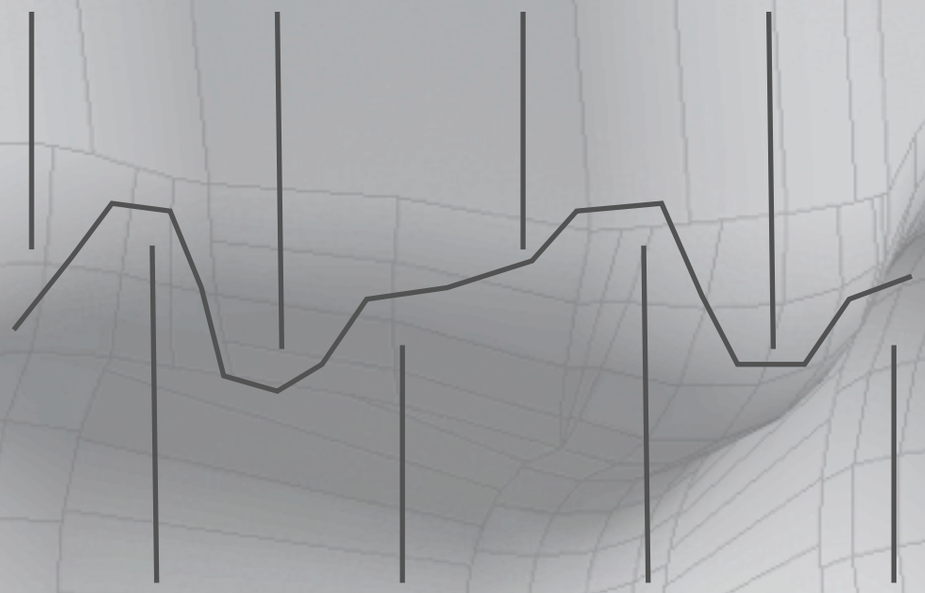
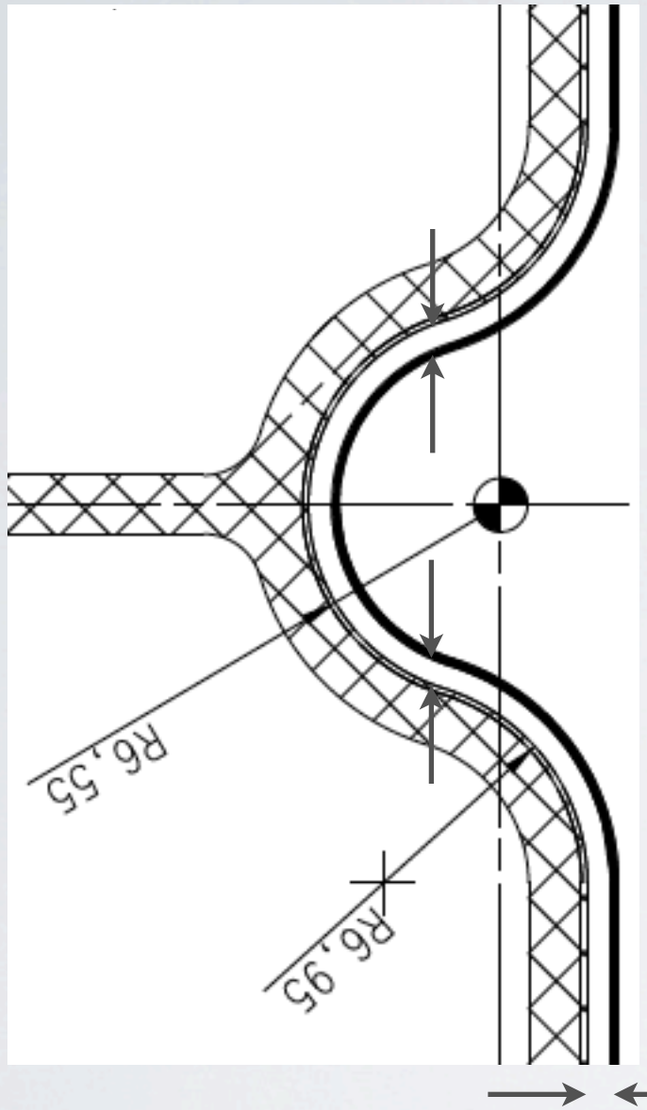


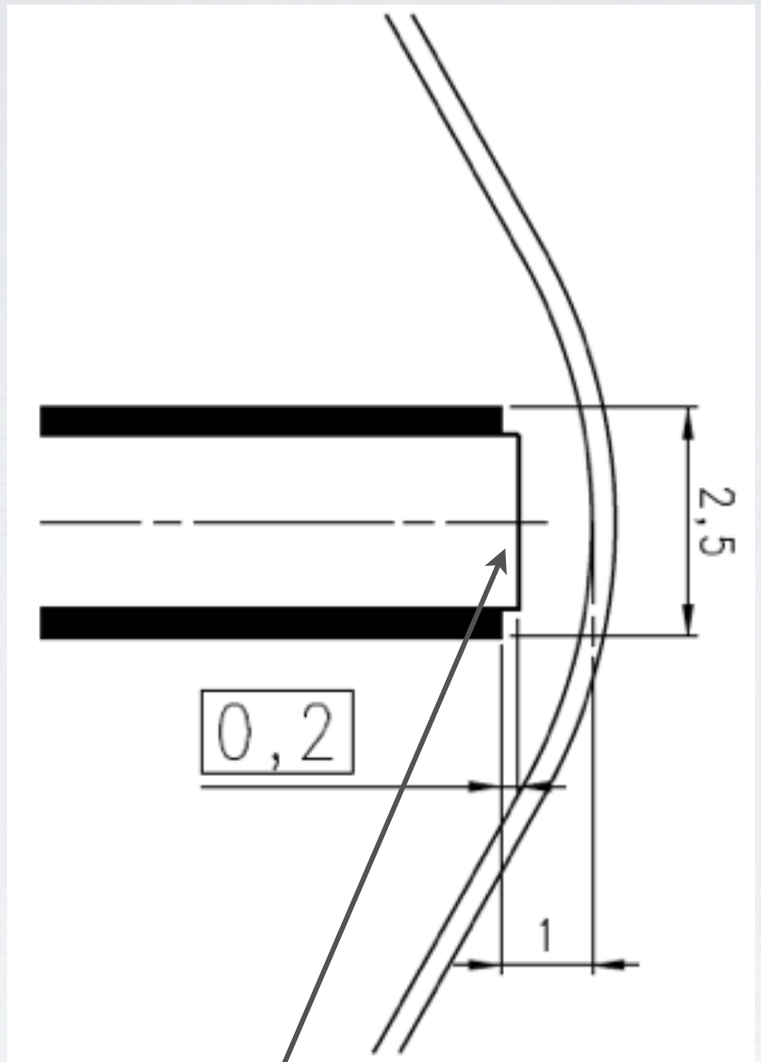
FOIL IDEAS

Marco Gersabeck (CERN)

