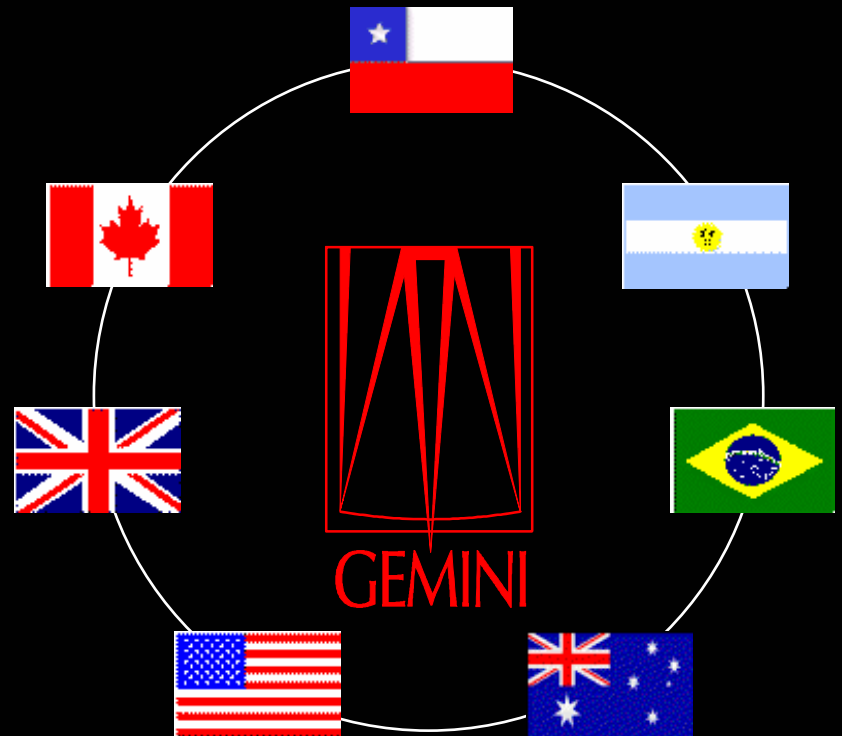


Gemini



The Gemini Project

- **Who:** An international partnership of the United States, United Kingdom, Canada, Chile, Argentina, Brazil and Australia.
- Canada's share is 15%.



The Gemini Project

- **What:** Two high performance, 8-meter aperture optical/infrared telescopes



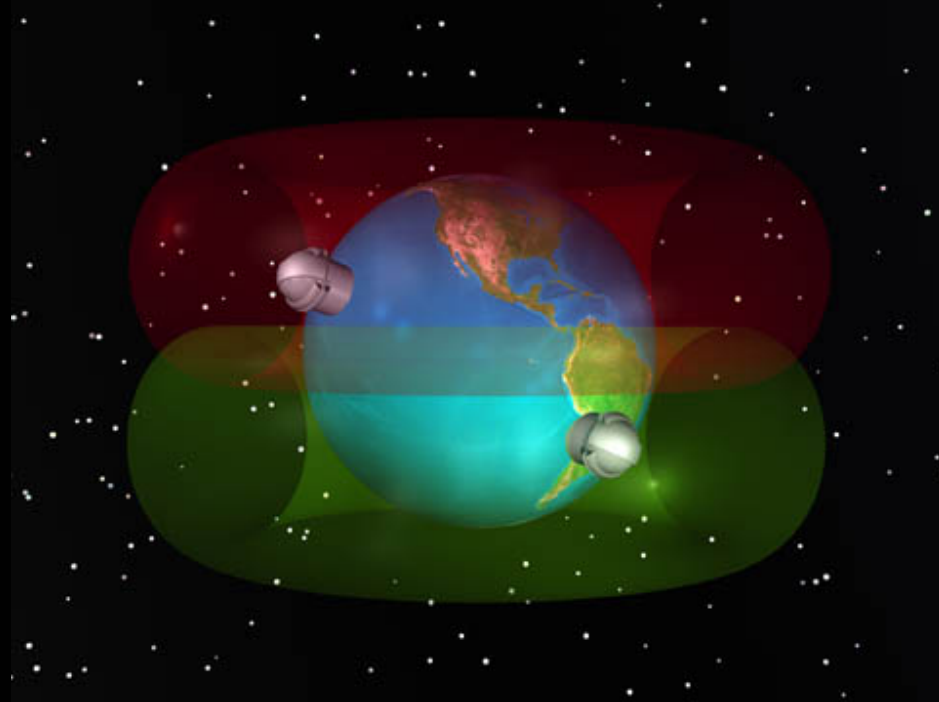
The Gemini Project

- **Where:** Mauna Kea, Hawaii, and Cerro Pachon, Chile
- **When:**
 - Gemini North official opening: 1999
 - Gemini South official opening 2002



The Gemini Project

- **Why:** To exploit the best natural observing conditions to undertake a broad range of astronomical research programs within the national communities of the partner countries.



