

Telescope update



The CHARA Science Meeting 2024 - Tucson



nic scott Telescope Systems Scientist





S4

S1

S2

S3

W1

W2

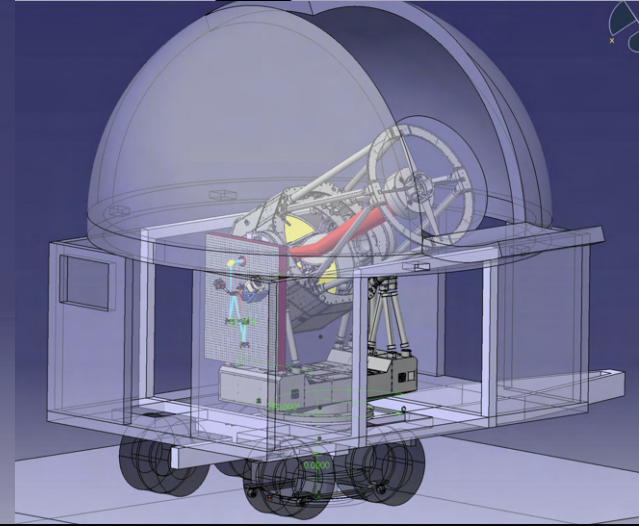
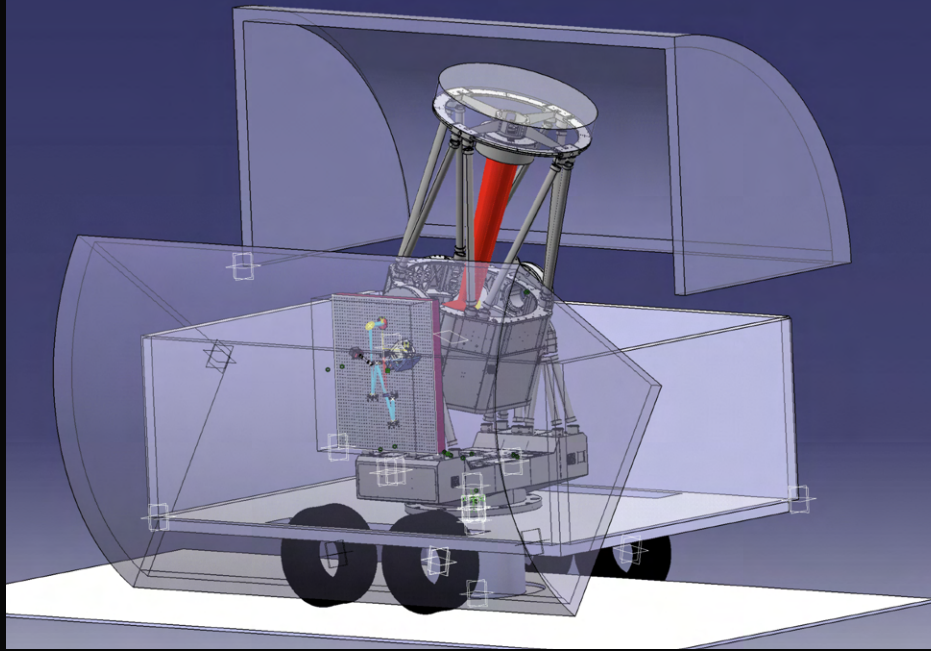
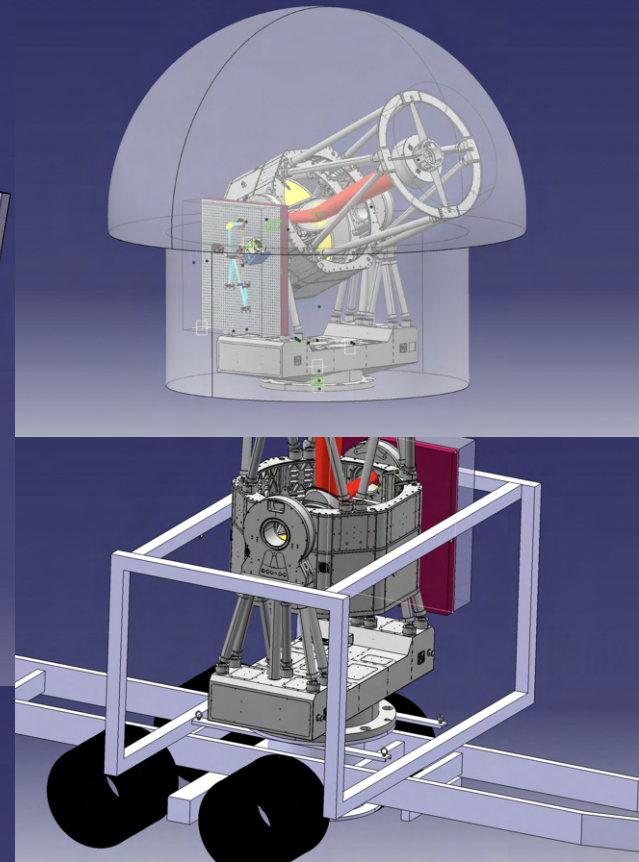
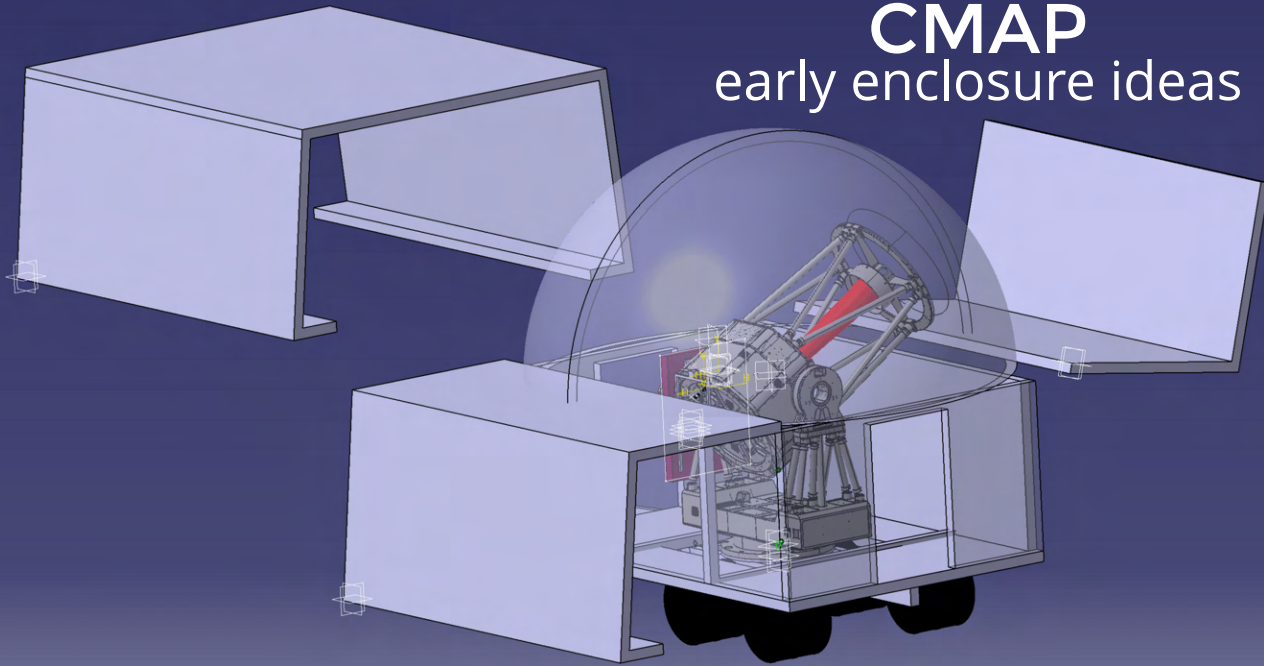
BCL

