

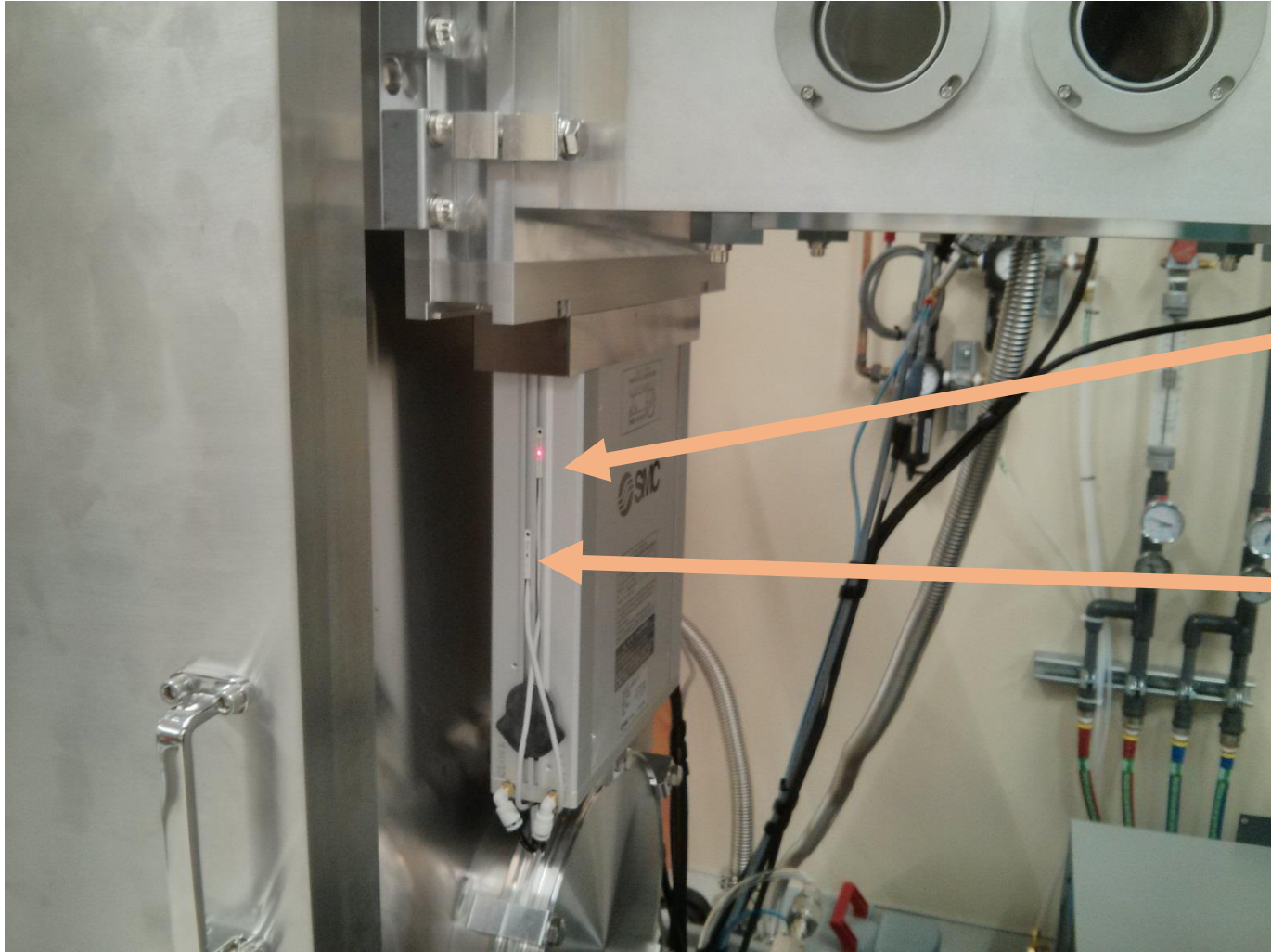
# AJA Evaporator: Loading and Unloading a Sample

V1.0

03/29/2016

Tool owner: Robert J. Chen (rjchen@stanford.edu)

Step 1: Ensure load lock gate valve is closed.

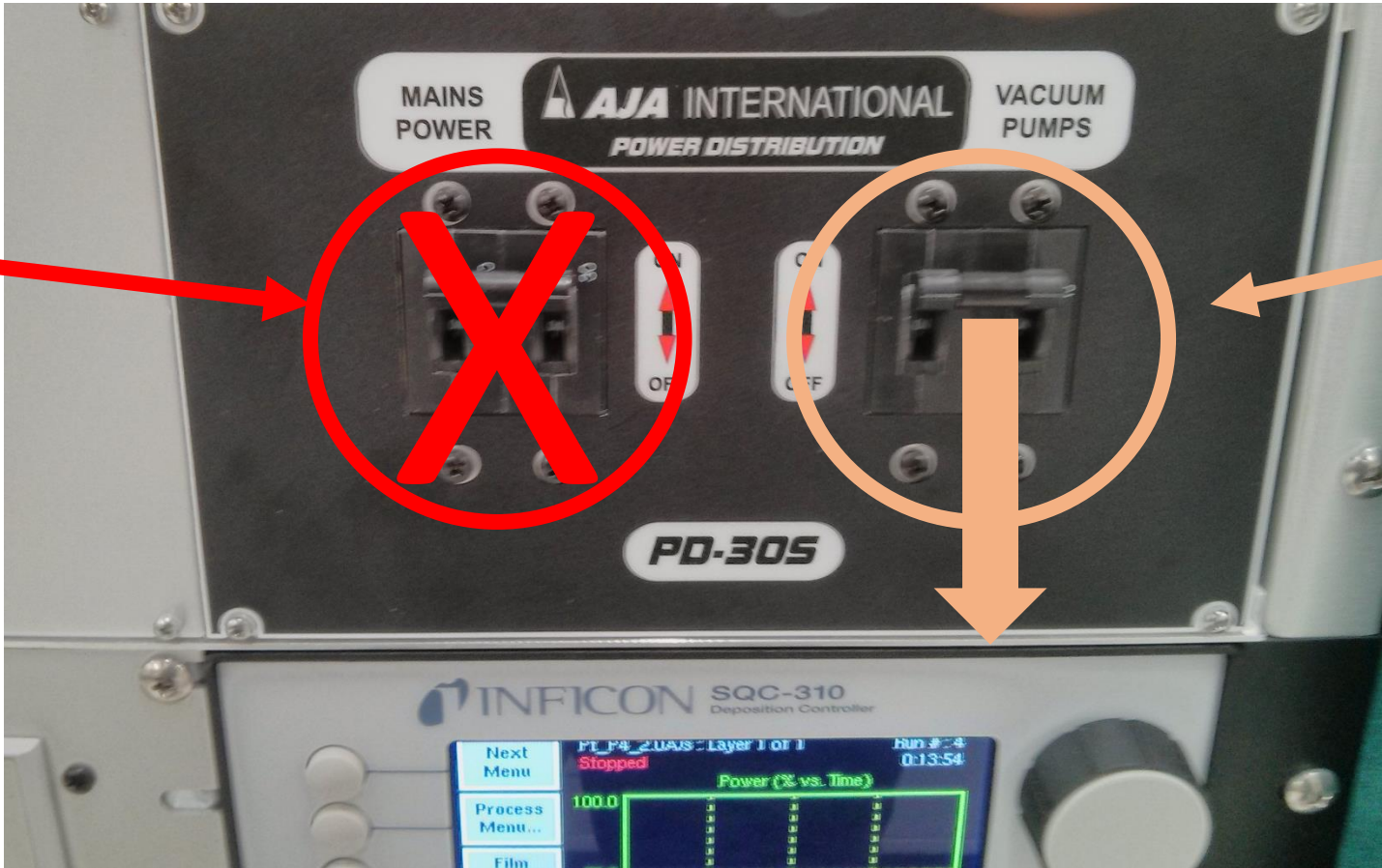


The upper indicator should be red.

The lower indicator should be dark.

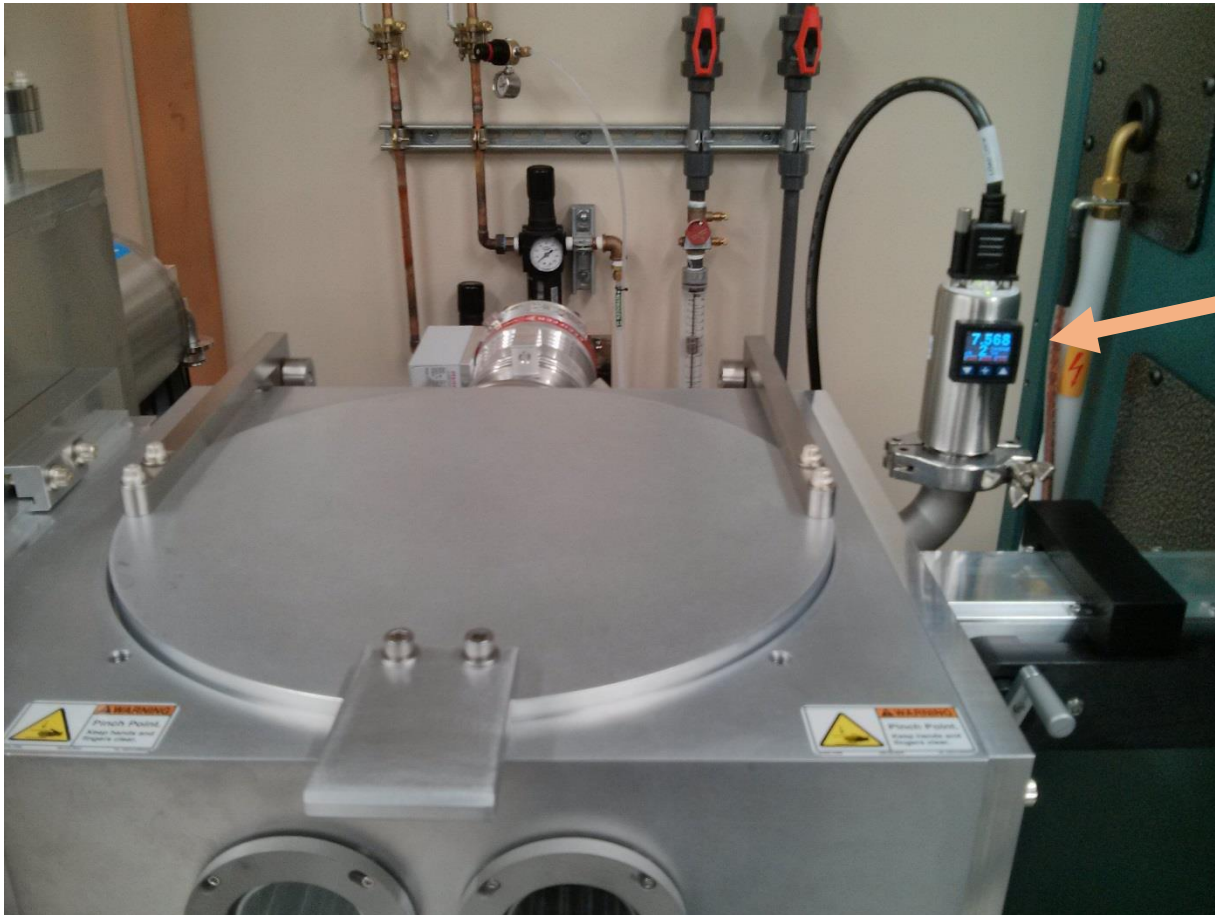
## Step 2: Vent the load lock.

Do NOT touch  
this one!



Flip the right  
switch down.

Step 3: Wait for load lock to vent.



This indicator will read  
 $\sim 7.60 \text{ e}2$  when load lock is  
vented.