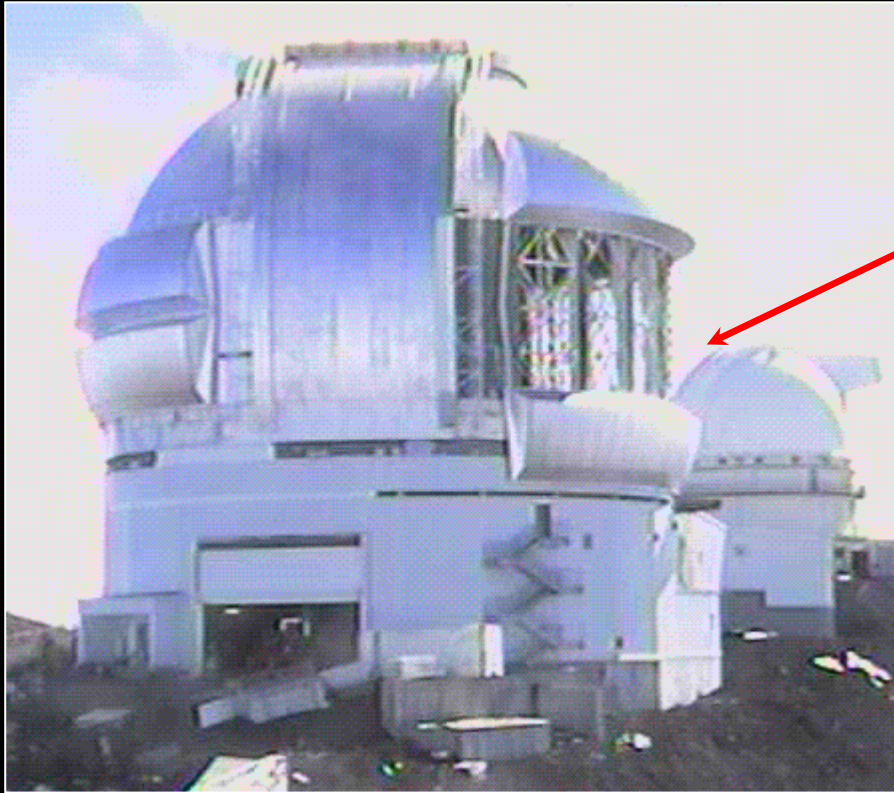
Mauna Kea, Hawaii





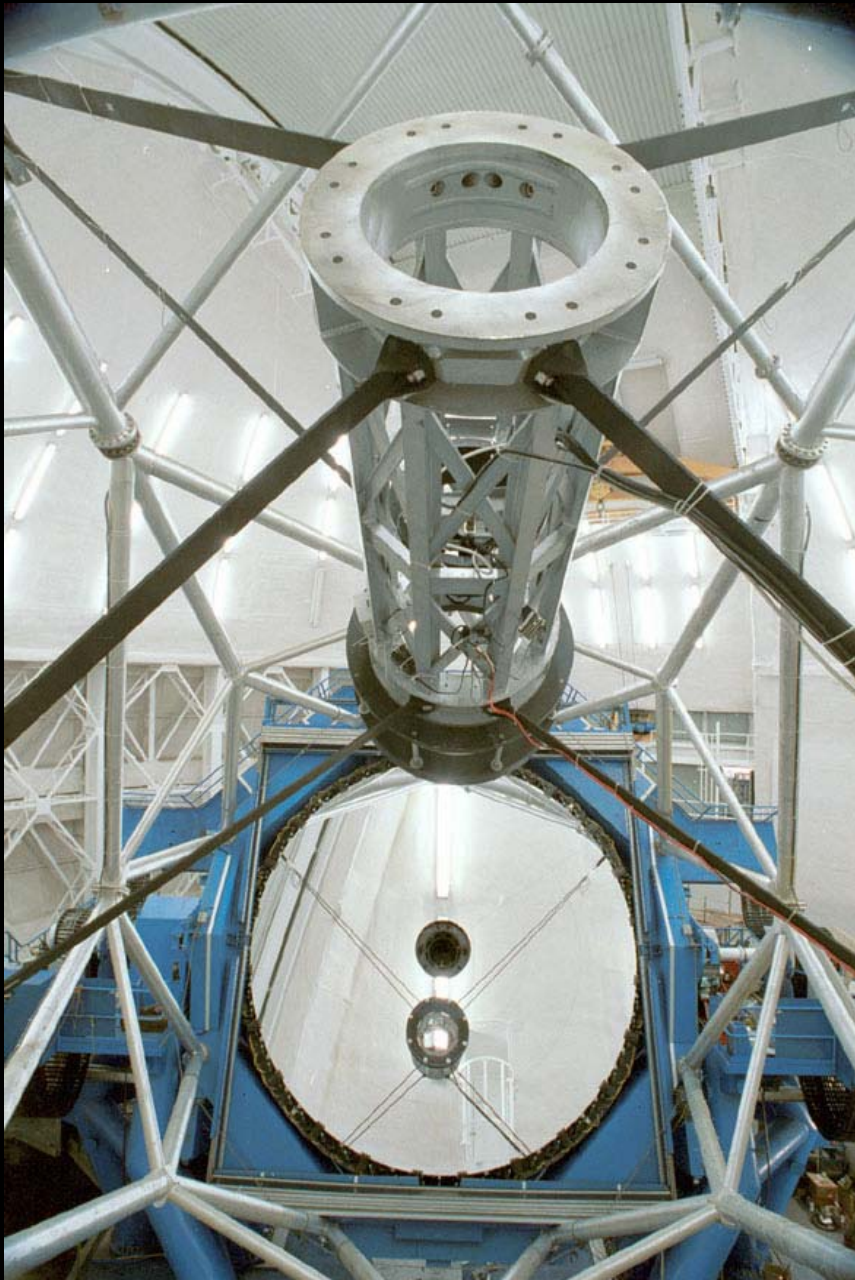


Enclosure Design Features



- Adjustable venting for wind flow control.
- Daytime air conditioning.
- Built by a BC company.