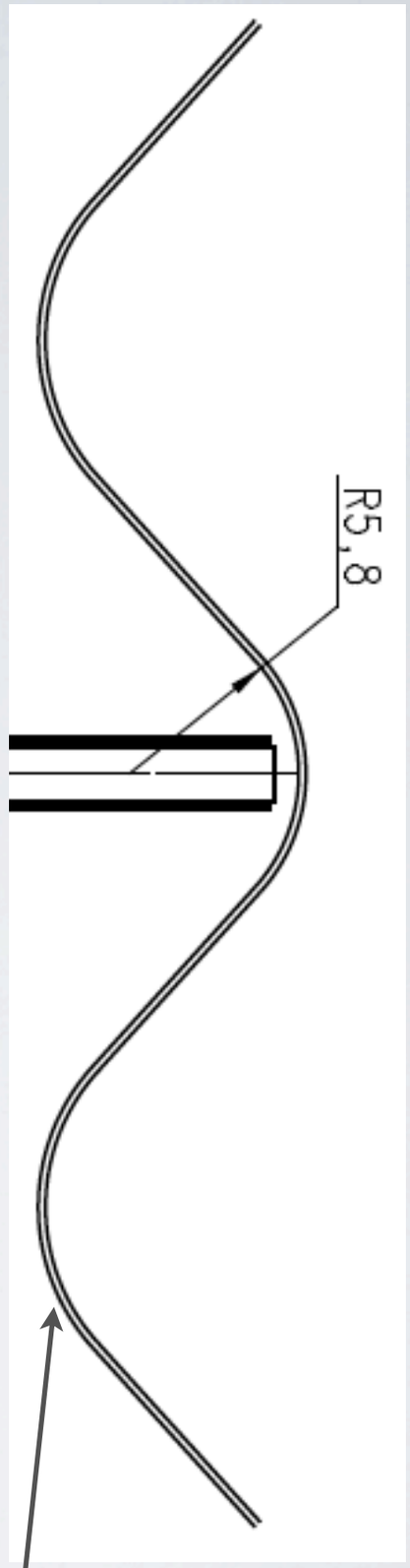
VELO Upgrade Meeting, 24 March 2010



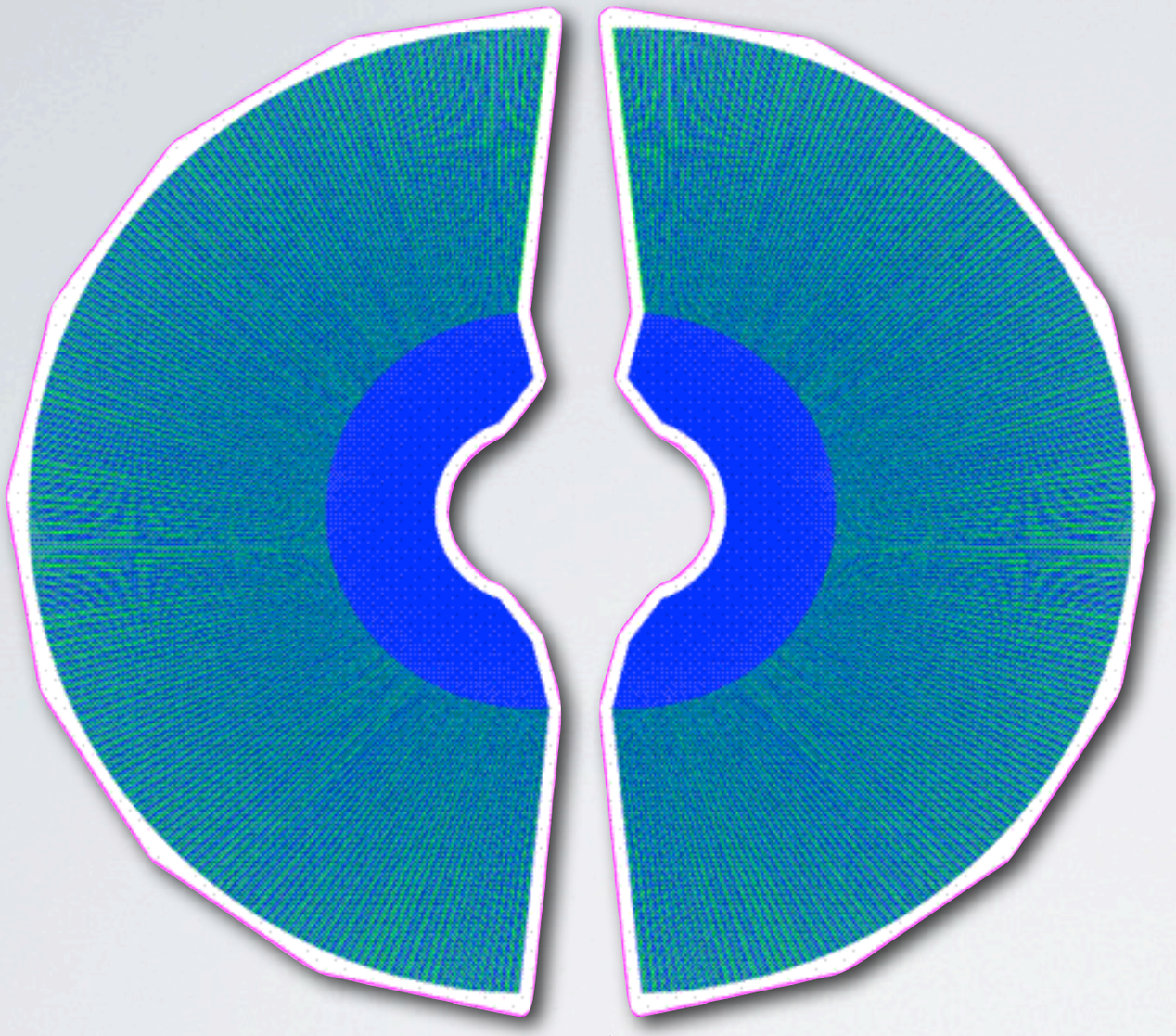
foil clearance needed in two directions in y and one direction in x

