

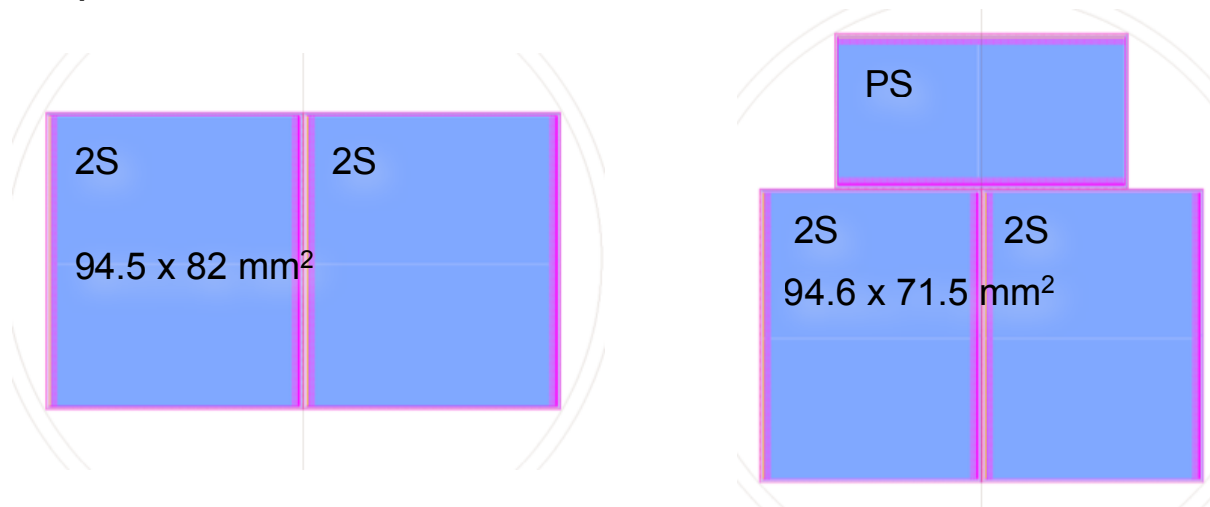
Implications of 8inch Wavers



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Tracker Upgrade Meeting
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Introduction

