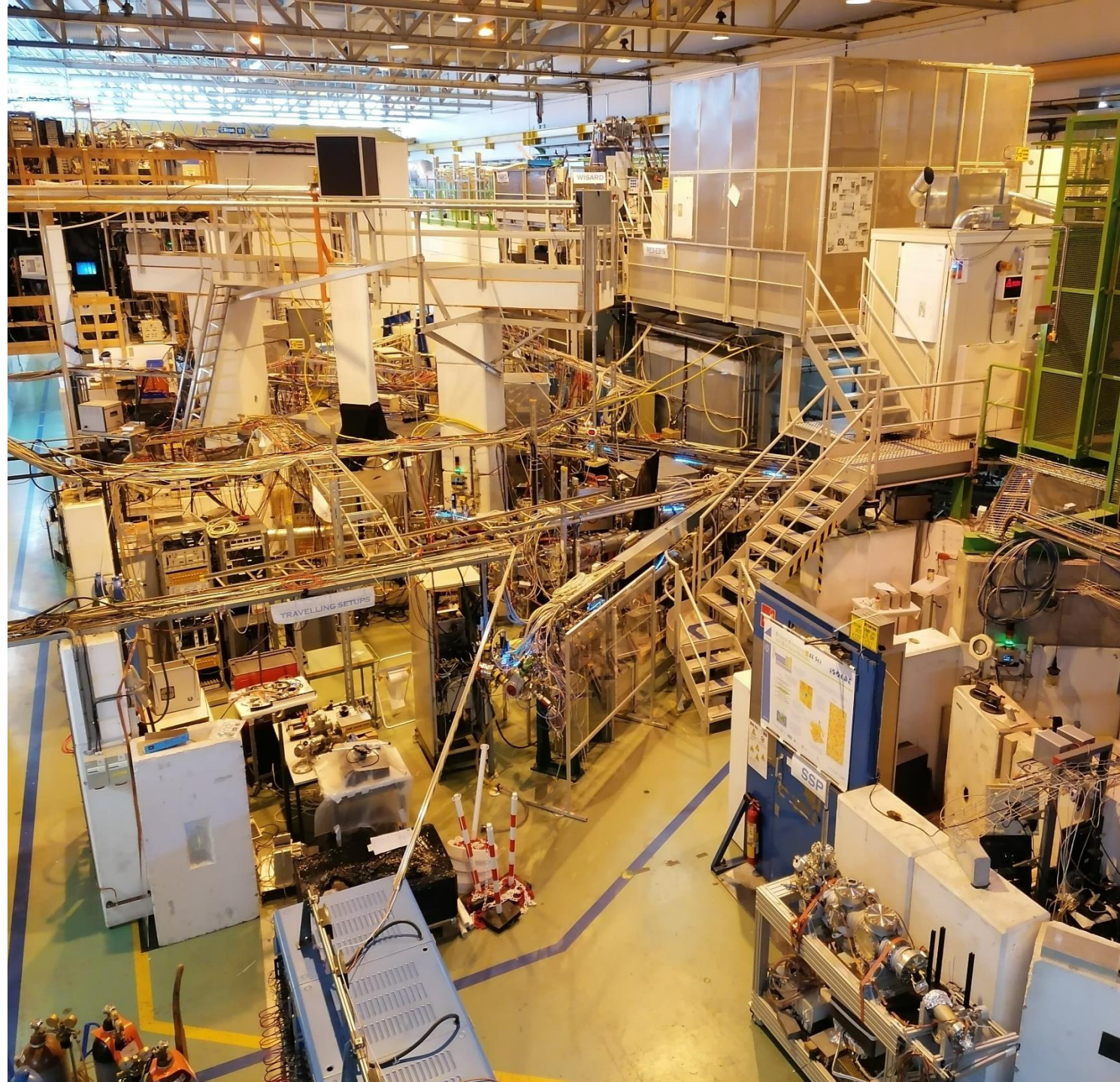
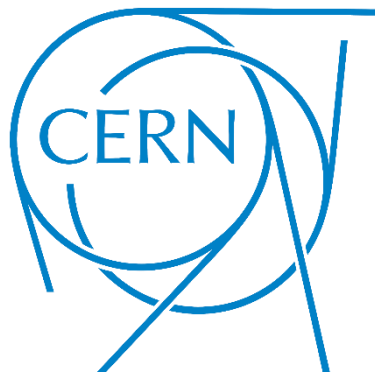


