

Loading Sample into Load Lock

1) Check that the chamber valves are closed

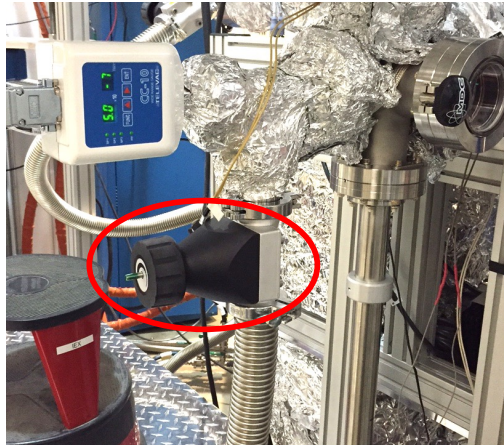


Main Chamber - Cube



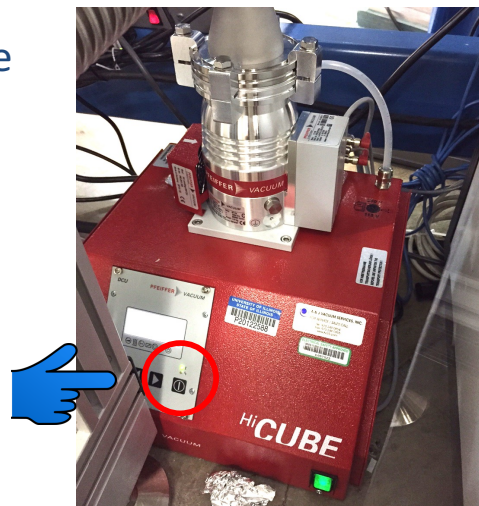
Cube –Load Lock

2) Valve-off Load Lock pumping

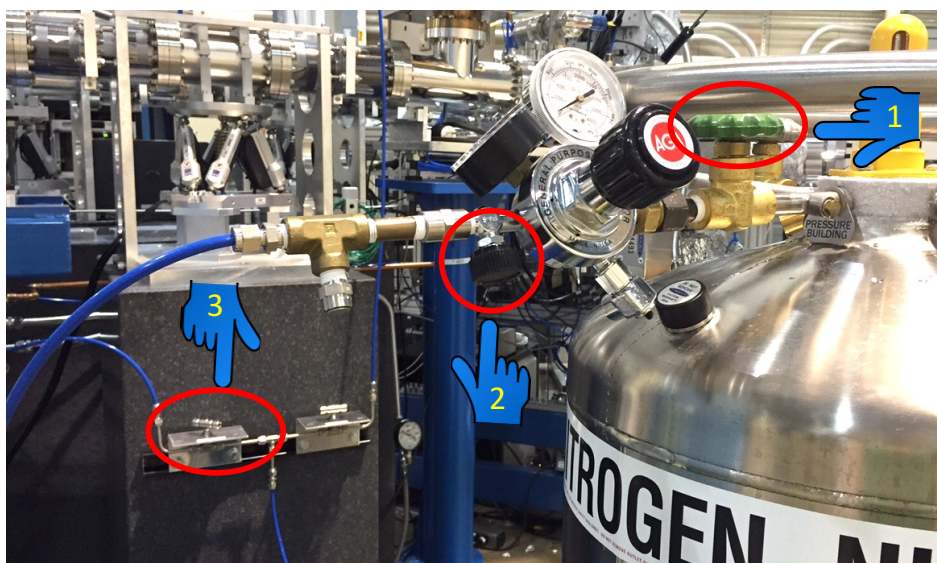


Do not over close or
over open
(pin exposed
= open)

