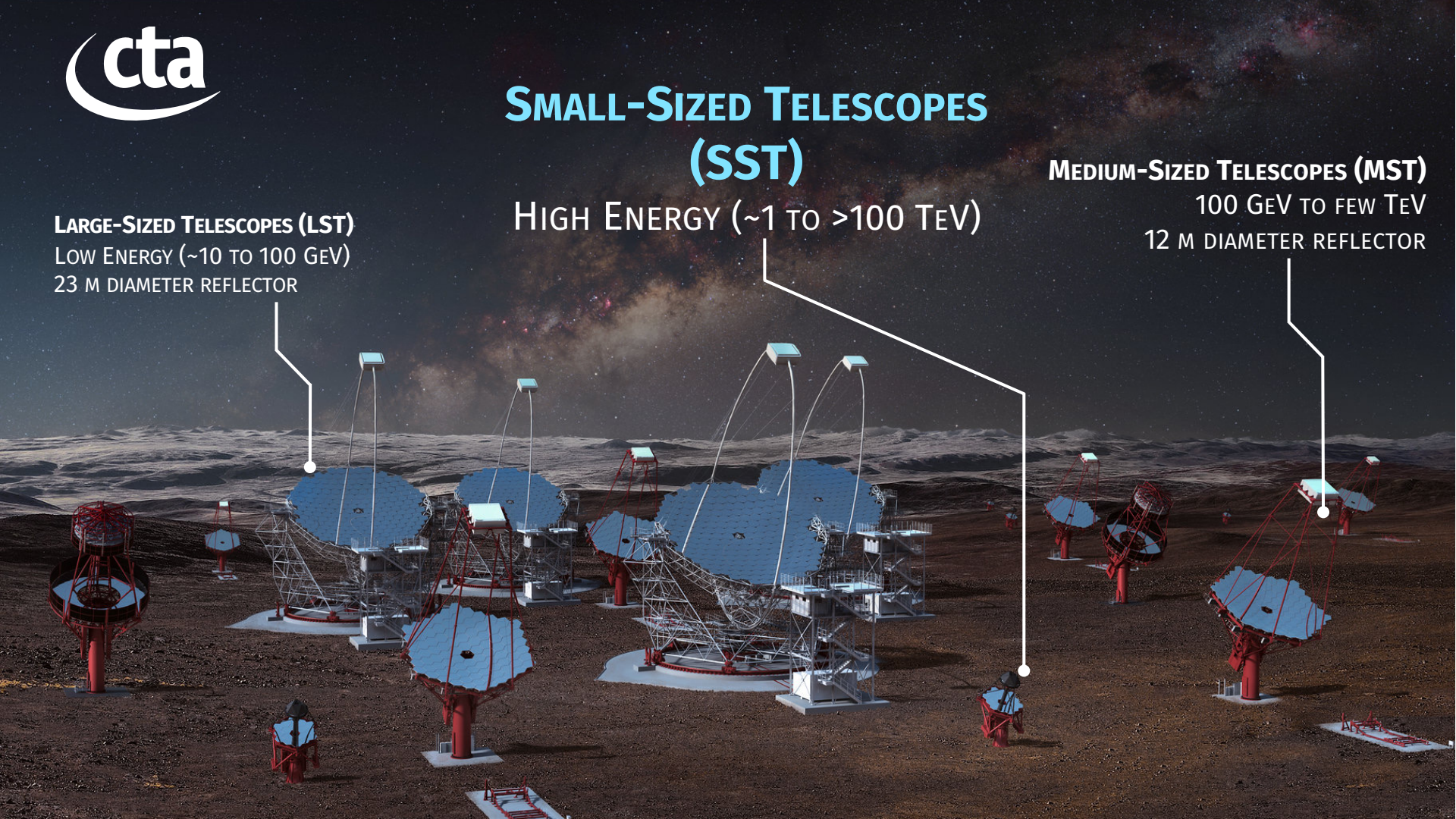
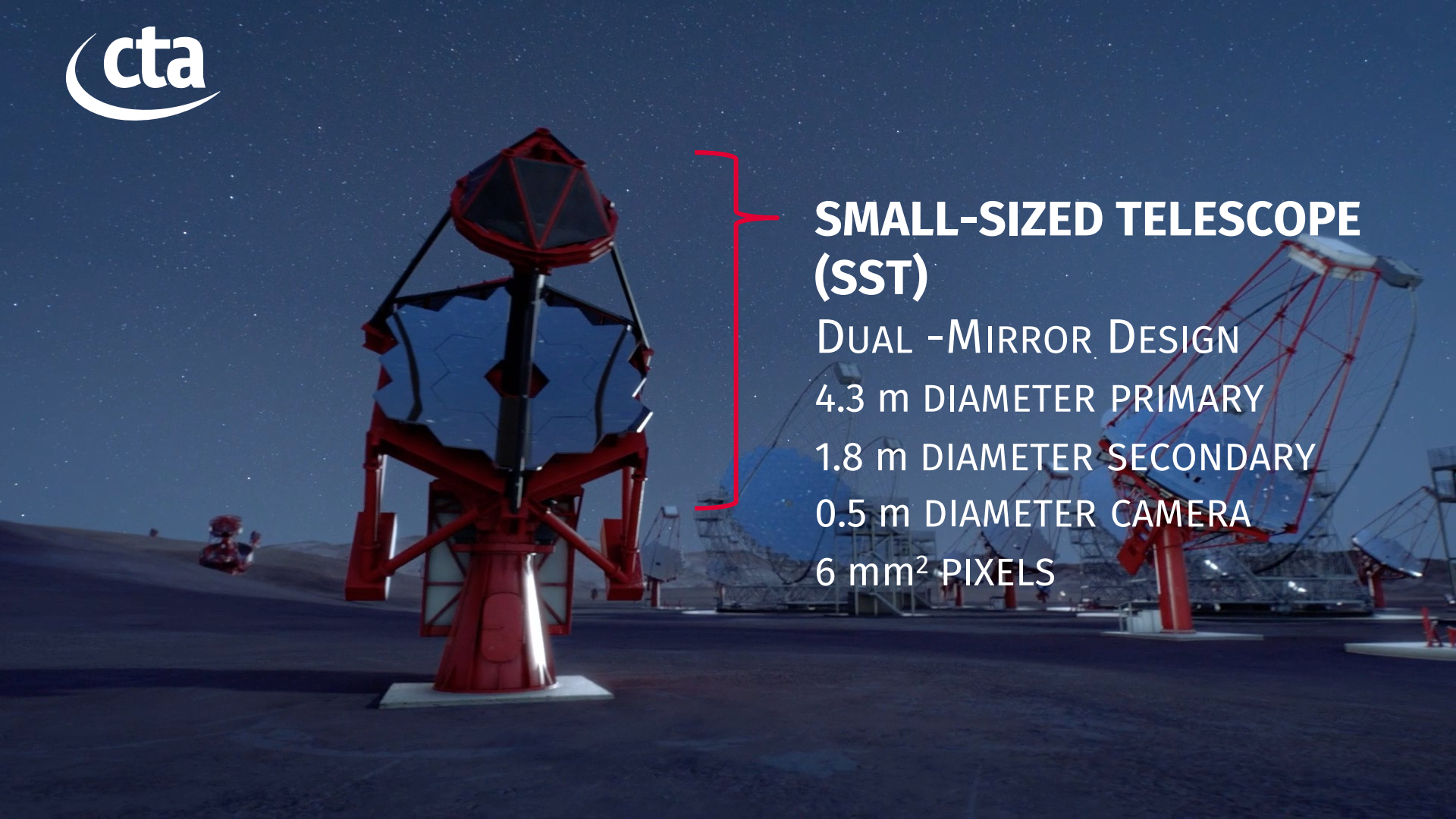
cherenkov telescope array