E2

E1

CMAP

early enclosure ideas



Astrohaven



- Street legal
- low ground clearance
- high tongue weight
- "chandaliar" mechanism
- 5 shutters
- \$400k

Construction Trailer



- rated for 30k lbs
- equalizer suspension
- no thru axle
- \$600 (+\$50k for Ash dome)



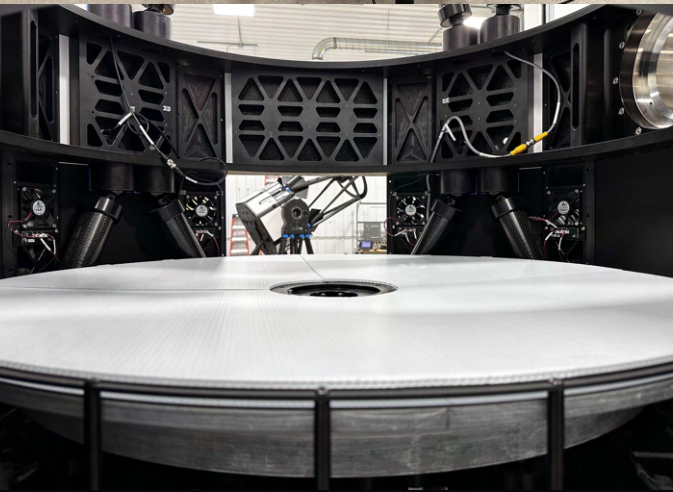
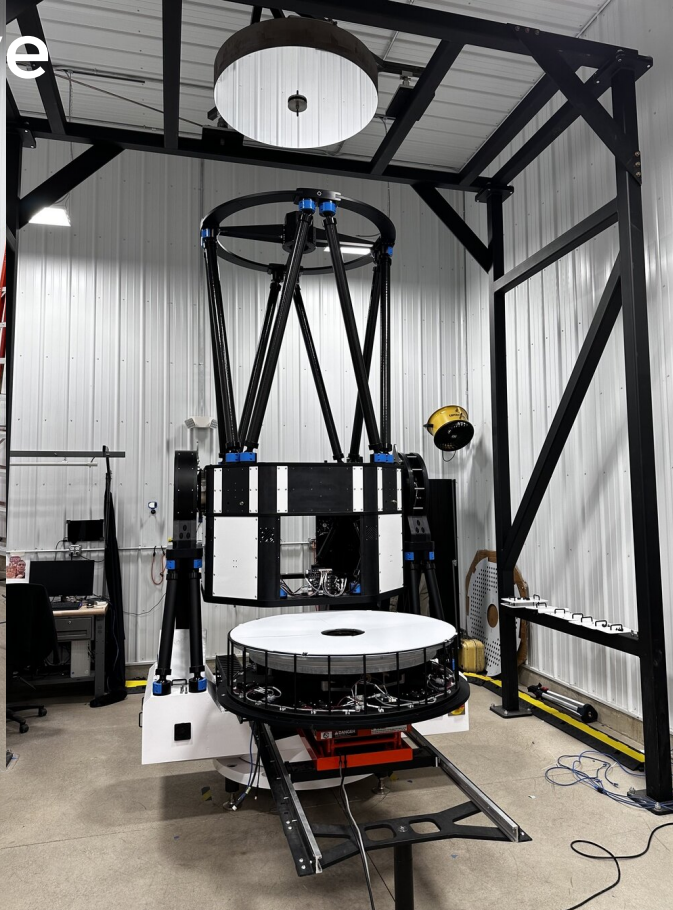
Mobile Telescope Transport (TR116)

[https://www.youtube.com/embed/T5hPIE_Mlzo?
rel=0&autoplay=1&loop=1&enablejsapi=1&vq=hd1024](https://www.youtube.com/embed/T5hPIE_Mlzo?rel=0&autoplay=1&loop=1&enablejsapi=1&vq=hd1024)