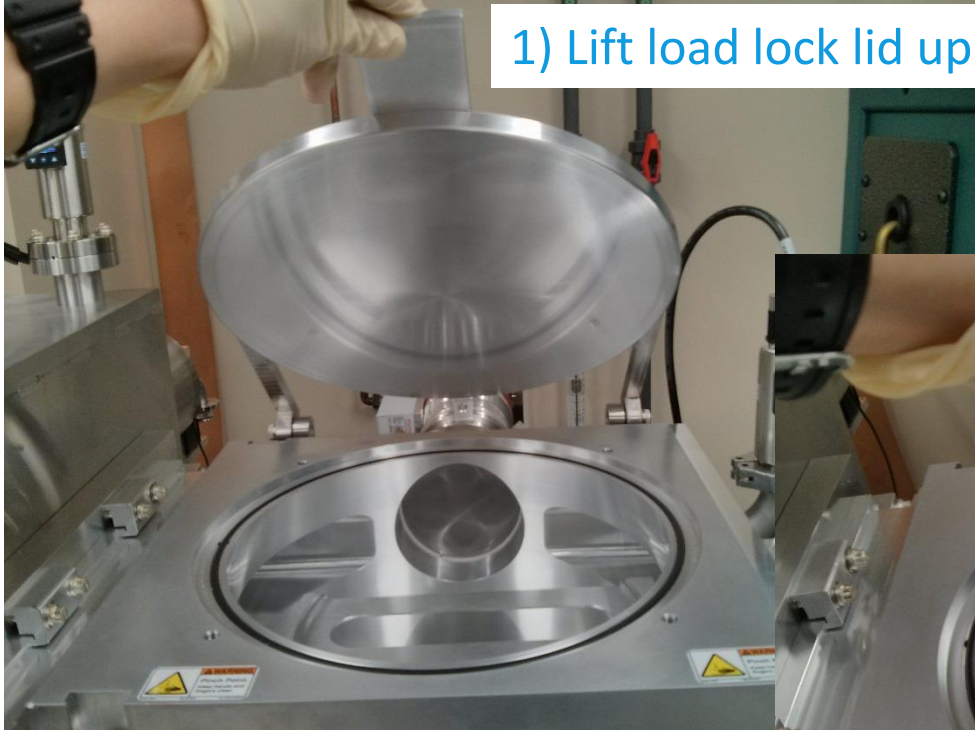


Step 4: Mount your sample using one of the provided chucks.

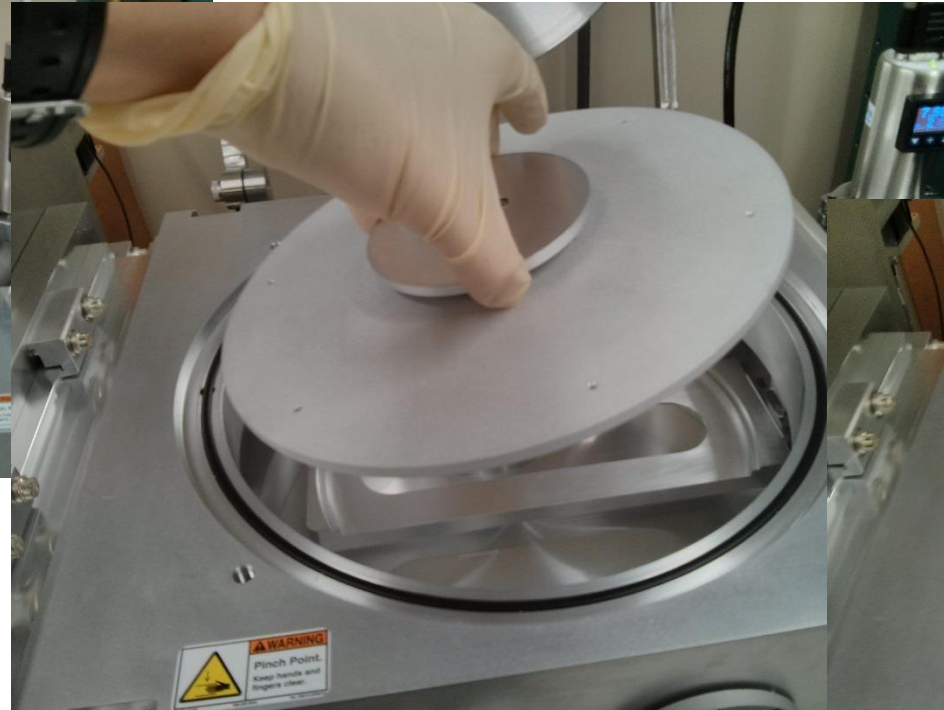


# Step 5: Load the chuck into the load lock.

1) Lift load lock lid up.



2) Hold chuck from the backside and lower onto load lock arm.

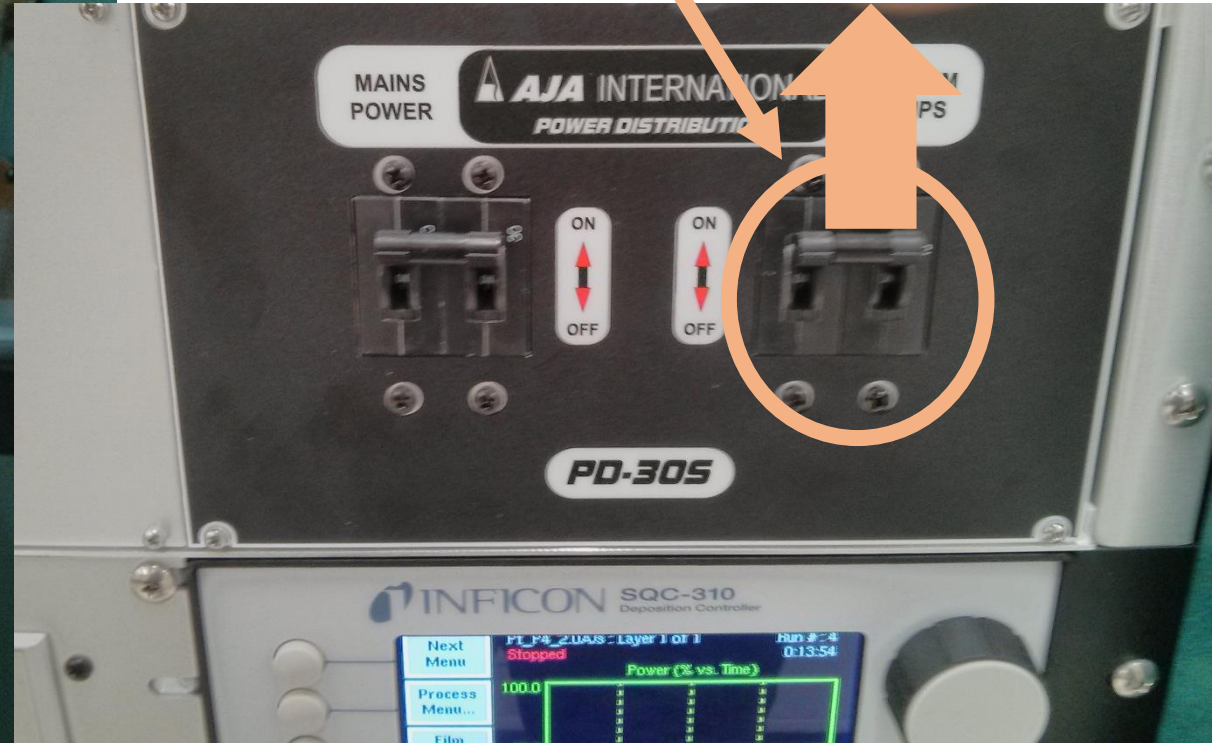
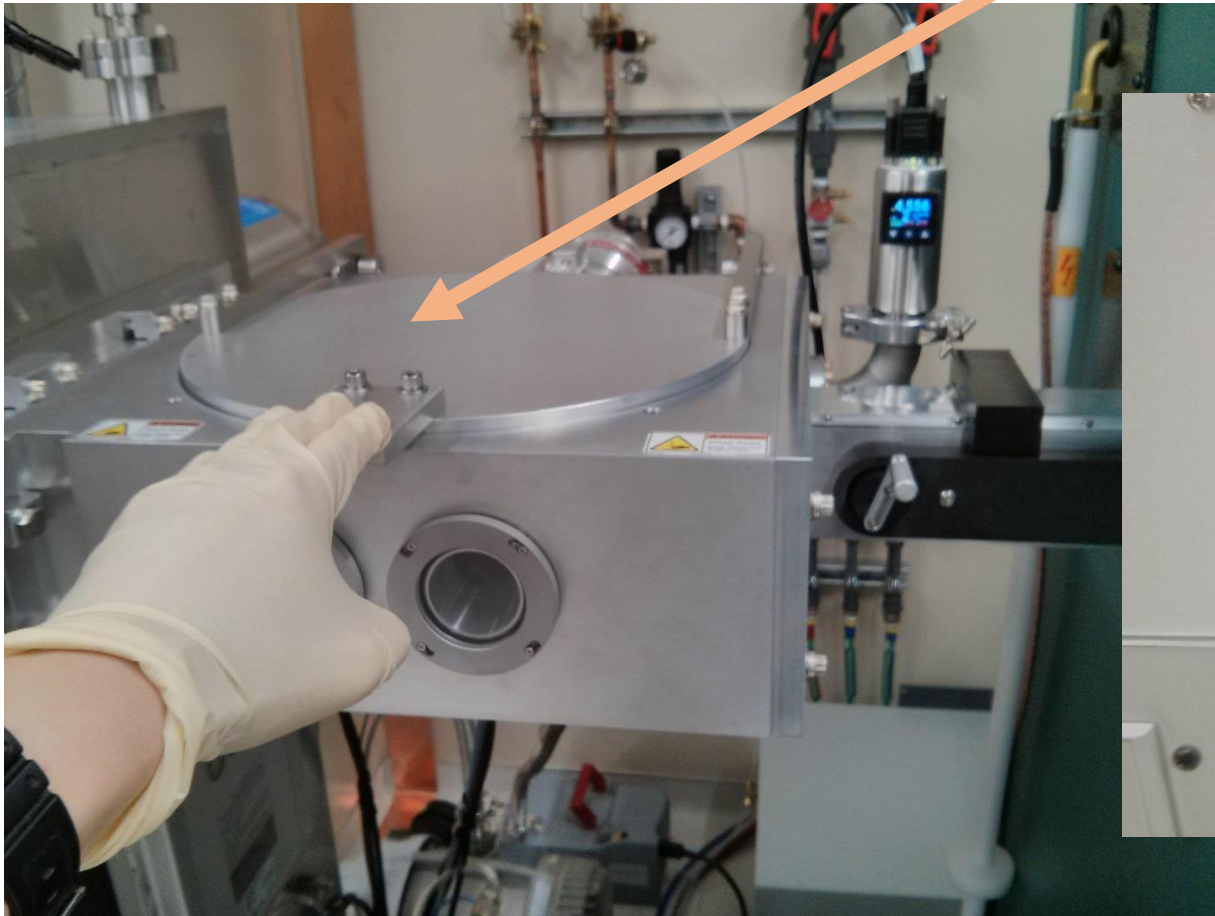


3) Chuck rests in the circular cutout of the load lock arm.

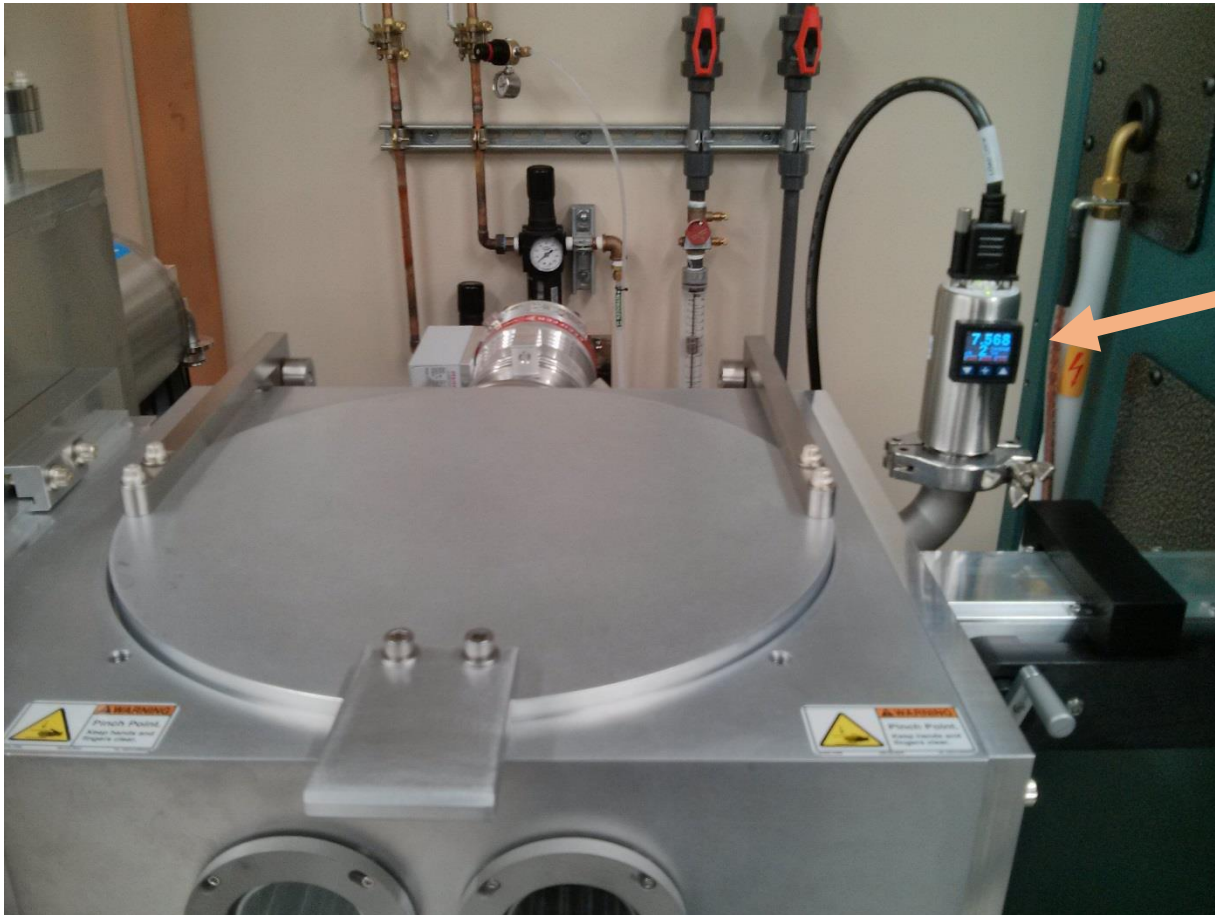


# Step 6: Pump down load lock.

Press down hard on the lid while flipping the right switch back up.



