

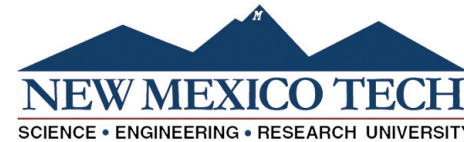
From first light to first fringes for the MROI



David Buscher, University of Cambridge
Michelle Creech-Eakman, New Mexico Tech
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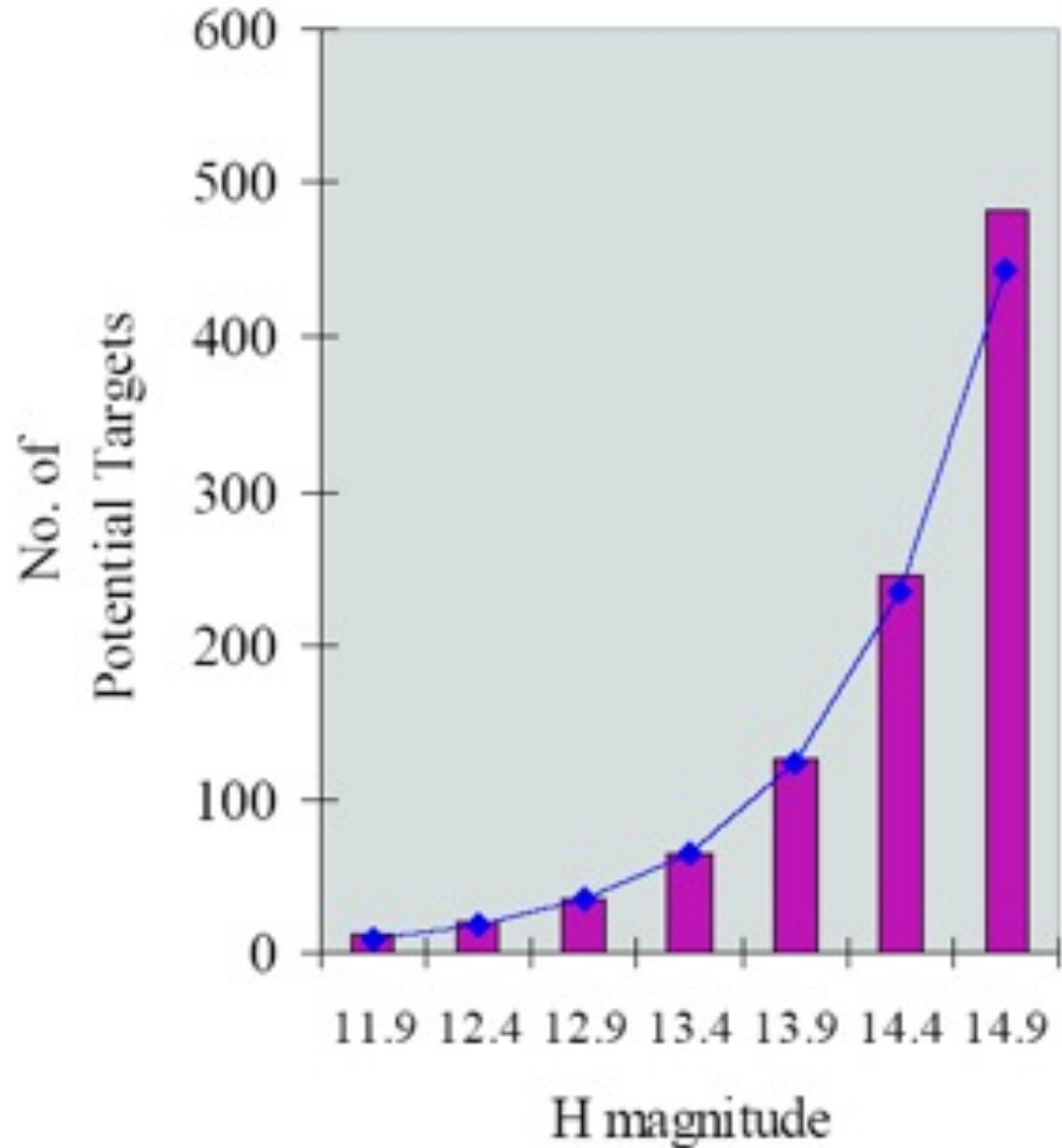


