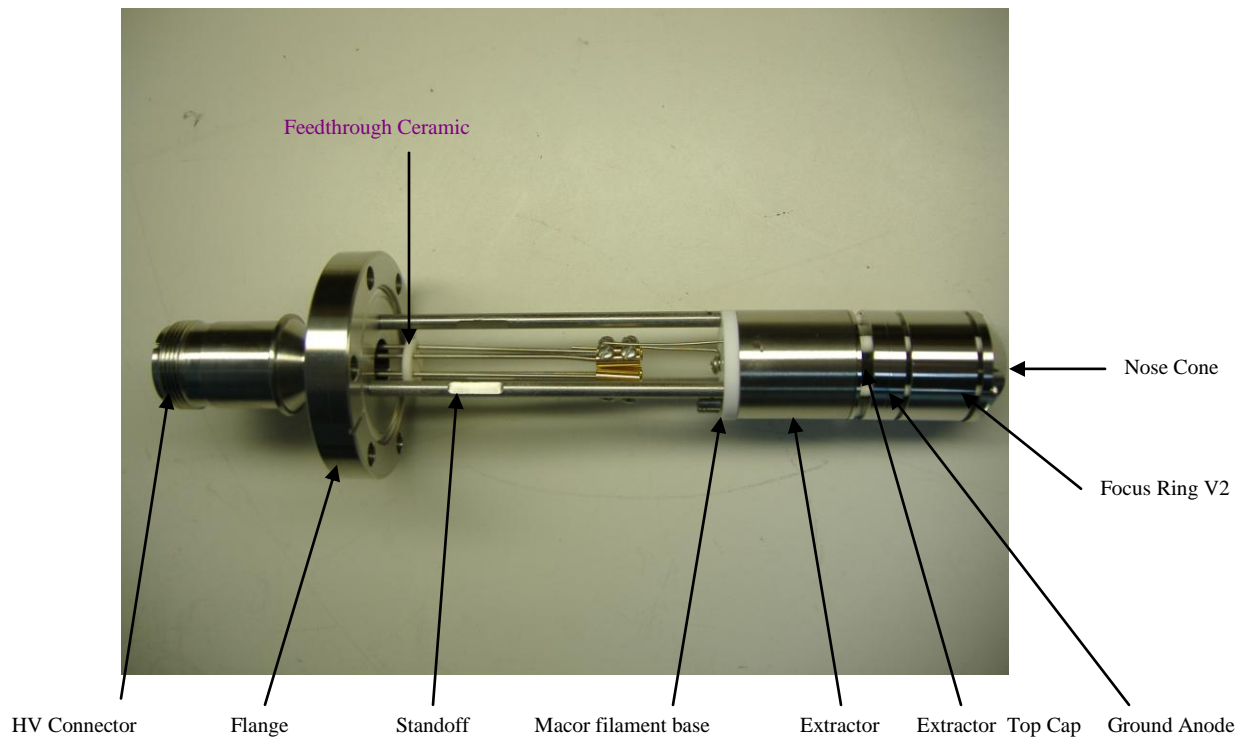


IG2 Filament Change Procedure



Tools needed:

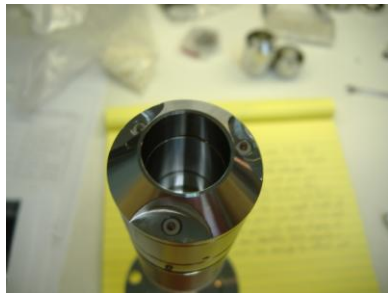
Tweezers
.035" Allen wrench
5/32" Box wrench

Needle nose pliers
.050" Allen wrench

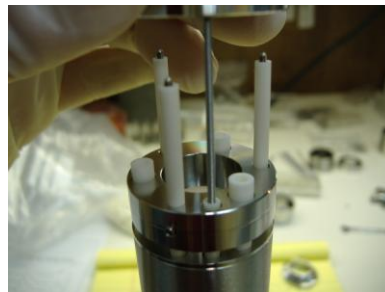
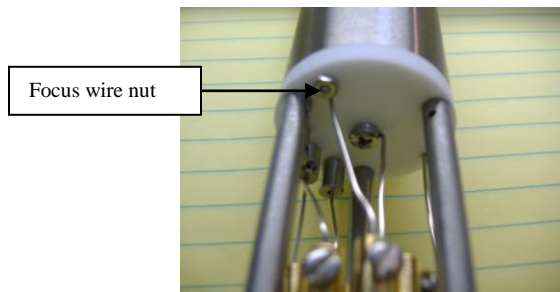
Wear clean gloves at all times and work on a clean surface with clean, de-magnetized tools. Secure the Ion Gun with nose pointing up, being careful to not damage the HV connector.