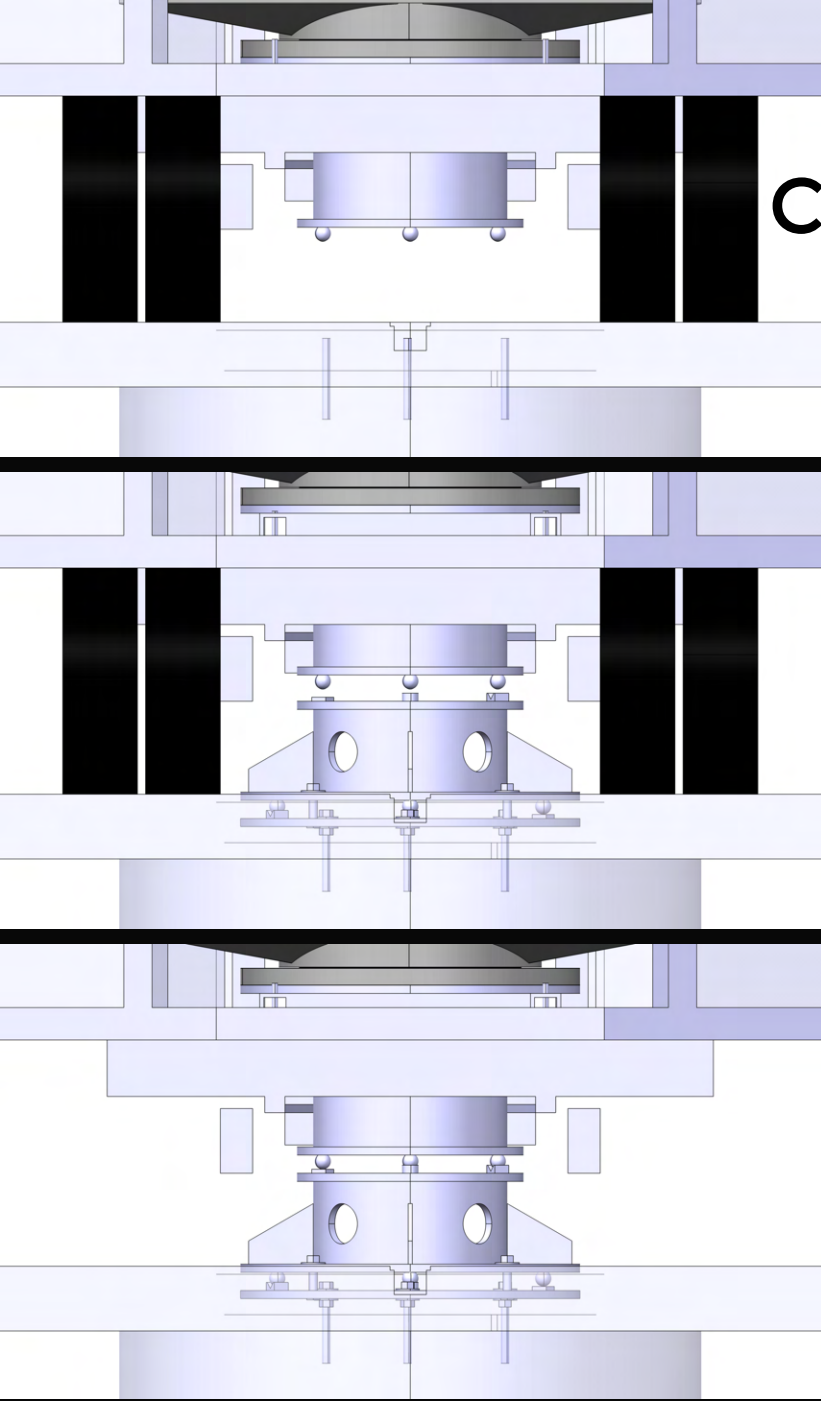




Planewave

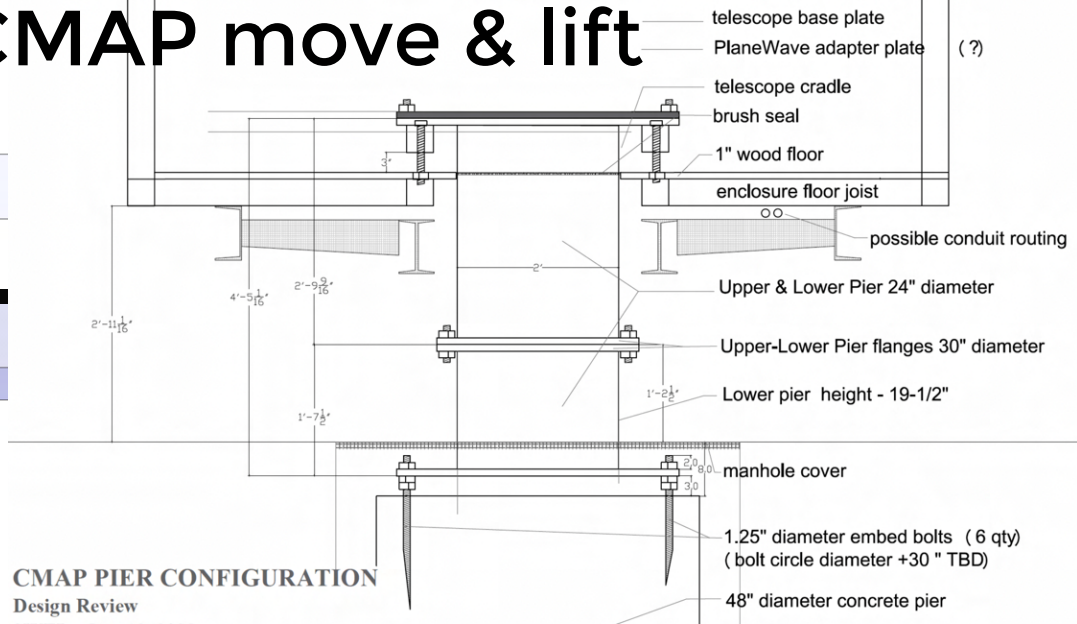






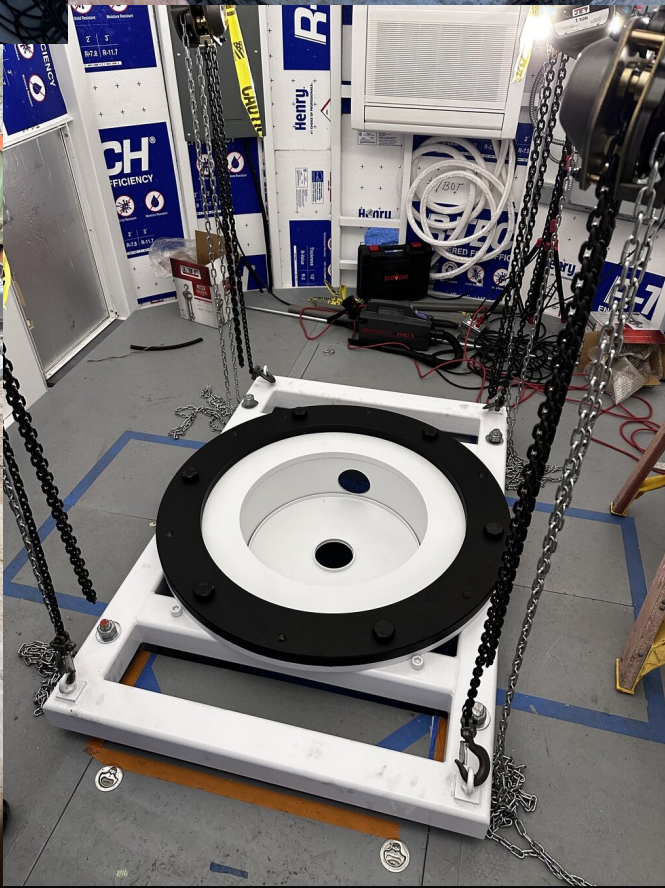
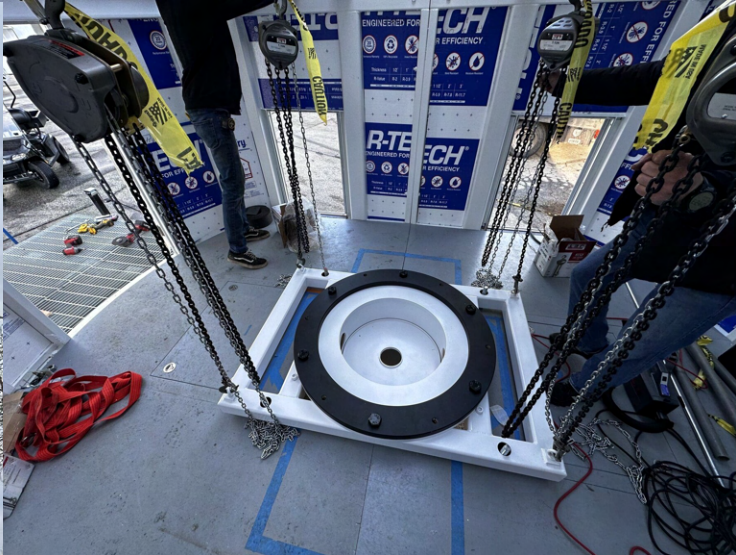
NOTE: Total pier height TBD:
 Upper pier: as shown ~ 33-9/16".
