

120 INCH TELESCOPE 3RD MIRROR REMOVAL

Sept. 14, 1978

SHANE COUDE' THIRD MIRROR DISASSEMBLY PROCEDURE

Equipment & Tools Needed For Job

1. Milk stool marked "3rd mirror". (SW mezzanine storeroom)
2. 2 pair of matching chain slings "
3. 2 heavy (5/8"x6") chain rings. "
4. 2 matching chains 46" long. "
5. 2 " " 61 " " . "
6. 2 - 2"x4"x12" blocks marked "3rd mirror". "
7. 1 - 2"x4"xapprox.48" long.
8. 4 - 4"x4"x " 18" " .
9. 4 - matching 5/8" eye bolts. "
10. 1 - X-shaped chain spreader marked "3rd mirror". (orange/red color)
11. Shop roll away tool box.

Procedure

1. Mirror cell has to be in the "DOWN" position which its supposed to be when stored.
2. Disconnect (1) Amphenol type connector under cell.
3. With use of long 2"x4" raise the counter weight in bottom of assembly & wedge short blocks between Ctr. wt. & front or south panel.
4. Remove circular inspection cover from north panel.
5. Remove 2-3 screws holding electrical panel on right side of inspection cover.
6. Measure length of turn buckles on right & left sides of inspection cover. Don't disconnect the (2) unaccessible turn buckles. Don't disconnect (4) eye bolts supporting (4) springs.
7. Lift disconnected cables over sheaves at top of assembly on east & west sides. Counter weight may have to be lifted to release steel balls on cables. Make Sure 2"x4" blocks are in place when releasing counter weight.

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3rd M.
Procedure

8. Install 4 - 5/8" eye bolts in the corners of the mirror cell. Adjust to the same height.
9. Lower bridge crane hook & connect outhaul. Hang (2) lengths of chain used for opening floor on hook.
10. Hang (2) heavy chain rings on end of crane chain.
11. Hang (2) sets of matched chains on rings. The long set on the south end of the cell & the short set on the north end of the cell.
12. Take up slack in chain.
13. Remove socket hd. cap screws from bearing caps on either side of cell..
14. Be sure rack & pinion drive is match marked for reassembly before lifting.
15. Carefully lift from assembly & set on milk stool in reverse position from mirror removal. The cell sets on legs of stool while mirror cover is removed.
16. Remove (2) snap rings & washers from mirror cover push rods.
17. Remove (2) socket hd. cap screws supporting mirror cover limit switch. Use small pliers.
18. Remove (5) screws on both end plates supporting mirror cover. Remove lifting eye bolts. Carefully lift off and store.
19. Remove (2) mirror clamps approx. 1/2"x2"x48". Don't lose orientation of shims under each of the clamps.
20. Loosen radial mirror supports.
21. Connect (2) matched pair of smaller chain slings to lifting chain & eye bolts in cell. Install chain spreader (16) links up.
22. Lift cell, rotate 180°, & align (3) stool legs with holes in bottom of cell.
23. Place 2 - 4"x4" under either side of cell lengthwise.
24. Carefully lower cell to blocks. Be Sure someone is supporting the chain spreader when chain slacks. Remove lifting chains.
25. Install I-beam aluminizing yoke from optics shop. Tighten!

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3RD M. Procedure

26. Remove (4) eye bolts from cell & install in (4) corners of aluminizing yoke.
27. Use small chain slings to lift horizontally and lower through open floor and tank onto mirror dolly.
28. Clean, aluminize, and install in reverse order.
29. Don't attempt to adjust vertical mirror supports without mirror clamps in place and tightened down.