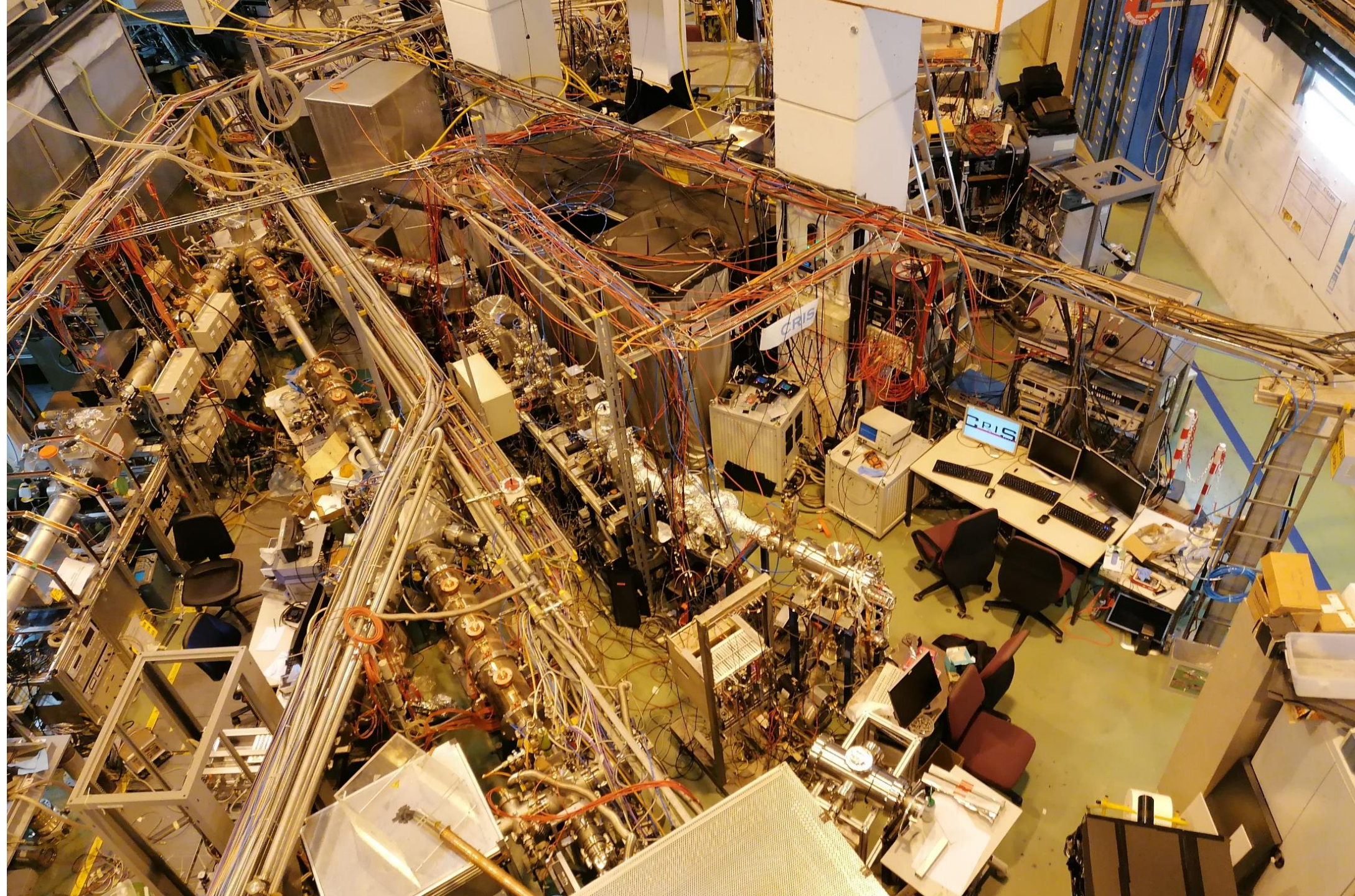