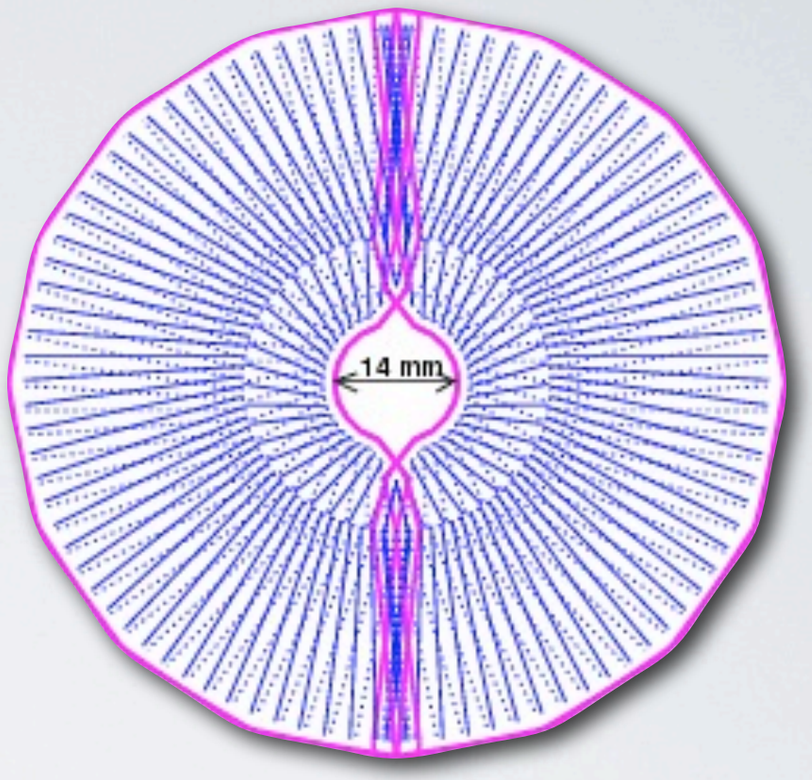


module thickness requires space

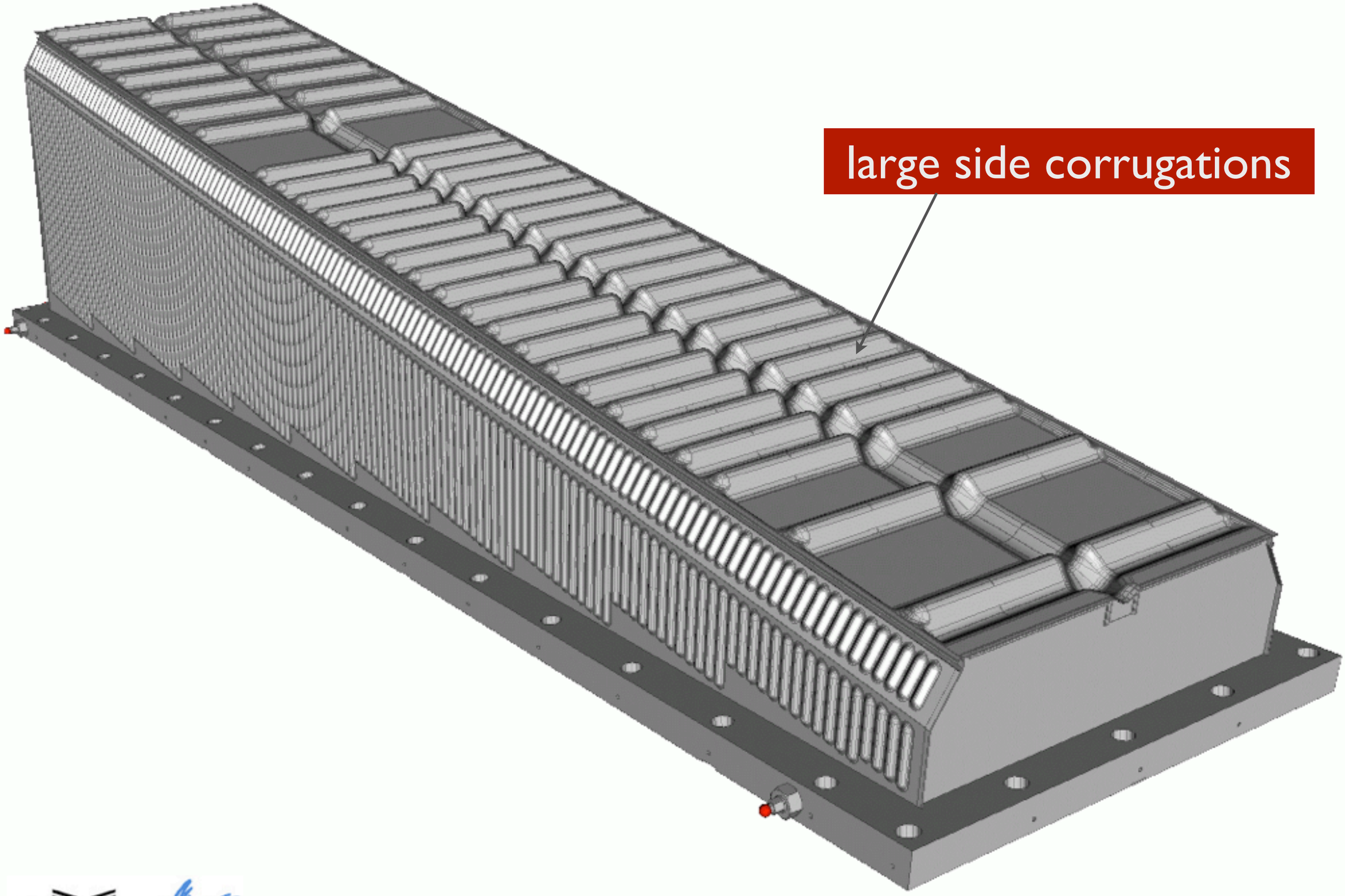


large side corrugations





large overlap needed
due to Φ sensor shape


large side corrugations

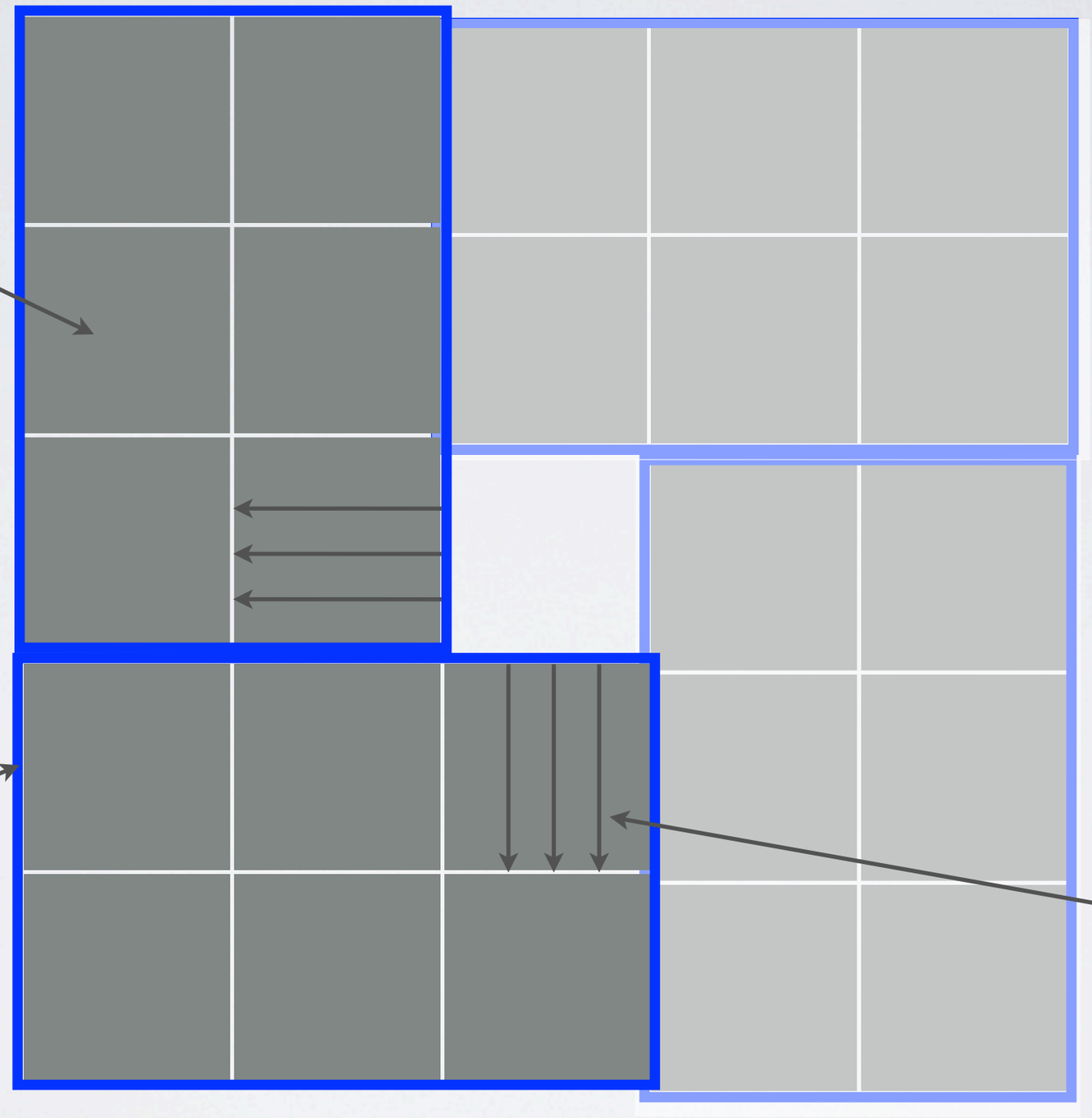
