

Corner Raft Test Station

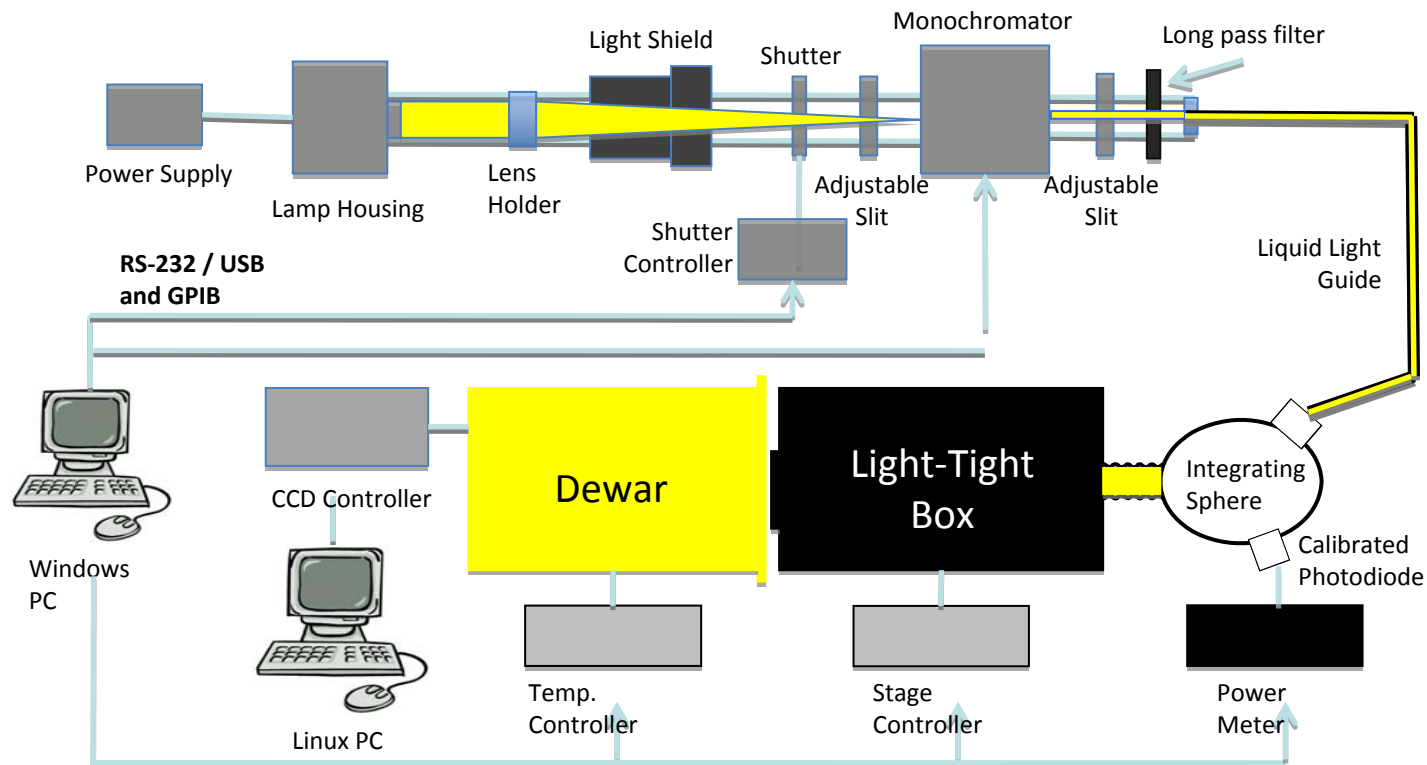
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Purdue University

LSST Camera Workshop
SLAC
Sept. 16-19, 2008

Test station

Includes a Cryostat (LN2 cooling + vacuum system), CCD controller, X-ray (Fe55) source, optical flat-field source, focusing optics + motion control, monochromator, electronic and mechanical shutters, and instrumentation (modeled on setup at BNL).

Initially configured for tests using single sensors for wavefront and guider studies. In the future, the test station will be expanded to accommodate tests of a full Corner Raft/Tower.