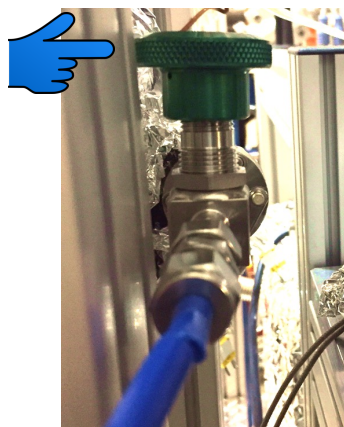
3) Turn off the Hi-Cube



4) Turn on N2 (open all three valve). Set flow to 6 psi

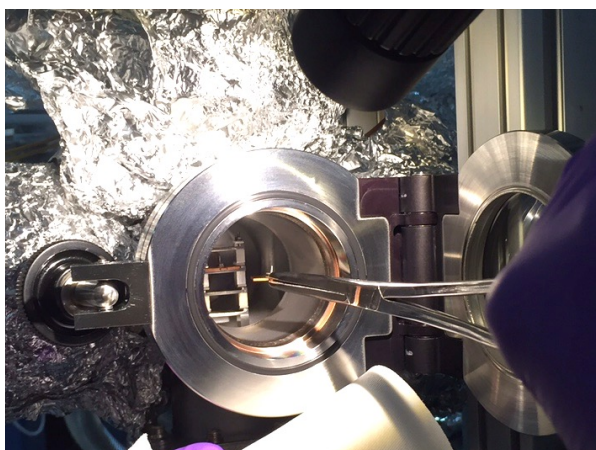


5) Slowly open Nupro-valve (right hand of the load lock) while watching that the pressure does not increase in the Cube



Do not crank on the valve. There is a strap-wrench if you can not open.

6) Once the pressure reads $\approx 7.2 \times 10^2$, open the Load Lock door and load samples:



7) Close door and turn off N2. Make sure that the pump has completely spun down, then open valve to pumping. Turn on pump

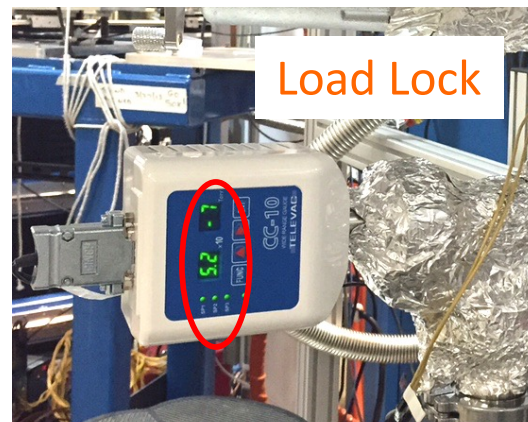
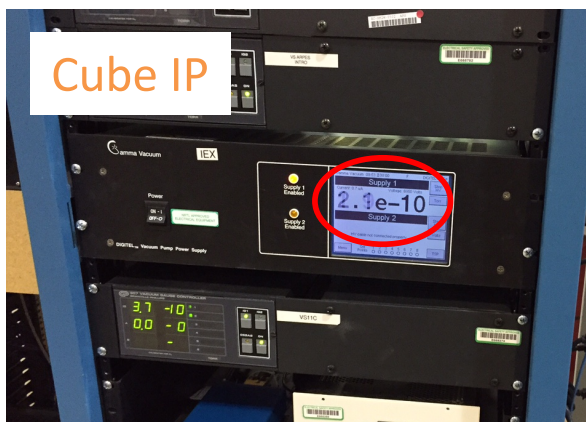
It should take $< 1\text{hr}$ to reach 5×10^{-6} Torr

