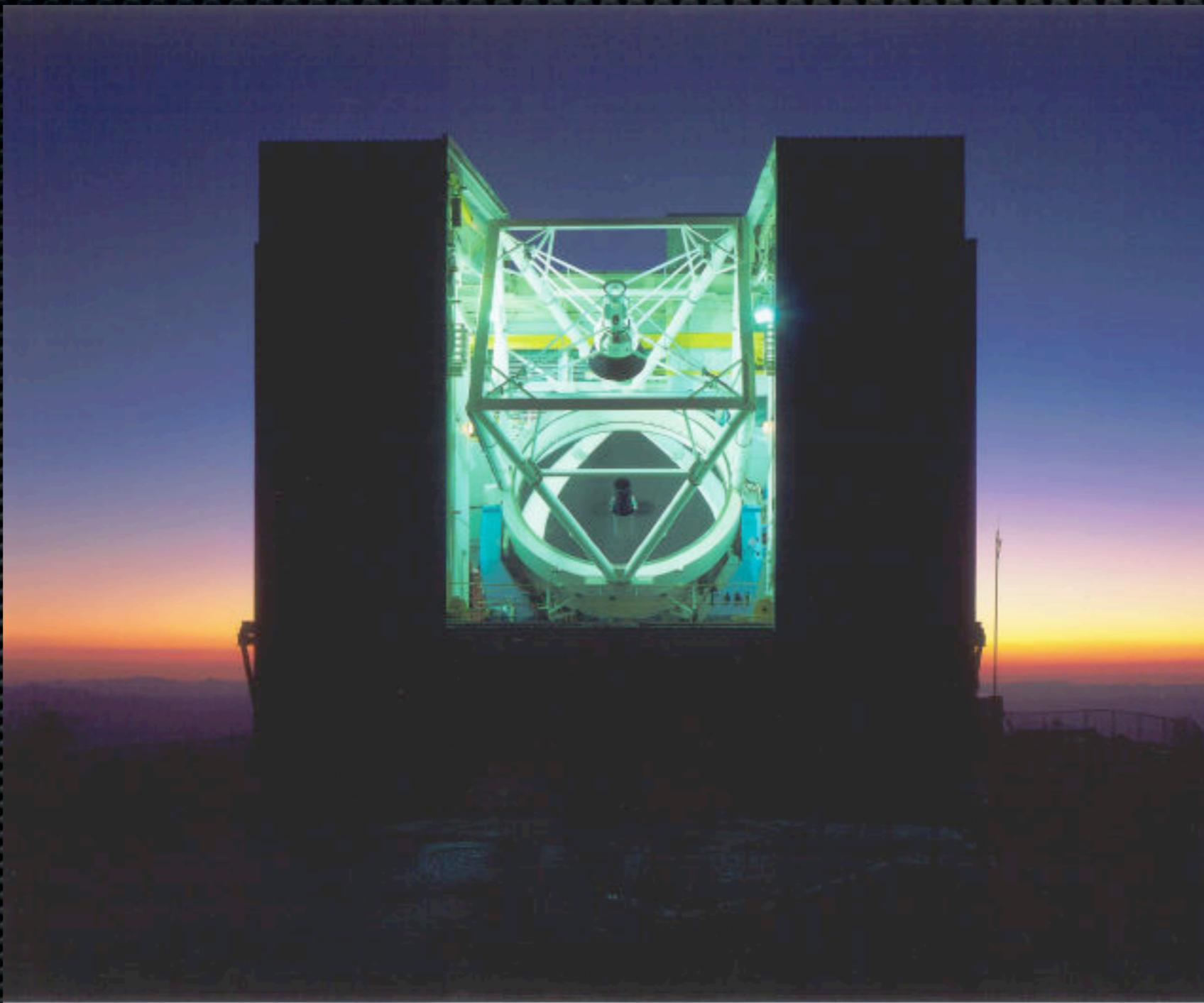


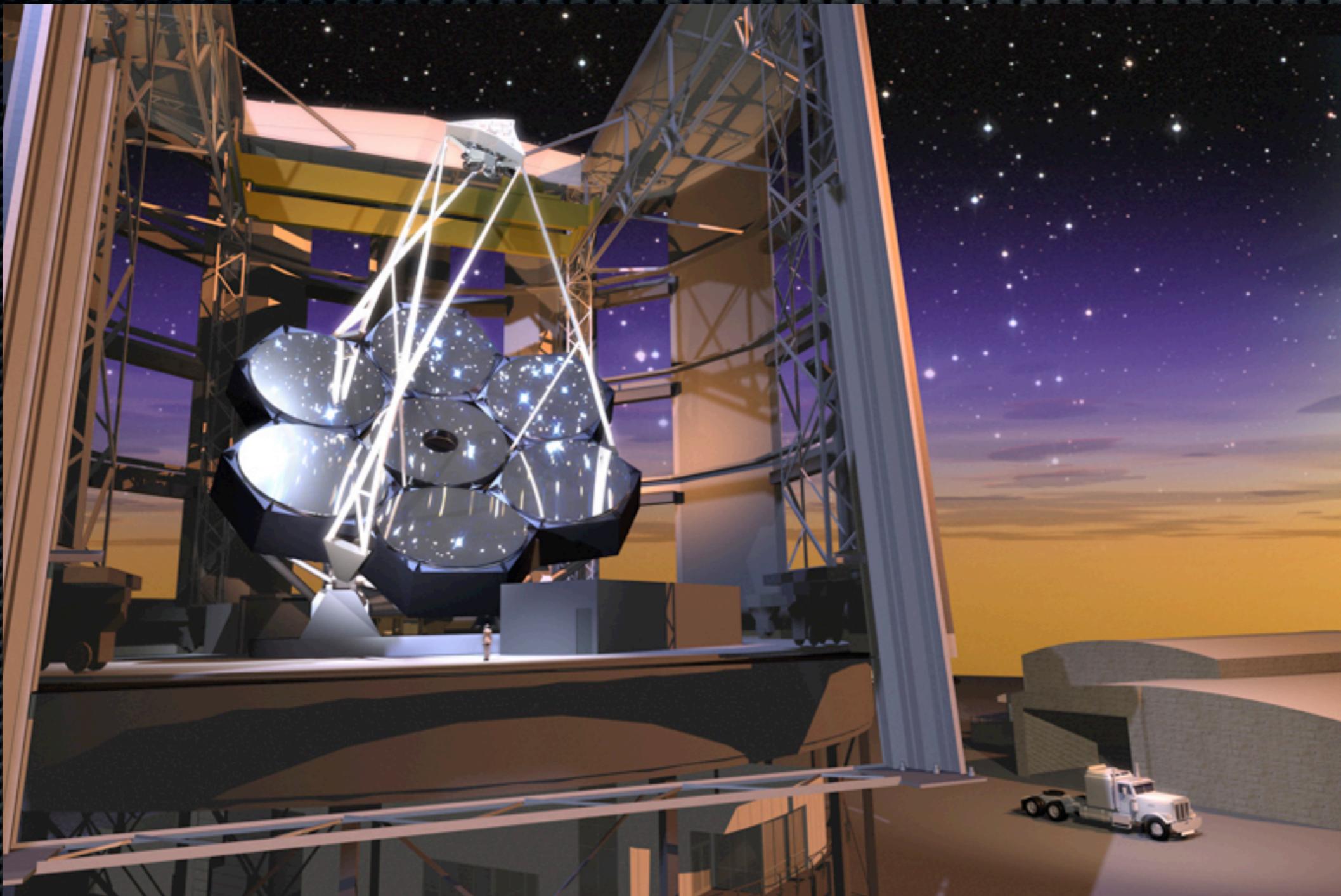
# MMT, Magellan & GMT

Francesco Pierfederici

Harvard Smithsonian Center for Astrophysics