8m Cassegrain Telescope



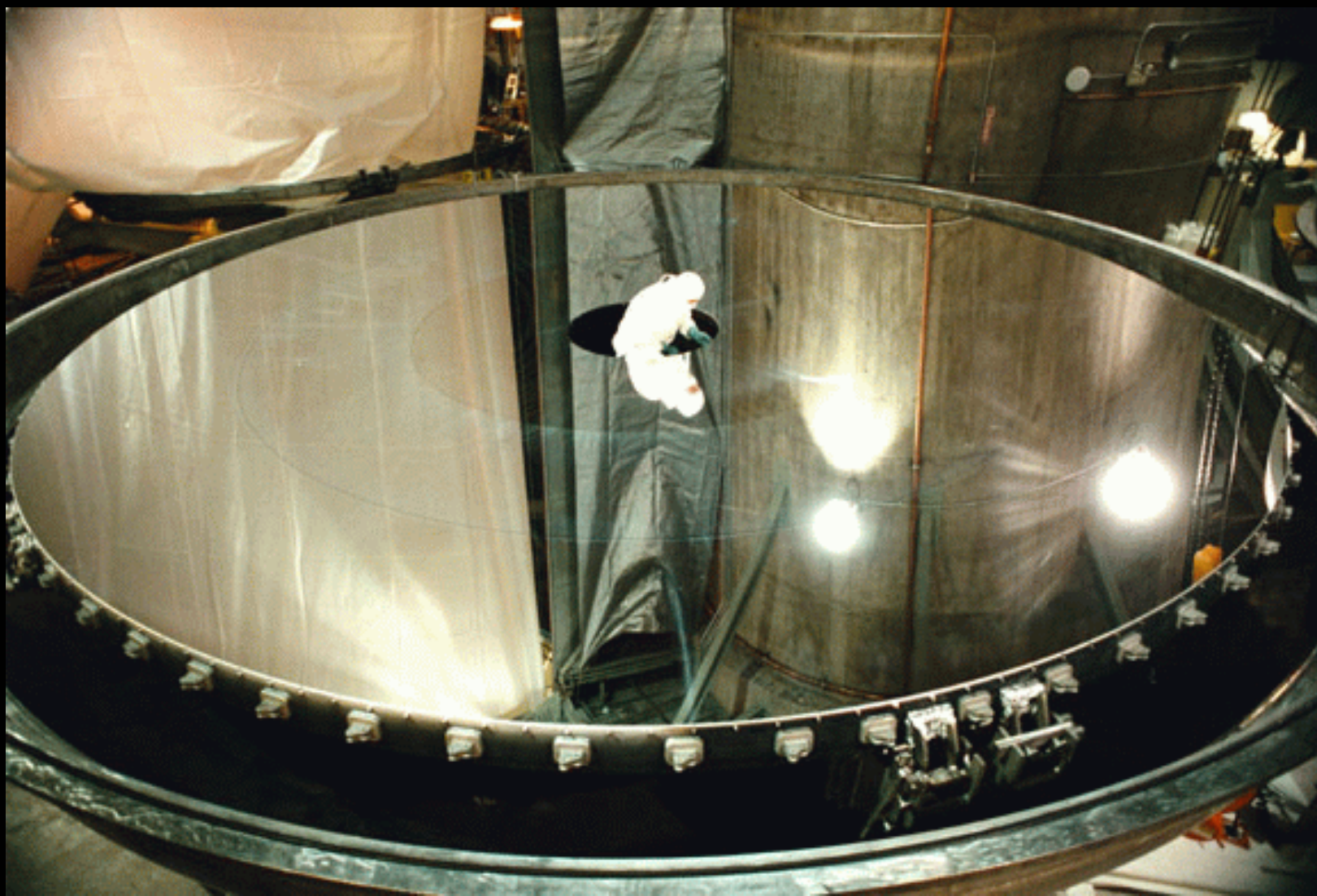
Primary Mirror



8m diameter, 20 cm