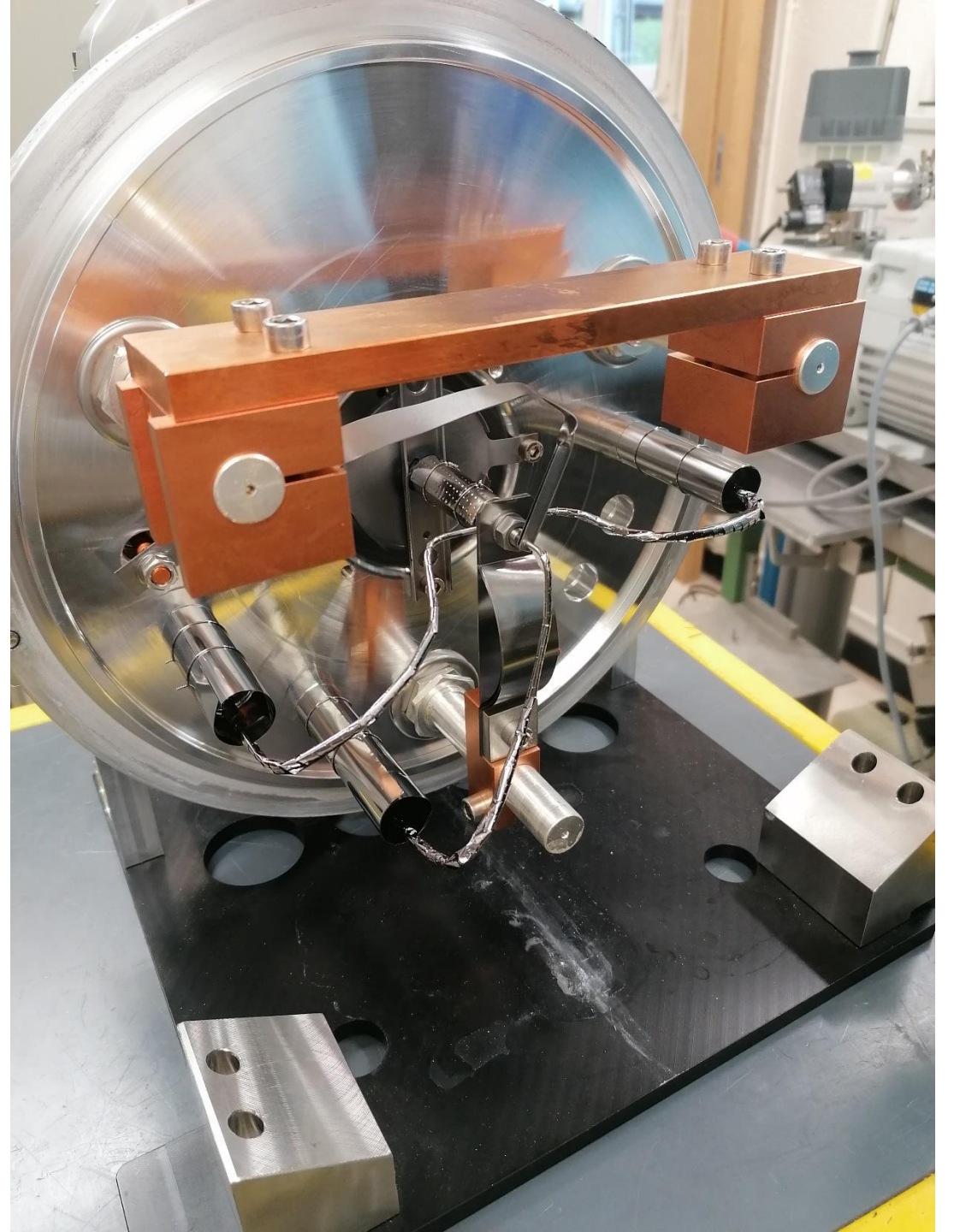
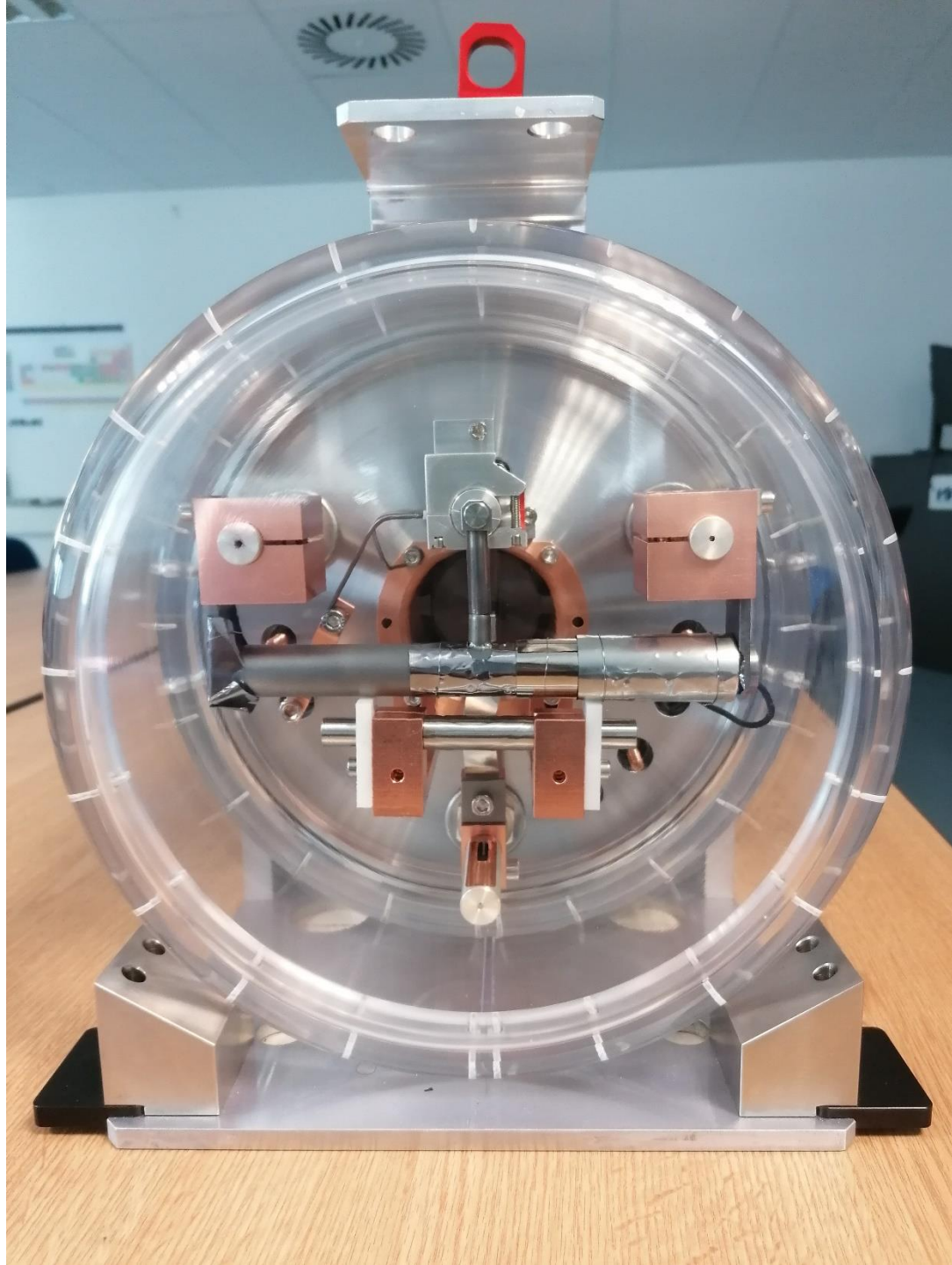
Spanish High-School Students Internship Programme 2019