 (Ground clearance ~ 11-1/2")
 Lower pier: as shown ~ 19-1/2"
 Clearance when mounted:
 telescope to enclosure floor approx 3"

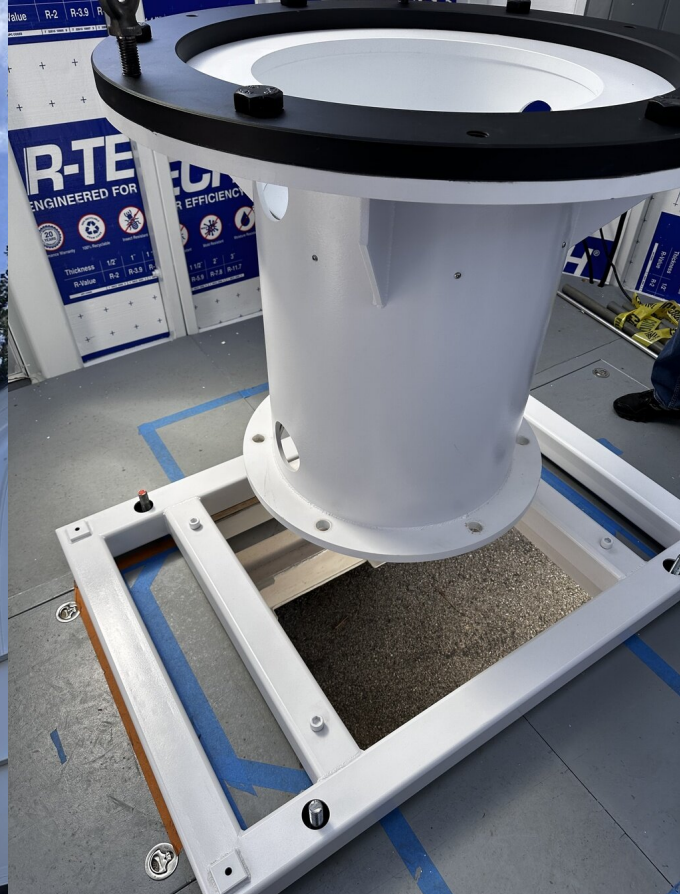
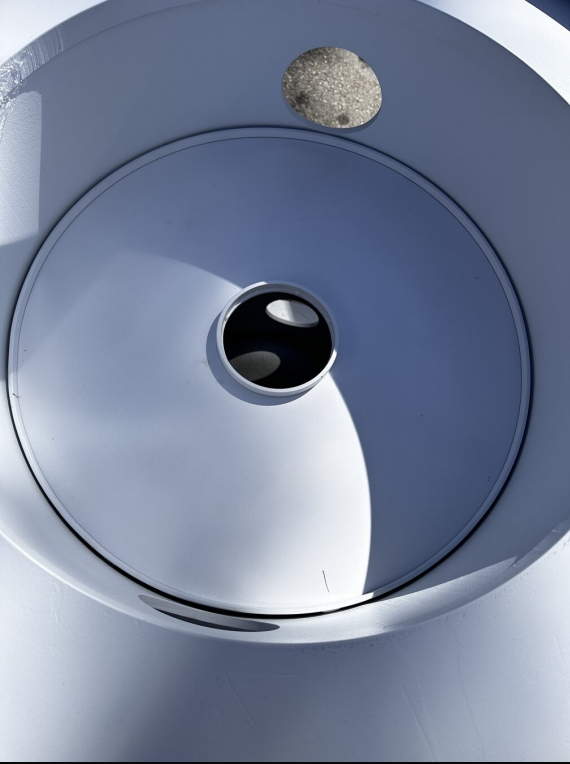
CMAP move & lift



