

120 INCH TELESCOPE ALUMINIZING PROCEDURE CHANGES



Bill Brown's List of Suggested Improvements 120" Re-aluminizing Procedure

First and very important is that I think we all agree that **NO VISITORS ARE ALLOWED ON THE DOME FLOOR DURING THE PROCESS!**

- 1) If the tub were placed about three inches closer to the wall when removed from the telescope (there is room), the Rubbermaid chemical cart could be wheeled closer to the staging area for the chemicals on the mezzanine for stripping. I believe the cart is about 25 inches wide.
- 2) We should be using Ultra High Purity (UHP) grade of dry nitrogen for the blow off gun. Even though I see there is an in-line filter, the UHP has a lower moisture and particulate content. I don't believe it costs much more than regular and the danger of tank impurities blasting the surface is much reduced.
- 3) If we provided a quick disconnect for the blow off gun nitrogen at the regulator, we could put the gun and power supply away when not needed.
- 4) I think we should get another tall ladder on wheels for the basement.
- 5) Dave Hilyard suggested we have two water supply hoses and sprayers for washing the mirror so we could "herd" the chemicals toward the central hole.
- 6) Dave also suggested we use plastic for the dam instead of duct tape. Much easier to deal with. However, the plastic dam could still be attached to the side of the mirror with duct tape.
- 7) I suggest we get a new thermocouple gauge to replace the current one. Duniway Stockroom's website is www.duniway.com and the TC's are on page VG9 under TC-Analog and Digital. Please check to see what tube we use now, but in any case we should replace both the tube and the gauge.
- 8) If you don't have a replacement, we should get a new o-ring for the tank and maybe a spare. It might help the pumping speed as the current one is quite scored and dirty.

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9) The nitrogen blow off gun is metal, and I worry about accidentally bumping the face of the mirror with it. I have a Simco gun here in SC that is all plastic as used in semiconductor clean rooms. Let me know if you have funds for such things.

10) What is the real purpose of the cardboard and aluminum foil around the mirror? The cardboard really dusts off and I know they make plastic that has a corrugated side that should serve the same purpose. It will take a little research, but Dave and I think it would be an improvement.

11) We implemented a change in the procedure this time at Dave's suggestion by using the black duct tape next to the glass instead of single faced masking tape. Hopefully it will be easier to remove than the masking tape next time.

12) What is your CO2 schedule for the 3-meter (and other Mt. Hamilton mirrors as well?) The mirror was very dusty this time and it could be that it was so dirty since last washing that even if it were CO2 cleaned recently it would not do any good. We should also reflectometer the surface more often.

13) Dave and I discussed having a cover made for the 3-meter primary instead of using cellophane. This would be useful to cover the mirror after stripping and during moving the mirror downstairs and then back upstairs after aluminizing. We were visualizing a custom "shower cap" style cover made from a lightweight material such as sailcloth with a draw-cord and toggle around the edge. If we put a "top hat" like support in the central hole, the cover would never touch the surface.

14) The new roll of vinyl used to protect the mirror cell during stripping worked out very well. It seemed less slippery than the Visquene we have used in the past.