SBB 6/06

SPUTTER COATING IN THE HUMMER

--DO NOT OVERTIGHTEN THE ARGON LEAK VALVE!

1. TURN ON ARGON TANK, if it is not already on.

2. OPEN CHAMBER AND SET BELL JAR ON ITS SIDE BETWEEN TWO OBJECTS (so it won't roll off the tabletop). INSERT SPECIMENS. CLOSE UNIT GENTLY—You can make the target fall out onto your samples. Be sure bell jar and top are properly seated..

3. BE SURE PUMP VENT CORK IS IN PLACE. TURN **MAIN** POWER ON, THEN SWITCH ON VACUUM PUMP (switch is on the pump)

4. PUMP DOWN CHAMBER, THEN FLUSH CHAMBER WITH ARGON 3-MANY TIMES USING ARGON LEAK VALVE-- **DO NOT OVERTIGHTEN**
(VACUUM GAUGE WILL INCREASE TO 500 mTorr, COUNT 5-1 THOUSANDS)

5. WHEN VACUUM IS BELOW 70 mTORR, TURN TIMER TO 4-8 MINUTES, THEN TURN HIGH VOLTAGE SWITCH ON.

6. TURN HIGH VOLTAGE CONTROL KNOB TO 9, TIMER SWITCH TO AUTO (it is taped in place). **BE SURE CURRENT READS LESS THAN 10 mA!**

7. SLOWLY OPEN ARGON LEAK VALVE UNTIL A READING OF 10 mA CURRENT IS OBTAINED

8. TIMER SHOULD BE SET FOR DESIRED COATING TIME (4 MIN FOR BIOLOGICAL SAMPLES, 6-8 FOR GEOLOGICAL)

9. ADJUST LEAK VALVE SO THE HV CURRENT REMAINS CONSTANT AT 10 mA (Slowly! open Leak Valve to increase current , close to decrease).

10. AT THE END OF THE TIME PERIOD, HV KNOB TO 0, TURN OFF HV CURRENT

11. SHUT DOWN IN THIS ORDER:
HIGH VOLTAGE KNOB TO **0**
HIGH VOLTAGE SWITCH **OFF**
MAIN POWER **OFF**
******MECHANICAL PUMP **OFF, THEN IMMEDIATELY PULL OUT CORK TO VENT** MECHANICAL PUMP
TURN OFF **ARGON TANK,** CLOSE but **don't tighten** ARGON LEAK VALVE

12. REMOVE SAMPLES

13. CLEAN BELL JAR WITH KIMWIPE and 95% ETHANOL

14. SIGN USAGE LOG