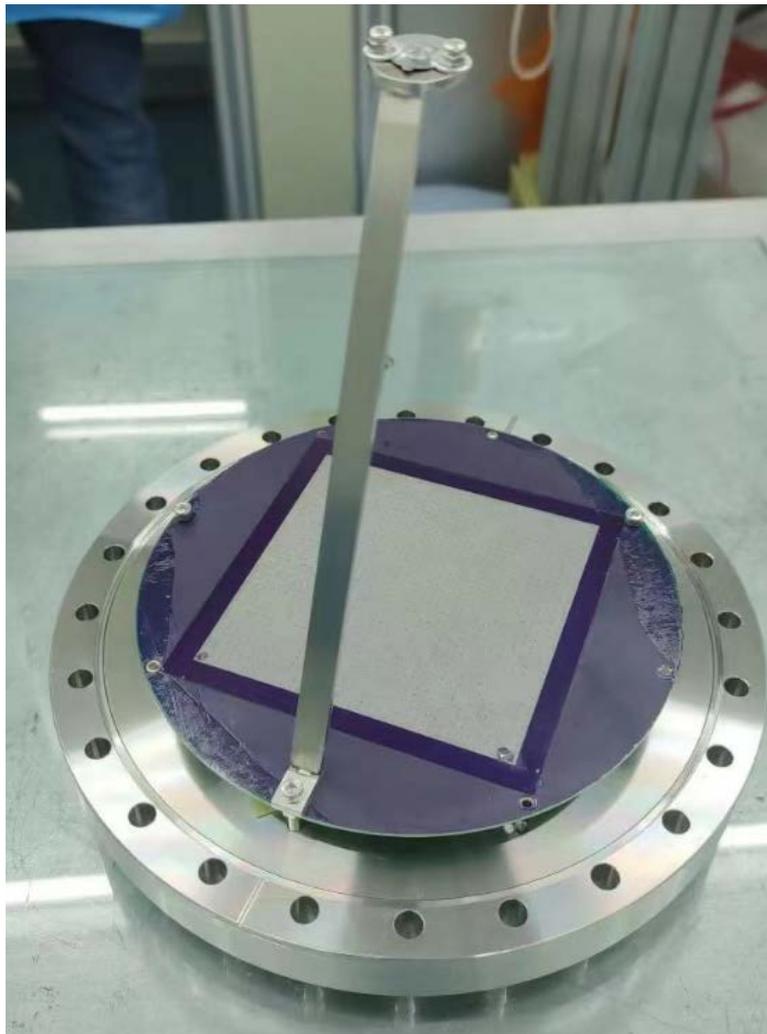
丁雪峰, 管宇铎, 姚海峰, 文其林, 余信, 黄金浩, 孙一方, 侯少静, 徐美杭

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- **项目进展**
 - 探测器进展
 - 连接线进展及调研