The Small-Sized Telescopes for the Southern Site of the Cherenkov Telescope Array

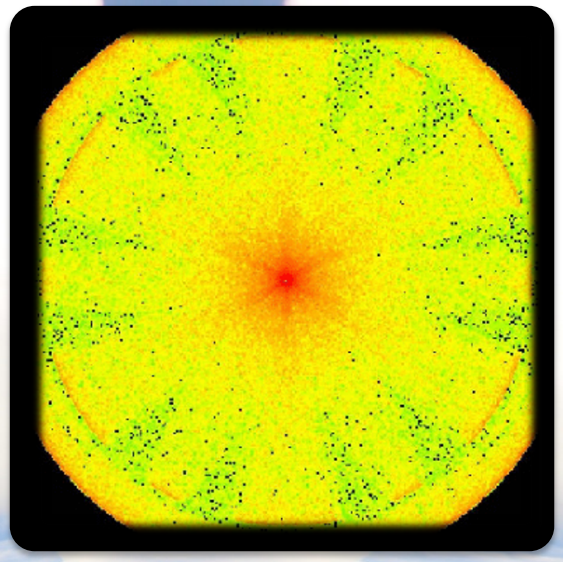
Richard White (MPIK)
for the CTA SST Project


cta
Small-Sized Telescopes (SST)
High Energy (~1 to >100 TeV)
Large-Sized Telescopes (LST)
Low Energy (~10 to 100 GeV)
23 m diameter reflector
Medium-Sized Telescopes (MST)
100 GeV to few TeV
12 m diameter reflector


