



Gemini Observatory

Facility Control Systems Highlights



NSF's National Optical-Infrared Astronomy Research Laboratory





Gemini Facility motion control systems

- Primary Mirror (custom IPAC)
- Secondary Mirror (custom)
- Cassegrain Rotator (PMAC)
- Telescope Mount (PMAC 2x)
- Enclosure/shutter (Galil)
- Calibration Unit (OMS44)
- A&G (PMAC 2x)
 - Science and AO fold mirrors
 - WFS camera probe arms
 - Acquisition camera
- Laser Guide Star Facility
 - NewFocus / OMS MAXV



Laser Guide Star Facility



- Beam Injection Module (BIM)
 - Linux w/ EPICS 3.14.12.8
 - (EPICS motor record w/ NewFocus 8743-CL controller)
 - Closed loop control for flexure compensation
- Beam Transfer Optics
 - transfers the laser beam from the Laser to the Sky compensating for changing gravity vector using a model and providing fast Tip-Tilt position correction for the laser beam.
 - EPICS 3.13.8
 - OMS MaxV
 - VME with MVME6100
 - Possible Upgrade to 3.15.