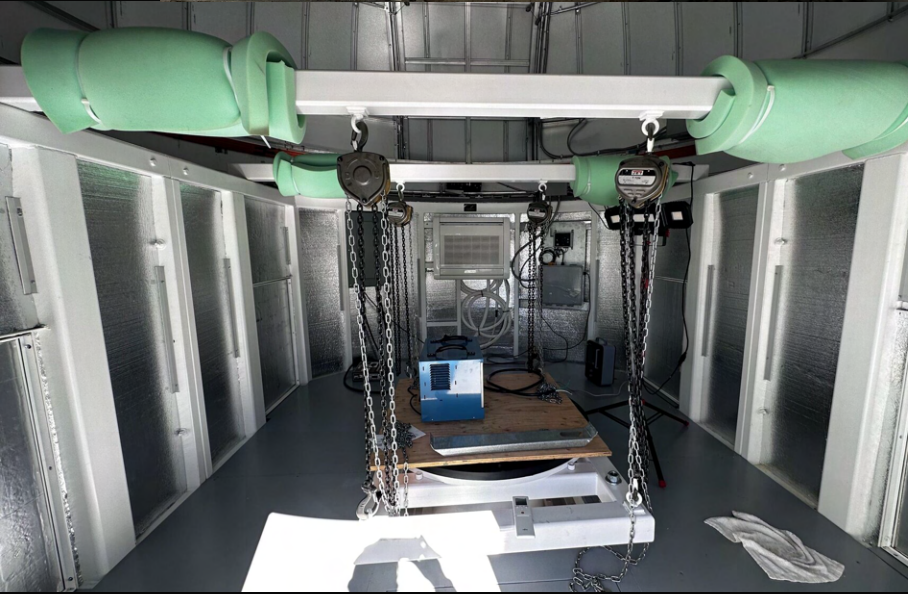
CMAP PIER CONFIGURATION
 Design Review
 SWEI Oct. 12, 2023





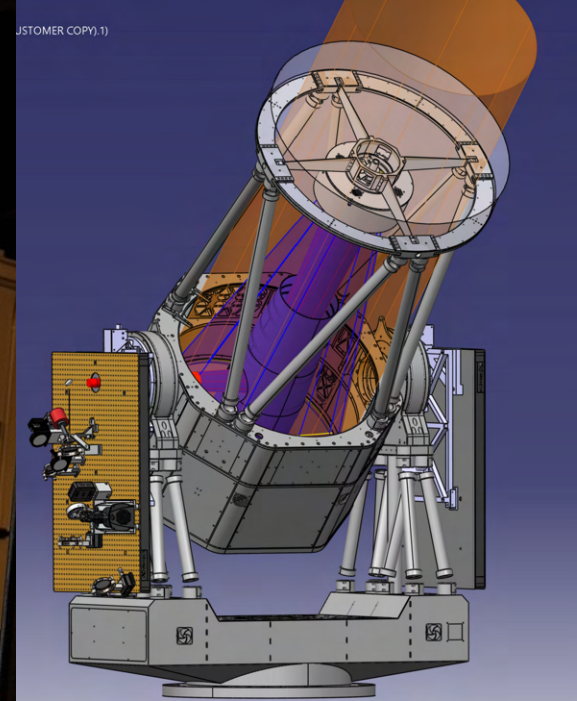
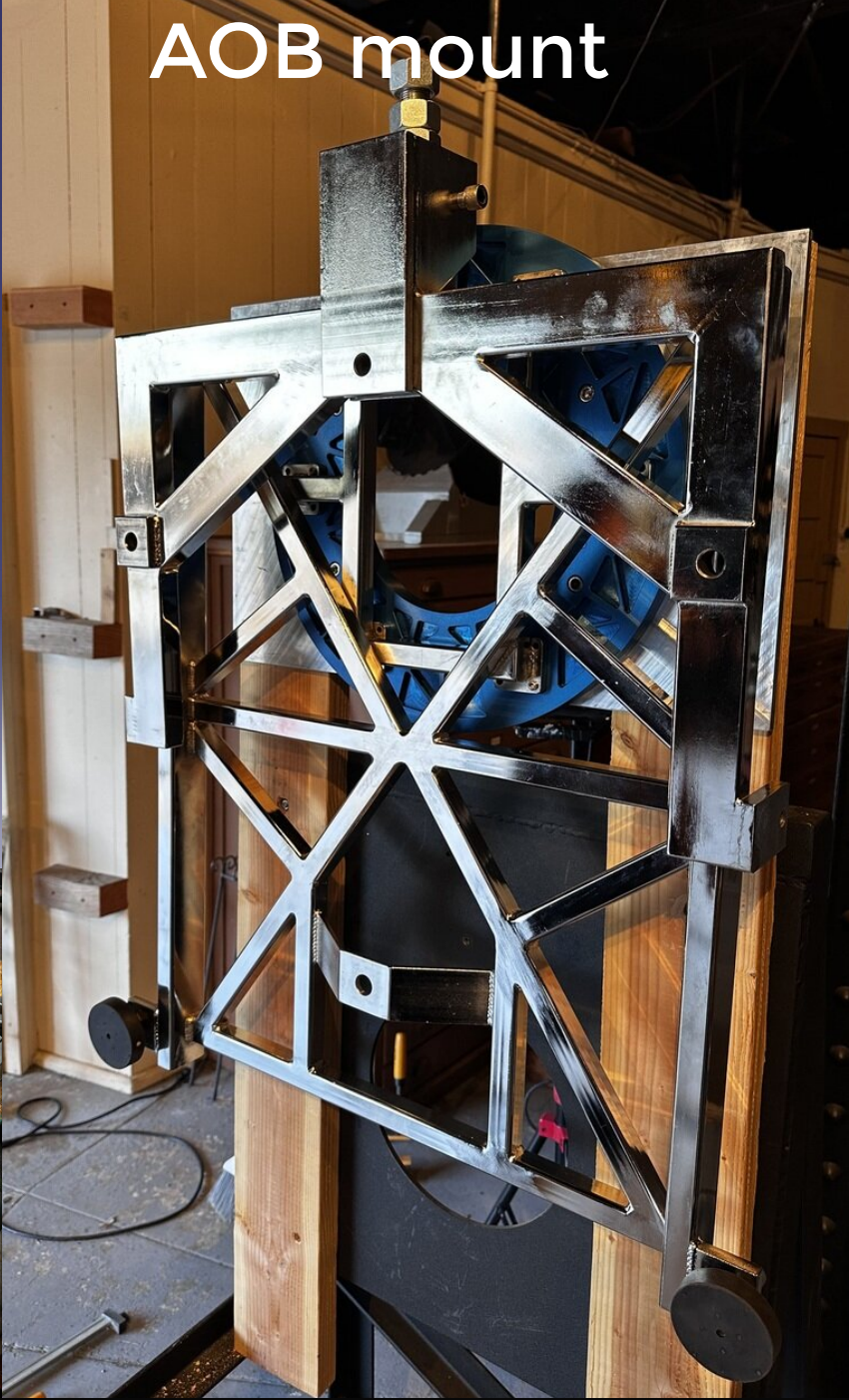
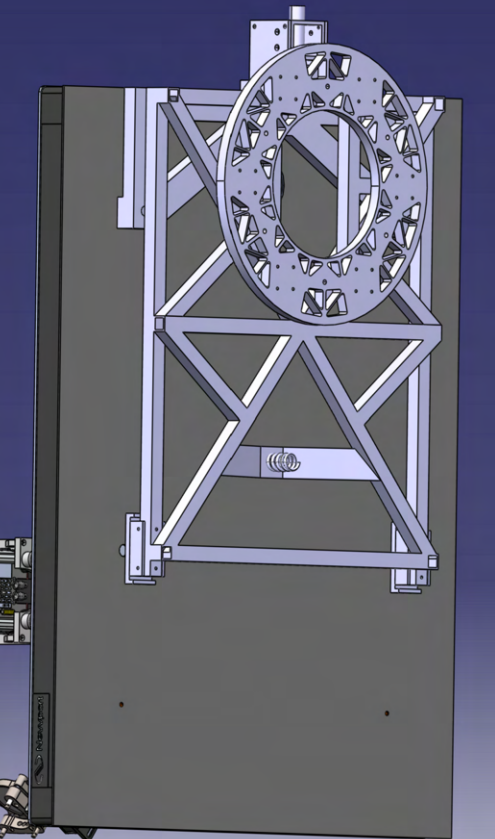