Step 7: Wait for load lock to pump down.



Wait until pressure is  $<5e-6$ .

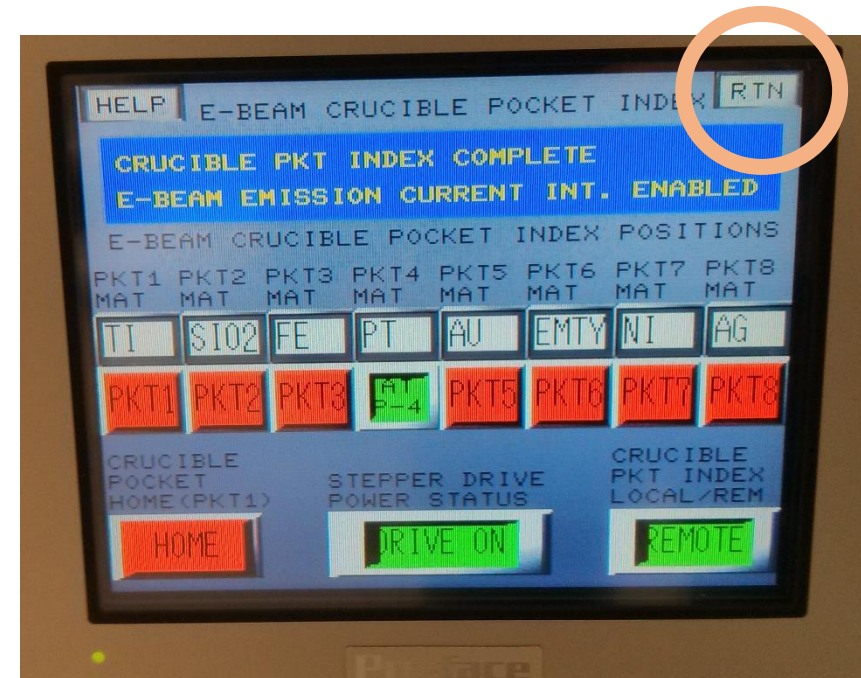


# Step 7: Open load lock valve.

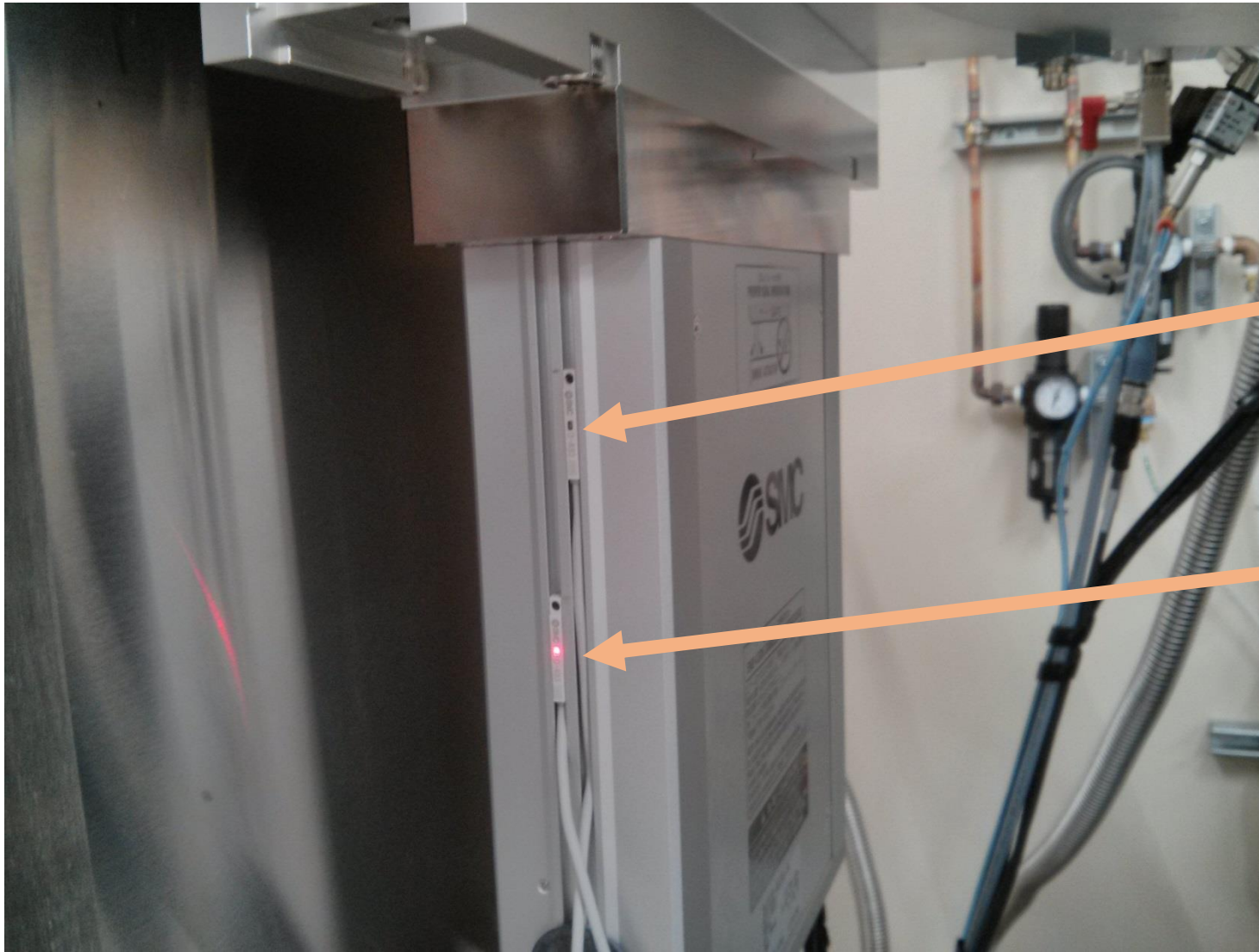
Press the “LL IV OFF” button on the touchscreen\*. It will turn from red to green when the valve is open.



\* If you see this screen, press the “RTN” button at the top right corner to return to the main interface first.



# Step 8: Verify the load lock gate valve is open.

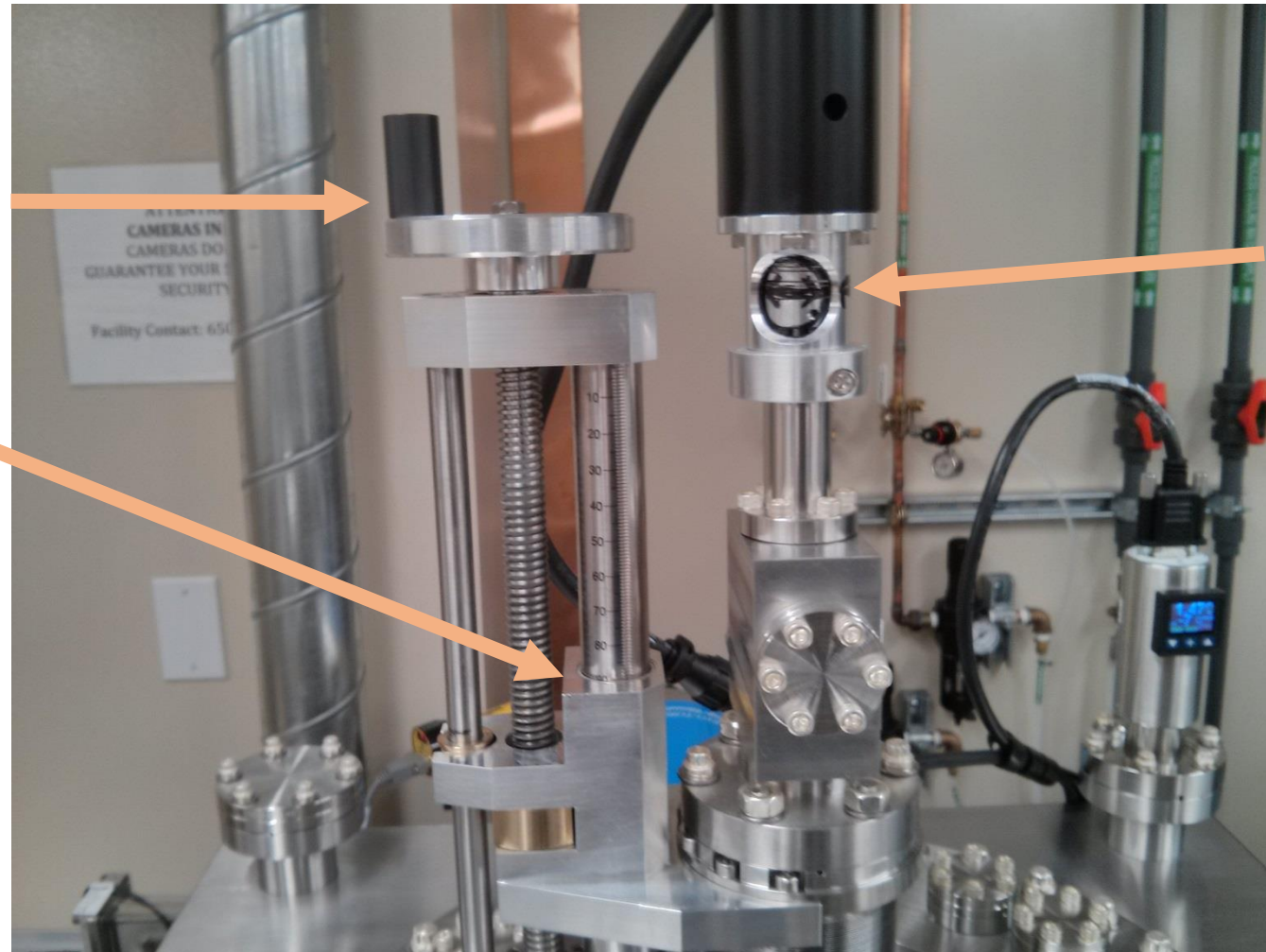


The upper indicator should be dark.

The lower indicator should be red.