thick, weighs 22 tons



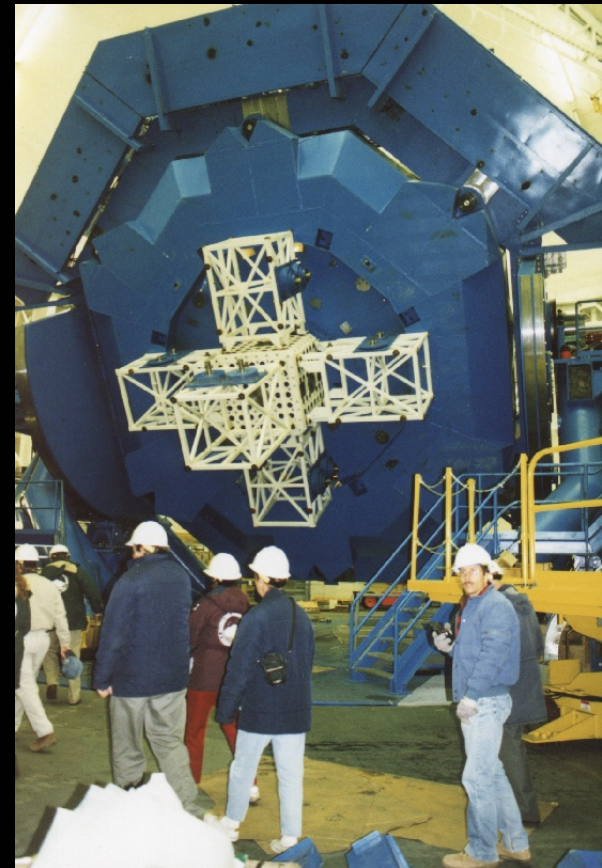
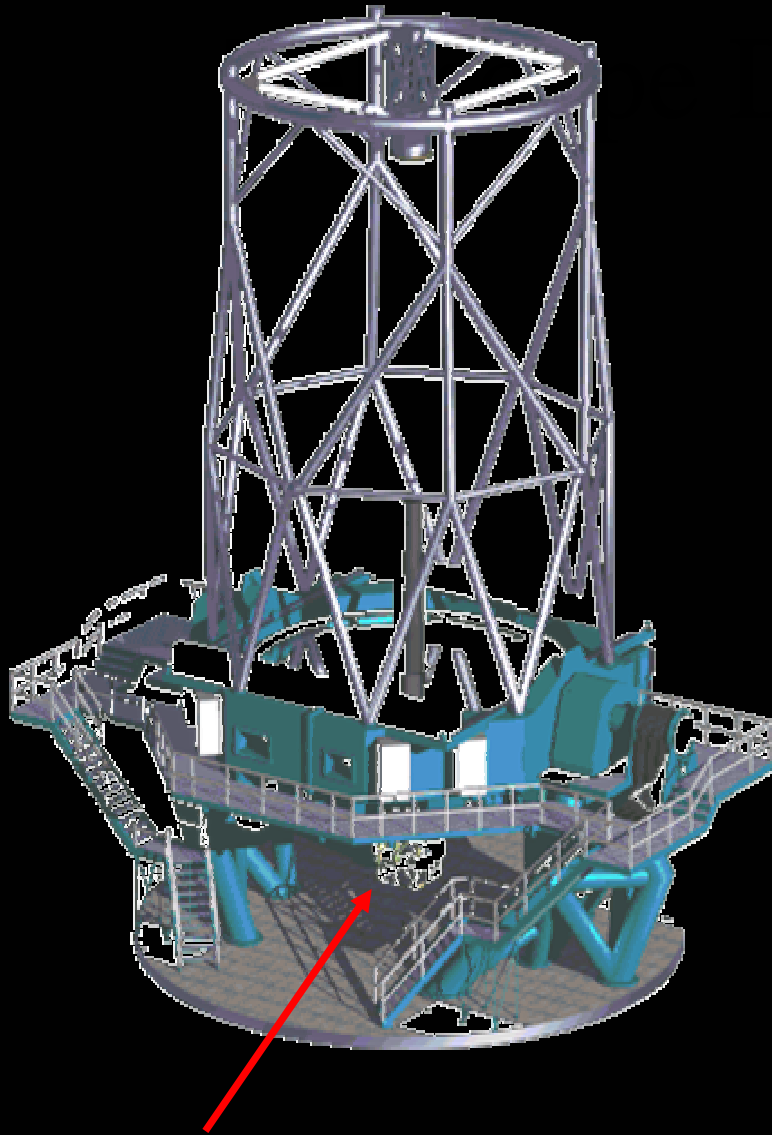