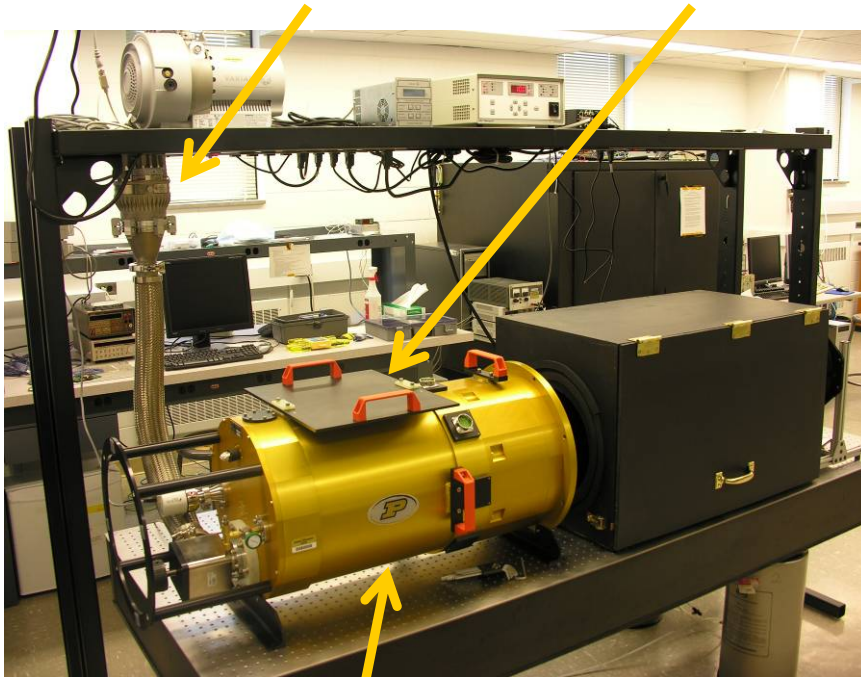
Equipment setup in our cleanroom

Turbo vacuum pump

site for CCD controller

LN2 storage cylinder

monochromator



Dewar from
Universal Cryogenics

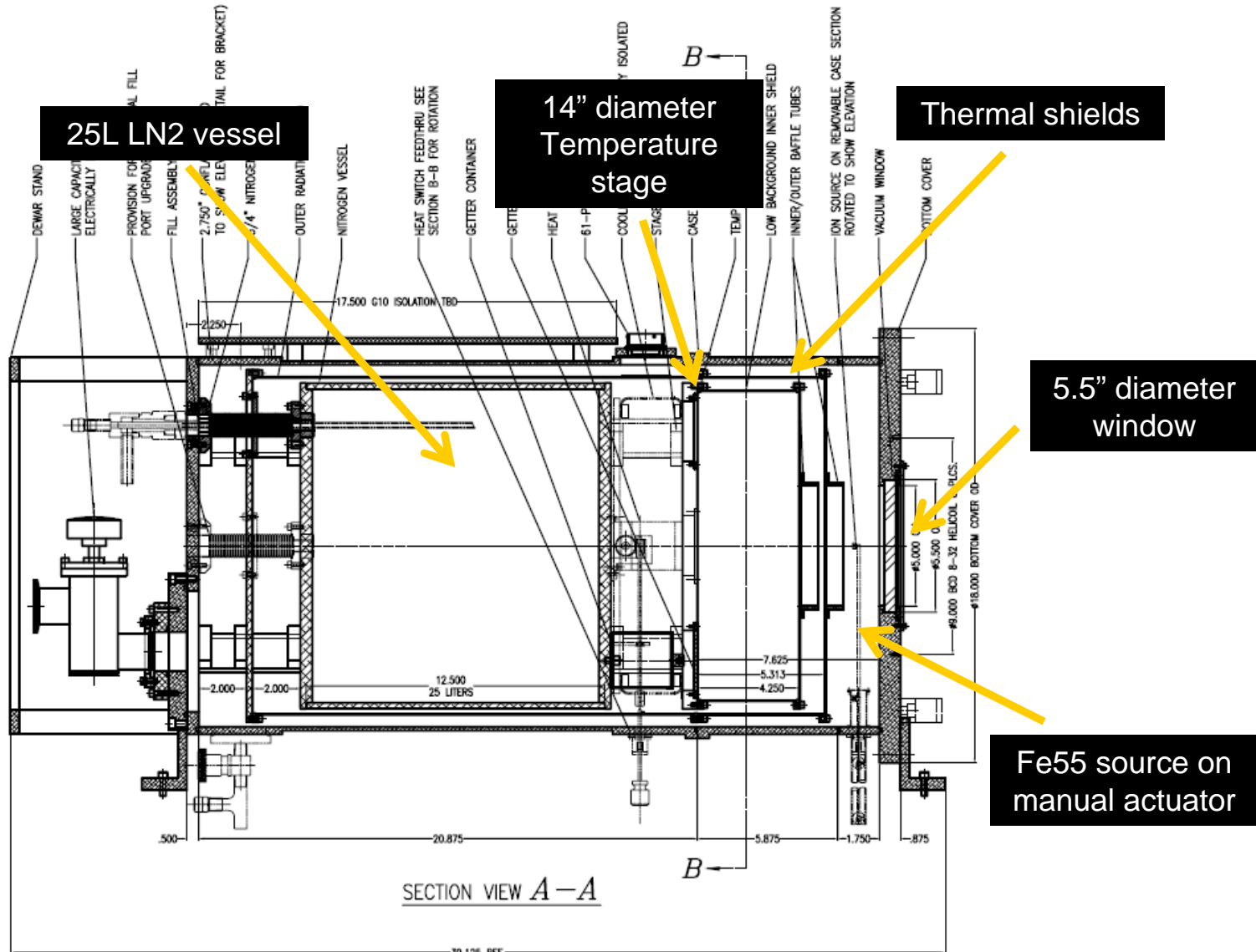


Dark box

integrating
sphere

All items purchased exclusively
for LSST using University funds

Dewar section view

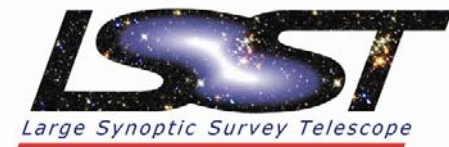


Test station equipment status

Equipment *	Status	Est. delivery
Computer (CCD Controller, DAQ)	in progress @ SLAC	??
CCD (Geary) Controller	in progress @ SLAC/Harvard/BNL	??
Computer (temp/shutter/motion control, photodiode readout)	operational	
LN2 Handling equipment	operational	
Optical Bench	operational	
Cryostat	operational	
Turbo Pump vacuum system	operational	
Light source	operational	
Monochrometer	operational	
Electronic shutter	operational	
Filters and holder	operational	
integrating sphere	operational	
Light guides with adapters	operational	
Photodiode w/ power meter (Qty. 2)	operational	
Fe-55 source	received	
Camera lens	received	
RGA	received	
Air force target	ordered	end Sep.
pinhole masks	ordered	Oct.
Translation stages	ordered	Oct.
Motion Controller	ordered	Oct.
Ion pump	to be ordered	Nov.

* this is a partial list of the equipment needed

Backup slide



Optics Equipment list

