MAESTRO Proceedure #1

Dismounting the spectrograph from the alignment frame

Last modification: Aug. 10, 2007

Having 4 people makes the tedious part of the procedure go quickly.

Equipment needed

¾ inch wrenches for each person.
5/8 driver
¾ inch bolts 2 inches+
¾ inch washers
¾ inch nuts
Six lengths of 5/8 inch allthread attached with nuts and washers in all but the two inner weldment attachment locations
Level

Large weight (greater than 250 pounds) to keep the spectrograph level while lowering.
Heavy duty strap and rigging to attach it to the spectrograph on the dewar end.

Procedure

1. Remove the dewar and secure cables out of the way.

2. Roll the cart under the weldment and roughly align the cart to match up the eight attachment wings on the spectrograph. The 4 weldment attachment wings should be to the grating side of the cart attachment wings.

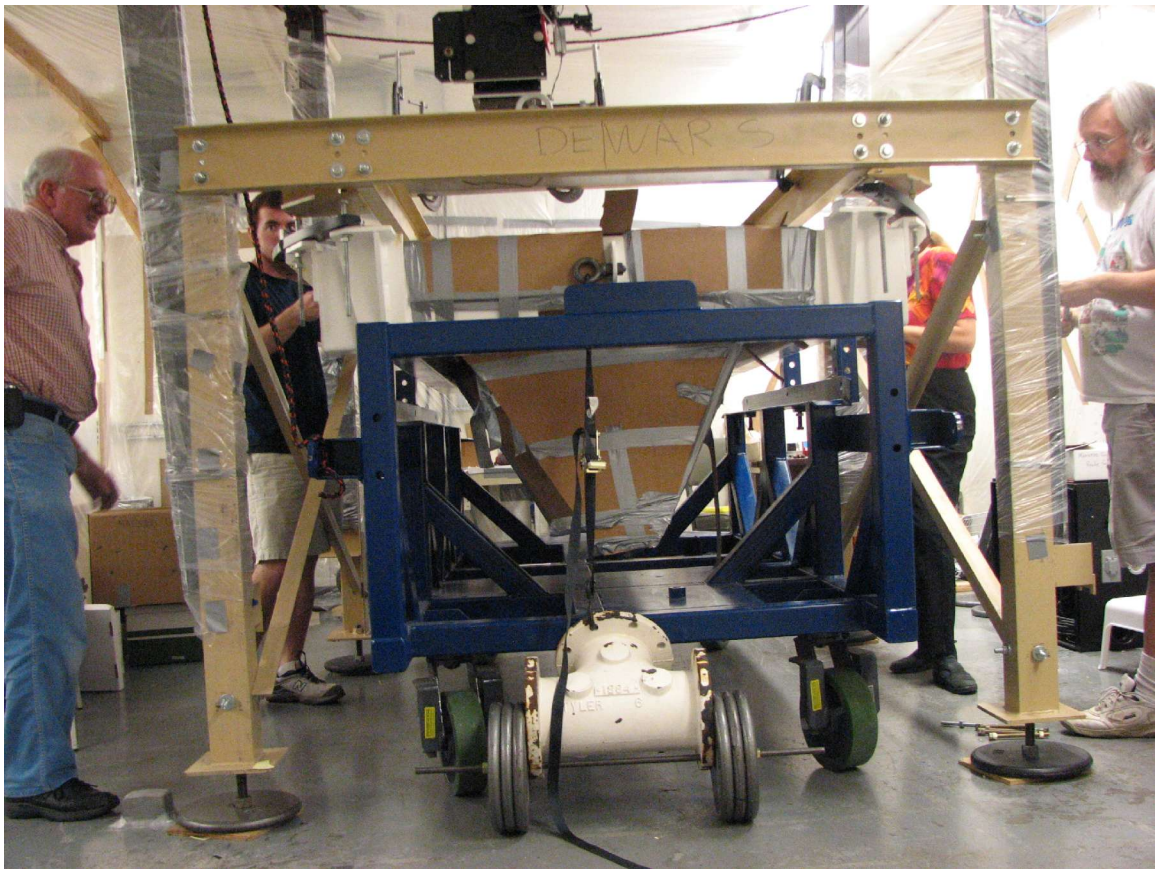
3. Attach allthread to six of the eight weldment wings; the two wings on the inner side of the weldment are unreachable. Use double nuts and washers at all locations

4. Attach one hook of the strap to the weldment at the dewar end extension hole.

5. Attach the other hook of the strap to the weight on the floor. Adjust the strap so that it will not push the cart out of the way under tension.