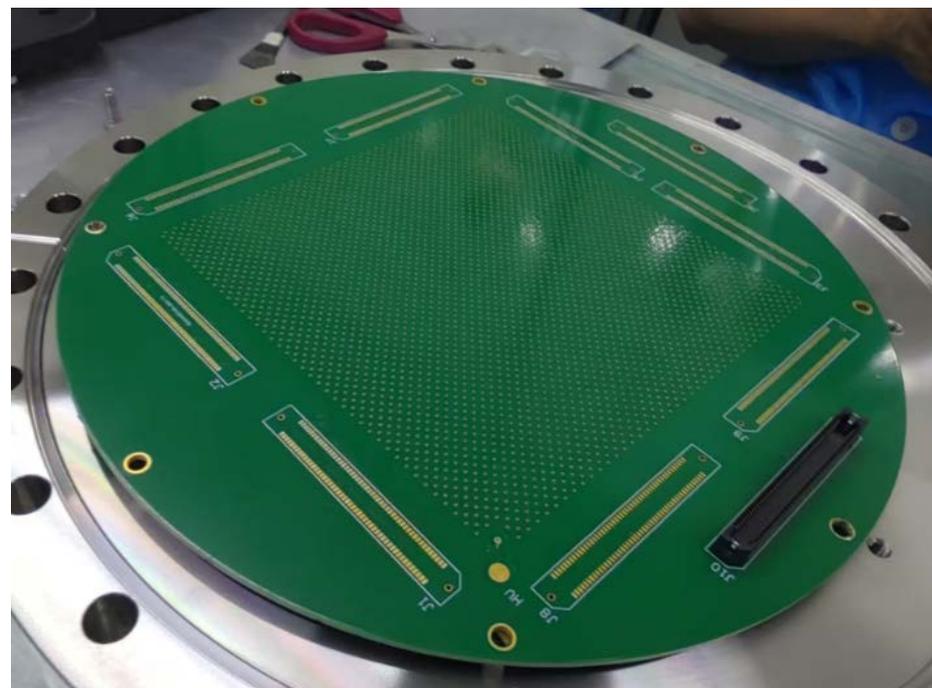
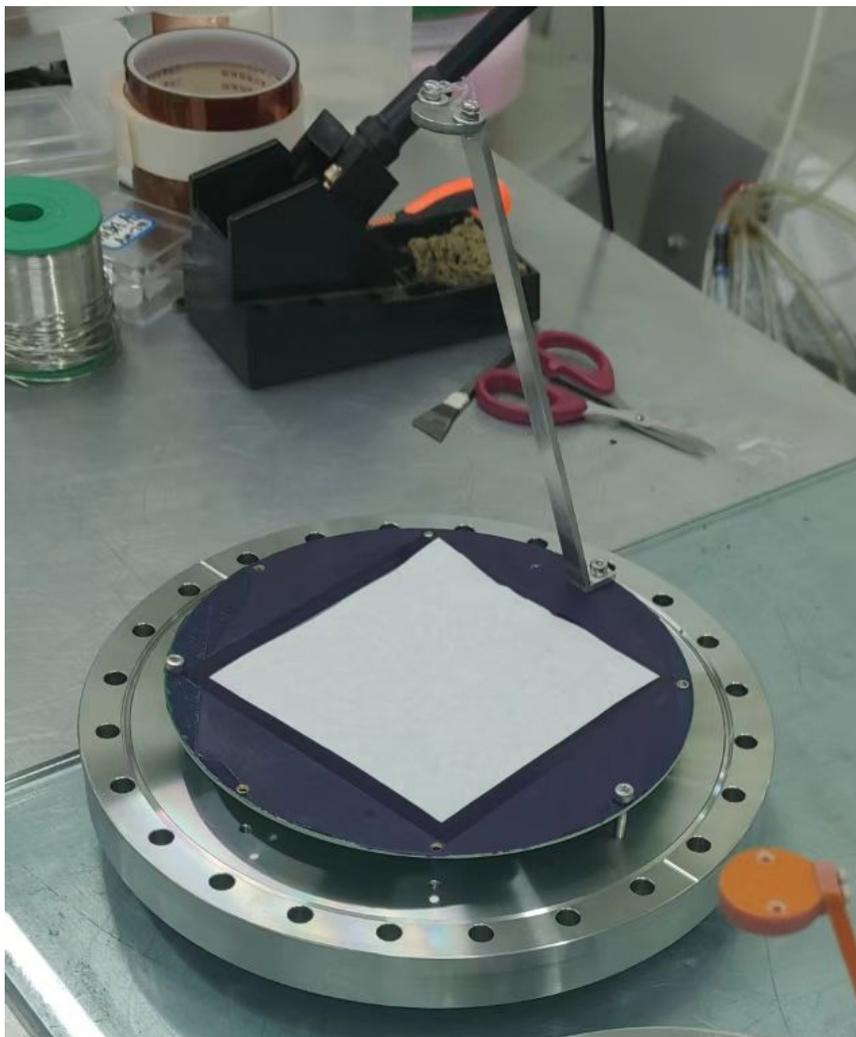
进展1 – 探测器准备