FOIL IDEAS FOR L-SHAPE

prepared with

C side

A side

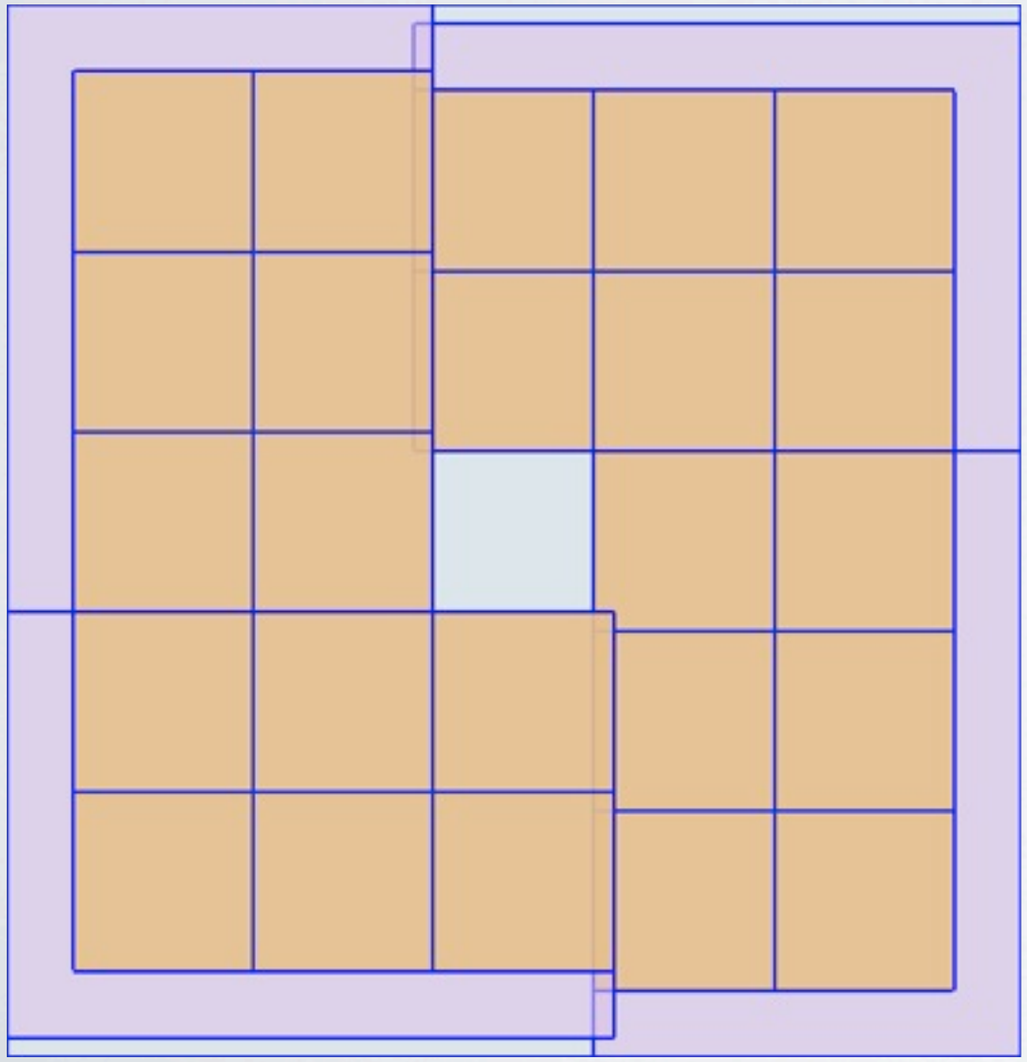
2x6 chips
per hybrid

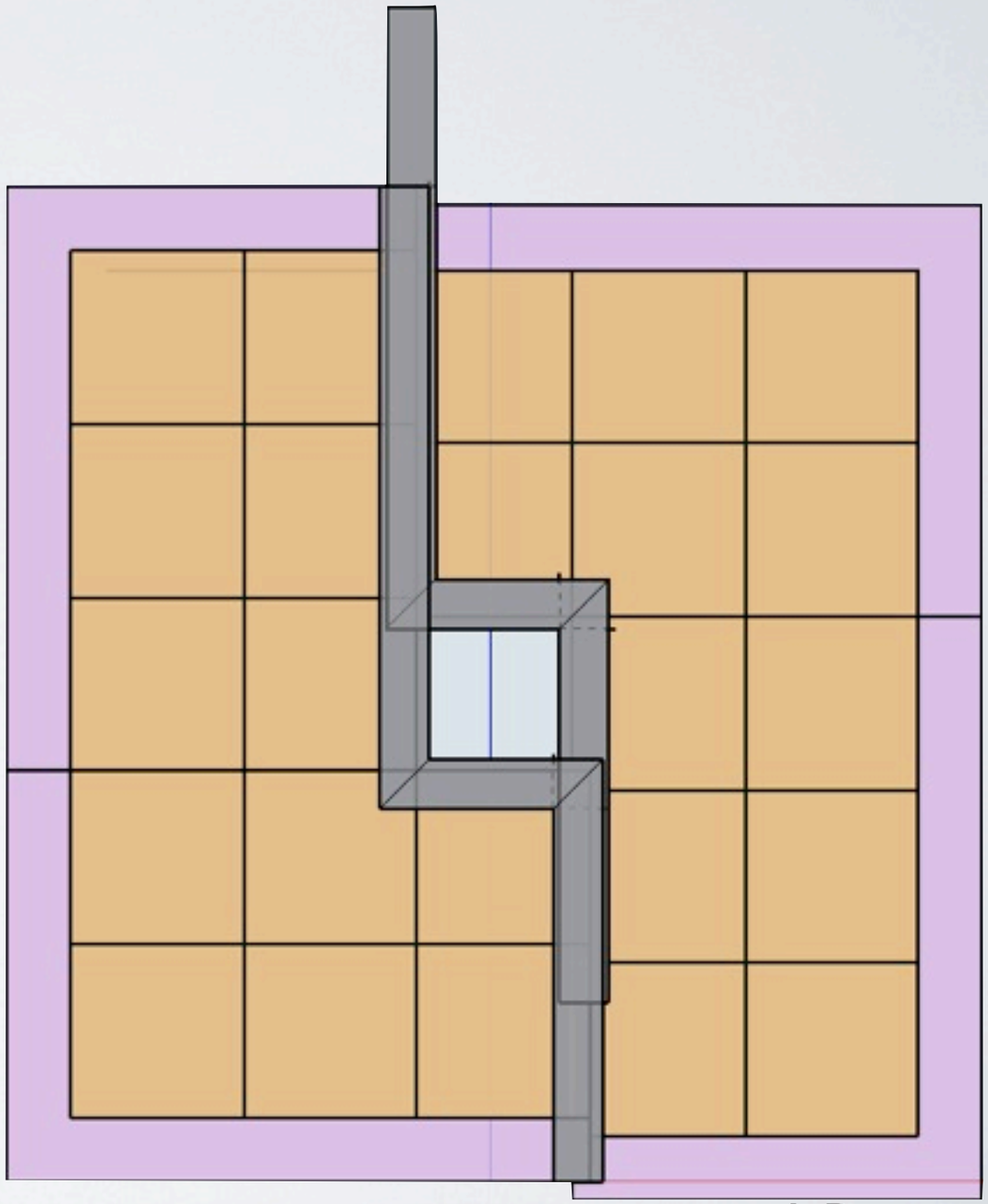


Guard ring
for each block
of 6 chips

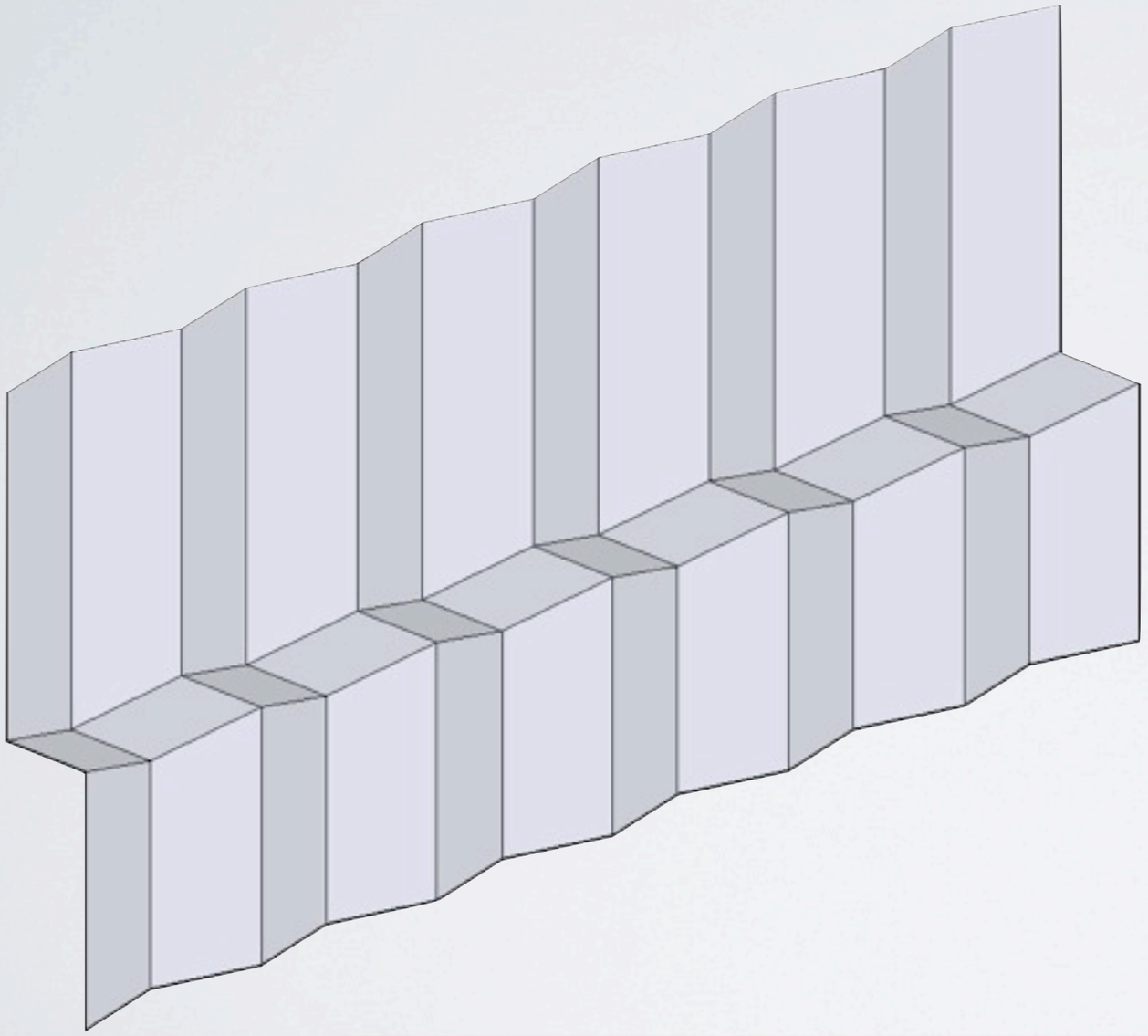
