Project Planning for Aluminization of the 100-inch Telescope Mirrors using the 108" Bell Jar

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2.0 Coordination Plan for Telescope Mirror Removal and Optical Work

Aluminization of large pieces like the 60 and 100-inch mirrors requires the coordination of the teams that work on mirror removal (Handling Crew) and those who will handle the recoating process (Optical Crew). These are delicate and time consuming tasks and should not be rushed.

2.1 Standard Procedure for Aluminization

1. Prepare substrates to be coated
2. Prepare vacuum system for use
3. Burn-in filaments
4. Melt-in filaments
5. Plasma cleaning of substrates
6. Deposition
7. Removal of work

2.2 100-inch Telescope Planning

This is an optimal schedule and may vary depending on the rate of progress and quality of the coatings and runs from Thursday July 12 through Monday July 16, 2001. This schedule is subject to successful repair of the 2 Ton hoist in the coating lab. An extra day was added to accommodate the crossing of a weekend.

Even Schedule 2001

Crew	July 12	July 13	July 14	July 15	July 16
Handling	• Begin to remove small mirrors from the 100-inch telescope. • Small mirrors to be delivered to the optical work area first.	• Begin removal of 100-inch mirror cell. • General craning.	• Day off.	• Move small mirrors to safe area or reinstall area. • Lower 100-inch mirror to optical work area.	• Load primary mirror onto bell jar base. • Prepare for telescope reassembly. • Install small optics.
Optical	• Prepare chemicals and work	• Complete cleaning of	• Remove small mirrors	• Prepare work area for large	• Complete cleaning of 100-inch

	area. • Load new filaments in bell jar, pump down and degass. • Load aluminum staples onto filaments pump down and melt in. • Strip and clean small telescope mirrors.	small optics. • Load small optics into bell jar. • Pump down and deposition for small mirrors. • Evaluate coatings.	from bell jar. • Reload filaments with aluminum, pump down and melt in.	optics. • Strip coating from 100-inch mirror.	mirror. • Pump down and deposition. • Evaluate coating.

July 17 and 18: Telescope reassembly, general clean up and telescope realignment.

Event Schedule 2000

Crew	Day 1	Day 2	Day 3	Day 4
Handling	• Secure telescope. • Prepare hoists and mirror caddies. • Begin to remove mirrors from the 100-inch telescope. • Small mirrors to be delivered to the optical work area first. • Primary to be readied to be lowered to optical work area.	• Move small mirrors to safe area or reinstall area. • General craning.	• Lower primary to optical work area. • Load primary mirror onto bell jar base.	• Raise primary mirror to mirror cell. • Install primary cell.
Optical	• Prepare chemicals and work area. • Load new filaments in bell jar, pump down and degass. • Load aluminum staples onto filaments in bell jar, pump down and melt in. • Strip and clean small telescope mirrors. • Load prepared mirrors onto bell jar base.	• Pump down and deposition for small mirrors. • Remove small mirrors from bell jar. • Reload filaments with aluminum, pump down and melt in.	• Strip and clean primary mirror. • Pump down and deposition. • Evaluate coatings.	• Remove primary mirror from bell jar. • Evaluate coatings.