

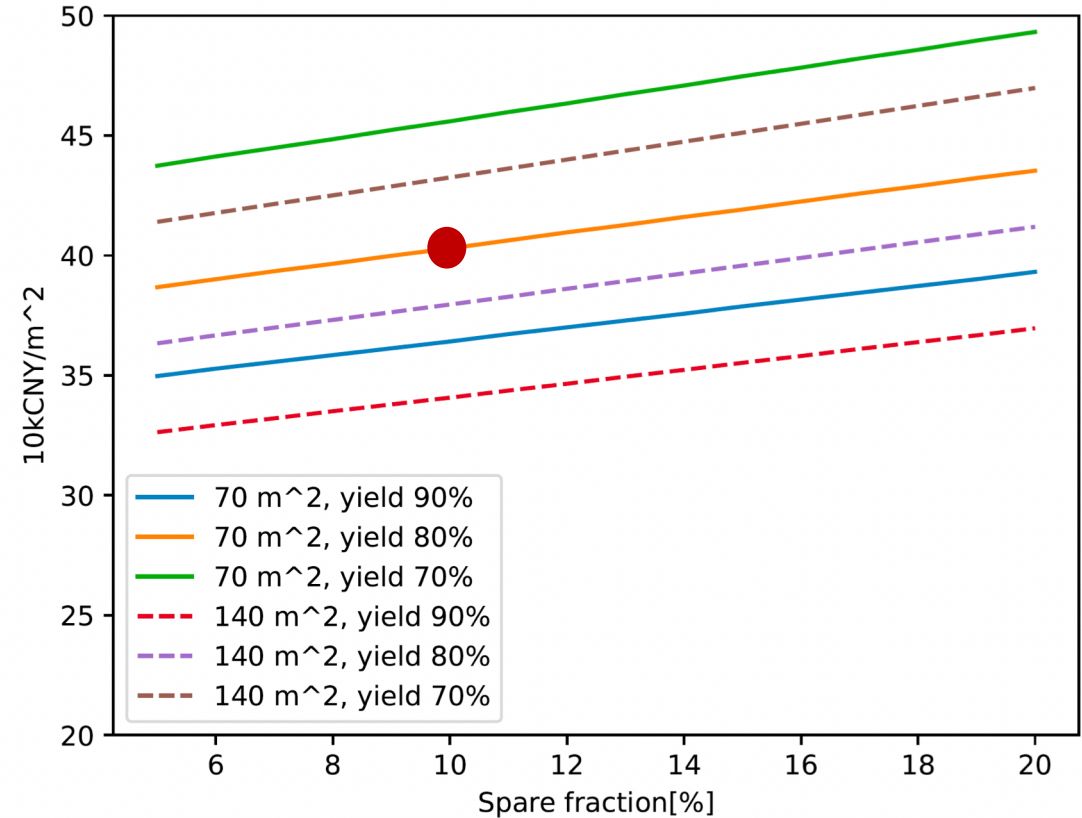
Cost estimation for CMOS sensors

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CEPC detector reference TDR tracker meeting
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HVCMOS cost

- Sensor cost scales with area
 - NTO overhead is a small fraction
- Quotes for SMIC 55nm process
 - 12-inch wafer with 1k Ohmcm resistance
- Assuming:
 - 70m², 80% total yield, 10% spares
- 56k USD/m² ~ 400k CNY/m²



HVCMOS cost

- Sensor cost scales with area
 - NTO overhead is a small fraction
- Quotes for SMIC 55nm process
 - 12-inch wafer with 1k Ohmcm resistance
- Unit cost drops when area increases

