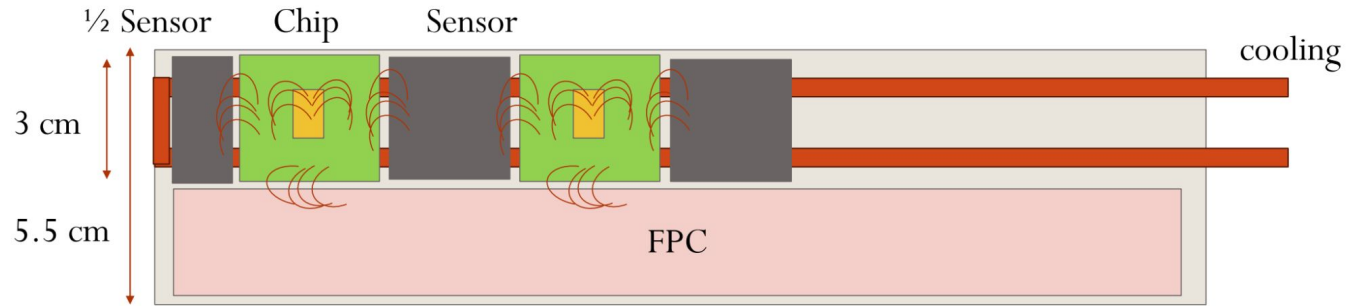


# FCFD Power

- Fresh from Artur:
  - for Analog only: “depending on the required performance and sensor specs, we expect from simulation to have power consumption around 2.5-3.5 mW per channel.”
- Let's use the worst case: 3.5 mW/ch analog
- We will assume that the digital is  $\frac{1}{4}$  of analog so 0.9 mW/ch digital
- 128 channel ASIC
  - 450 mW analog
  - 120 mW digital
- 32+32 ASICs per stave (32 on top, 32 on bottom)
  - 28.8 W analog
  - 7.7 W digital
  - 36.5 W dissipated along the stave (ASICs)
  - assuming 70% efficiency  $\Rightarrow$  14.6 W will need to be additionally dissipated on the PB (cooling!)
- total power required per stave  $\Rightarrow$  52 W
  - but note that this is without the RB which I didn't calculate yet...

# Stave Dimensions

From Simone's presentation in Frascati (right?wrong?)



Narrow! FPC even narrower!!