Active Optics



Computer Controlled
Actuators

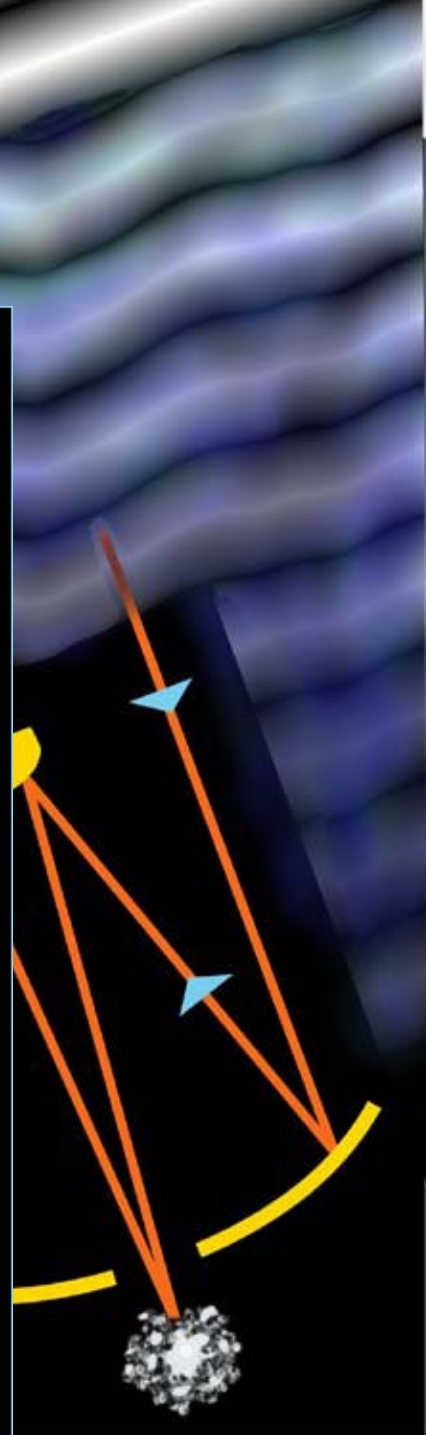
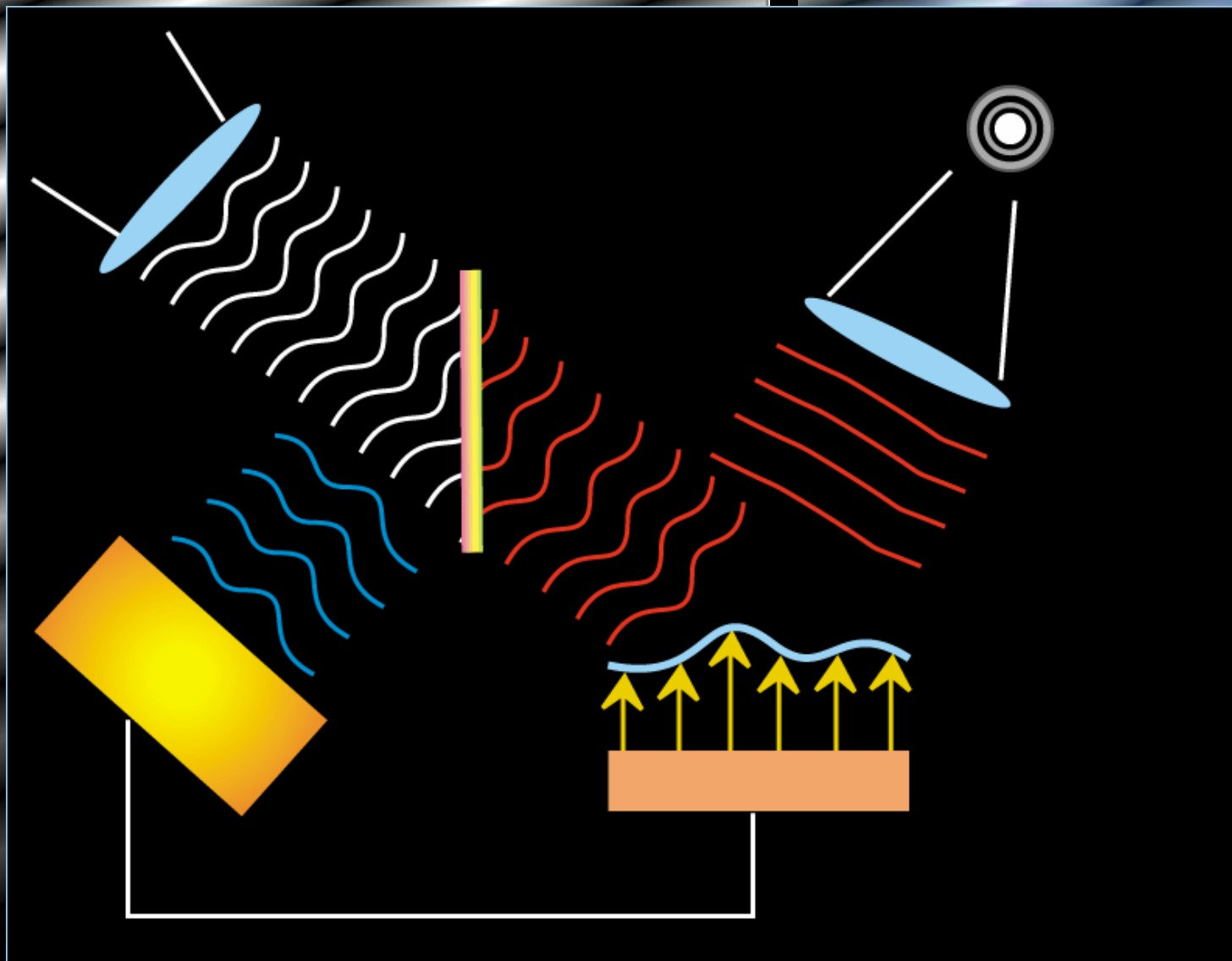


