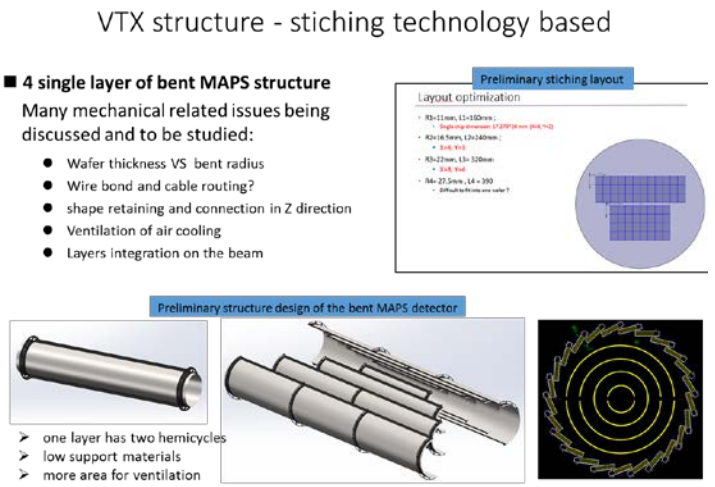
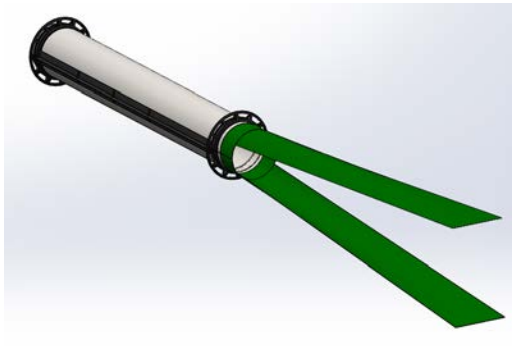
VTX