Readout
direction

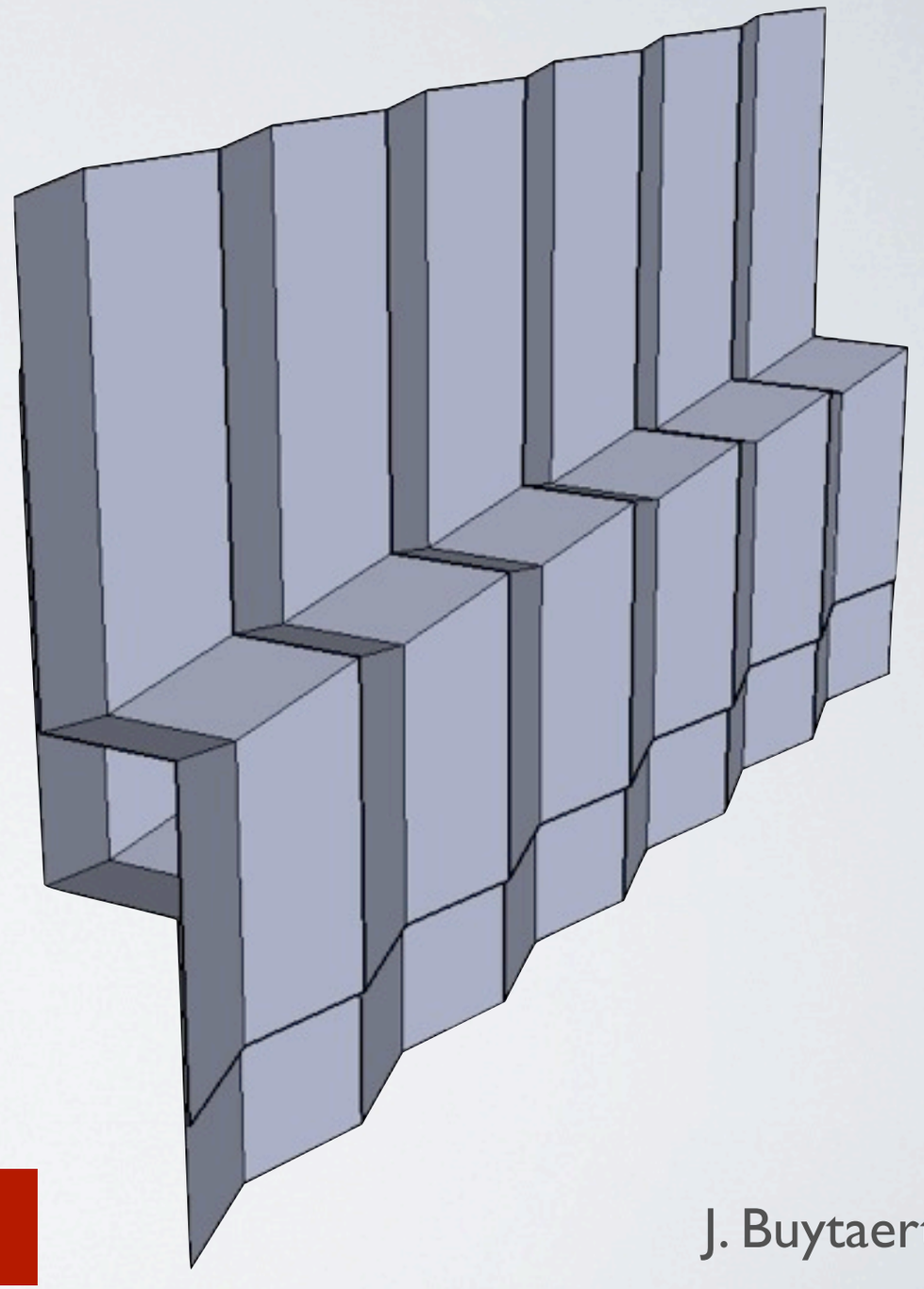
FRONT VIEW





J. Buytaert

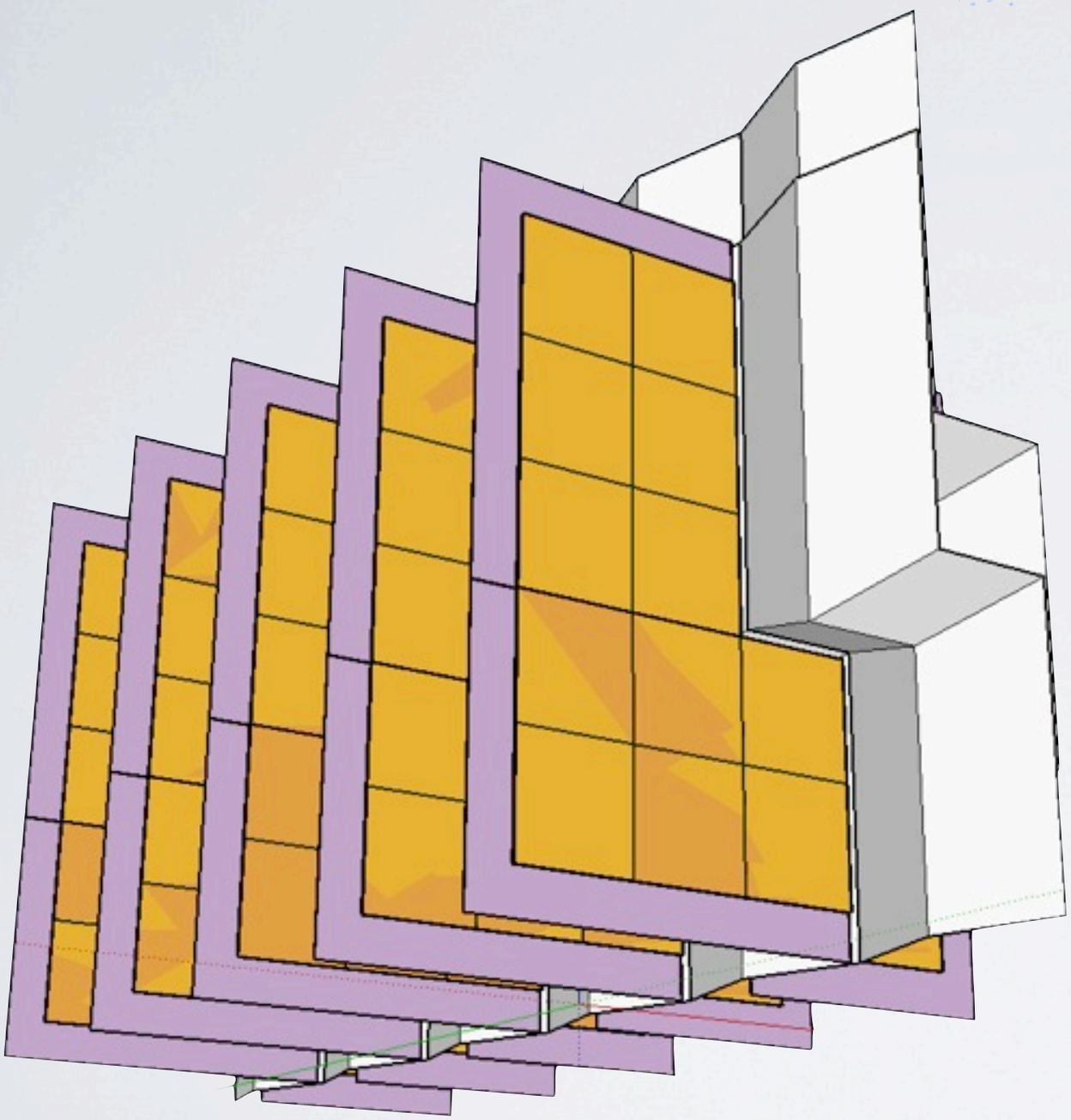


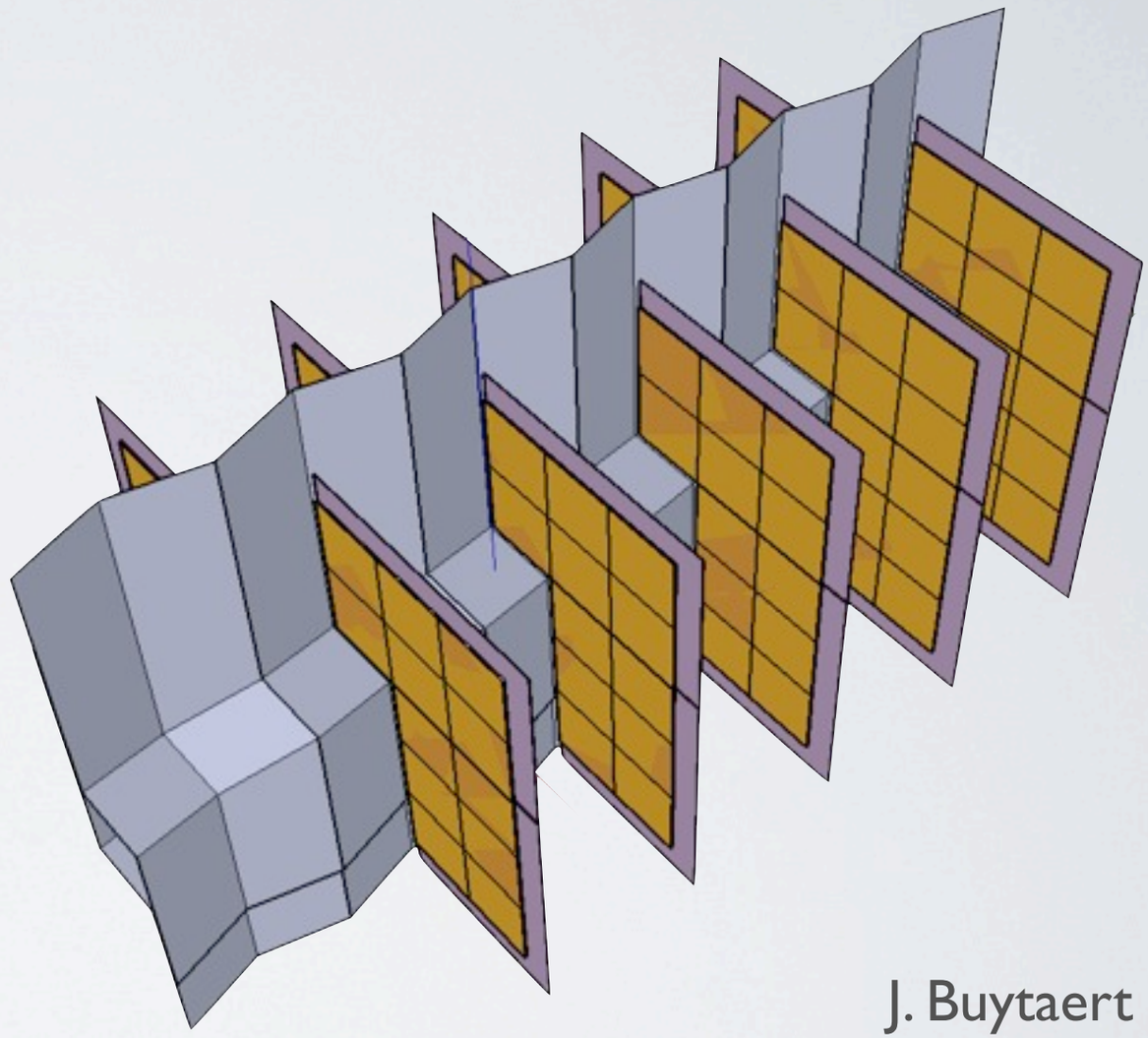


2 identical foils staggered

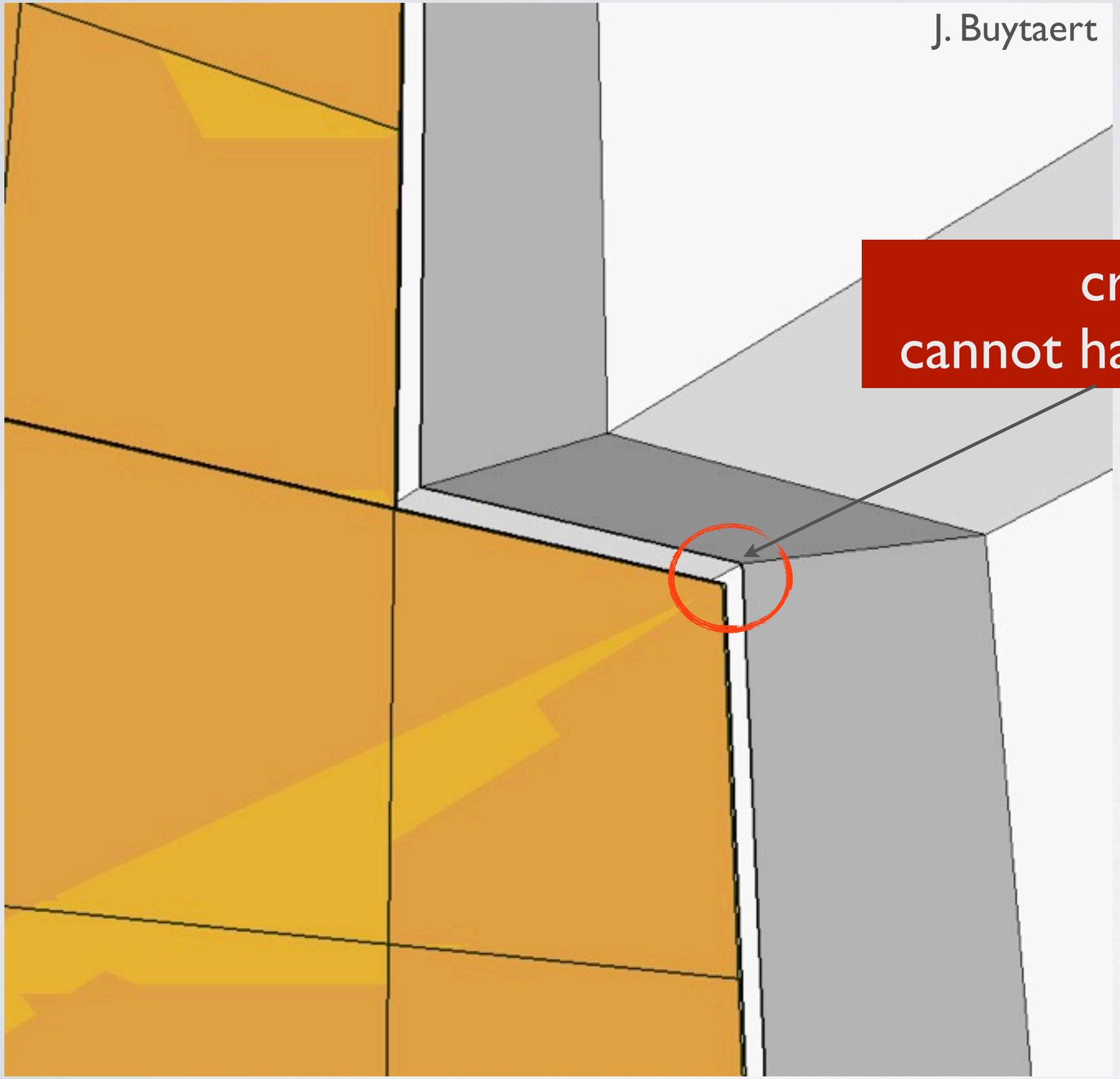