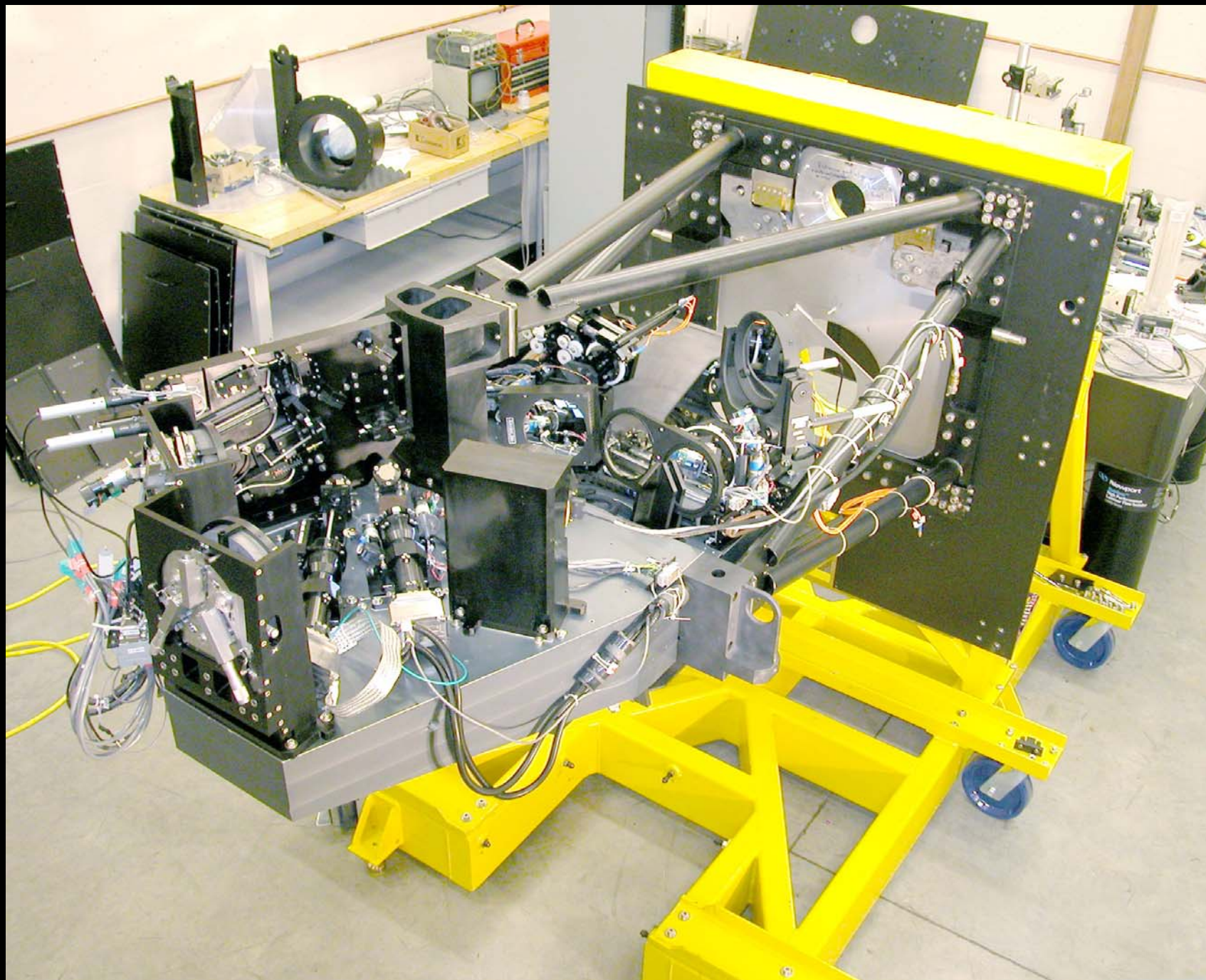
Instrument Support Structure

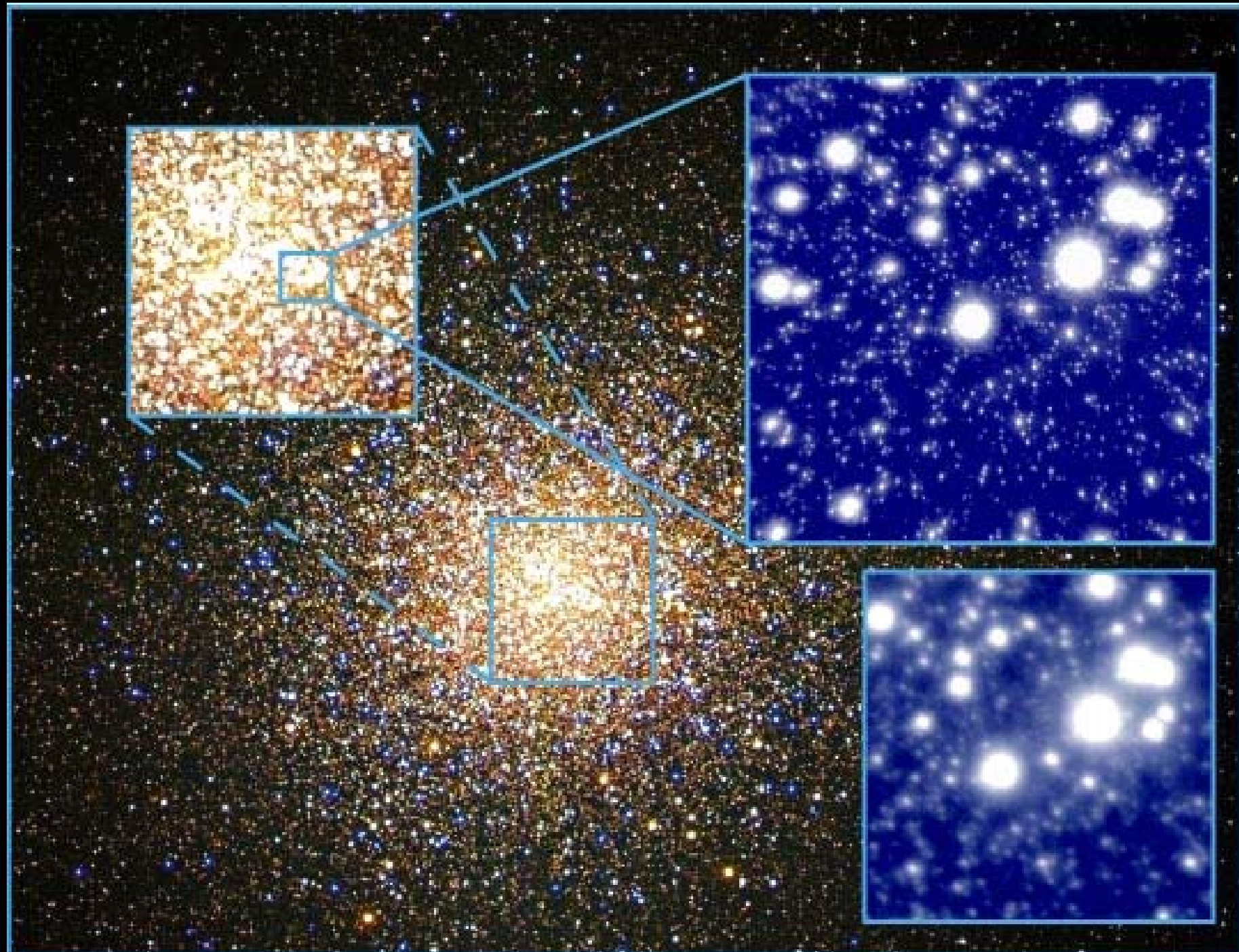


Altair: Adaptive Optics on Gemini North









IR imaging of the Galactic Center region

