

① OSM for first light (d-IFS absent)

- 2 x TT stars (NIR)
 - 1 TTFA (NIR)
 - 1 TwFS (NIR)
- 4 pick-offs only across $150''$ FoV

- don't need to worry about transmitting beam.
- packing not an issue.
- baseline LGS patrol star pick-off?

Requirements

- Different requirements for this OSM as compared to LGS.

① Closest separation not defined, but can adopt $15''$ of LGS (?)
Likely much larger is OK.

② Need to dither using TT stars, to sub-pixel accuracy (when sampling DL at blue- α d) in instrument.

③ Need to track non-sidereal objects with telescope
so TT stars need to initiate this.

② OSM for first light (cont.)

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Question (Q1) When tracking TT stars for non-sidereal pointing ~~and/or for pupil fixed mode when source (on axis) is TT star~~ how critical is DM to lenslet registration? DM to MEMS registration?

→ IF critical to keep pupil fixed on lenslet and/or DM 2 ways to do this

- (a) rotate OSM as a whole (we'd rather not)
- (b) incorporate small K mirror (or equivalent) into each pick-off arm.
- (c) Something else I can't think of.

(Q2) What about DM to MEMS registration upon acquisition of target? Can this vary? Same question for DM to lenslet registration?