# Step 9: Ensure chuck holder is in correct position to receive the chuck.

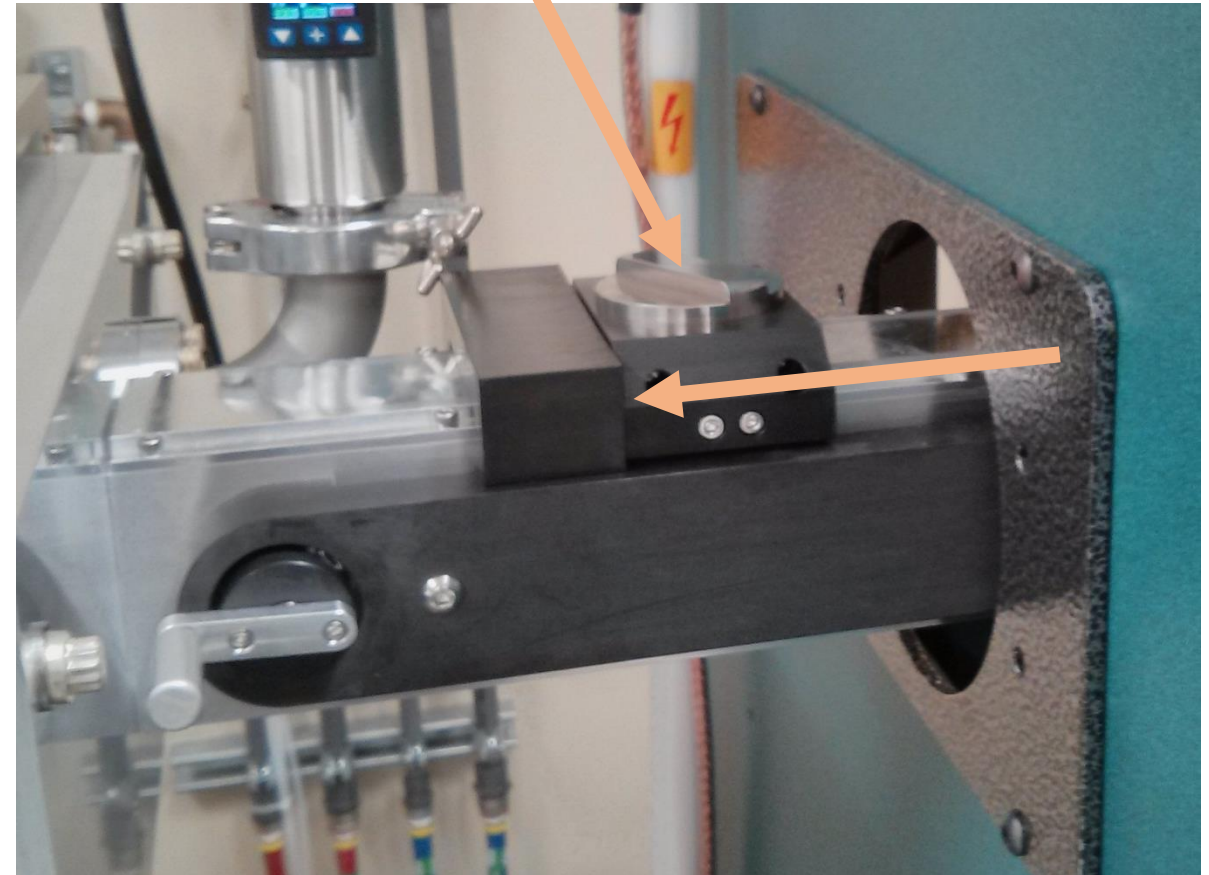
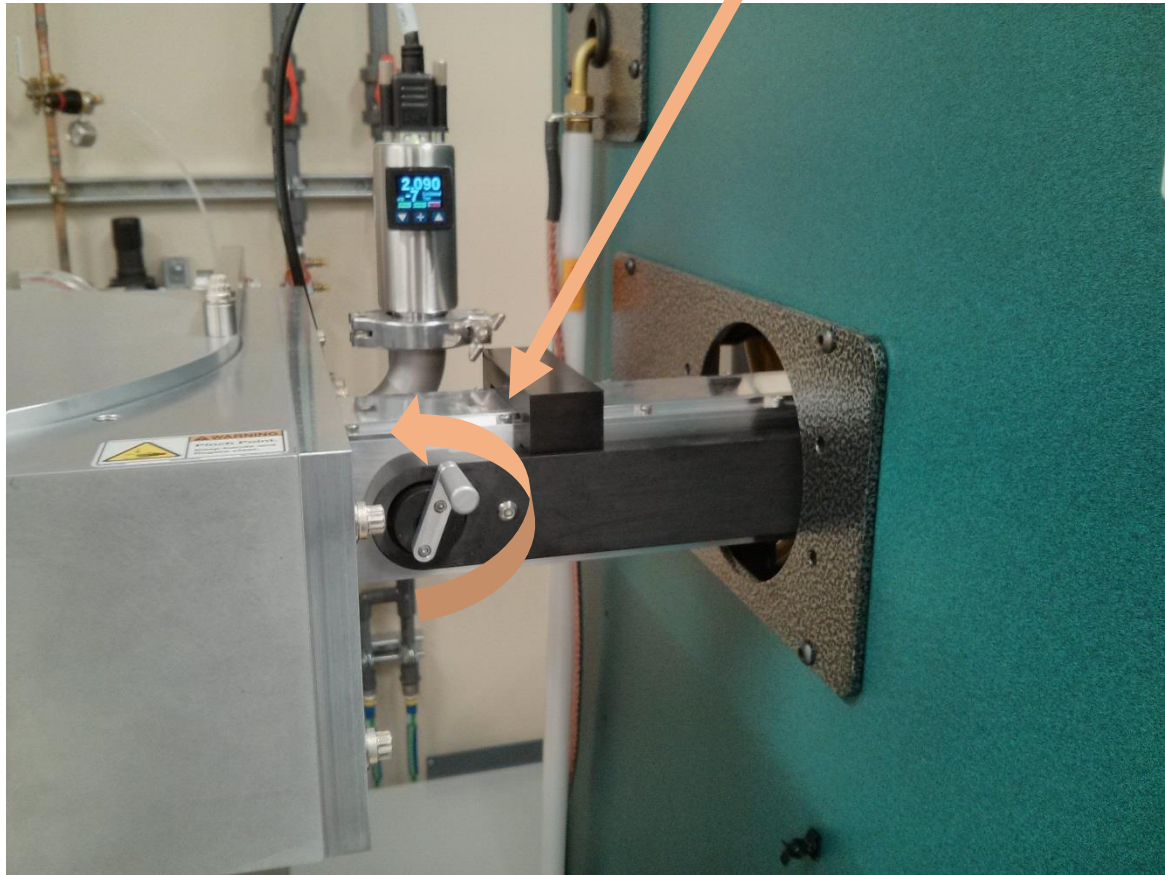
1) Turn this crank until the height indicator is set to "90."



2) Rotate the inner cylinder with your hand until you see the double arrow in the window.

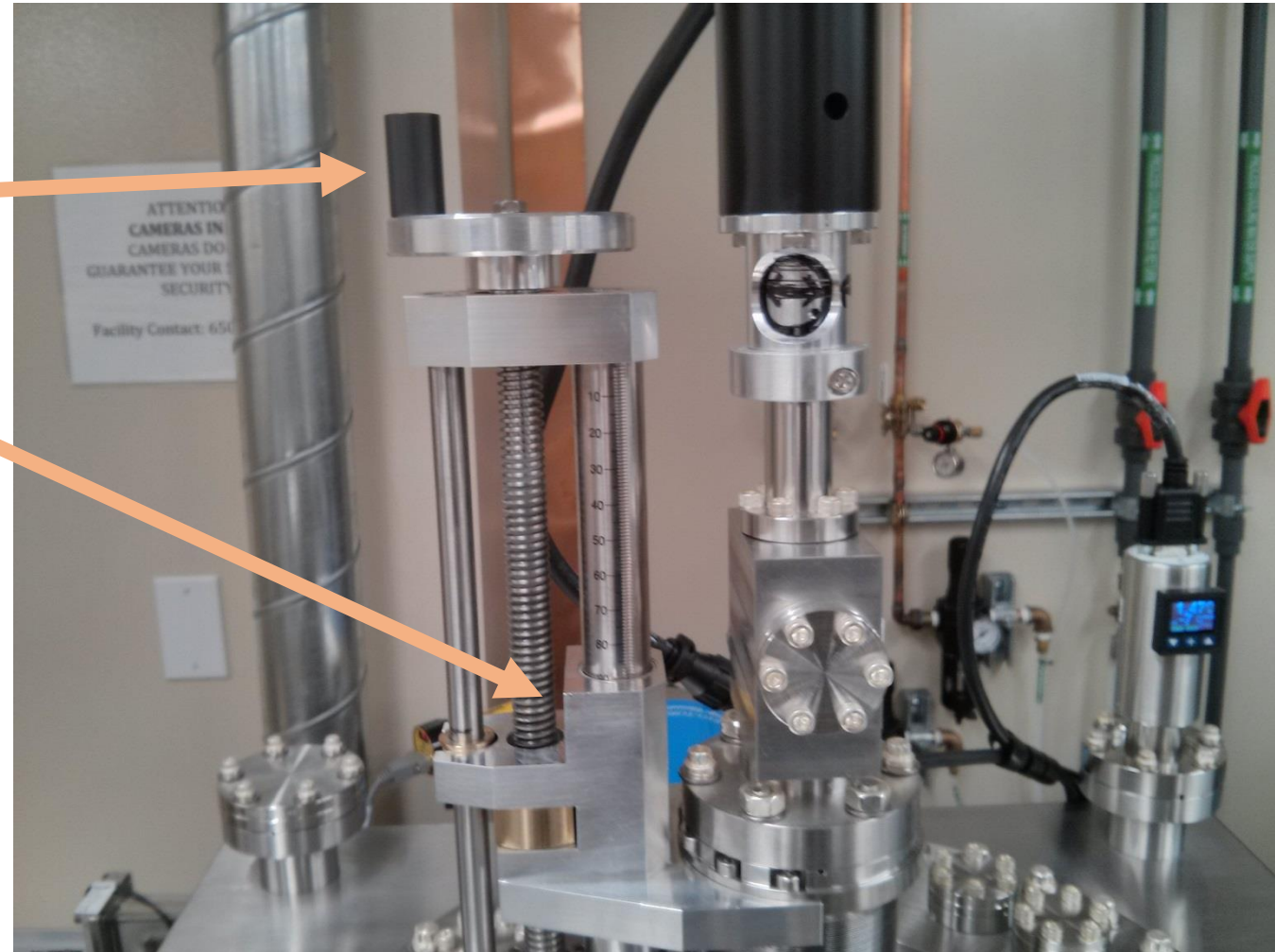
# Step 10: Move load lock arm into the main chamber.

Rotate this crank counter-clockwise until the shuttle moves up against the block.



