

BaD EIPh beamline

X-ray Source PSP twin anode

October 4, 2010

Switch On:

1. Turn-on manually the **water cooling** of the X-ray source.
2. Switch-on the two power supplies (TX400 & SL600) and check that on the SL600 display the “interlock closed” is lighted **GREEN**.
3. Select the filament to use: filament 1= Mg - **filament 2=Al (default)**.
4. On the TX400 check that the control button is switched to “**Control filament**”.
5. On the SL600 push “**HV OFF**” and check the following settings:
 - (i) **kilovolts** display is showing **0.00 KV** (otherwise turn the kilovolts potentiometer to reach this value);
 - (ii) **milliamperes** display is showing **16.2 mA** (otherwise turn the emission current potentiometer to reach this value).
6. On the TX400, without touching the **emission current** potentiometer (already set to **16.0 mA**), increase slowly the **filament current** up to **1.88 A**.
7. On the SL600 push the “**HV ON**” button and increase slowly the kilovolts potentiometer up to **11.50 KV (never exceed this value!!!)**.
8. On the TX400 check the emission current display shows 15-16 mA, then switch the control button to “**Emission control**” (and the emission current display will show 16mA while the filament current display will show a value a bit different from 1.88A).
9. The X-ray source is now in operation at fixed emitted power (184W).

Switch Off:

1. On the TX400 switch the filament control button to “**Control filament**”
2. On the SL600 turn-off the high voltage using the corresponding potentiometer and then pushing the green button “**HV OFF**”.

3. On the TX400 decrease the **filament current** potentiometer **to zero**.
4. Turn-off manually the **water cooling** of the X-ray source.

Very important warning:

Before increasing the pressure in the prechamber/main-chamber (for sputtering, gas treatments, etc.) be sure the gate valve between main-chamber/prechamber is closed and the X-ray source is OFF.