The MRO is designed to have an unchallenged combination of capabilities



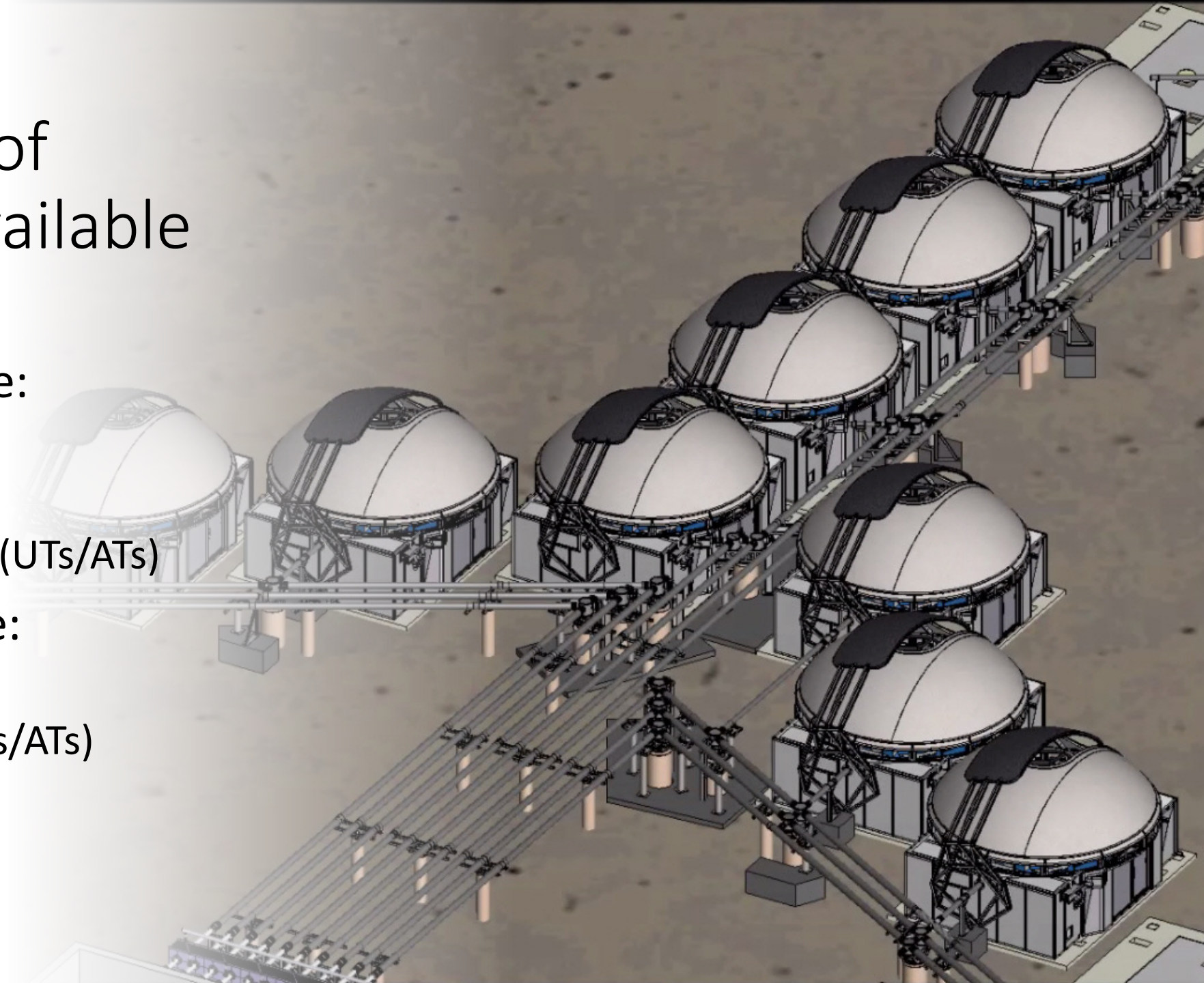
The design prioritizes faint-object science

- MROI fringe tracking limiting magnitude: H=14, K=13
- VLT/GRAVITY fringe tracker K=10.5/9.5 (UTs/ATs)
- CHARA K=8.5



