The GTS meeting Friday January 9th was beneficial for all in attendance. We agreed on what components are necessary and where they should reside on the chamber. So moving in the right direction for having the chamber configured correctly, see the below action items:

(1) Phil and John to design a Fork adapter for the Rotary Manipulator, ensuring that the Fork and Pucks' grooves center lines(in the Storage garage) match up.

(2) More Pucks with grooves are needed for the storage garages in the chamber. We should make three more so as to have a total of Four(4) - three for KSb and one for GaAs as a standard.

(3) The Garage that holds 3 pucks is the best to use, and will be made by the shop. (Phil to submit). The chamber will be fitted with two pucks per garage. The last garage modification should be implemented to ensure that the pucks remain upright during manipulation.

(4) The Bottom 10" Flange with 5 ports with the near zero length configuration will be used. 5 @ 2.75" conflats flanges equally spaced are mounted on the 10" conflat Flange with one in the center. The High powered puck Heater will be in the center, and four windows for Lasers.

(5) The Top 10" Flange will be Marcy's hogged out version with NEG hangers. It also has 5 2.75" conflat ports. The Heater will be in the center, an activation feedthrough for the NEGs, the Rotary feedthrough for the Mask (see 8 below) and two windows.

(6) The chamber Ion pump will be moved to the back of the chamber. This position clears the center area between the Gun HV chamber and the KSb chamber

facilitating the Helmholtz coil, if neccessary, for Magnetized beams in the future. This positioning requires a cut out in the Oven wall to allow the roughing line connections for evacuation while also affording access to the Right Angled Valve during Bake outs.

(7) The RGA needs a Nipple Modification to place the Ionizer into the chamber proper. It will be mounted on the upper level at the back side port.

(8) The Mask will need an extension rod to position it at the space ~0.5" - 1" below the Puck face (once it is rotated downward on the Manipulator), in the activation configuration. The Rotary Feedthrough will be mounted with a small bellows - 1.33" conflat flanged with guide threaded rods used as aligners to move the Mask up against the Puck for activations.

(9) An NF3 spigot should be added / mounted on the Lower level for activating the GaAs wafer as a Standard. {a fall back for Beam operations if making KSb cathodes are a problem}

Note: Matt's initial drawing conveys most of this configuration with minor changes to the lay out of devices on each Level.

I trust this help and allow us to work toward a timely completion.

Phil Adderley