40''x 40'' mosaic; J, H, K composite



Non AO corrected



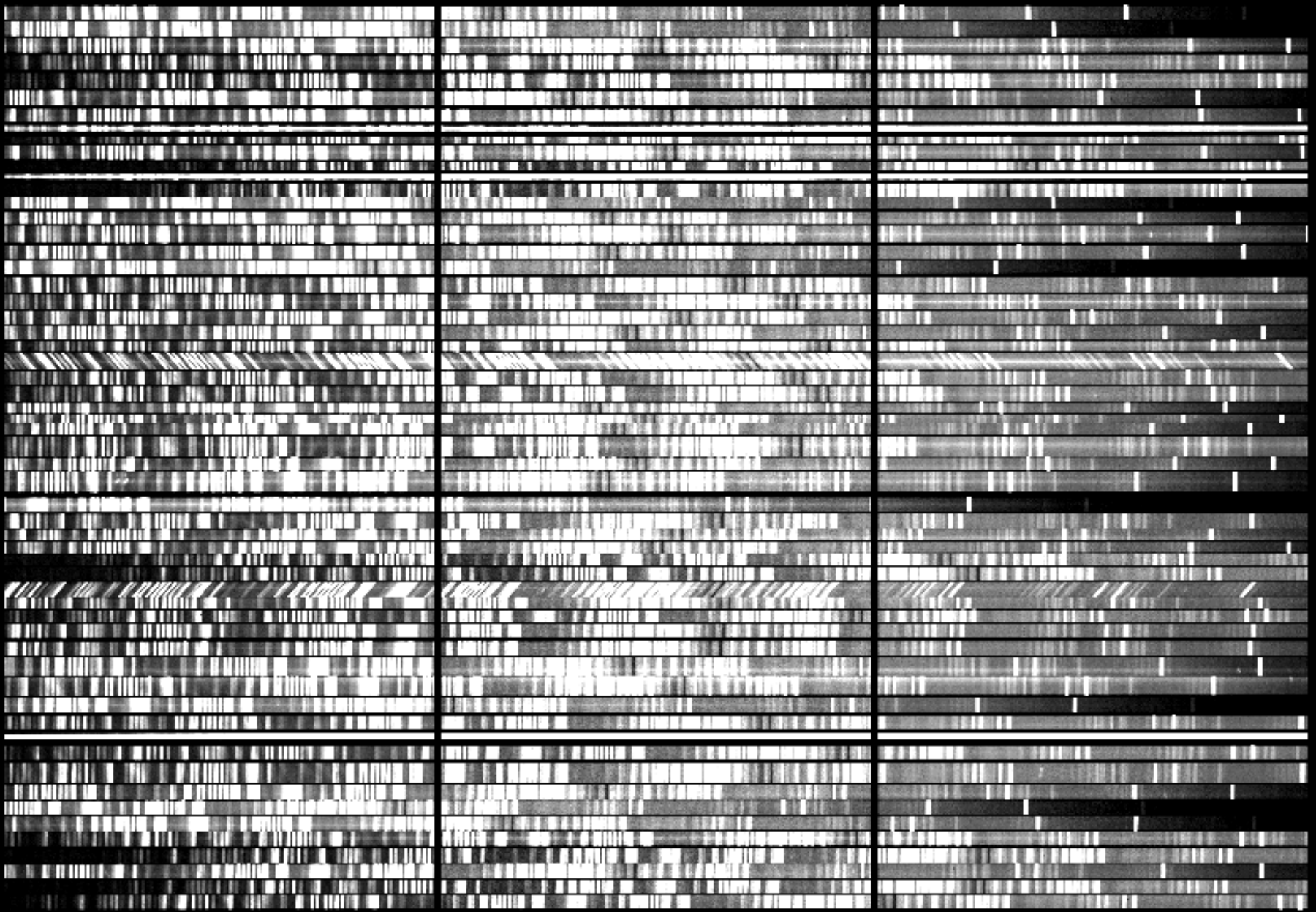
AO corrected

Gemini N/Hokupa'a-Quirc (U of H/NSF)

Science with GMOS