- Micromegas探测器进展
 - 上周例会建议采用国内连接线（替代Samtec连接线）



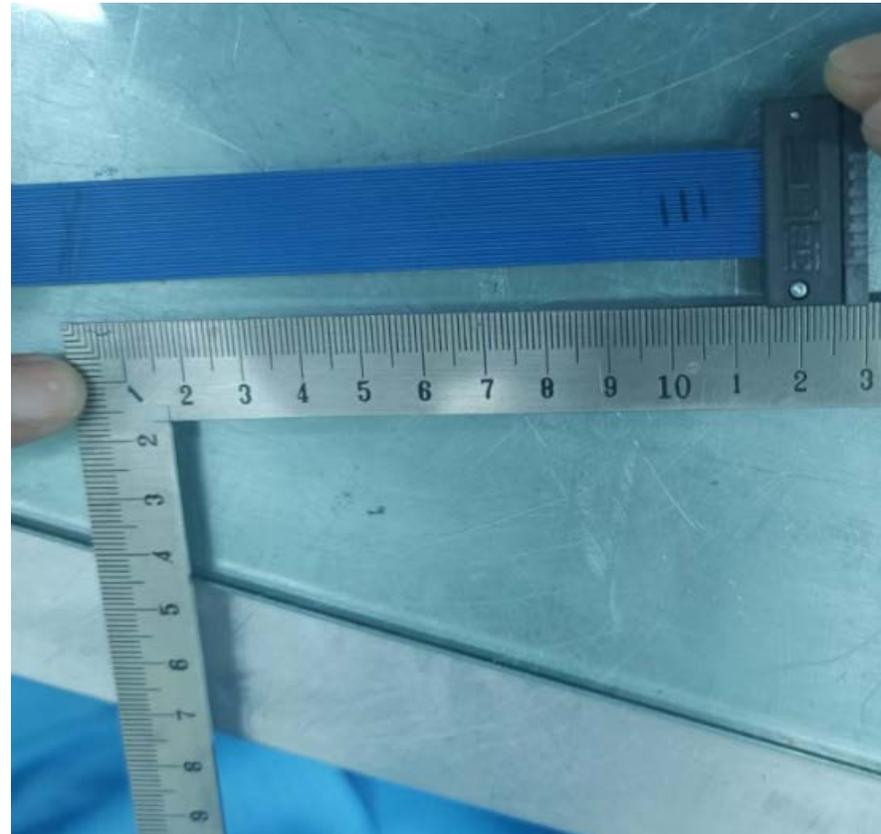
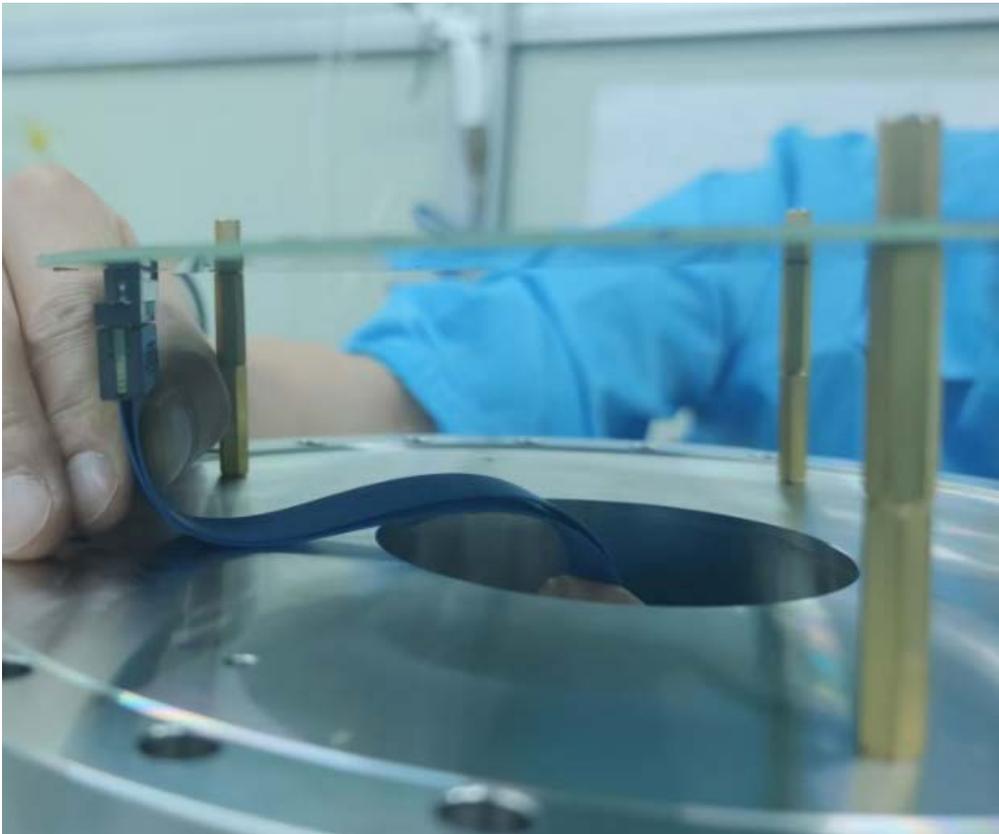
进展2 – 探测器准备