J. Buytaert

reduced amplitude of side corrugations:
+/- 6 mm → +/- 2 mm





J. Buytaert



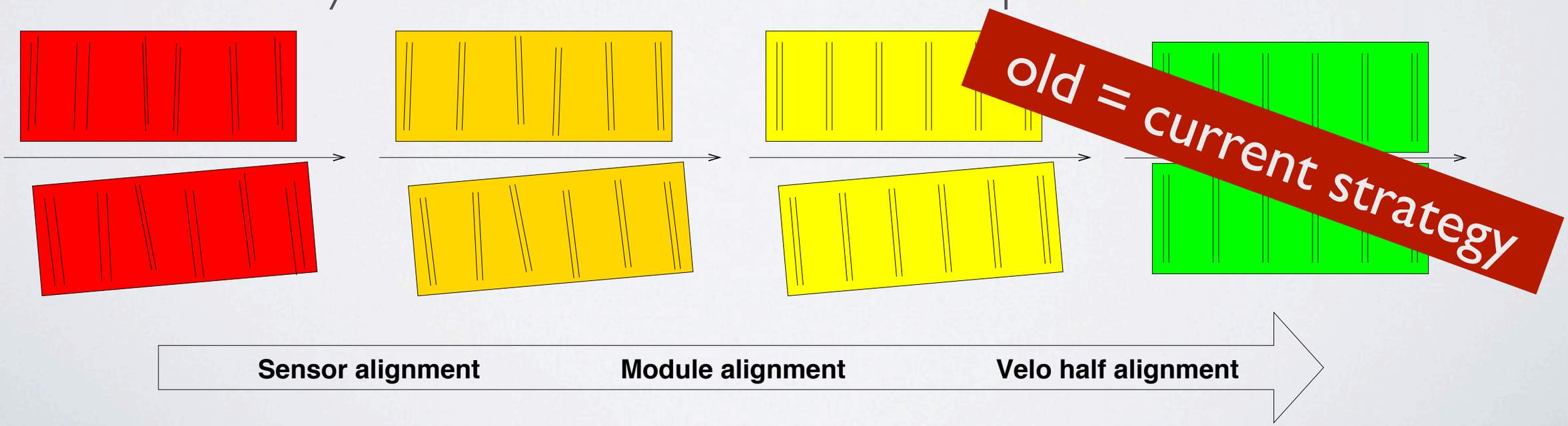
critical point
cannot have corner cut-offs

ALIGNMENT ET AL.

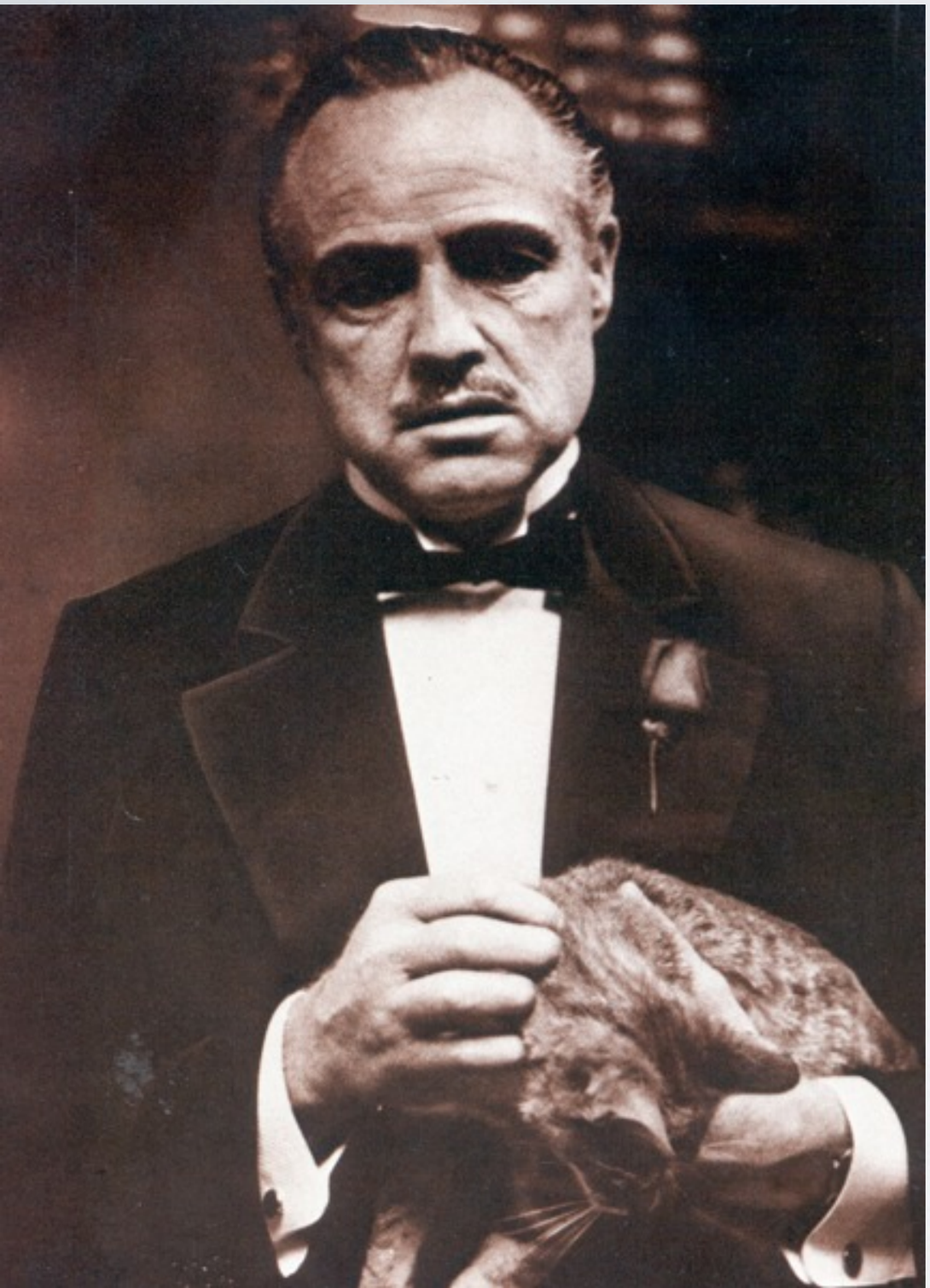