THE SSTS WILL BE DEPLOYED AT CTA-SOUTH
ATACAMA DESERT - CHILE
37 SSTS ARE CURRENTLY PLANNED


SMALL-SIZED TELESCOPE (SST)
Dual -Mirror Design
4.3 m diameter primary
1.8 m diameter secondary
0.5 m diameter camera
6 mm² pixels

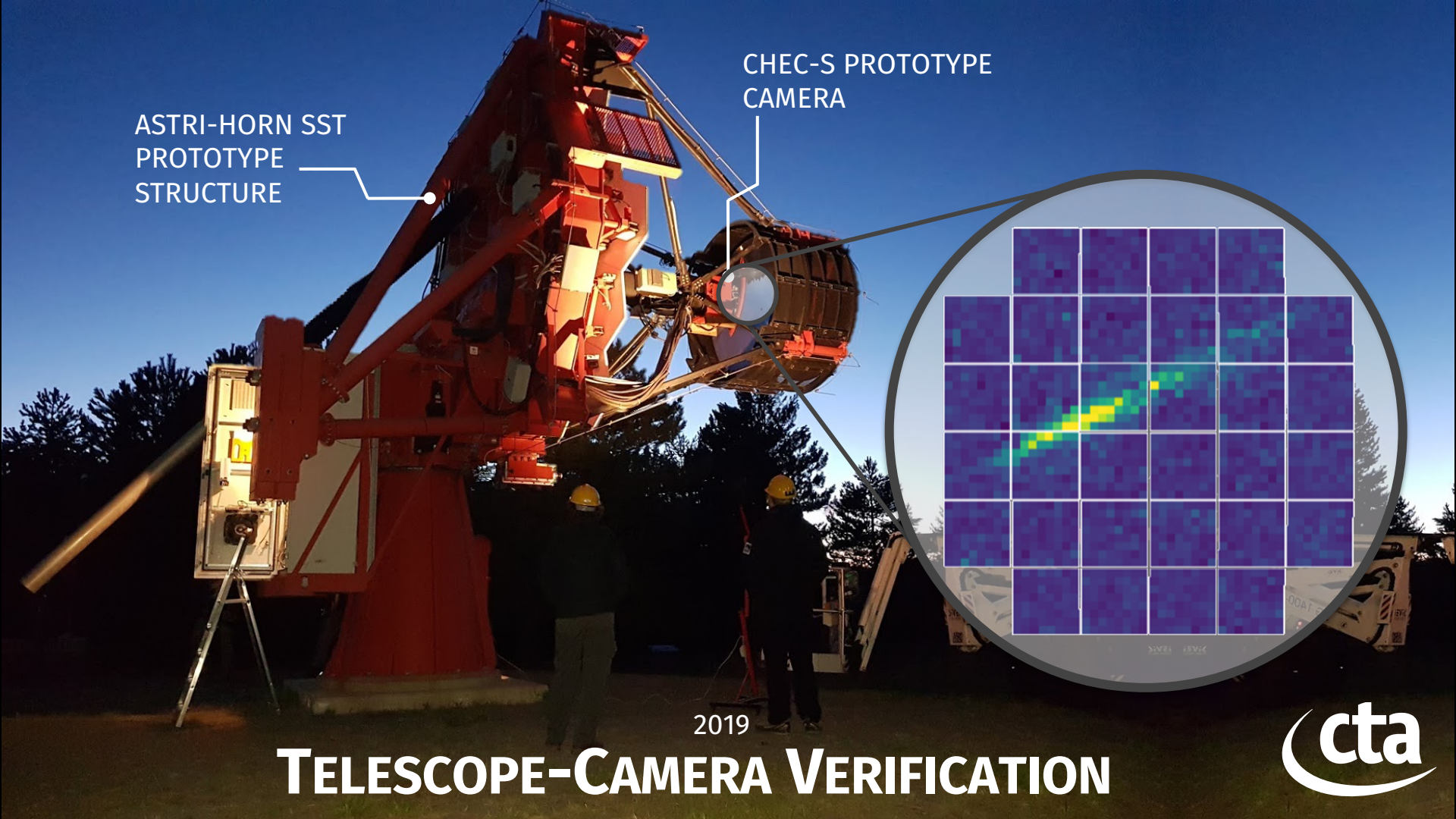
ASTRI-HORN SST PROTOTYPE



Camera Pixel Size

Point spread function varying across FoV