New baseline 结构方案设计与分析：

- 走线空间受限
- Stiching结构线路引出和探测器支撑与固定

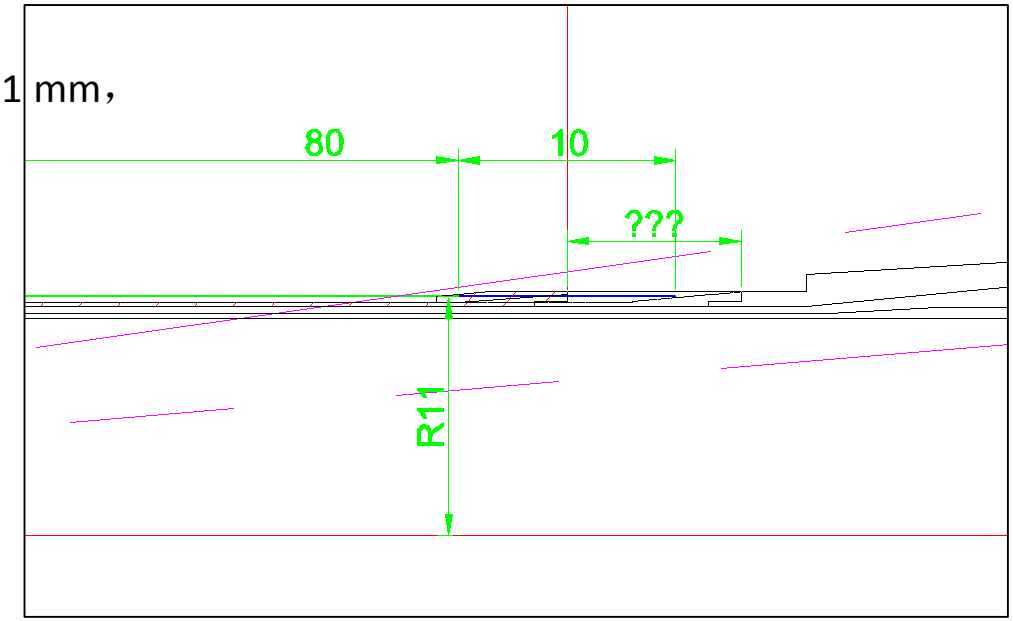


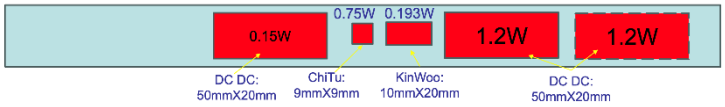


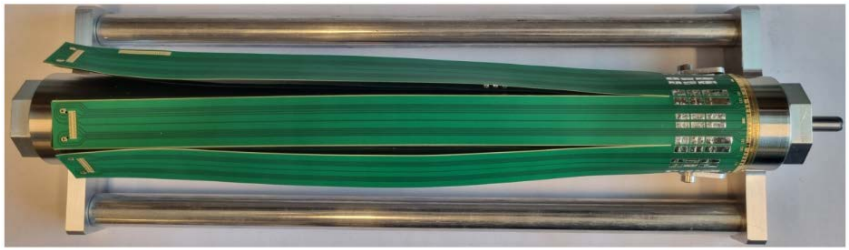
VTX+风道放大腔总体结构模型

VTX最内层尺寸与束流管对接？

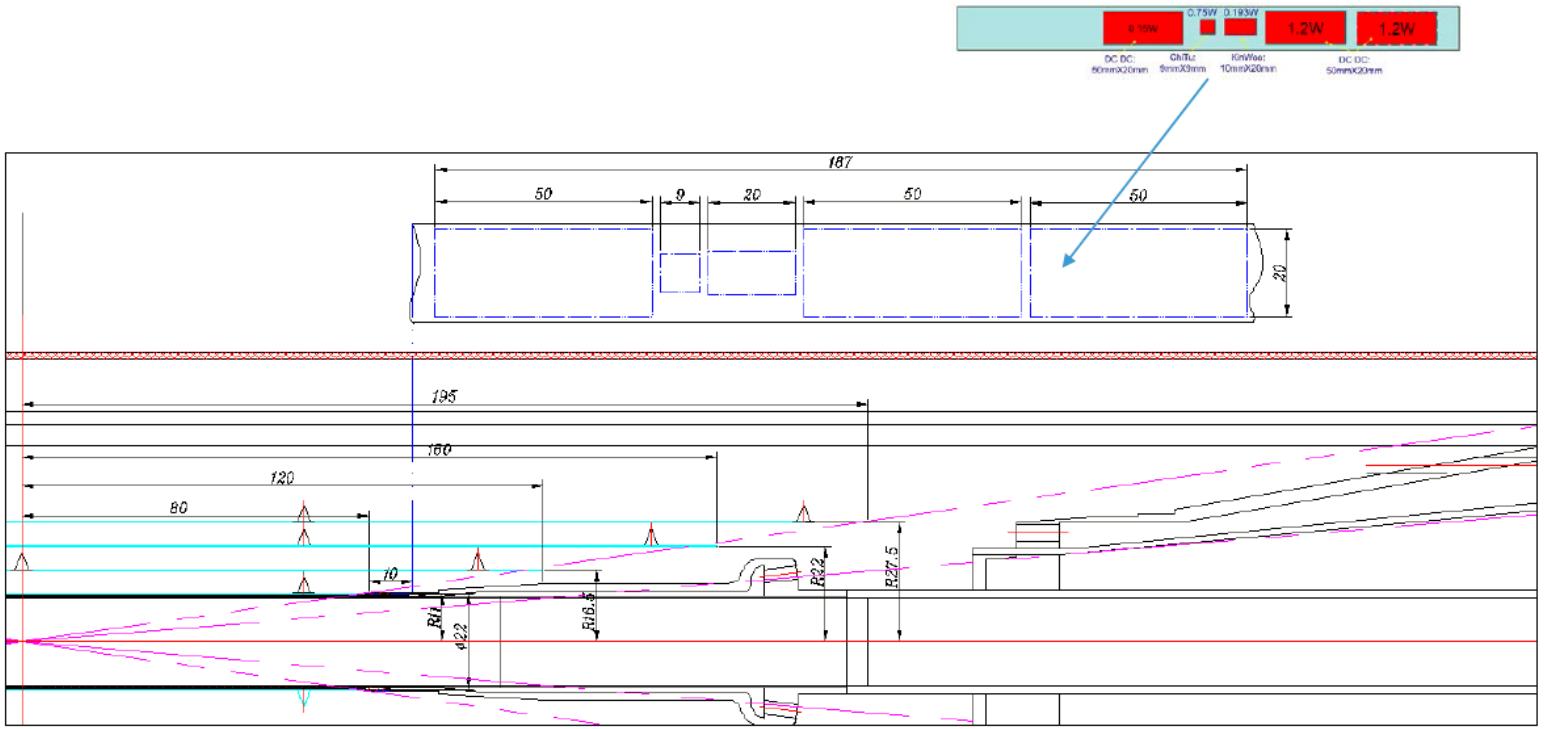
按当前layout：最内层弯曲芯片R11 mm，
与外铍管段干涉。
外皮管可否适当延长？





