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To: "Gary S. Varner" <varner@phys.hawaii.edu>

Cc: "<john.flanagan@kek.jp> <john.flanagan@kek.jp>" <john.flanagan@kek.jp>, "Kenney, Christopher J." <kenney@slac.stanford.edu>, "Hasi, Jasmine" <jasmine.hasi@slac.stanford.edu>

For today's meeting: Summary of detector design parameters discussed during the last few weeks.
- Julie

KeKB Detector Design Summary

	imager	spectrometer
readout polarity	collect electrons	collect electrons
detector thickness	75um	75um
overall die size	13.2mm x 4.0mm*	12.5mm x 2.4mm
pad pitch	50um	360um
strip dimensions	25um x 2mm	18um x 250um min, 4.1mm x 250um max
number strips	256	12
detecting edge width	6.4mm	250um
max read-out capacitance	3.0pF/3.2pF (xtra balcony)	3.4pF**
min read-out capacitance	1.5pF/1.7pF (xtra balcony)	2.0pF**

* imager with extra "balcony" for stacking is 0.4mm taller

** balanced metal capacitance

The pads are placed at 360um pitch. I placed the pads so that the maximum distance right and left are roughly equal. But I could move the whole pad block either left or right if we want to minimize the capacitance more for certain pixels, or if it will be easier to wire bond.

The layout is not quite finished, I haven't filled in the "empty" space with guard rings yet, and I can compress the fan-out region height a little, but I wanted to verify that this is what we want before finalizing. Let me know if this looks OK.

Thanks!

- Julie

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Hi folks,

Some slides for today.

Talk to you soon,
John

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Resolutions for different detector pitches.pptx

218K