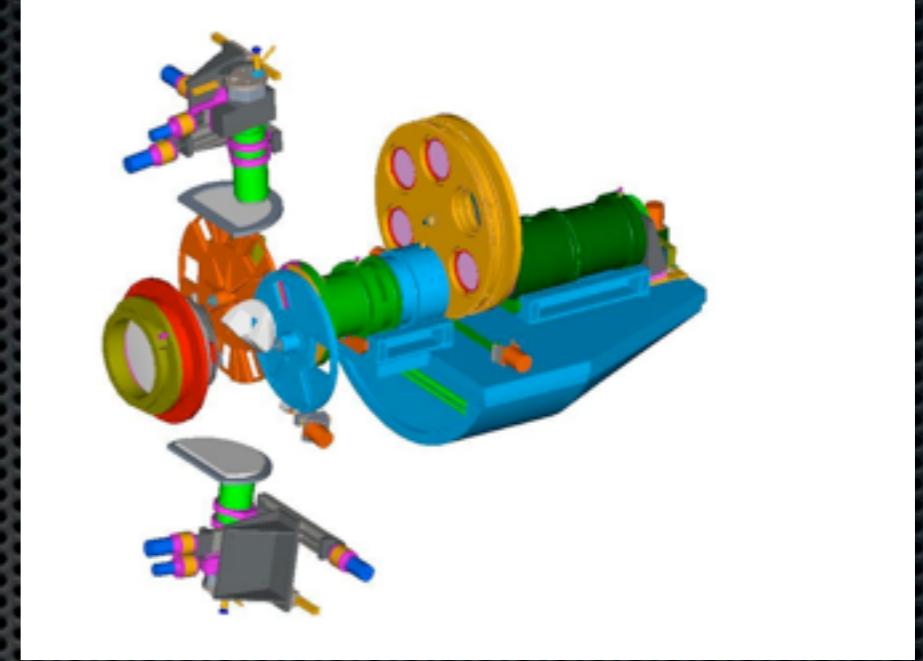




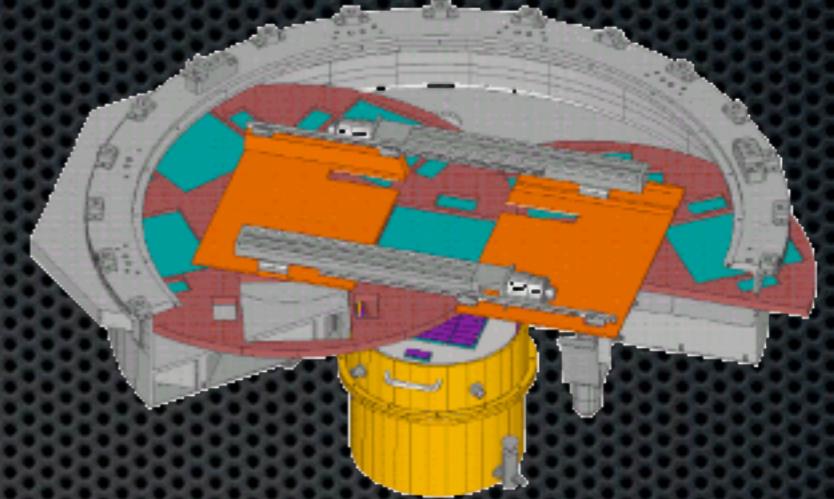


# MMIRS

- 2Kx2K CMOS
- Imaging: Y, J, H, K ( $6.9 \times 6.9 \text{ arcmin}^2$ )
- Spectroscopy
  - Multi-slit ( $4 \times 7 \text{ arcmin}^2$ ) or longslit (7 arcmin)
  - J, H, K @ R=3500
  - H+K @ R=1300