- Micromegas探测器进展
 - 焊接Samtec连接头，测量需要的连接线长度



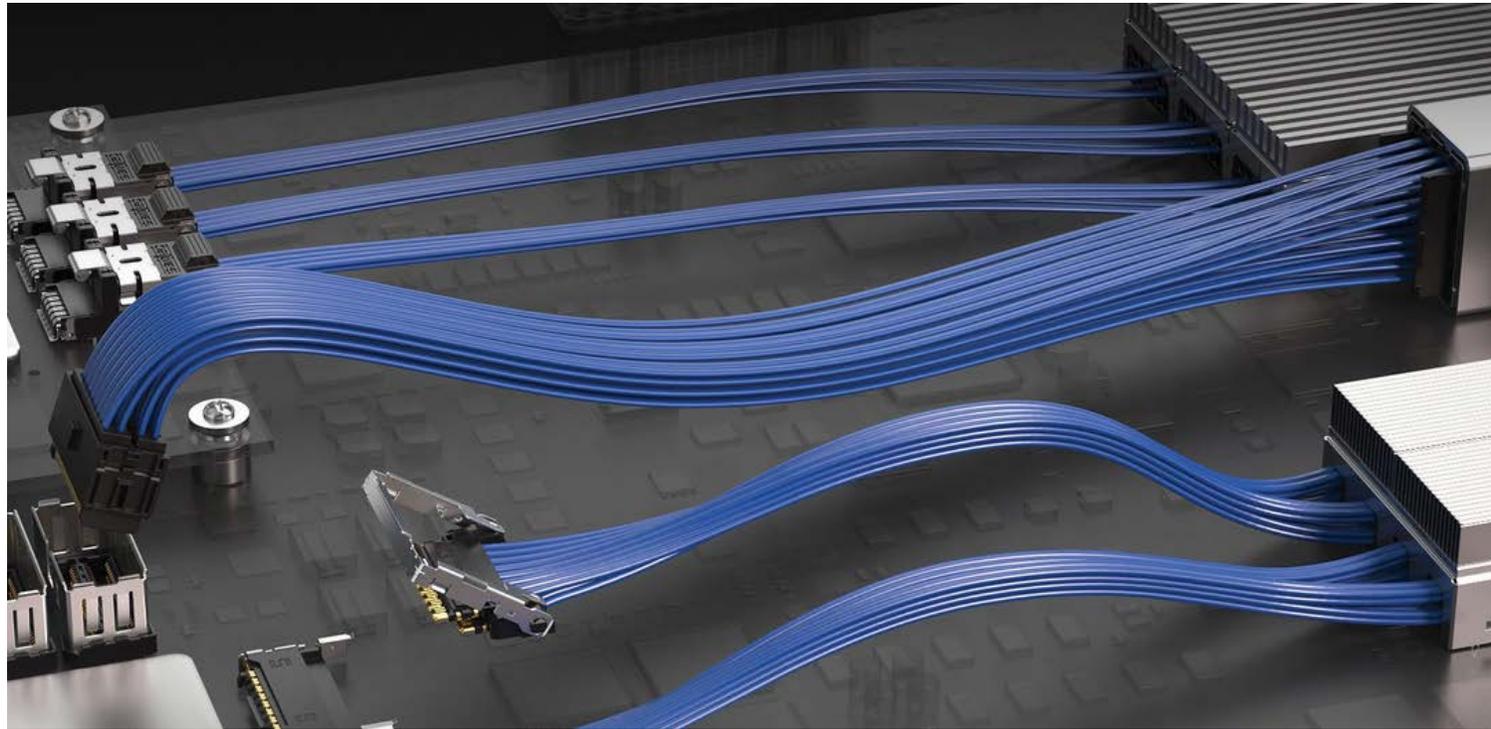
进展3 – 探测器准备

- Micromegas探测器进展
 - 焊接Samtec连接头，测量需要的连接线长度
 - 长度需要：11cm线缆长度（腔体内部）
 - 密封胶需要的长度5cm



进展4 – 连接线调研

- Samtec连接线缆



进展5 – 国内替代方案

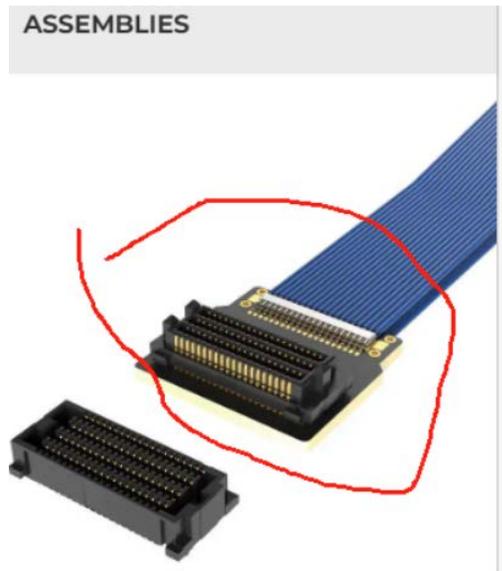
- 沃德披欧连接器
 - <https://www.worldpo.com/index.php>
 - 制作连接connector，价格是进口的一半以内
 - 尺寸及规格完全与Samtec一致，可平替Samtec QTEC系列
 - 但做不了连接线



QSE	PINS PER ROW NO. OF PAIRS	01	PLATING OPTION	TYPE	A	OTHER OPTIONS	"X"R
	-020, -040, -060 (40 total pins per bank = -D)		-F = Gold flash on contact, Matte Tin on tail	-D = Single- Ended		-GP = Guide Post	Leave blank for Tray Packaging
	-014, -028, -042 (14 pairs per bank = -D-DP)		-L = 10 μ" (0.25 μm) Gold on contact, Matte Tin on tail	-D-DP = Differential Pair		-K = (8.25 mm) .325" DIA. Polyimide Film Pick & Place Pad	-TR = Tape & Reel (40 positions max. with -GP)
			-C = 50 μ" (1.27 μm) Electro-Polished Selective Gold on contact, Matte Tin on tail (passes 10 year MFG testing)			-L = Latching Option (Not available on -042 & -060 positions)	-FR = Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks) (40 positions max. with -GP)

-D-DP = (No. of Positions per Row/14) x (20.00) .7875 + (1.27) .050	
-D = (No. of Positions per Row/20) x (20.00) .7875 + (1.27) .050	