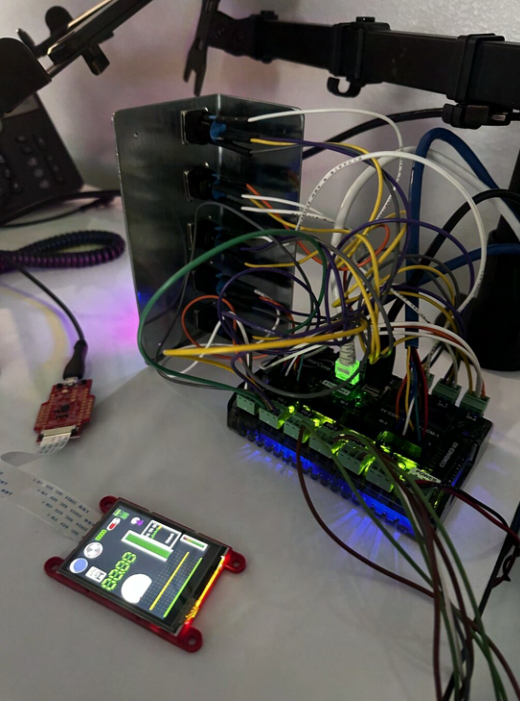


[https://www.youtube.com/embed/qqNxdpz02Bk?
rel=0&autoplay=0&loop=1&enablejsapi=1&vq=hd1024](https://www.youtube.com/embed/qqNxdpz02Bk?rel=0&autoplay=0&loop=1&enablejsapi=1&vq=hd1024)

AOB mount

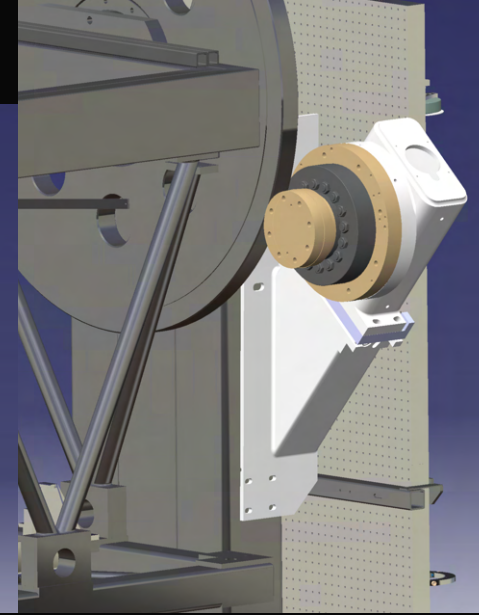
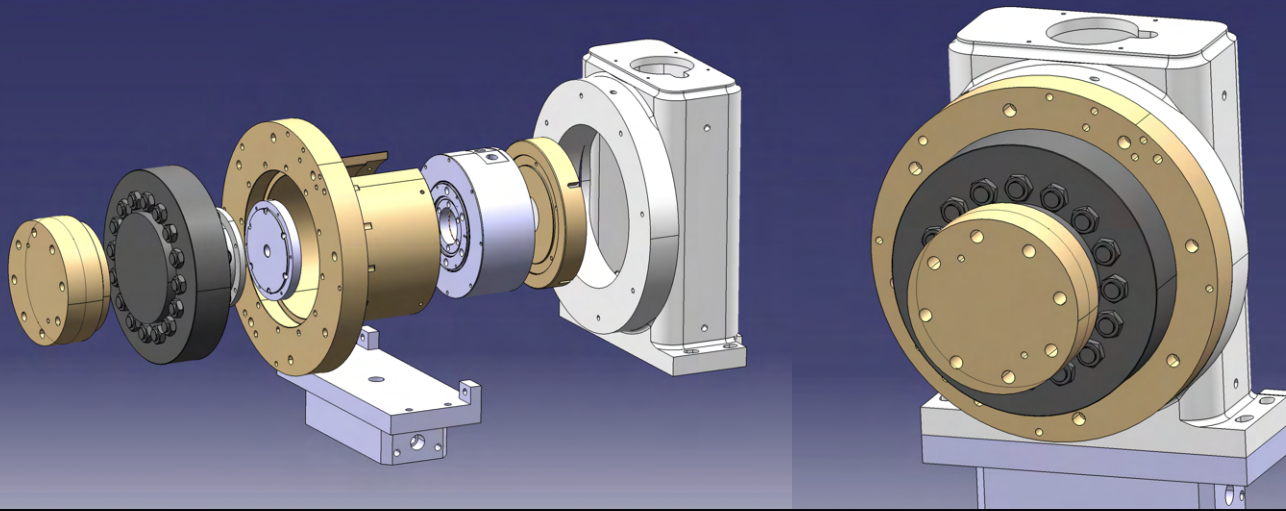