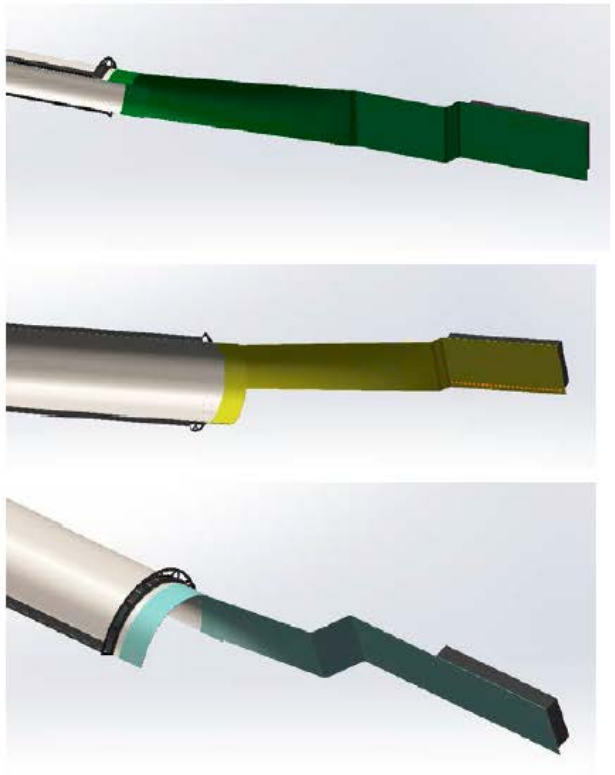


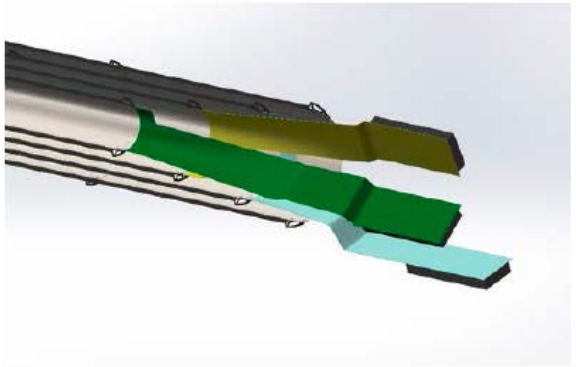
VTX-stiching 走线空间



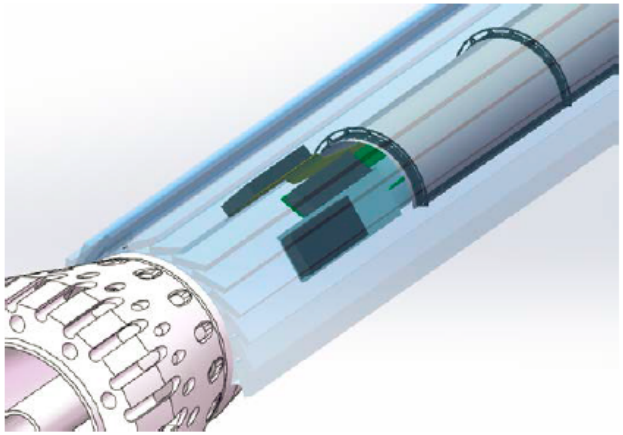
VTX-stiching 走线空间-update

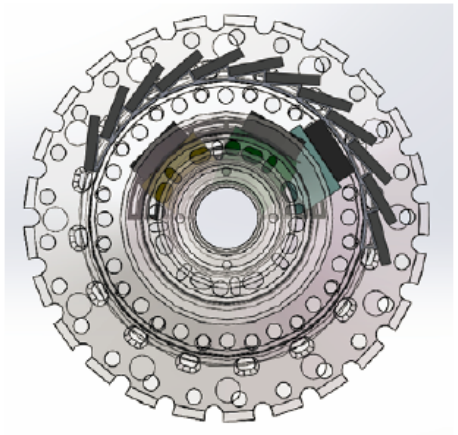
试一个半圆上装一条flex，一个DC-DC 模块50x20x6.7 mm

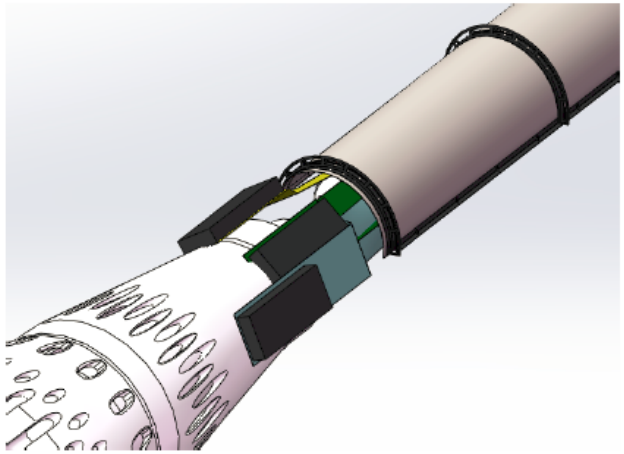




VTX-stiching 走线空间-update







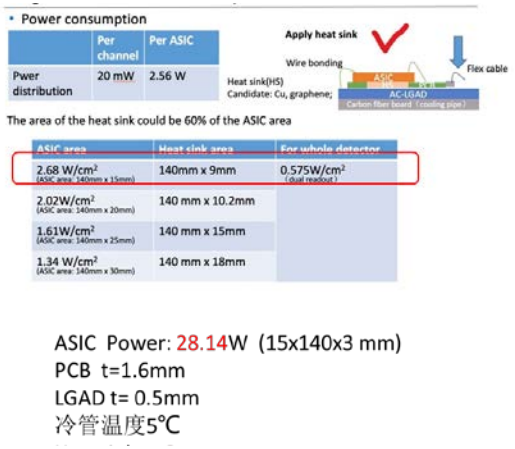
Stiching可用截面太小：

- 相邻层间flex周向有叠加、无间隙
- 4（示意3层）层的flex+DC-DC径向比较局促、贴近外桶
阻挡风道、支撑结构生根受阻