To remove filament:

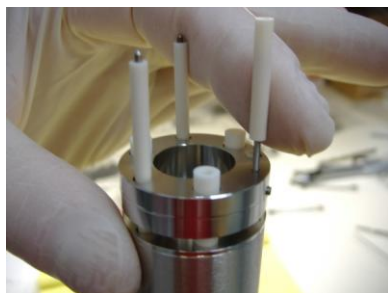
Using the 5/32" wrench, remove the 3 nuts and accompanying washers holding the Nose Cone to the body of the gun. Remove Nose Cone. Remove the 3 short ceramic spacers resting on the Focus Ring.



Remove nut holding Focus wire to Focus Ring allthread (5/32" wrench). Gently lift Focus Ring until allthread clears ceramic insulator.



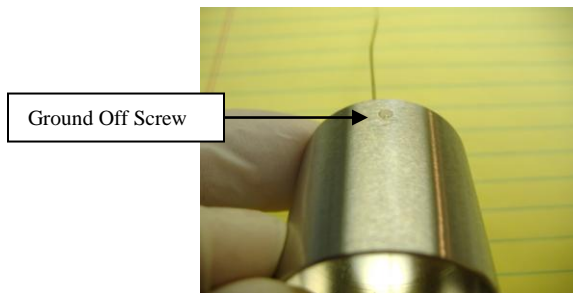
Remove ceramic spacers from Ground Anode and then pull short ceramic insulator off of allthread associated with set screw. Loosen set screw (.035" Allen) and pull Ground Anode up and off of remaining insulators.



Remove remaining loose ceramic spacers from Extractor Top Cap, gentle prying may be necessary. Gently slide Extractor Top Cap up and over ceramic insulators.



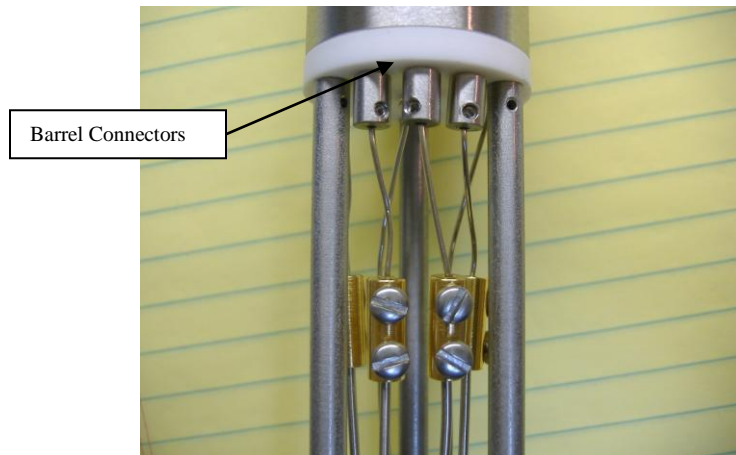
Notice the ground off screw holding the connecting wire to the Extractor. Loosen the barrel connector holding this connecting wire and gently pull Extractor away from macor filament base. Help the wire through the macor with one hand while pulling up on the Extractor.



Take note of the stainless steel sleeves and their orientation (notch outwards) on all ceramic feedthroughs and the various lengths of ceramics for aid in reassembly if removal is necessary.



Loosen set screws in the filament barrel connectors (.035" Allen) and bend the filament wires down and out of the connectors. While holding the filament post with some pliers, gently unscrew its barrel connector. Do this for all three posts. Be aware of the lock washers between the barrel connectors and the macor base.



Once barrel connectors are removed, pull up on old filament assembly and remove, note the small ceramic spacers between filament posts and macor base. You are now ready to install the new filament assembly. Installation and reassembly is the reverse of disassembly.