(7.24) .285 (7.48) .295 (0.76) .030
(3.05) .120 (3.25) .128



进展7 – 国内替代方案

- SOLEPIN 硕品连接器
 - <https://www.solepin.com/>
 - 可以做连接线，样品两根确认邮寄，下周可做实验

● **14Gbps 高速连接线缆 可随意定制 最高支持100针信号传输**



14Gbps 高速连接线缆 可随意定制 最高支持100针信号传输

品名规格:

物料料号: 66XX-XXXXXXXXXX

电镀要求: 镀金

塑胶材质: LCP

生产周期: 30-40天

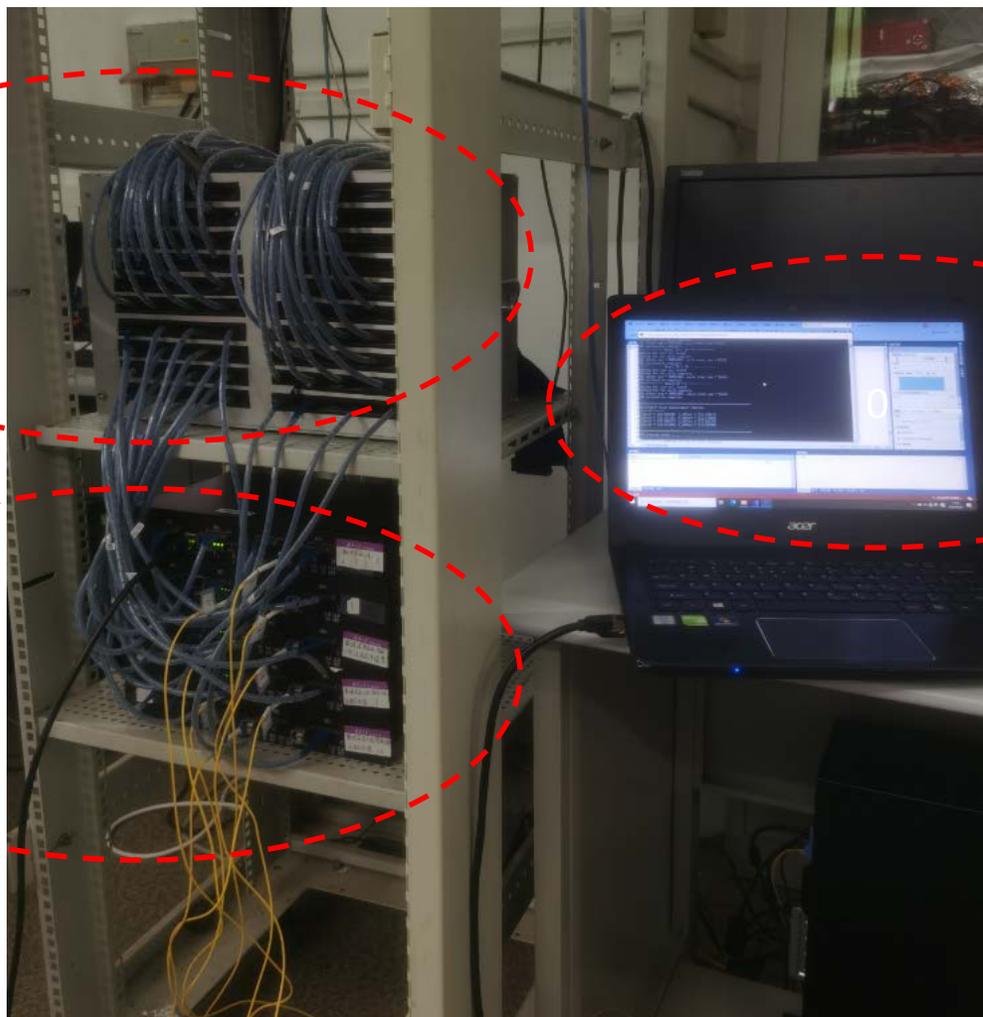
包装方式: 盘装

进展8 – 电子学准备

- Micromegas探测器+电子学进展
 - 读出电子学已安装在探测器旁边

前置放大器

数据采集DAQ



数据采集DAQ
软件及控制

Many thanks!