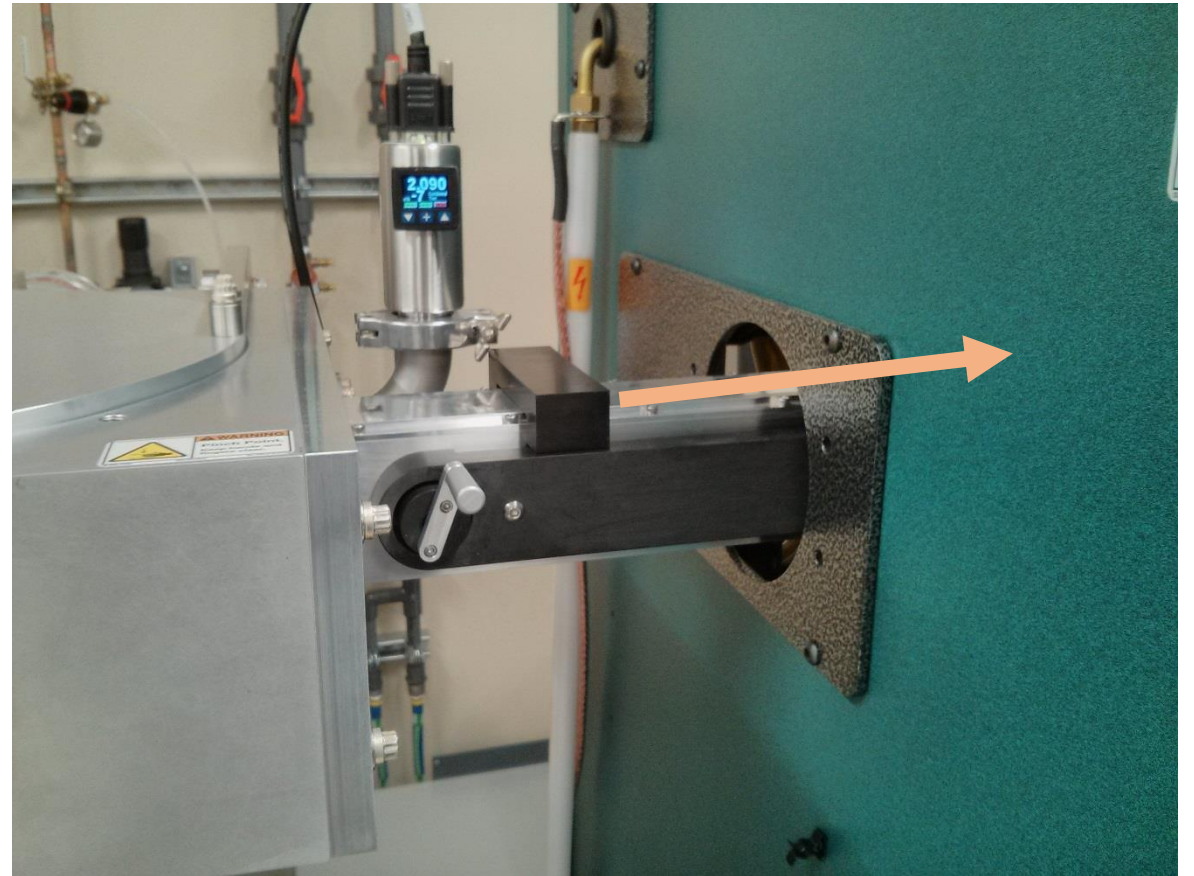
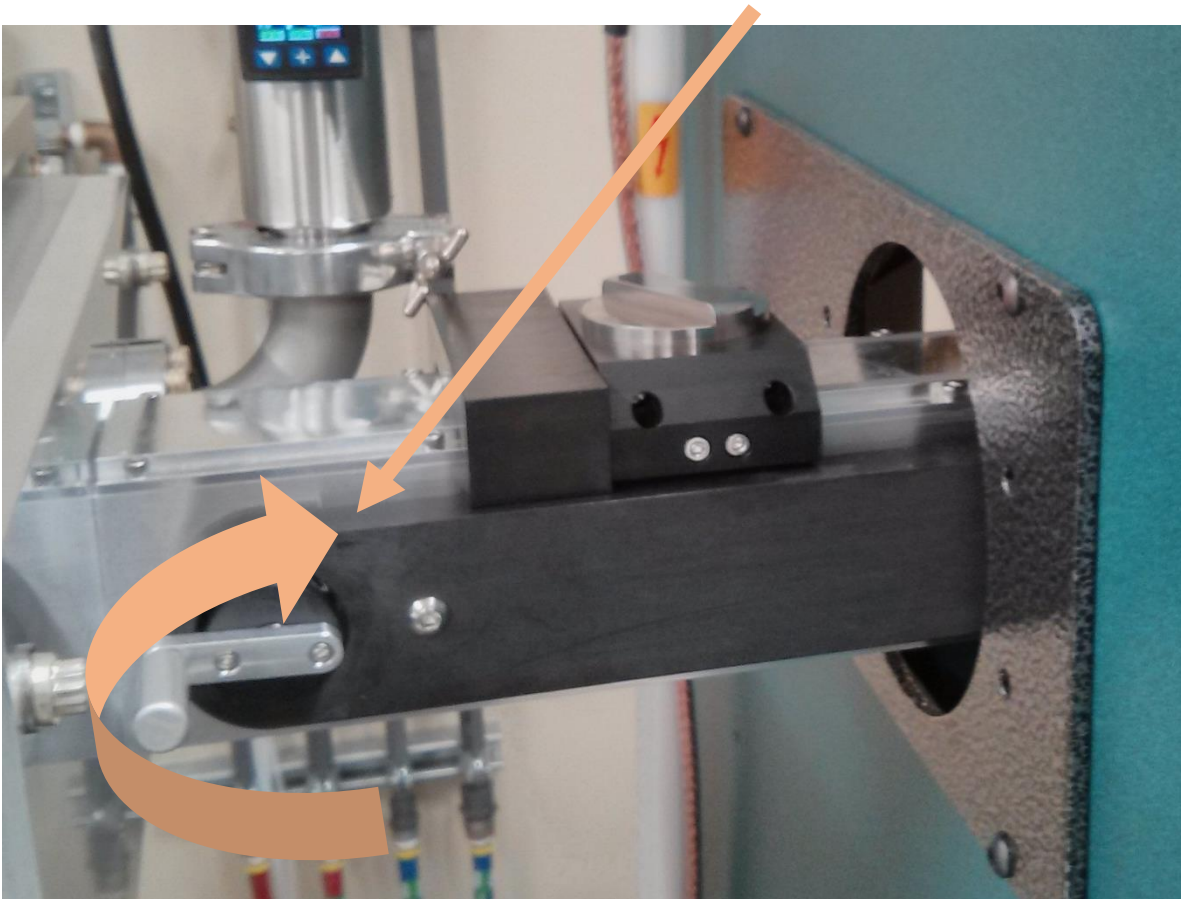
# Step 11: Transfer chuck from load lock arm to chuck holder.

Turn this crank until the height indicator changes from 90  $\rightarrow$  70.



# Step 12: Retract load lock arm.

Rotate this crank clockwise until the shuttle moves all the way back to the right.

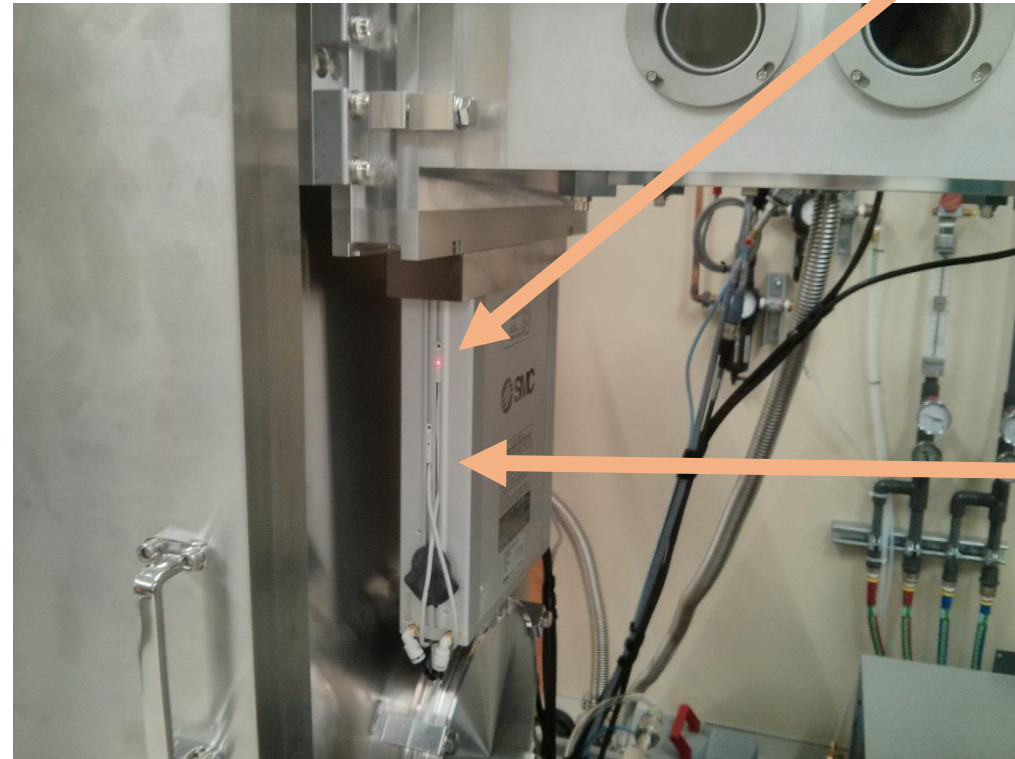
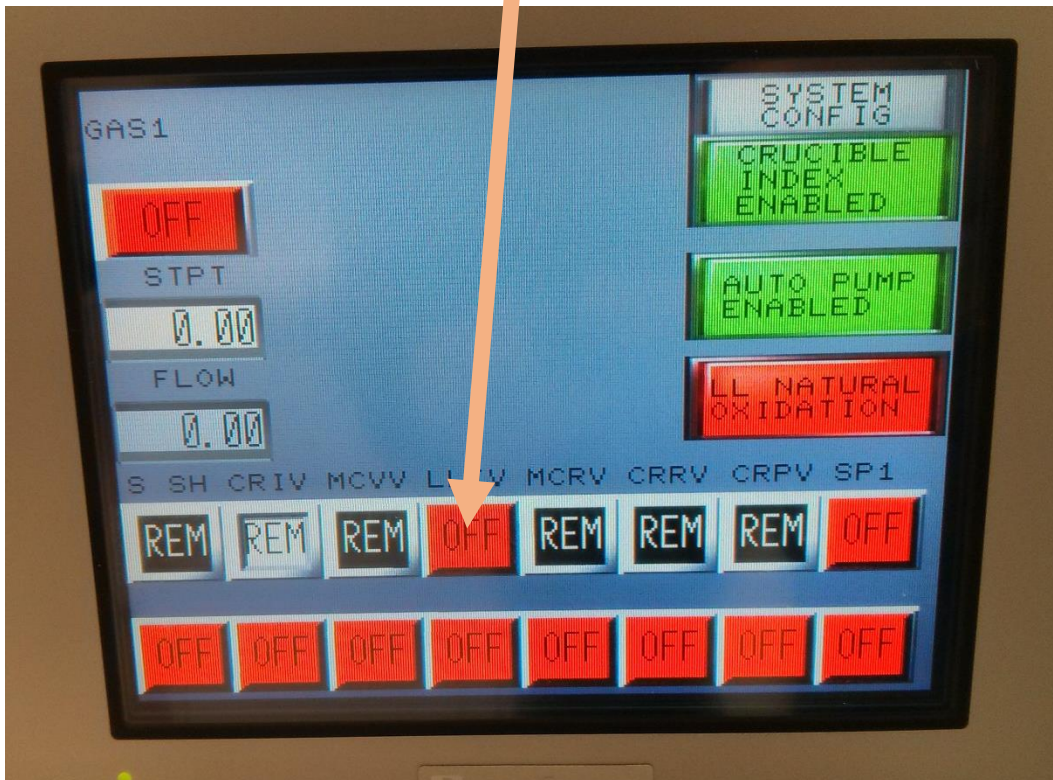


# Step 13: Close load lock valve.

Press the “LL IV ON” button on the touchscreen. It will turn from green to red when the load lock valve is closed.

The upper indicator should be red now.

The lower indicator should be dark.



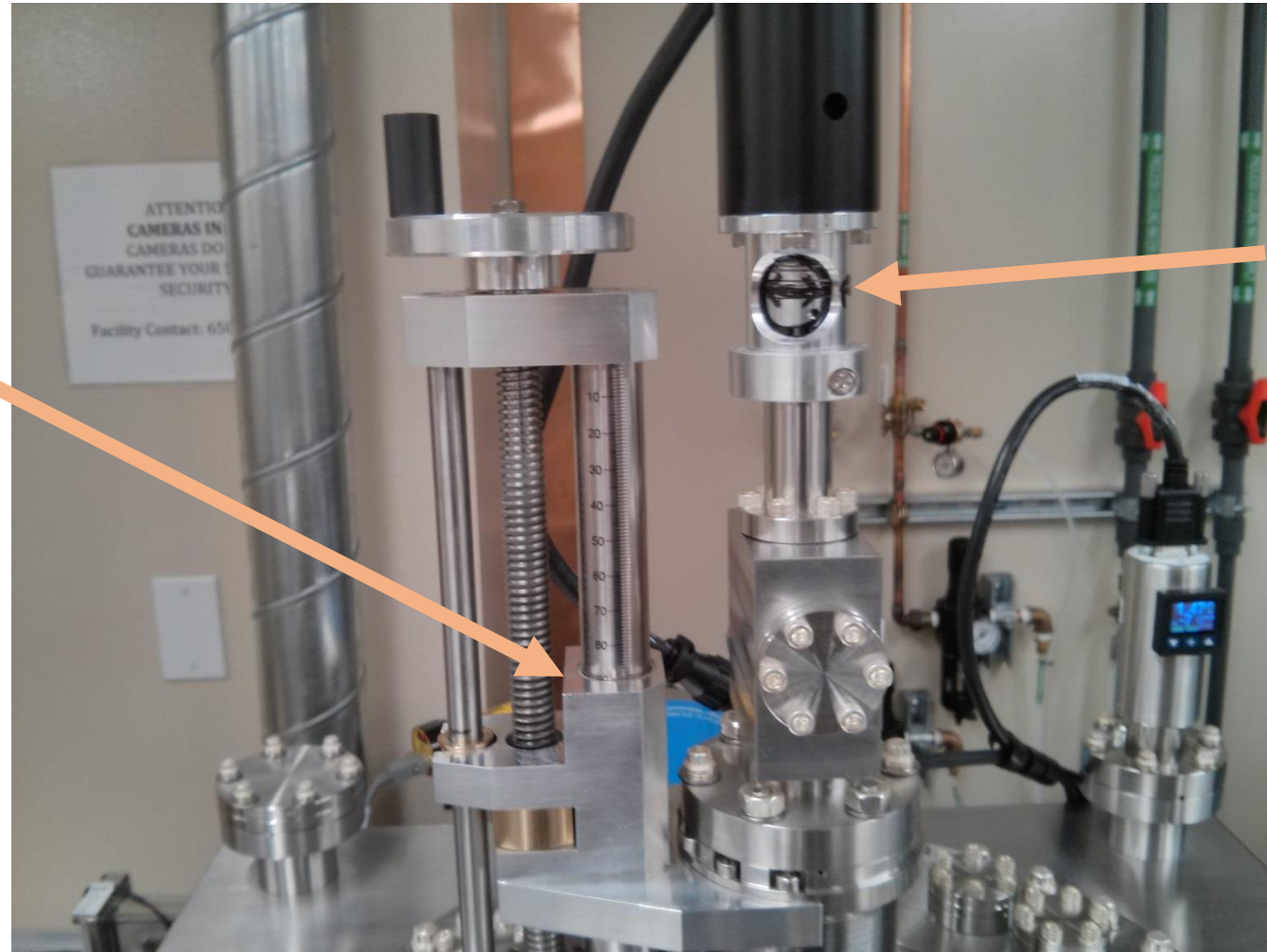
Step 14: Perform evaporation (please refer to the “Performing Evaporation Guide”)



Unloading a Sample

Step 1: Ensure chuck holder is in correct orientation for chuck transfer.

