

CTA SCT (MRI) Secondary Mirror

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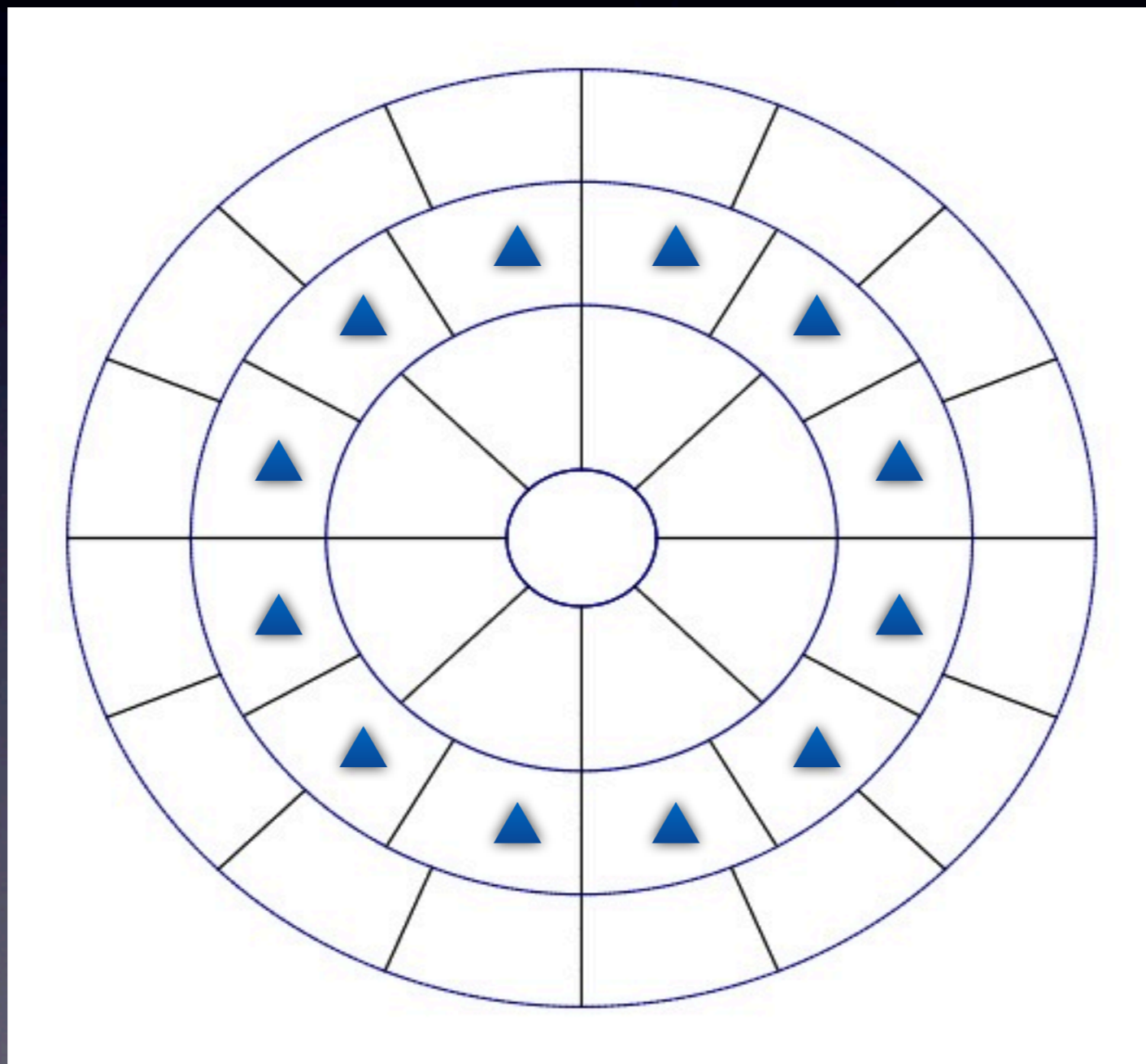
Center for Applied Optics (UAH)

ENI (Industrial Partner)

UCLA

Mirror coating industrial Partner (BTE?)

What are we making?



Activities

- Mandrel design, manufacture
- Mirror electroforming
- Mirror backing: study & implementation
- Mirror coating
- ... integration with alignment fixtures & telescope

Schedule

- Year 1: Mandrel Design & manufacture. Backing concept developed.
- Year 2: Electroforming of mirrors. Implementation of backing design & coating ... delivery to UCLA
- Year 3: Integration with the telescope & operation as proof of concept SCT. Explore other options for mandrel, e-forming, relationship with NASA, CTA.....

PTDR

- Design
 - Dimensions & number of mirrors
 - Mandrel/Mirror - size of reflector/segmentation scheme
- Requirements:
 - Surface roughness
 - Mandrel/mirror - 2 - 4 nm (science requirement?)
 - Figure
 - Mandrel/mirror - 100 - 150 μm over 1 m scale (science)
 - Reflectivity
 - Coating - ?? (science)
 - Stripping/recoating/backing(adhesive) - ?? (science, mission)
 - Rigidity
 - Backing - ?? (science)
 - Thermal properties?
 - Mirror/backing - ?? (science)
 - Lifetime
 - Mirrors/backing - ?? (mission)
- ICD
 - Mirror panel - Alignment fixtures (ICD document TBD)