Transferring Sample From Load Lock to Cube

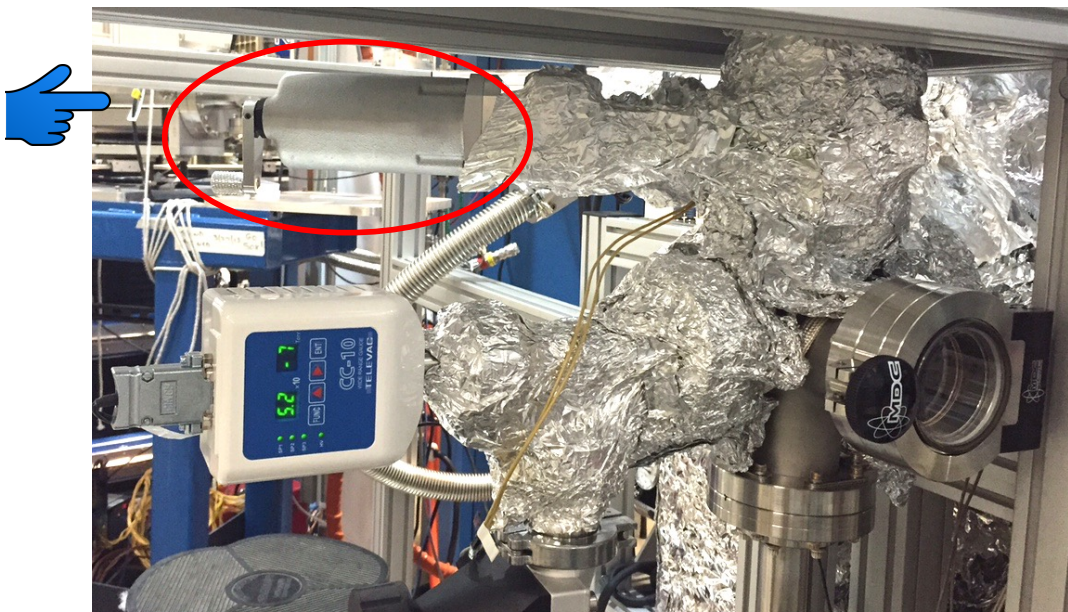
1) Check that valve to main chamber is closed



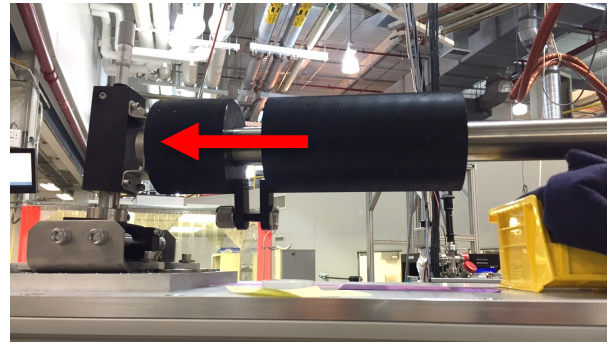
2) Check the pressures: $P_{\text{Load Lock}} < 1 \times 10^{-6}$ Torr



3) Open valve between cube and Load Lock



4) Check that the Cube transfer arm is retracted all the way.



5) Checking pressures; open the valve between the Load Lock and the Cube. Bring the Load Load magazine up
– the top sharpie mark indicate roughly the center of the Cube



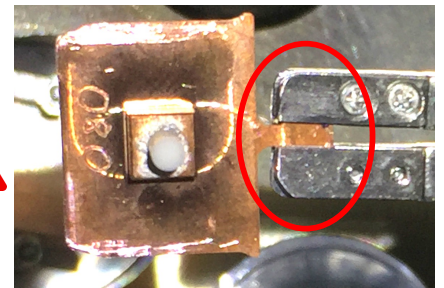
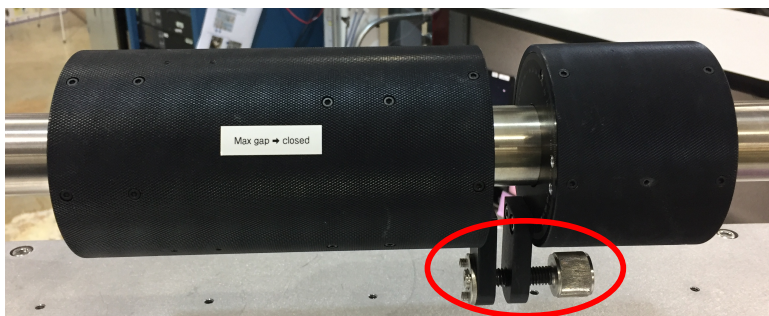
Warning:
magnet is
heavy

6) Grab sample with pincher, the thumb screw pointing down

CW ➡ close

CCW ➡ open

Make sure the pincher is securely “snapped” on the sample tab:

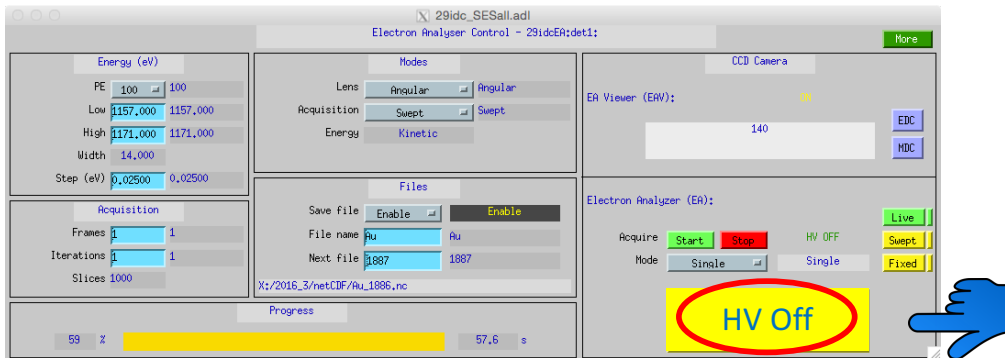


7) Completely retract Load Lock transfer arm (down to bottom sharpie mark) and **CLOSE** valve:

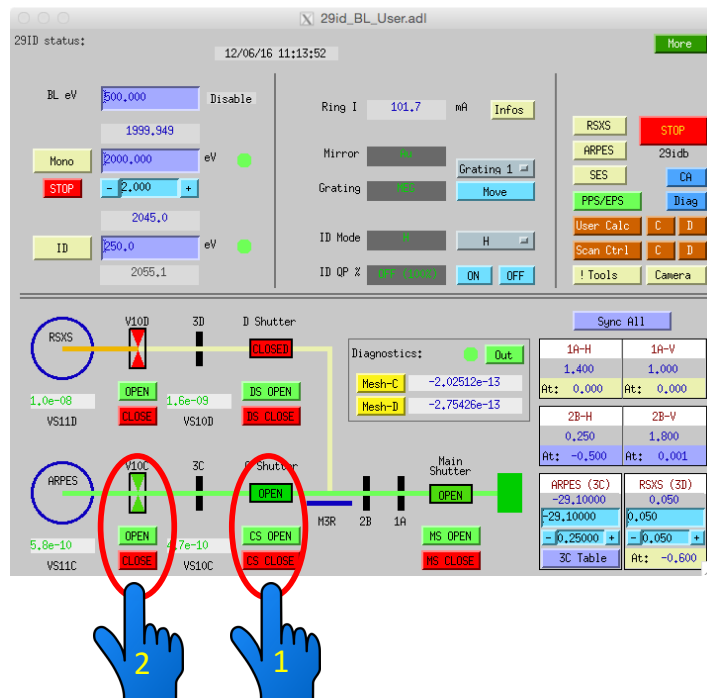


Loading Samples In/Out ARPES chamber

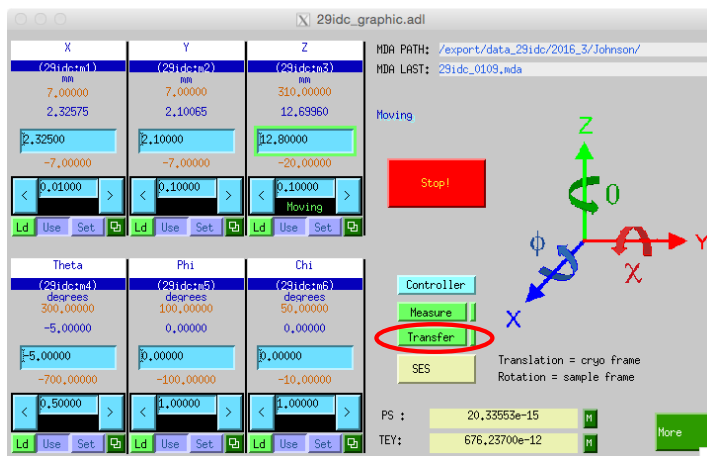
1) Turn off SES high voltage:



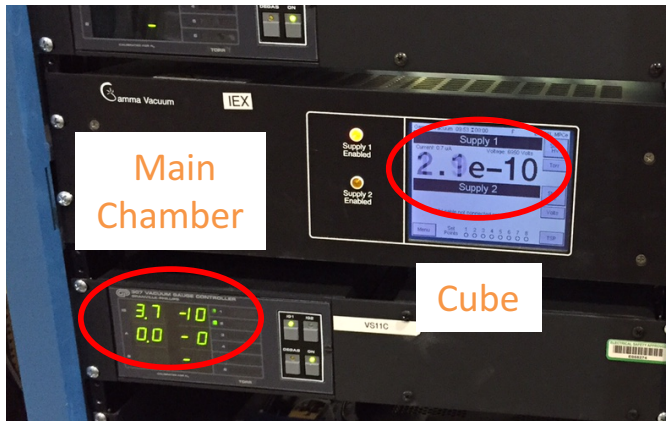
2) Close C-Shutter then V10C (ARPES valve):