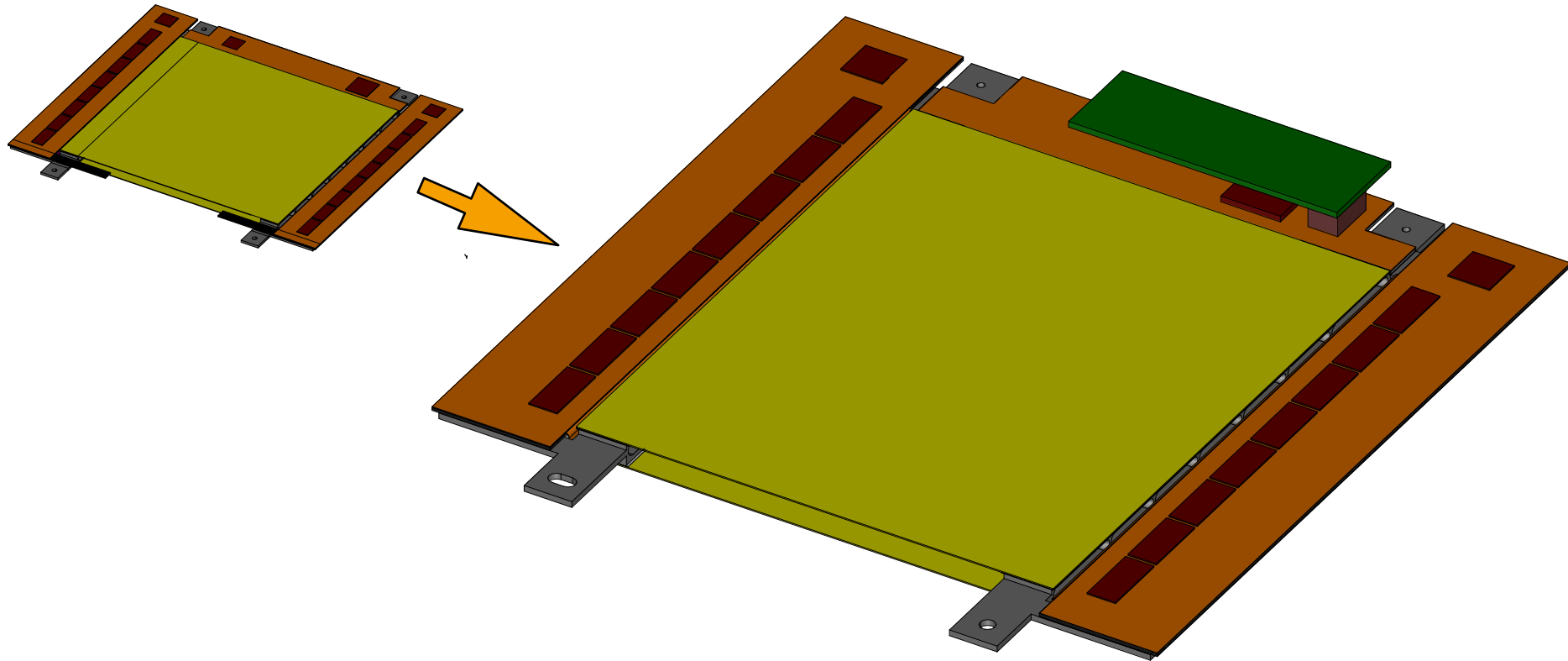
- > HEPHY has established contact to Infineon as a possible vendor for sensors
 - they offer a 8inch production
 - cost of 8inch waver is about the same as for a 6inch waver
 - 8inch offers 84% more area
 - reduction of cost
- > this has implications on the sensor dimensions, electronics and modules



- > many more options under discussion and feasible
 - Option 1 - PS and 2S sensors on same waver
 - Option 2 - 2S sensor split in two → 4 sensors per module
 - Option 3 - 4cm long strips at inner radii, 8cm long strips at outer radii

