

Instructions for pre-Alignment in Lab 2-102

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Step:

- 1.) Level the chamber frame left/right and front/back
- 2.) Center the chamber and the differential pumping stage on the frame (loosen all bolts – don't forget the ones at the differential pumping stage !)
- 3.) Zero all knobs on the telescope (don't forget the left/right mirror at the front lens).
- 4.) Position the telescope near entrance of the differential pumping stage and level it.
- 5.) Use the differential tube inside the chamber as a reference. Focus on the entrance with the help of the 2.75in gate valve if needed. Focus on the exit of tube with the socket pipe alignment tools (with wire cross and/or pin hole).
- 6.) Put the aluminum blocks with rulers on top of the skimmer hole to indicate the jet propagation pathway and check with the telescope.
Tip: Use a magnifying glass to match the skimmer hole with the ruler. Fine tune the differential pumping tube alignment if necessary (by loosening the center ring inside the chamber holding the tube in place) and re-position the telescope if necessary.
- 7.) Put a fine wire cross on the entrance flange of the differential pumping stage. Check the position with the telescope – adjust the height and left/right position of the differential pumping stage carefully if needed (don't forget to loosen the 2.75in bellow-cuff for that plus all bolts on the frame of the differential stage !).
- 8.) Fix the position of the chamber and the differential pumping stage on the frames (fasten all bolts carefully).
- 9.) Move the Jet-alignment tool out of the way and check the exit flange. Center the flange using a cross by adjusting the three regulation screws at the 6in bellow at the exit of the chamber.