- No a priori need for side corrugations as basically all particles will cross that part of the foil at an angle

- Track crossing both halves will come for free from interactions around the IP

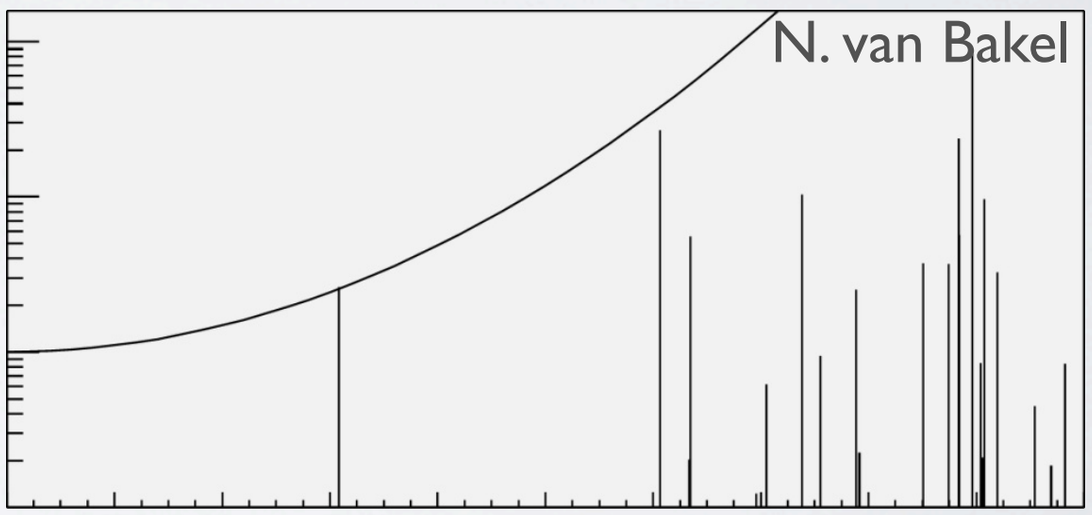
- Two 6-chip pieces need individual alignment constants, therefore they need individual track samples



CONSULT MAFIA



- On the to do list:
- Perform MAFIA studies to determine RF behaviour of new foil model



shunt resistance vs frequency for a given geometry