Irene Guadix Gil

Dewi Valentina Martín Wangsa







HP Compaq LA2405x CWO-508-ISO1

Isotope Browser

Found 28 Elements, 10 Stable

¹¹⁷Sn Tin Half life: 1.1 s Atomic Number: 50 Mass: 99.99607304 MassEcnvsn: 57295 keV	¹¹⁸Sn Tin Half life: 1.97 s Atomic Number: 50 Mass: 99.9254455 MassEcnvsn: 60310 keV	¹¹⁹Sn Tin Half life: 2.9 s Atomic Number: 50 Mass: 100.0020491 MassEcnvsn: 64500 keV	¹²⁰Sn Tin Half life: 7.0 s Atomic Number: 50 Mass: 102.92010473 MassEcnvsn: 68570 keV	¹²⁴Sn Tin Half life: 20.8 s Atomic Number: 50 Mass: 123.92151256 MassEcnvsn: 73627 keV
¹²⁶Sn Tin Half life: 24 s Atomic Number: 50 Mass: 124.9189842 MassEcnvsn: 72328 keV	¹²⁸Sn Tin Half life: 1.92 m Atomic Number: 50 Mass: 126.91693068 MassEcnvsn: 77354 keV	¹²⁹Sn Tin Half life: 2.90 m Atomic Number: 50 Mass: 128.91573385 MassEcnvsn: 82370 keV	¹³⁰Sn Tin Half life: 10.30 m Atomic Number: 50 Mass: 130.91198425 MassEcnvsn: 87391 keV	¹³²Sn Tin Half life: 19.2 m Atomic Number: 50 Mass: 132.91291977 MassEcnvsn: 92413 keV
¹³³Sn Tin Half life: 4.16 s Atomic Number: 50 Mass: 133.90784427 MassEcnvsn: 95744 keV	¹³⁴Sn Tin Half life: 16.9 s Atomic Number: 50 Mass: 134.90517031 MassEcnvsn: 99232 keV	¹³⁵Sn Tin Abundance: 9.87 % Atomic Number: 50 Mass: 135.90462373 MassEcnvsn: 103055 keV	¹³⁶Sn Tin Half life: 15.09 d Atomic Number: 50 Mass: 136.90576781 MassEcnvsn: 106923 keV	¹³⁷Sn Tin Abundance: 2.68 % Atomic Number: 50 Mass: 137.90727244 MassEcnvsn: 110797 keV
¹³⁸Sn Tin Abundance: 3.44 % Atomic Number: 50 Mass: 138.90504479 MassEcnvsn: 114529 keV	¹³⁹Sn Tin Half life: 15.07493 d Atomic Number: 50 Mass: 139.90424918 MassEcnvsn: 118152 keV	¹⁴⁰Sn Tin Abundance: 14.4 % Atomic Number: 50 Mass: 140.90202974 MassEcnvsn: 121759 keV	¹⁴¹Sn Tin Abundance: 7.63 % Atomic Number: 50 Mass: 141.90169069 MassEcnvsn: 125387 keV	¹⁴²Sn Tin Abundance: 8.59 % Atomic Number: 50 Mass: 142.90211142 MassEcnvsn: 129035 keV
¹⁴³Sn Tin Abundance: 32.56 % Atomic Number: 50 Mass: 143.90201072 MassEcnvsn: 132682 keV	¹⁴⁴Sn Tin Half life: 87.23 s Atomic Number: 50 Mass: 144.90424918 MassEcnvsn: 136387 keV	¹⁴⁶Sn Tin Abundance: 4.93 % Atomic Number: 50 Mass: 146.90343252 MassEcnvsn: 143424 keV	¹⁴⁷Sn Tin Half life: 120.2 d Atomic Number: 50 Mass: 147.90272521 MassEcnvsn: 147081 keV	¹⁴⁸Sn Tin Abundance: 6.79 % Atomic Number: 50 Mass: 148.90276944 MassEcnvsn: 150742 keV
¹⁴⁹Sn Tin Half life: 3.14 d Atomic Number: 50	¹⁵⁰Sn Tin Half life: 2.15 s Atomic Number: 50	¹⁵¹Sn Tin Half life: 18.02 m Atomic Number: 50	¹⁵²Sn Tin Half life: 16.02 m Atomic Number: 50	¹⁵³Sn Tin Half life: 2.23 m Atomic Number: 50