6. Chuck the wheels of the cart so it doesn't move.

7. Tighten the strap to maintain tension on the dewar end. As the frame lowers, there is a weight imbalance with the grating end.



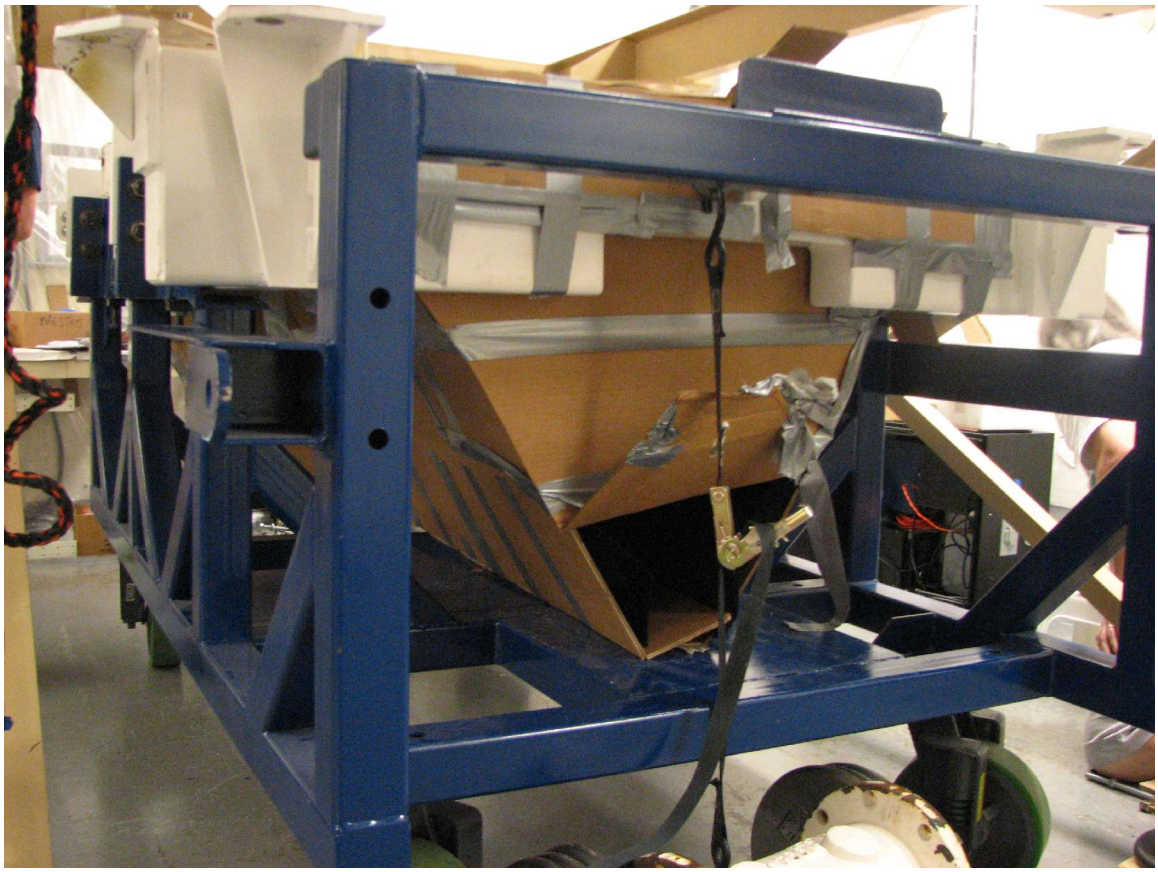
8. Loosen one of the nuts to act as an emergency backup.

9. With personnel at each of the 4 corner locations, slowly lower the weldment from the alignment frame in ½ turn increments simultaneously.

10. After each 1 inch of movement, check to see that the spectrograph is staying level as lowered, and tension is remaining on the dewar end to keep the weldment level. Measure the distance between the weldment and alignment frame at all points with a ruler.

11. When the weldment is approximately 2 inches above the cart top, check the alignment of the cart to the weldment and adjust cart as necessary.

12. Continue lowering by ½ turn increments checking alignment with holes, and inserting bolts loosely as holes line up.



13. Wiggle cart and wedge as necessary until all bolts installed.

14. Tighten all 8 bolts to attach the spectrograph to the cart.

15. Remove allthread, reassembling hardware together as removed.

16. Detach the strap/weight assembly.