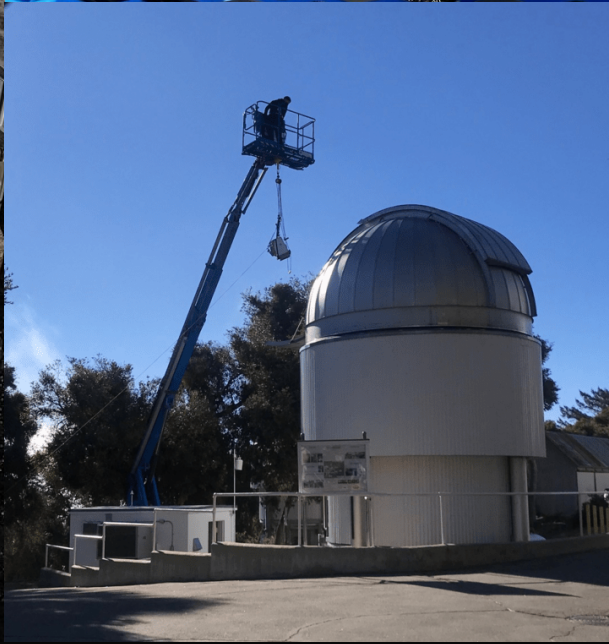
cylinder upgrade



Drive Upgrade

- MSIP
- Existing drives are ~25 years old & discontinued
- Reduce vibration, improve tuning
- One prototype assembly and short pivot arm made by UCryo
- Adapter plate made by GSU
- all 12 drives and motors (plus spare) in hand from Parker
- S2 EL drive assembly removed and reinstalled
- Spare Dojen obtained
- Hardware now ready for EL install
- Install can be completed during daytime without impacting observing, but nights needed for software and tuning
- Software still needs work





CHARIOT

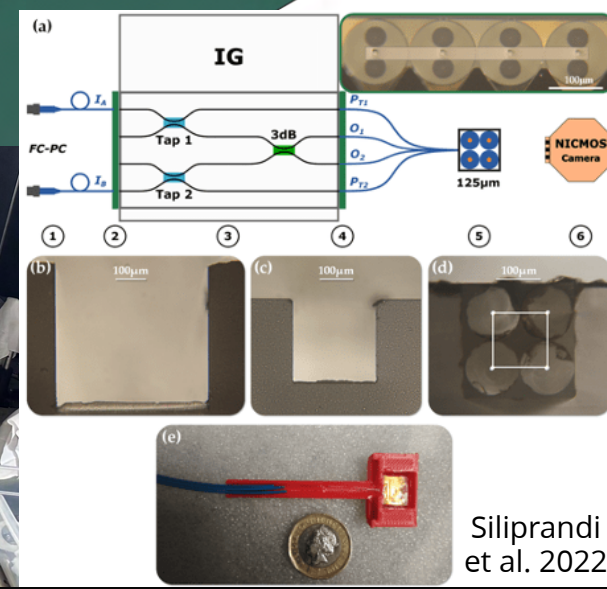
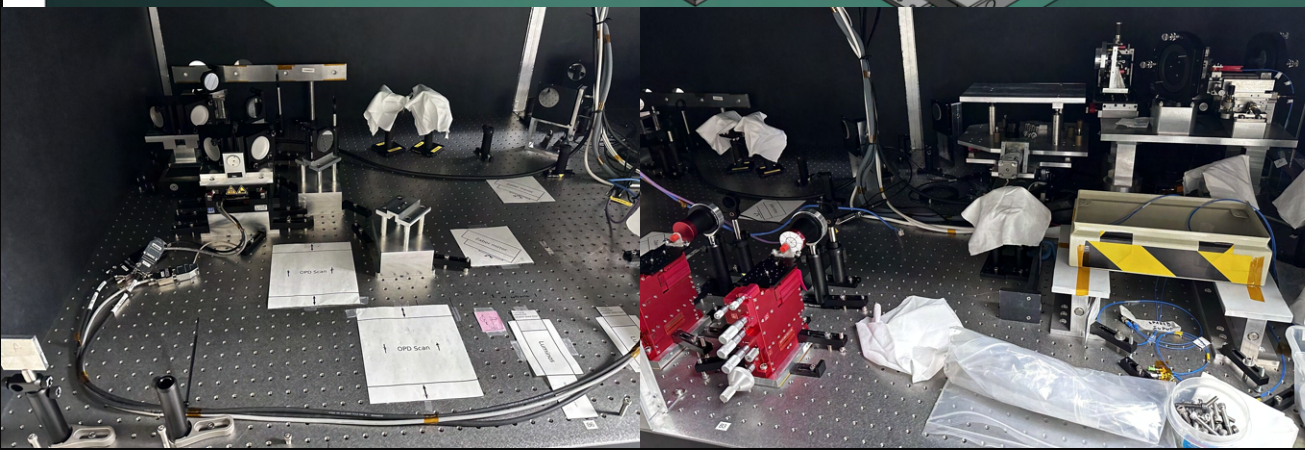
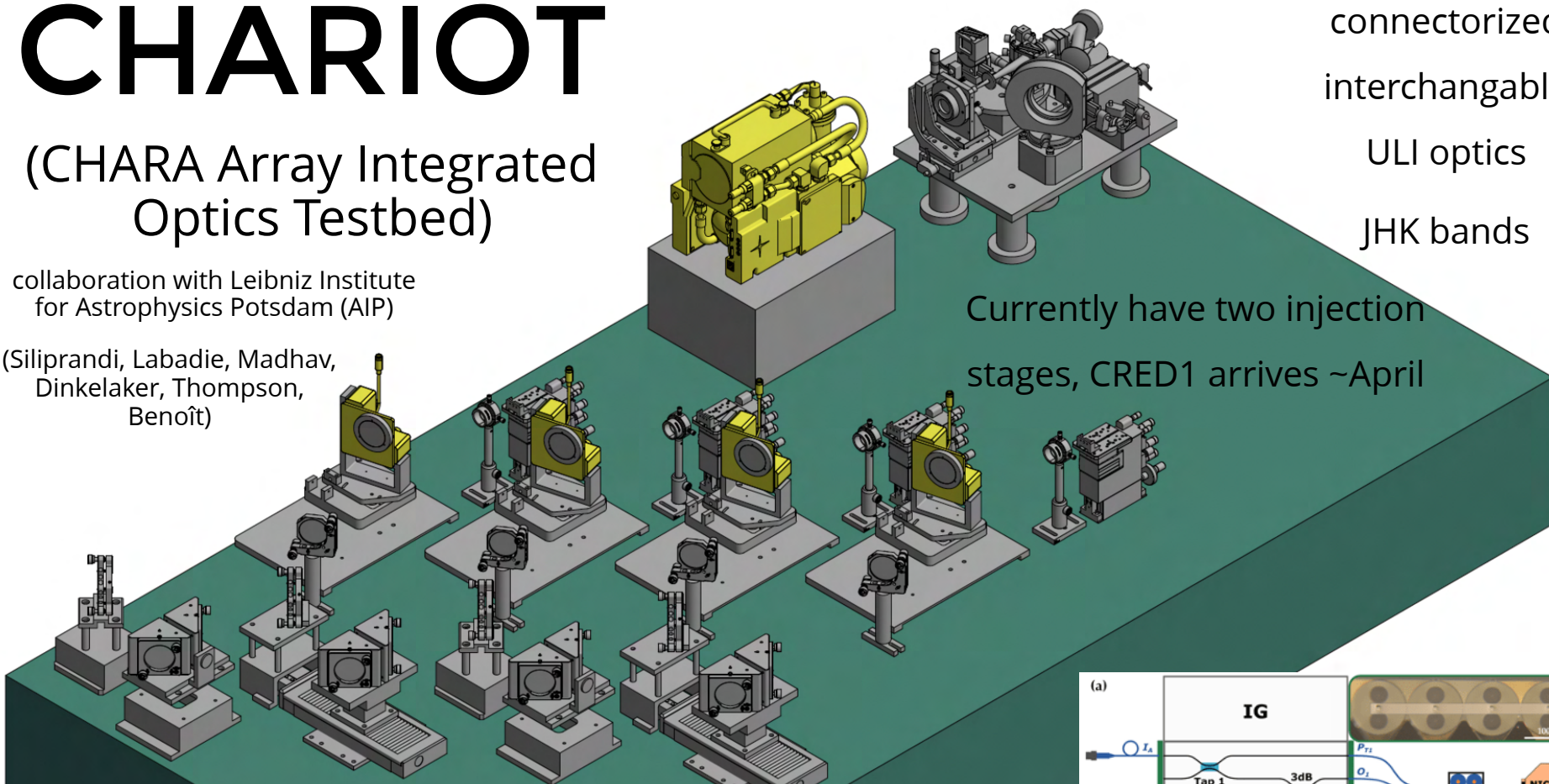
(CHARA Array Integrated Optics Testbed)