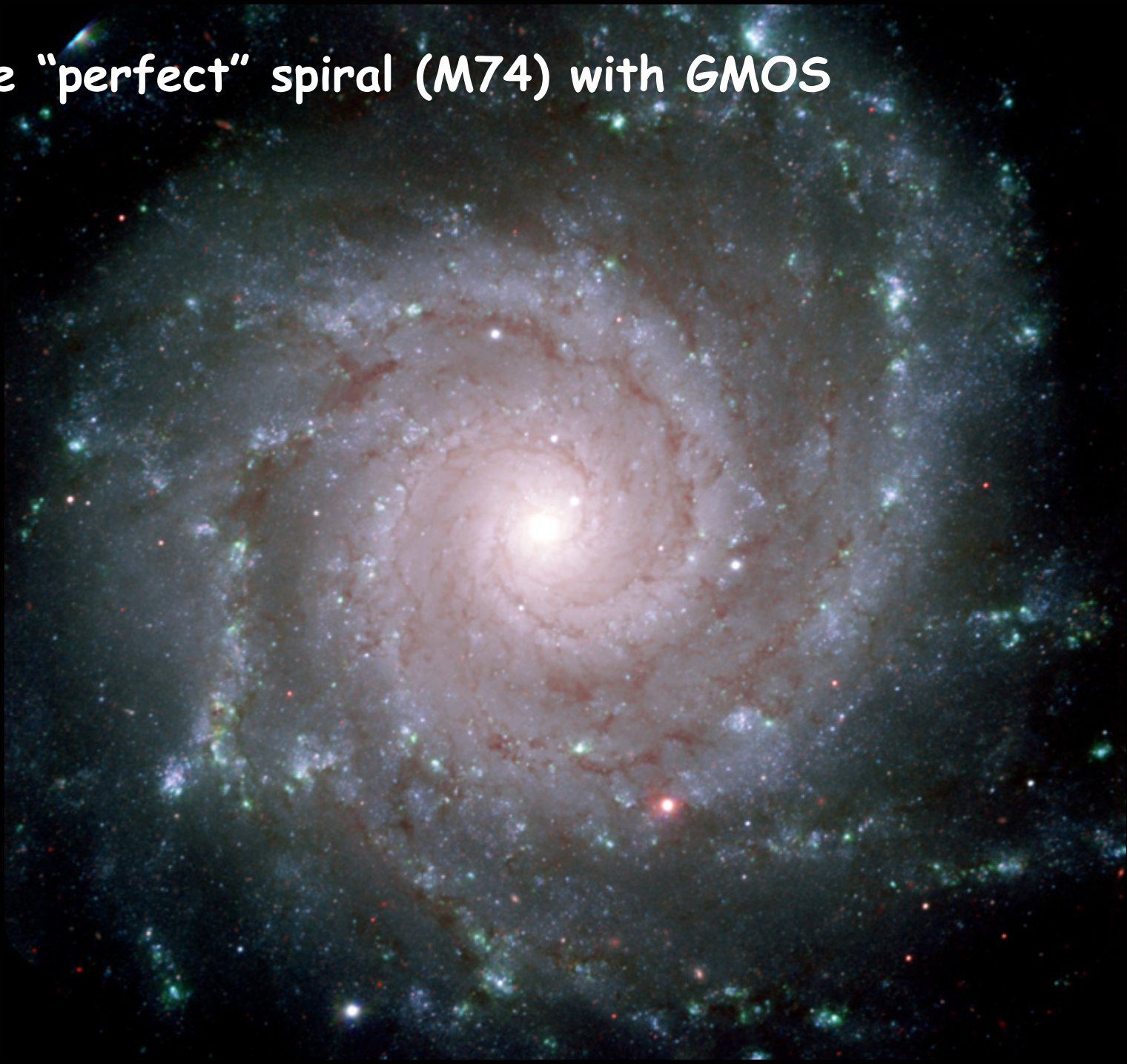
1868 galaxies
in the 5.5'x5.5'
field





Up to hundreds of simultaneous spectra

The “perfect” spiral (M74) with GMOS



The Trifid Nebula



