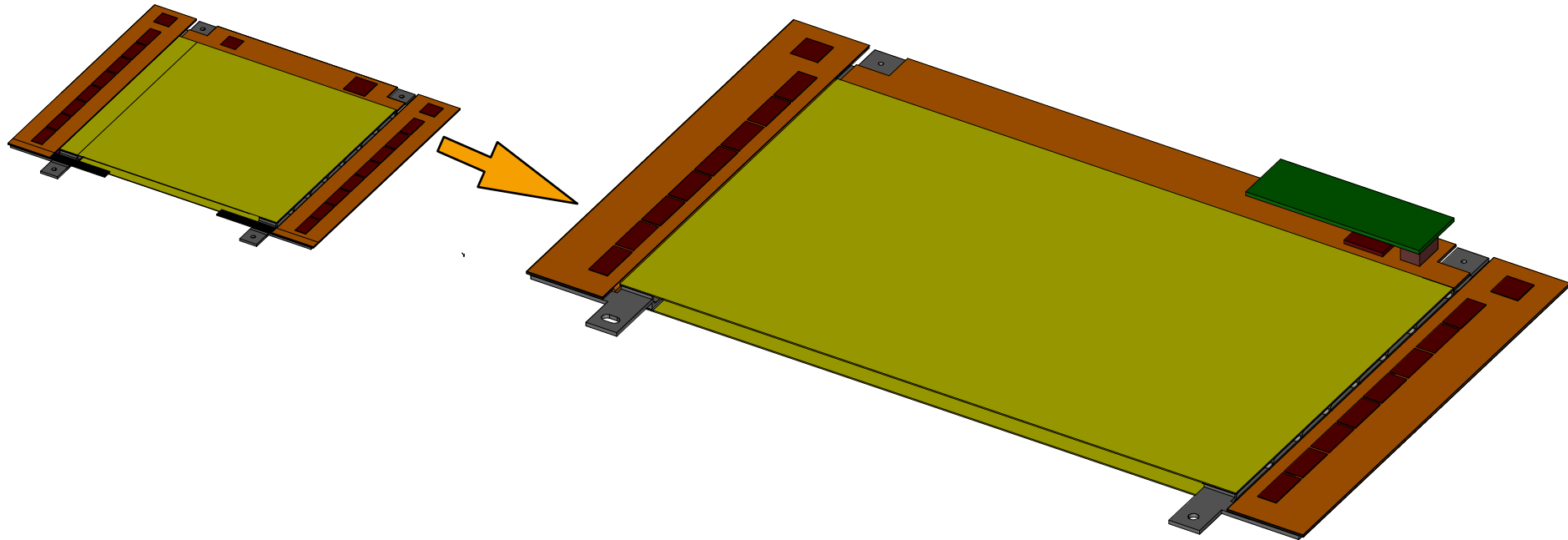


2S Module Short



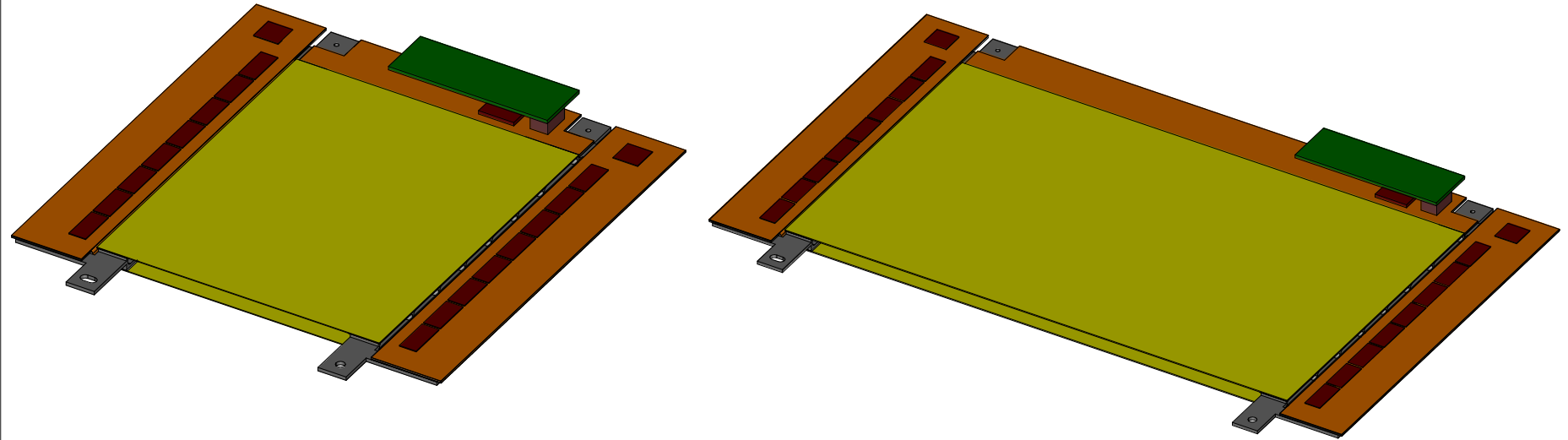
- space on service board is rather tight - 8 cm instead of 10 cm
- no change in mechanics
- smaller heat generation by sensor
- shorter distance from sensor center to cooling

2S Module Long



- plenty of space on service board - module is now 16 cm long
- mechanics might become tricky
- might only be possible with 300 um sensors
- heat generation by sensor will be larger - needs to be checked
 - factor 1.5 due to thickness, however fluence is smaller ($r \geq 85\text{cm}$)
- longer distance from sensor center to cooling - might need additional cooling contact in the middle

Summary



- > 8inch wavers most likely mean two different module design
 - I do not consider different sensor spacings as different module designs
- > will update FEA for new ideas to have some numbers ready by the tracker week