END OF ALS BEAMTIME: Disassemble the COLTRIMS setup

Here are some helpful details to keep in mind when taking down the experiment after an ALS beamtime. Please follow this concept step-by-step.

1) Computers:
Stop the COBOLD data acquisition. Copy the relevant data needed to the analysis computer or any other laptop (if necessary). Then turn off the acquisition and analysis computer and bring them down to 2-102 very carefully (make sure you have gathered all the network cables and switches. Watch out for the monitors and harddrive crates not to fall from the carts while moving them to building 2)

2) Power Supplies:
Flip down the switches on the ISEG NIM power supplies for the detectors. Turn off the white SRS power supplies for the spectrometer. Turn down the dials and switch off the white dual channel bench top powersupply for the rainbow coils. Turn down the dials on the big power-ten powersupply for the Helmholz coils and turn it off with the big switch to the left. Turn off each NIM bin. Turn off the 4 fans in the electronic rack. Unplug the NIM electronics rack from AC power: **Keep the main power cable of the rack, which is connected at the outside on the lower left, with the crate at all times (do not loose it).**

3) Beamline:
Close the last beamline valve. Leave the hand valve between the differential stage and the chamber open.

4) Gasjet:
Turn off the jet: Close the gas bottle and the regulator. Release the pressure in the gas line with the three way valve on the gas manifold to air (pink tip pointing away from you) and pump it down for 1 minute afterwards (pink tip pointing towards you). Then close the three way valve again.
In case a gasline is connected to a bottle in the gas cabinet, get the key to the gas cabinet and disconnect the regulator first before taking off the gasline.
Open the bypasses at the first jet stage and the second stage.

5) Vent the COLTRIMS chamber:
Make sure the cold traps are empty.
Turn off all ion gauges by turning the black dials on the right of the silver controllers to “4” first. Then press the “FILAMENT” button. Then press the “POWER” button. Press the “IG2” button on the black “Diff. IG” controller..
Close the valves on the forepumps (jet, jet 2, chamber, differential stage)
Turn off the turbo pump controllers. Let the turbos spin down for 20 minutes.
Then open the green vent valve on the first stage slowly, listen, and monitor the manometer on the first stage – do not vent too fast.

6) Photon Beamdump:
Take off the photon beamdump. Cut the connection after the spool which is connected to the bellow (do NOT cut directly after the bellow).

7) Helmholtz Coils:
Dismount the Helmholtz Coils. Put them on the little 8020 cart and bring them to our secret hide out in 2-100B. Be careful not to drop the coils or bump the connection terminals (the insulation will suffer and result in a broken coil or an unsafe condition otherwise).

9) Detectors & Spectrometer:
Mount the crane and take out the spectrometer with the detectors first – bring them to the lab separately (be careful: the detectors are $30000 to $40000 each). Note: Usually the Batman and the phosphor screens as well as the apertures can stay inside the chamber – in principle nothing needs to be disassembled here.

10) Chamber turbo pump:
If needed take off the big silver Seiko Seiki turbo pump (caution: it is heavy).

11) Move the chamber:
On BL 11 bring the chamber on the transfer plates, each leg at a time. Disconnect the beamline bellow from the 4.5in flange at the differential stage and move the chamber back by 2 feet (this move is necessary since the chamber is tilted by 4 deg; otherwise it is highly likely to scratch the knife edges of the beamline and differential stage CF flanges). Take out the transfer plates and bring down the chamber slowly to the wheels with 4 people. Make sure you bring the feet all the way up to the bottom platform.

General Remarks:
Take out the KF foreline hoses only where needed. Disconnect them from the chamber and the pump and bring them down to 2-102.

Disconnect the plastic exhaust hoses at the forepumps (leave KF crosses and clamps on the pumps wherever possible). Bring them to lab 2-102.

Sort the LEMO cables per length and tie them together before putting them in the gray box:

- Put LEMO cables in the box labeled LEMO.
- Put SHV cables in the box labeled SHV.
- Put BNC cables in the box labeled BNC.
- Put SPECIAL cables (Reynolds and adapters) in the box labeled SPECIAL HV.

At the end clean up the place with a broom (you will find one in building 7).