OTK-热分析

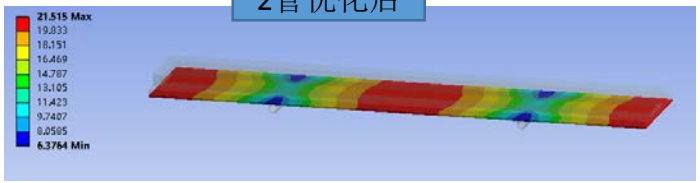
OTK冷却方案优化分析：
之前已对热沉方案采用Cu和AL情况的对比分析，初步结果显示：AL的效果也不错

按新的发热量，按物理需求，调整热沉材料为AL，对不同管路布置做了分析、对比：

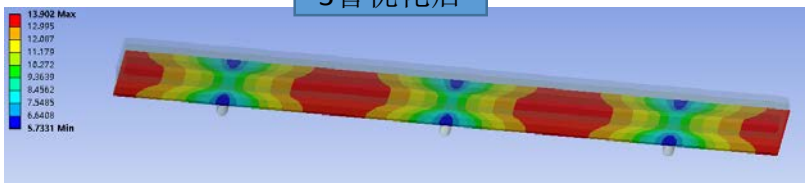


ASIC Power: 28.14W (15x140x3 mm)
PCB t=1.6mm
LGAD t= 0.5mm
冷管温度5℃

2管优化后



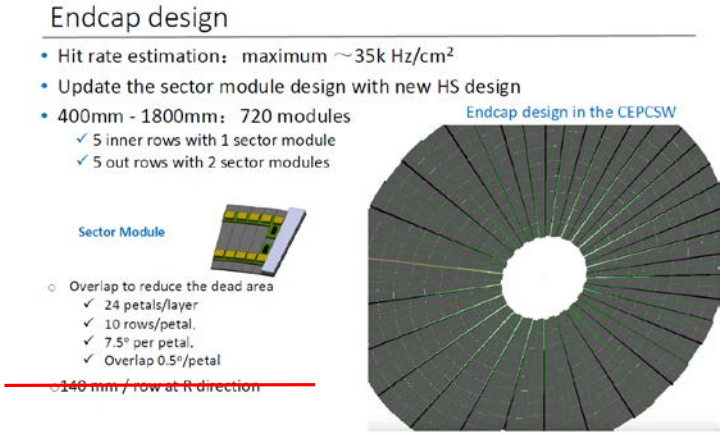
3管优化后



OTK endcap

按OTK LGAD endcap 物理模块初步方案，设计endcap支撑结构初步方案：

- 前后petal交替
- LGAD朝向IP
- / 电子学方案
- / 冷管布置



探测器R 400-1800 mm，整体R边界？

Endcap 初步结构方案