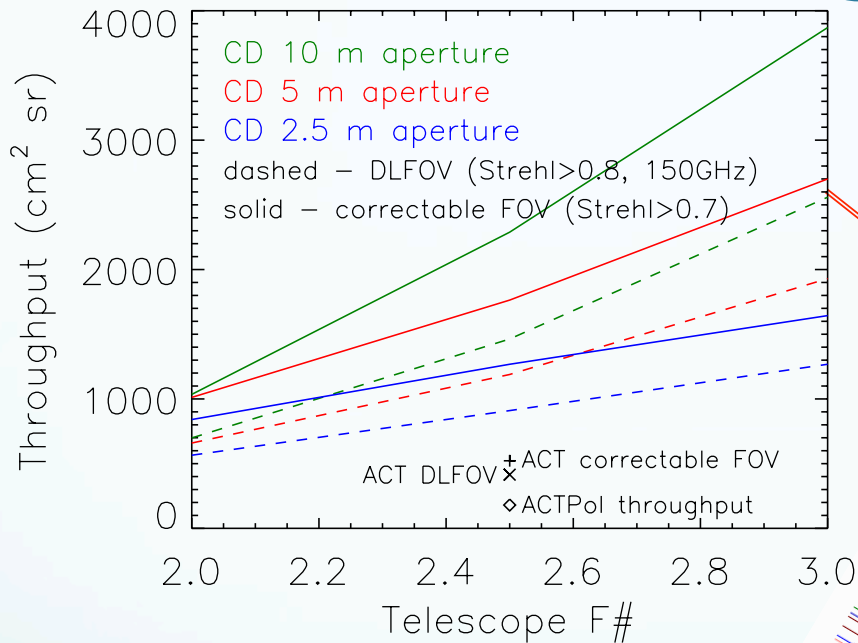
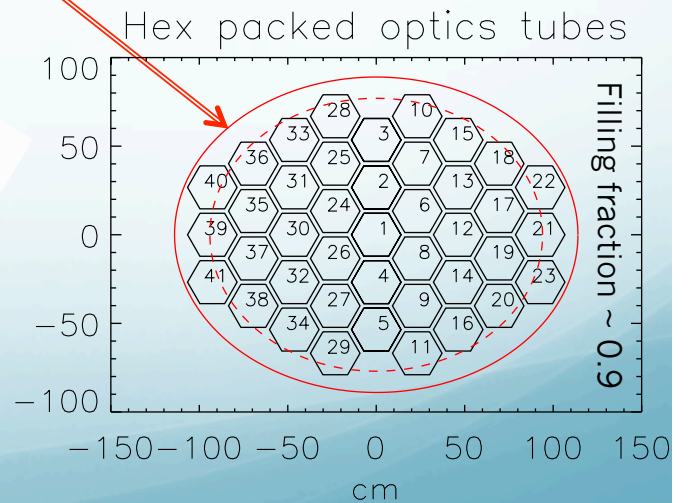
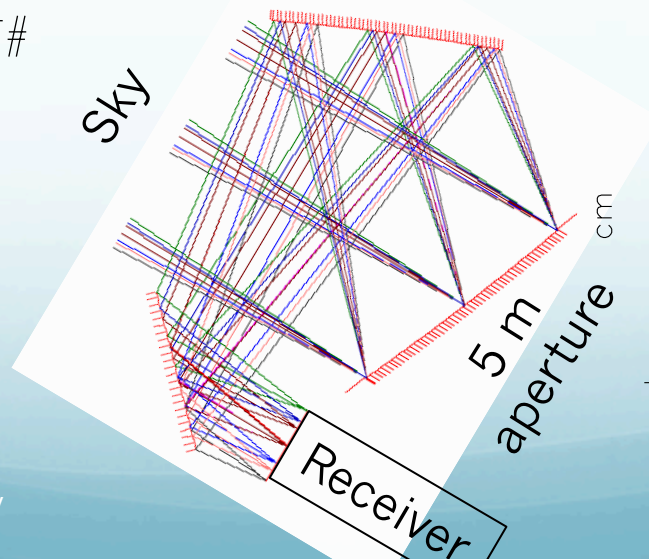


Much higher throughput Crossed-Dragone (CD) optics



- Larger aperture => larger throughput
- CD telescopes can illuminate $> 10^5$ multichroic detectors
- Preliminary 5 meter example illuminates ~ 40 optical paths with ~ 3000 detectors each

- Folding mirror for compactness of $F \sim 3$ designs



Suggested Large-aperture reimaging optics tradeoff study

Many “small” optics tubes

- Thinner refractive optics with less loss and emission
- Fewer detector wafers
- Improved image quality
- Less obscuration at detector array
- Impact of window on lenses?

“Large” (>45cm) optics tubes

- Simplified optics design
- Simplified cryogenics
(Both might be lower cost)
- Single “focal plane”
- Less obscuration at telescope focus

Questions for study:

How does maximum throughput compare for a given telescope?

How does instrument noise compare?

Note: not using reimaging optics requires lower F# => lower throughput