collaboration with Leibniz Institute for Astrophysics Potsdam (AIP)

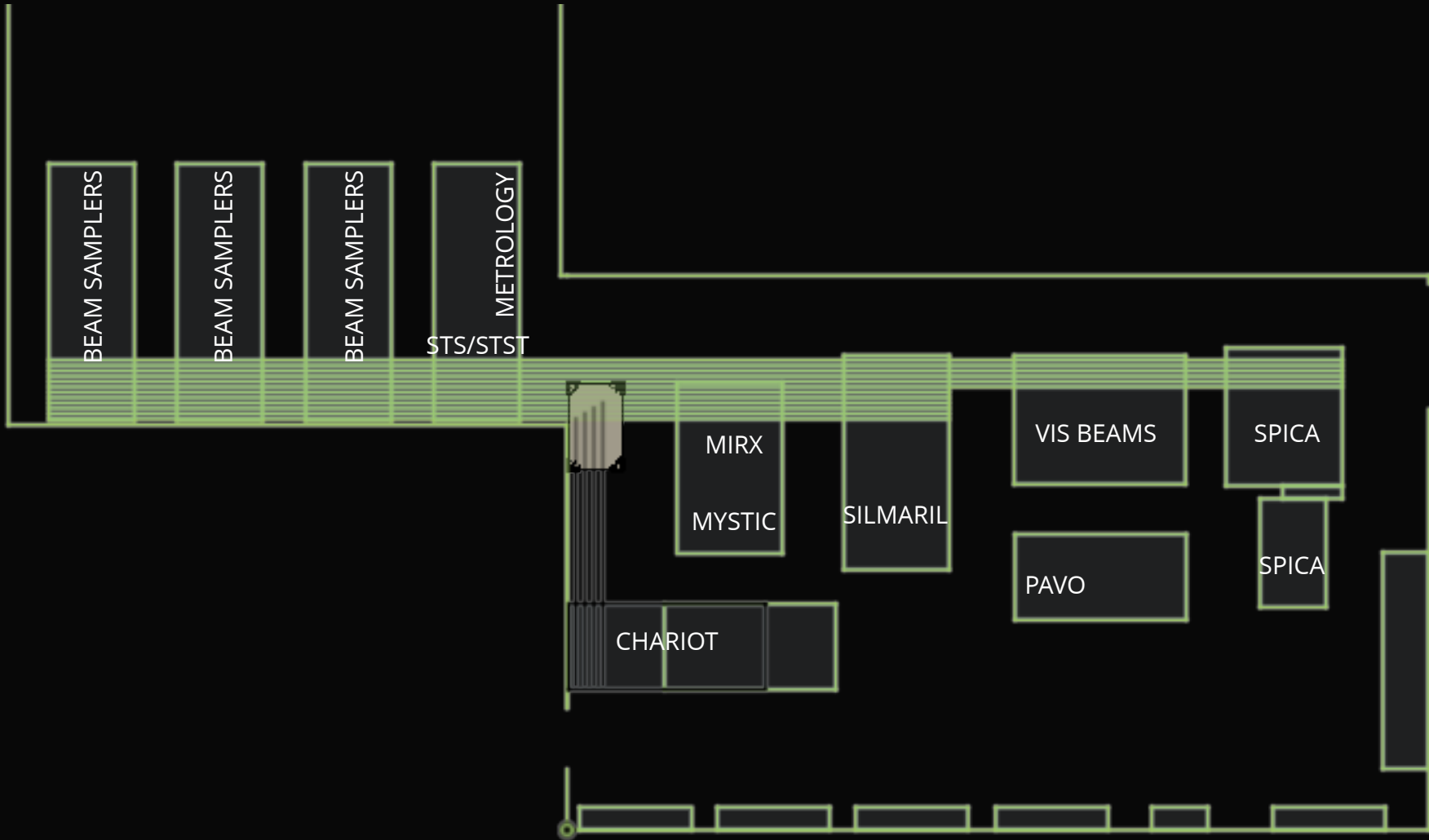
(Siliprandi, Labadie, Madhav, Dinkelaker, Thompson, Benoît)

connectorized
interchangeable
ULI optics
JHK bands

Currently have two injection stages, CRED1 arrives ~April



Siliprandi et al. 2022



BEAM SAMPLERS

BEAM SAMPLERS

BEAM SAMPLERS

METROLOGY

STS/STST

MIRX

MYSTIC

SILMARIL

VIS BEAMS

SPICA

PAVO

SPICA

CHARIOT