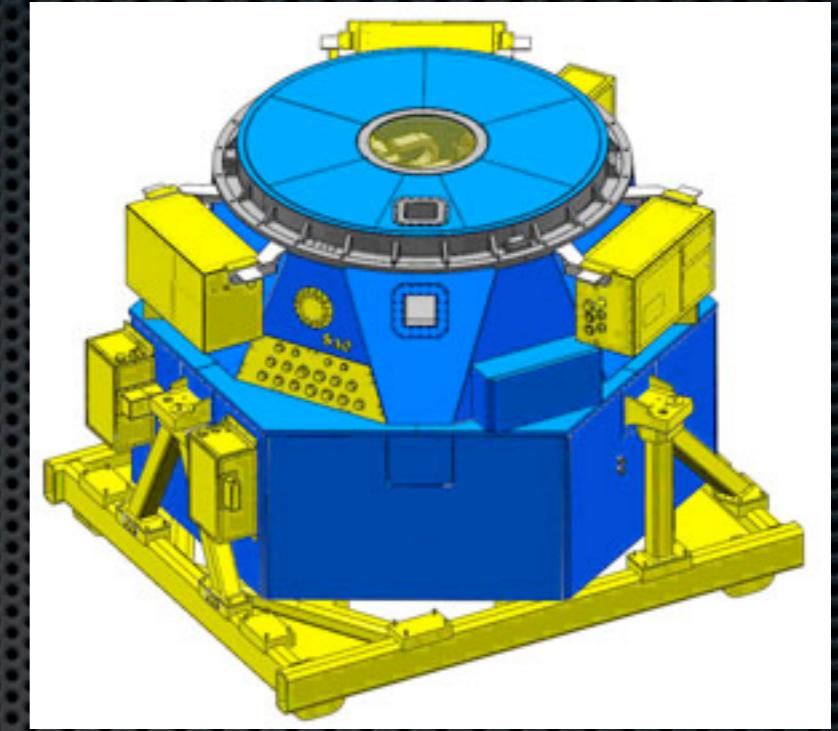
# Megacam



- 36 2Kx4K CCDs
- 0.08 arcsec/pixel
- 25x25 arcmin<sup>2</sup>
- u', g', r', i' and z'

# Binospec

- Imaging spectrograph
- Dual 8x15 arcsec<sup>2</sup>
- 390-1000 nm spectral range
- 5000 Å spectral coverage at 6 Å resolution
- 2100 Å spectral coverage at 2 Å resolution

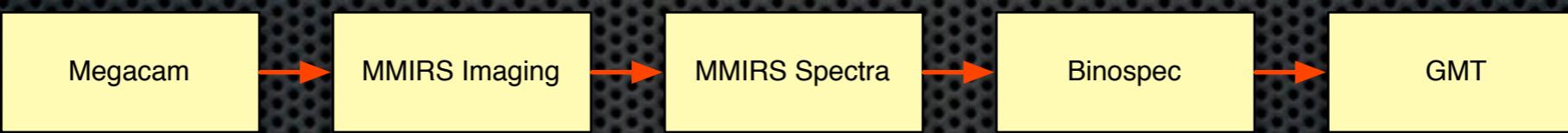


and...

- GMACS – Wide-Field Optical Spectrograph
- NIRIMOS - Near Infrared Multiple Object Spectrograph
- MIISE - Mid-Infrared Imaging Spectrograph
- GMTNIRS – High Resolution Near-IR Spectrograph
- HRCAM - Near-IR AO Imager

- GMT is our future

# Roadmap



- We have chosen the LSST framework.
- The CfA Megacam pipeline is the first one we are developing.

# Our Experience

- Software is self-contained
- Simple build environment
- Python-based
- Allows integration with batch-schedulers
- We do not need real-time processing
- Fast-paced development

# Our Experience 2

- Some data massaging (headers) needed
- Some configuration file editing needed
- Stages can be re-arranged but needs some effort