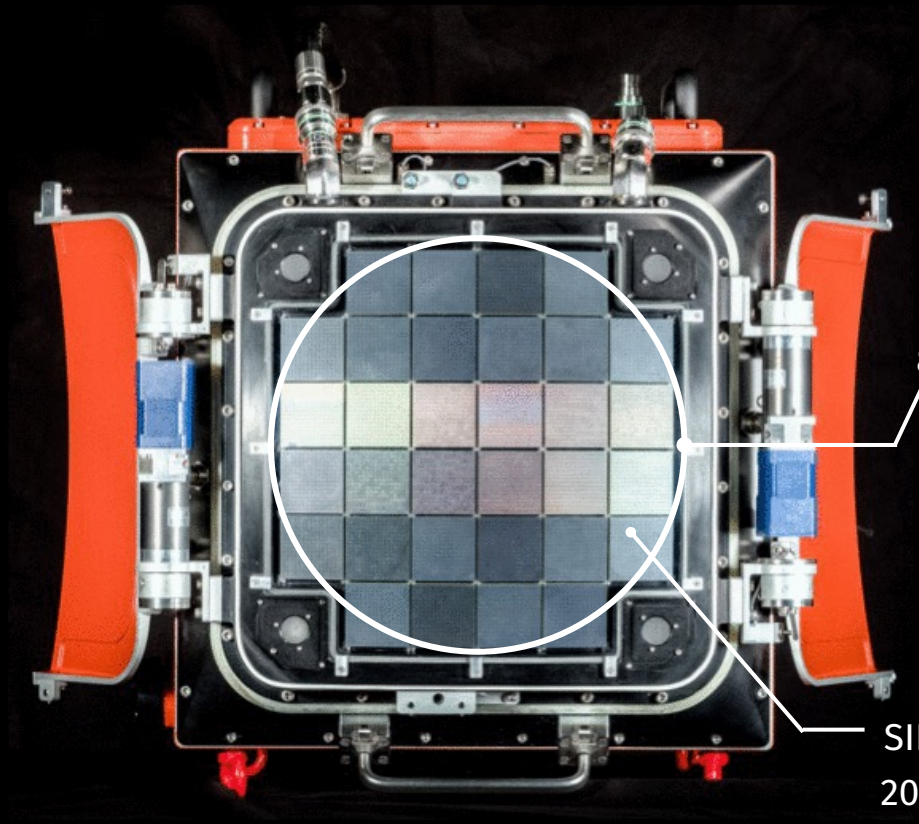
Mount Etna, INAF Observatory, Sicily



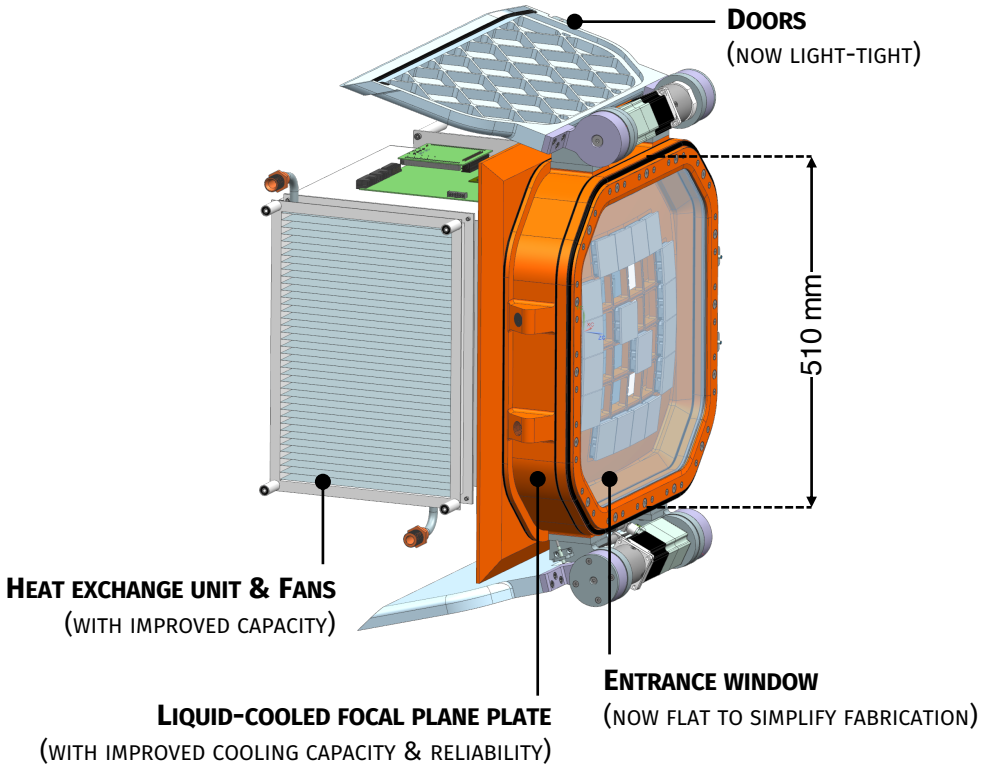
2019

Telescope-Camera Verification

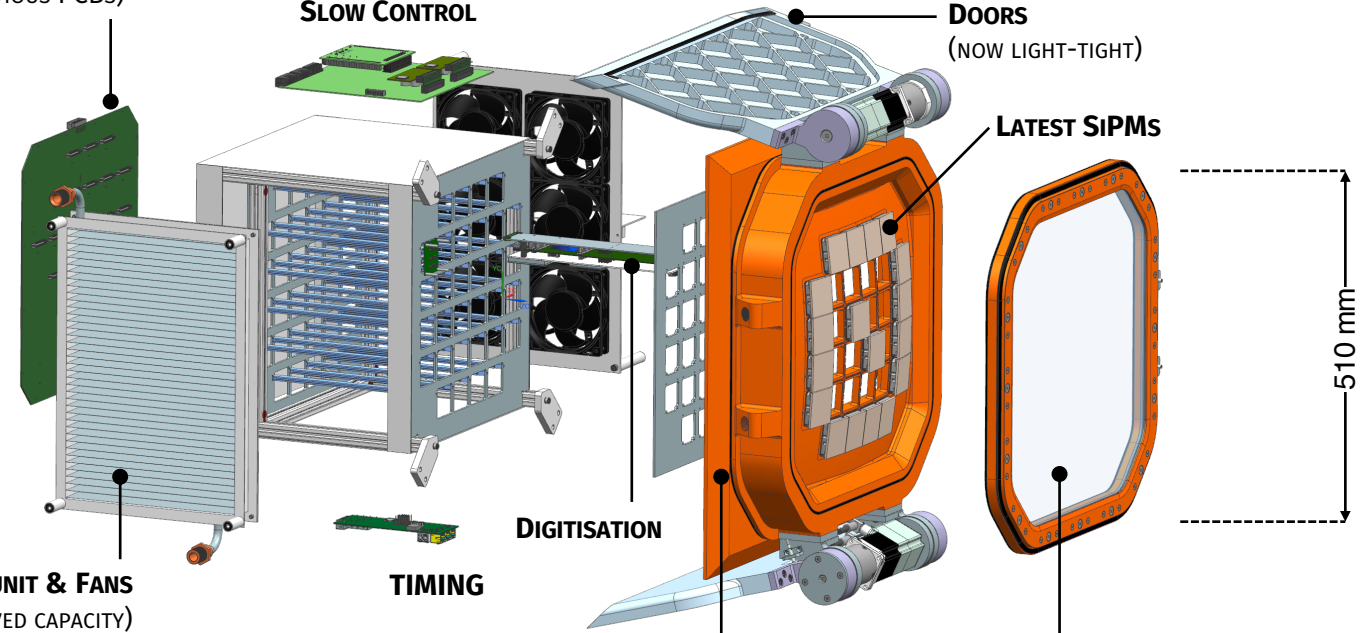
CHEC-S SST CAMERA PROTOTYPE



SST CAMERA DESIGN



SST CAMERA DESIGN



The SST Programme has now been established

To provide SSTs as a In-Kind Contribution to CTA

The team are finalising the SST design

for series production & deployment of 37 units

with an emphasis on ease of manufacturing, assembly, and maintenance


THE SSTS WILL PROVIDE CTA WITH SENSITIVITY AT THE HIGHEST ENERGIES
AND THE BEST ANGULAR RESOLUTION OF ANY INSTRUMENT ABOVE X-RAY ENERGIES
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