1. Power Supply (Newport part no. 69931)
 2. Cable (70050)
 3. Lamp Housing (67011), Qth Lamp (6333), and collimating Qth source (66502)
 4. Filter Holder (71260) with Long Pass Filters (59425 & 59510)
 5. Lens Holder (6195) with PCX Lens (41570)
 6. Light Shield (71311)
 7. Shutter (76992) with Shutter Controller (76995)
 8. Micrometer Driven Slit Adjuster (74001)
 9. Monochromator C-130* (74000) with GRATING 1200L/MM 500R BLZ (74036)
 10. Slit Plane with Fiber Bundle Mount (77860)
 11. Liquid Light Guide (77628/77638)
 12. Integrating Sphere (12" Labsphere)
 13. O.P.M: Optical Power Meter (70310) with calibrated photodiode
 14. Canon 100mm f/2.8 Macro Lens
- * supported on table by Adapter Thread (TA-8Q20-10), Support Post (SP-3), and Post Holder (VPH-2)

Computer Interfaced equipment

- Shutter Controller (76995) by RJ-45 to RS-232 adapter and cables to USB hub
- O.P.M: Optical Power Meter (70310) by RS-232 Male-Female Computer Cable (70040) to USB hub, or GPIB
- Monochromator (74000) by RS-232 Male-Female Computer Cable (70040) to USB hub, or GPIB
- Temperature controller by RS-232 Female-Female Computer Cable to USB hub, or GPIB
- XYZ motion stages – to be determined

Windows PC software

- LabVIEW
- TRACQ Data Acquisition and Spectroscopy Software (77890) for monochromator control