1) Confirm this is still set at 70.



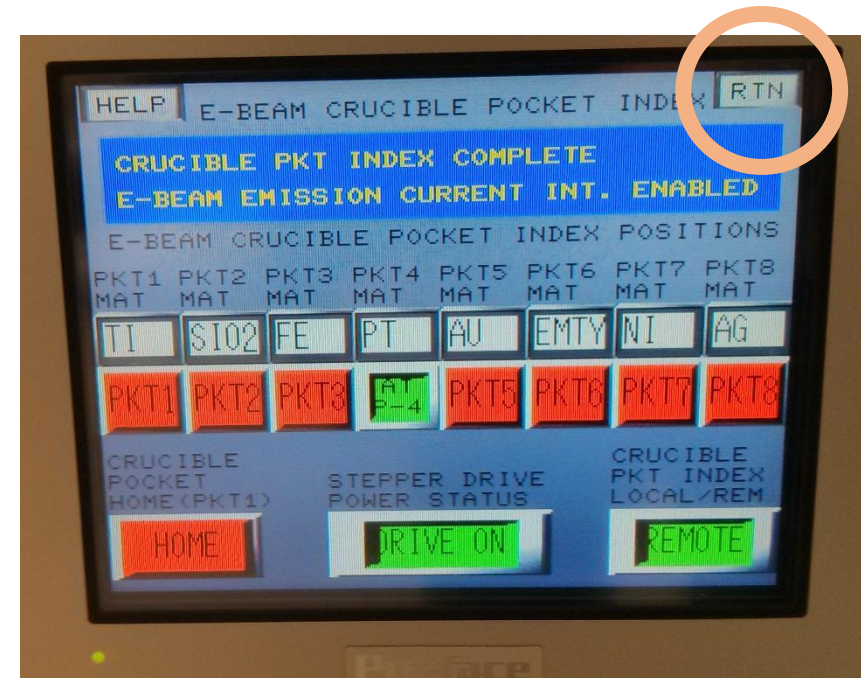
2) Rotate the inner cylinder with your hand until you see the double arrow in the window.

# Step 2: Open load lock valve.

Press the “LL IV OFF” button on the touchscreen\*. It will turn from red to green when the valve is open.



\* If you see this screen, press the “RTN” button at the top right corner to return to the main interface first.



Step 3: Verify the load lock gate valve is open.

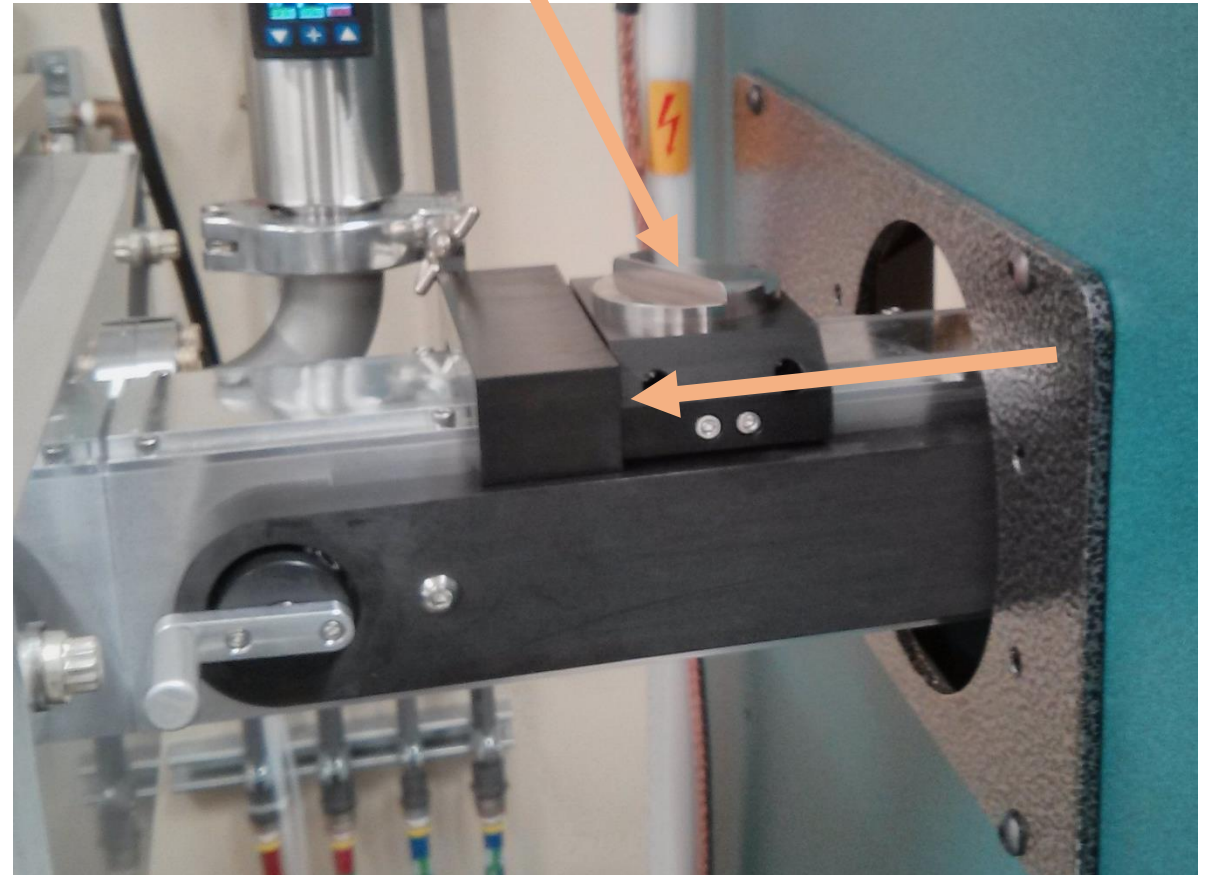
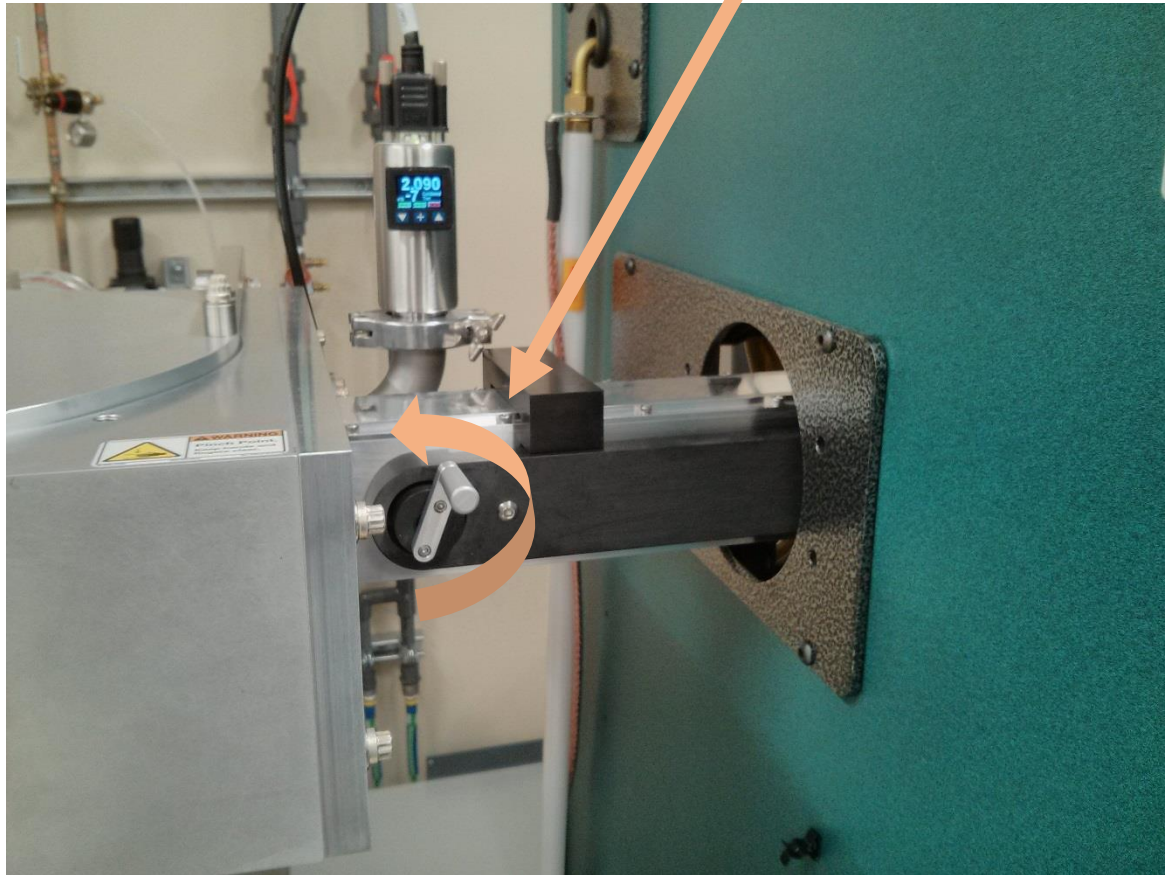


The upper indicator should be dark.

The lower indicator should be red.

# Step 4: Move load lock arm into the main chamber.

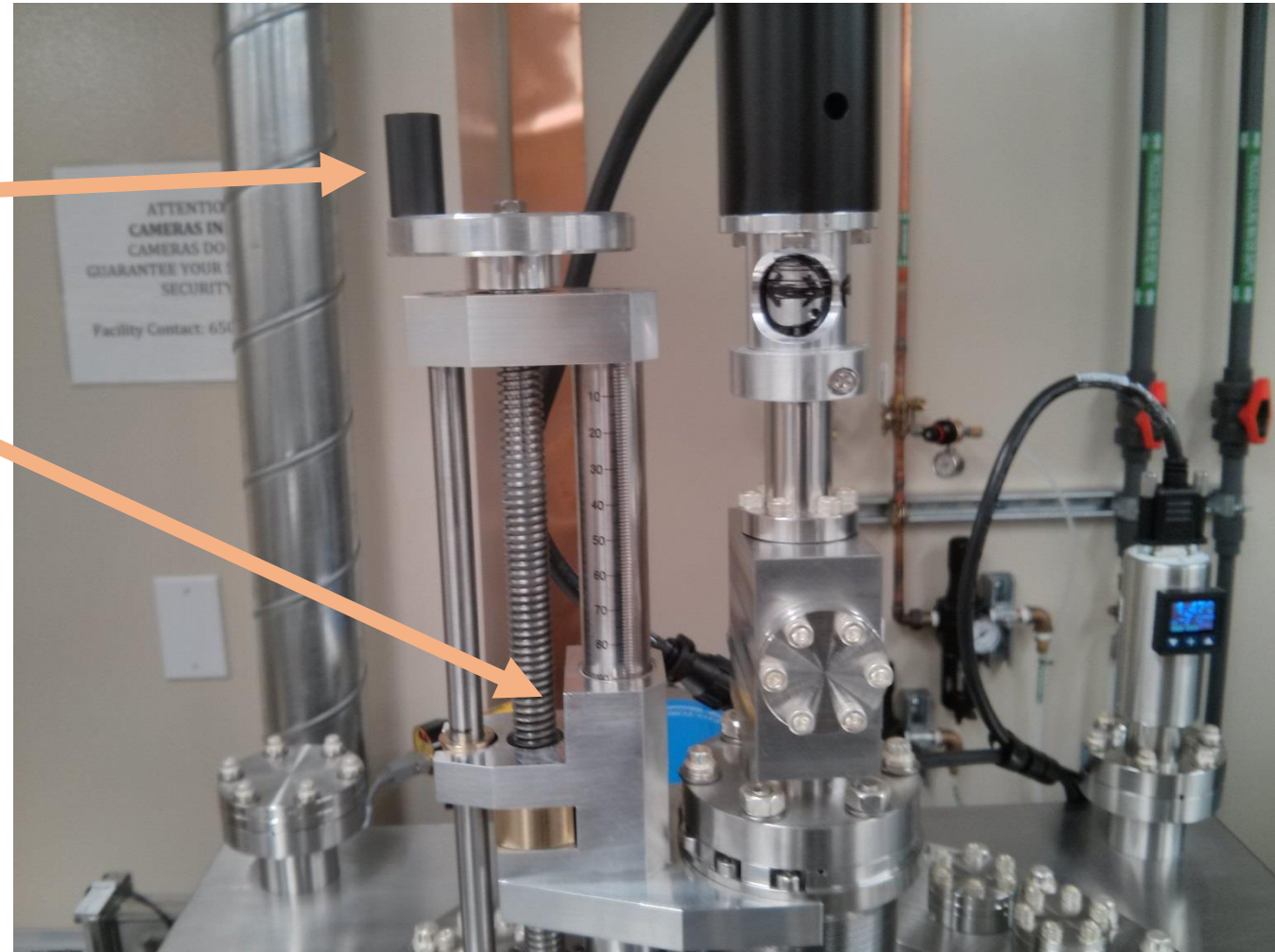
Rotate this crank counter-clockwise until the shuttle moves up against the block.