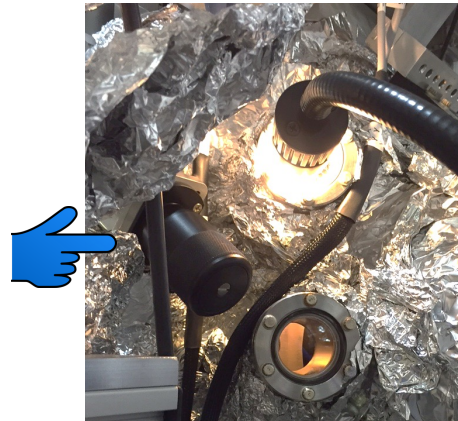
3) Move to transfer: (≈ 10 min)



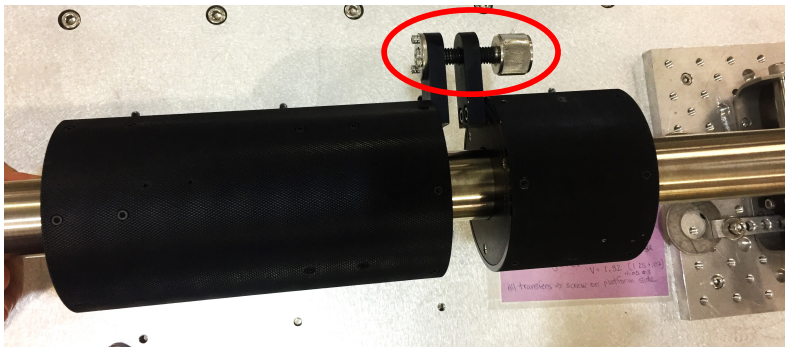
5) Check the pressure
 $P_{\text{Cube}} < 1 \times 10^{-9}$ Torr:



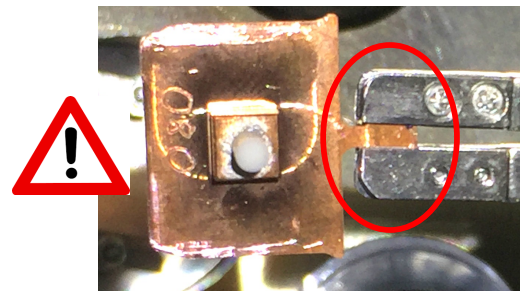
6) Open valve between
Cube and Main Chamber:



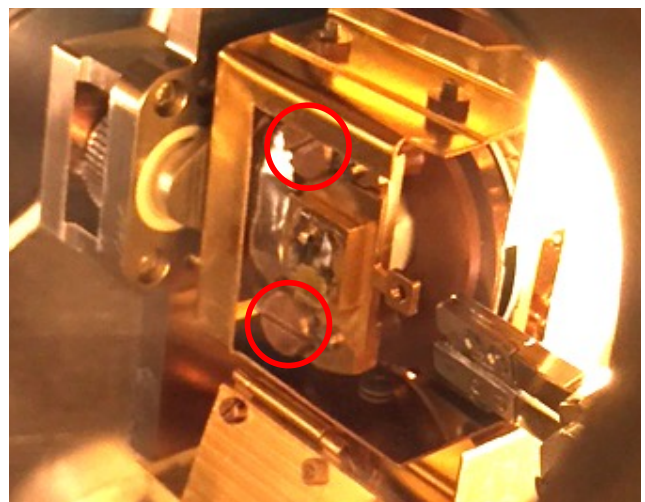
7) Grab/insert sample with pincher
with the thumb screw pointing
toward the computer:



Make sure the pincher is
securely “snapped” on the
sample tab:



8) With the transfer arm holding the
sample tab, gently tighten/untighten
the 2 screws with the wobble stick
(about ½ turn):



9) Close valve when
done transferring!