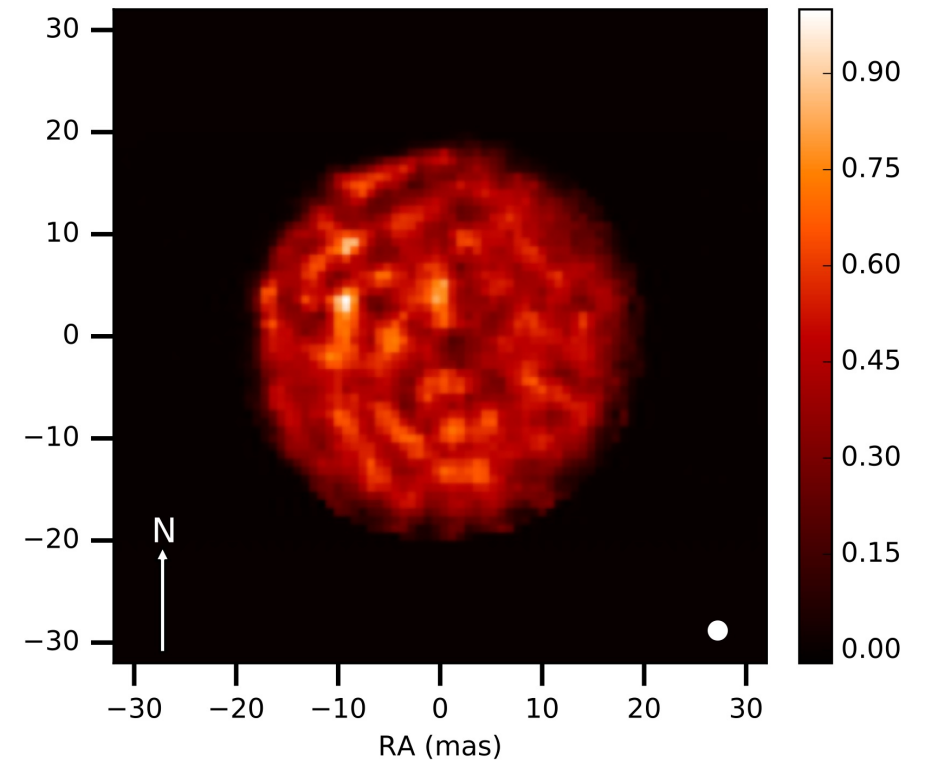
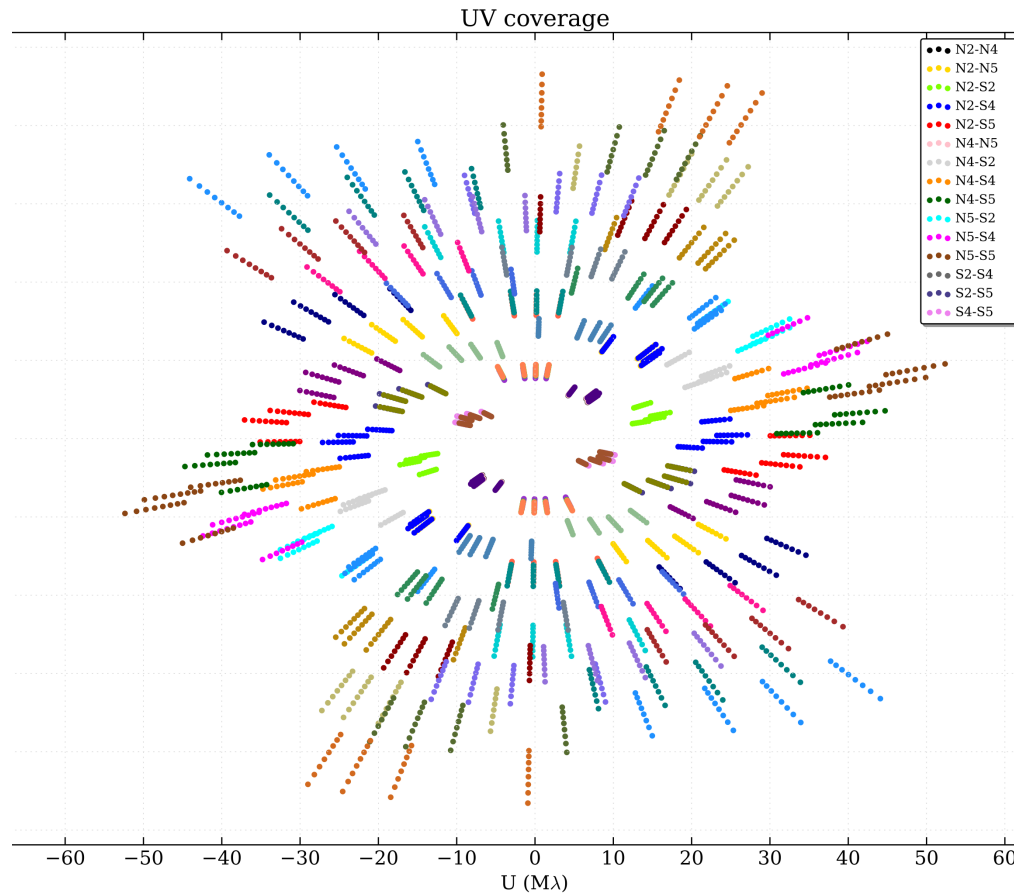
A large range of baselines is available