# Step 5: Transfer chuck to the load lock arm.

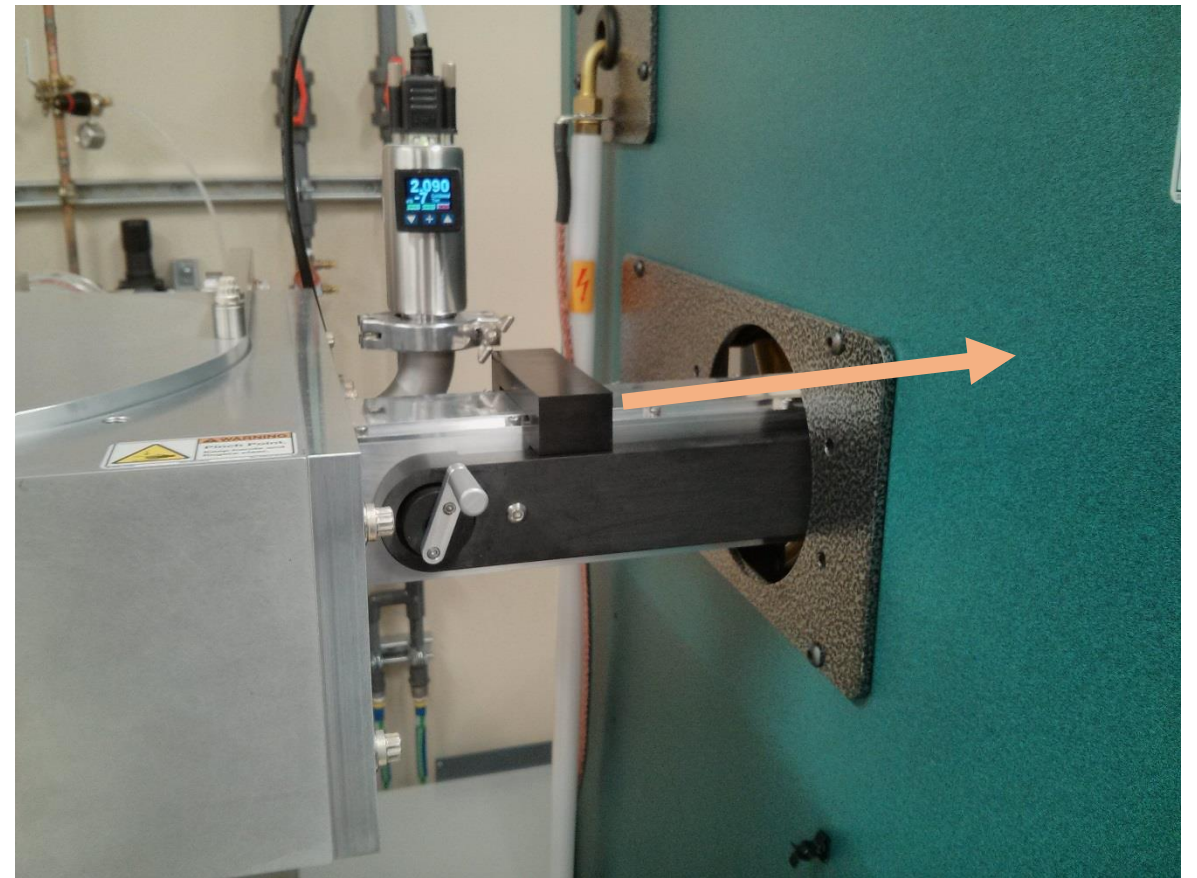
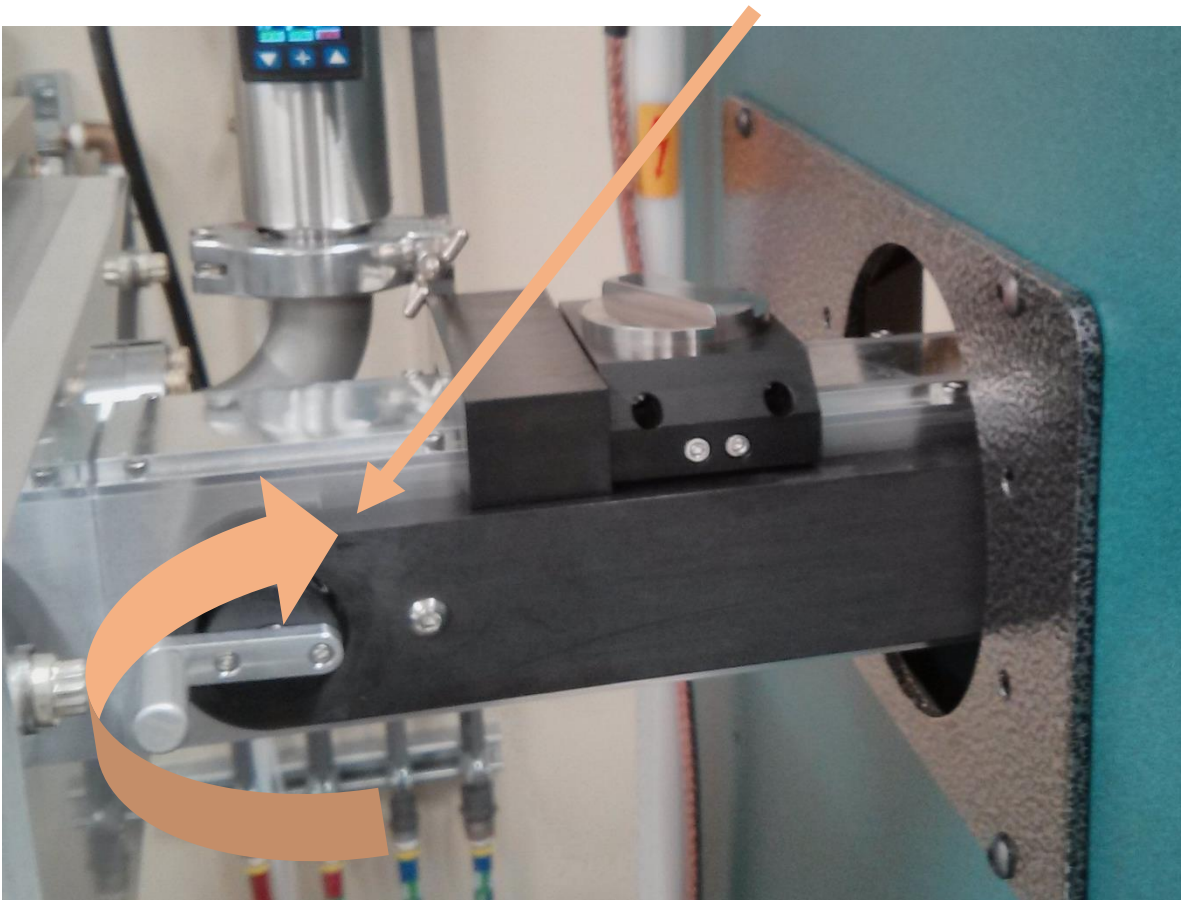
Turn this crank until the height indicator changes from 70 → 90.

Do NOT go past 90!



# Step 6: Retract load lock arm.

Rotate this crank clockwise until the shuttle moves all the way back to the right.

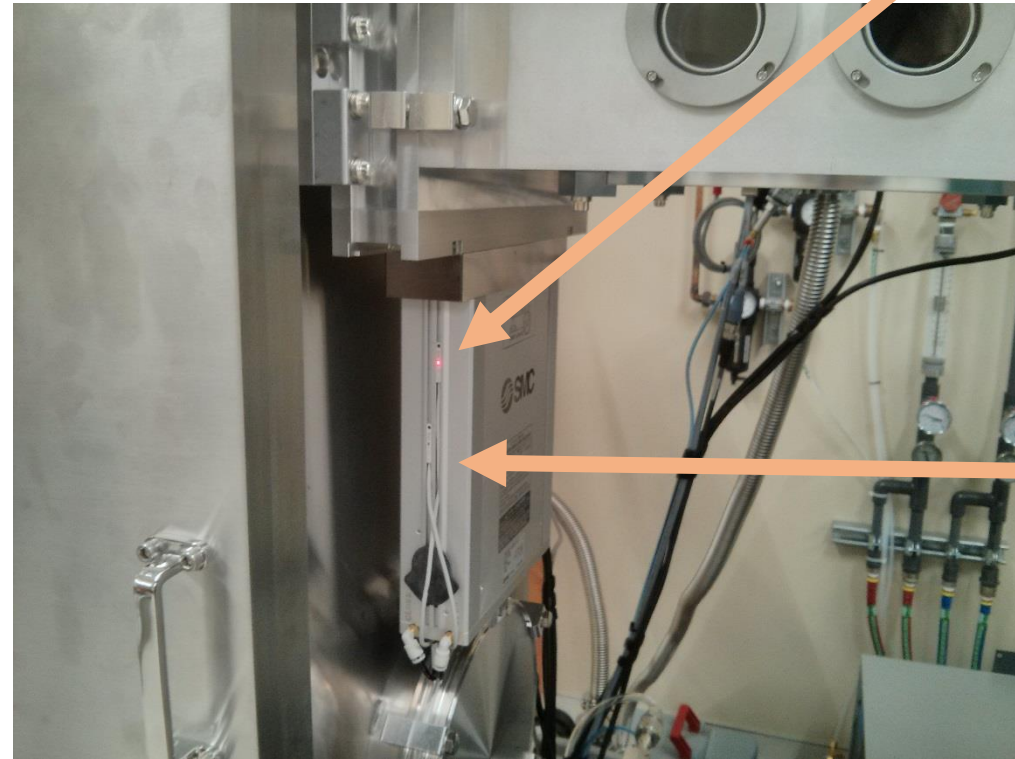
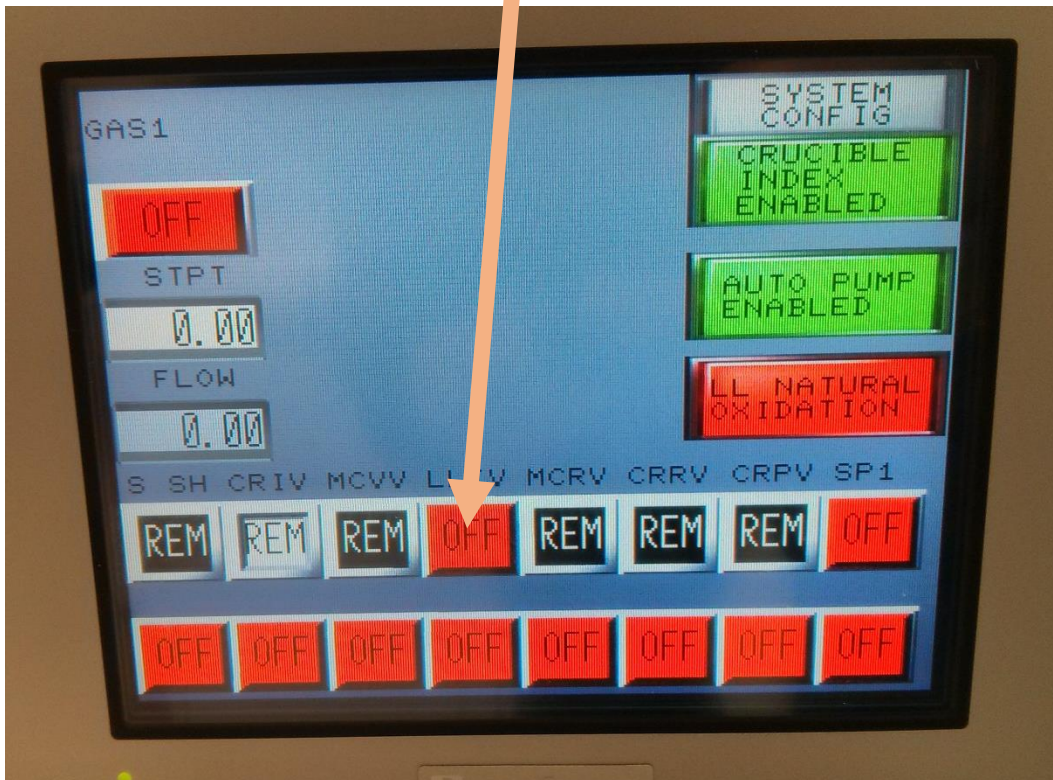


# Step 7: Close load lock valve.

Press the “LL IV ON” button on the touchscreen. It will turn from green to red when the load lock valve is closed.

The upper indicator should be red now.

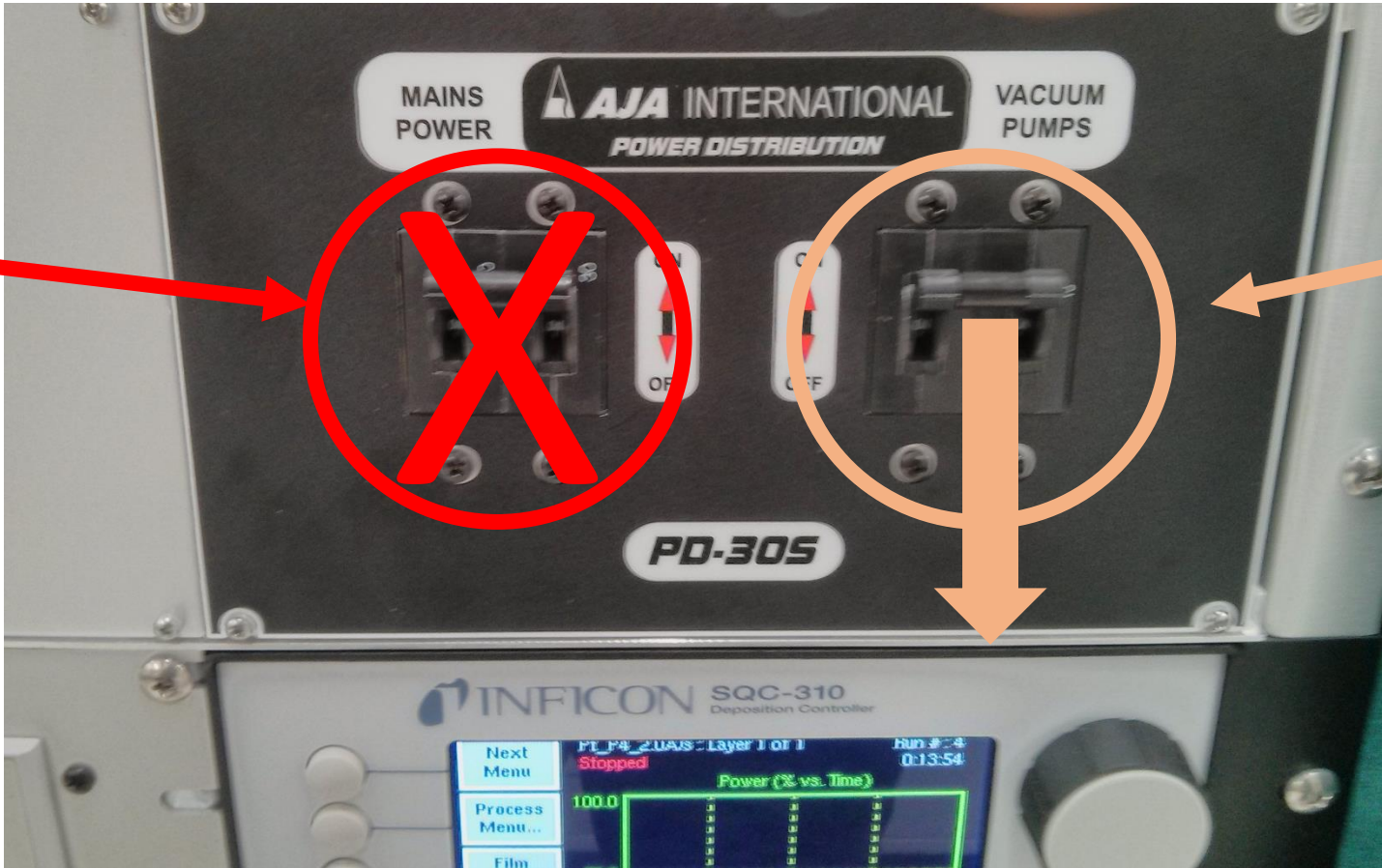
The lower indicator should be dark.





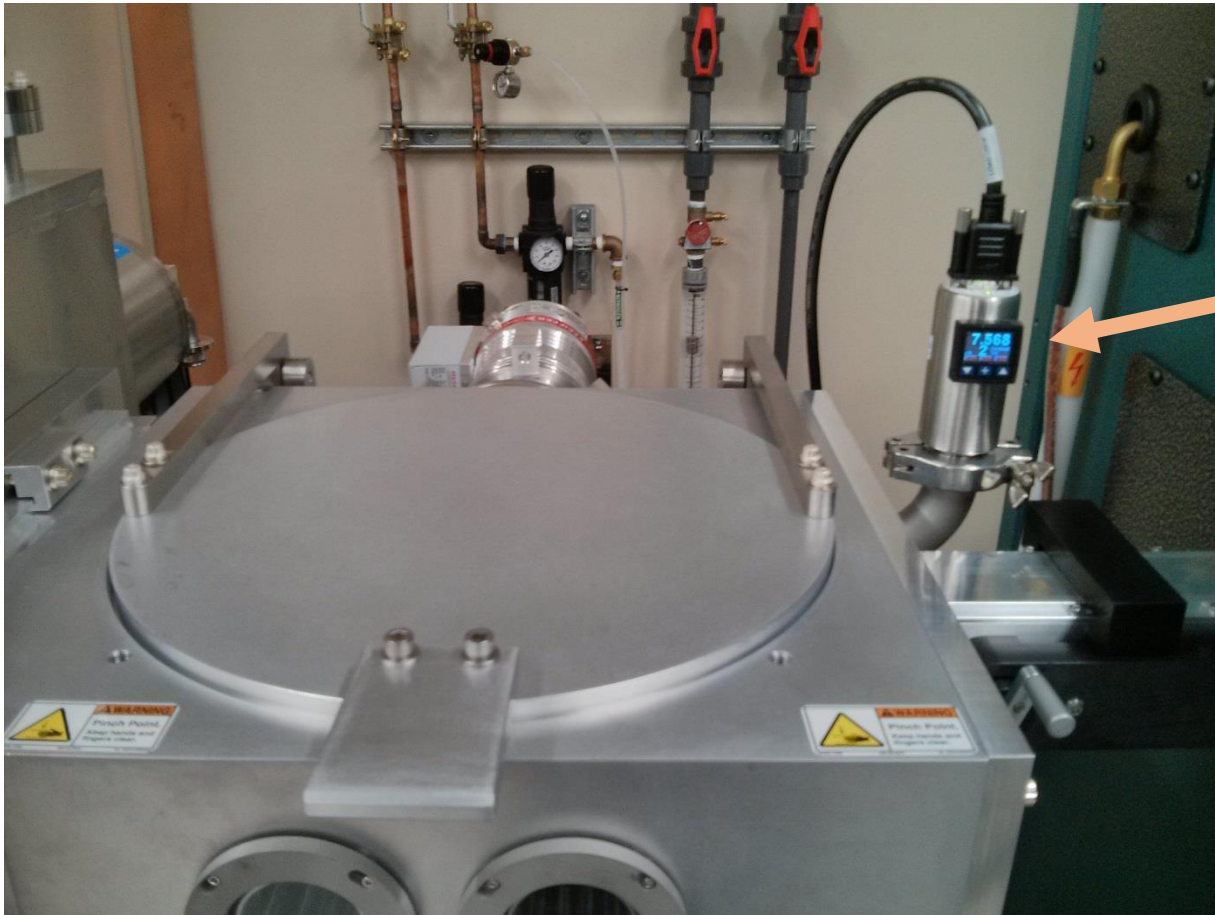
# Step 8: Vent the load lock.

Do NOT touch  
this one!



Flip the right  
switch down.

Step 9: Wait for load lock to vent.

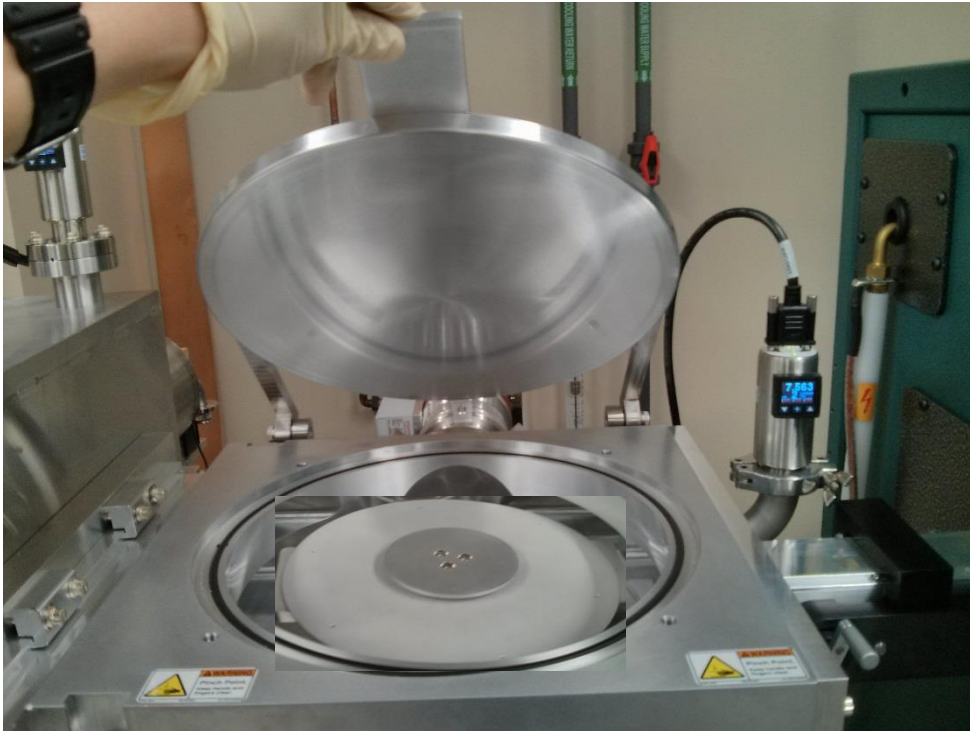


This indicator will read  $\sim 7.60 \text{ e}2$  when load lock is vented.

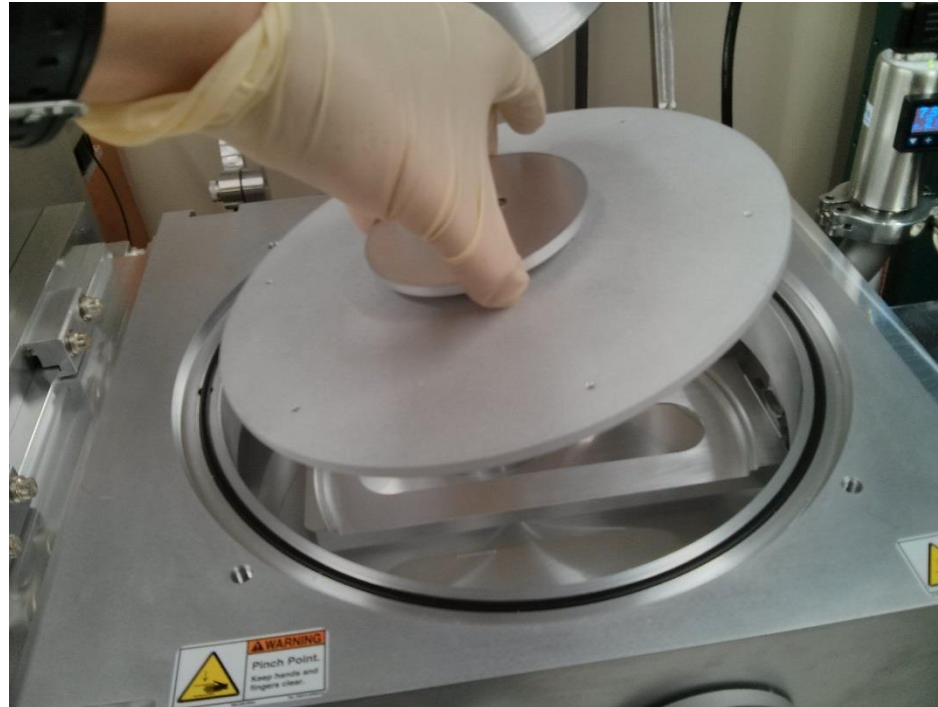


# Step 10: Remove chuck from the load lock.

1) Lift load lock lid up.



2) Hold chuck from the backside and remove from load lock.



# Step 11: Pump down load lock.

Press down hard on the lid while flipping the right switch back up.