- Maximum baseline:
 - MROI 347m
 - CHARA 330m
 - VLTI 130m/200m (UTs/ATs)
- Minimum baseline:
 - MROI 7.8m
 - VLTI 47m/8m (UTs/ATs)
 - CHARA 34m



MROI will make 50 images per night

- VLTI: multiple images over several nights
- CHARA: ~1 image/night





Magdalena Ridge
Observatory

Most of the infrastructure is in place



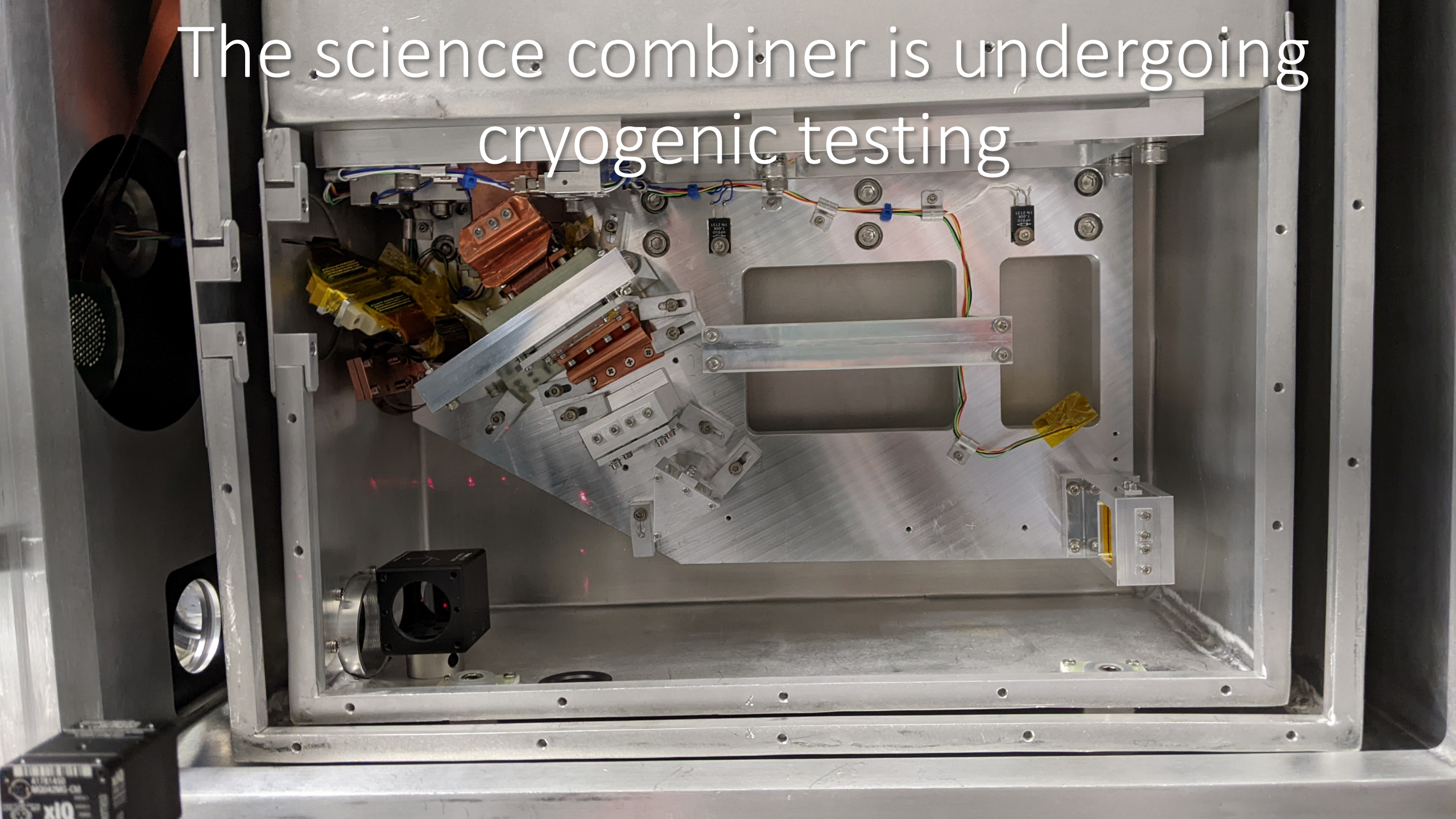
We have light from the first telescope
into the beam-combining area



The second telescope is at the Ridge



The science combiner is undergoing cryogenic testing





We are aiming for first fringes this year

Xiaowei "David" Sun (1966 - 2022)