CERN - AB - OP eLogbook - Viewer - Mozilla Firefox

YHRS.BSC420

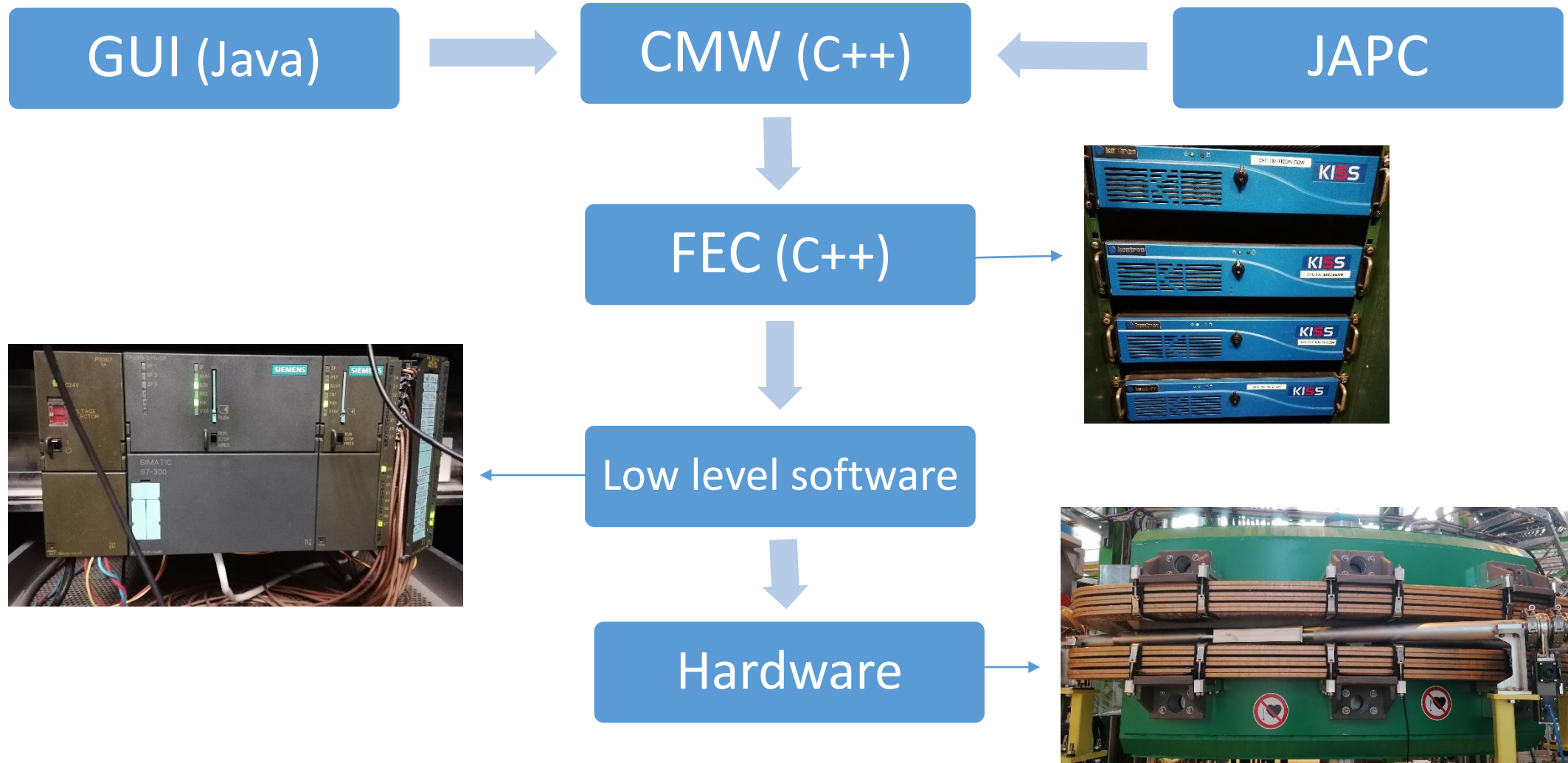
Handwritten annotations on the spectra:

- Top plot: Xe , SnS , circled peak.
- Bottom plot: $Lo?$, $LoO?$, 174 ($LaOH$), $Ta?$ 187 , $TaO?$.

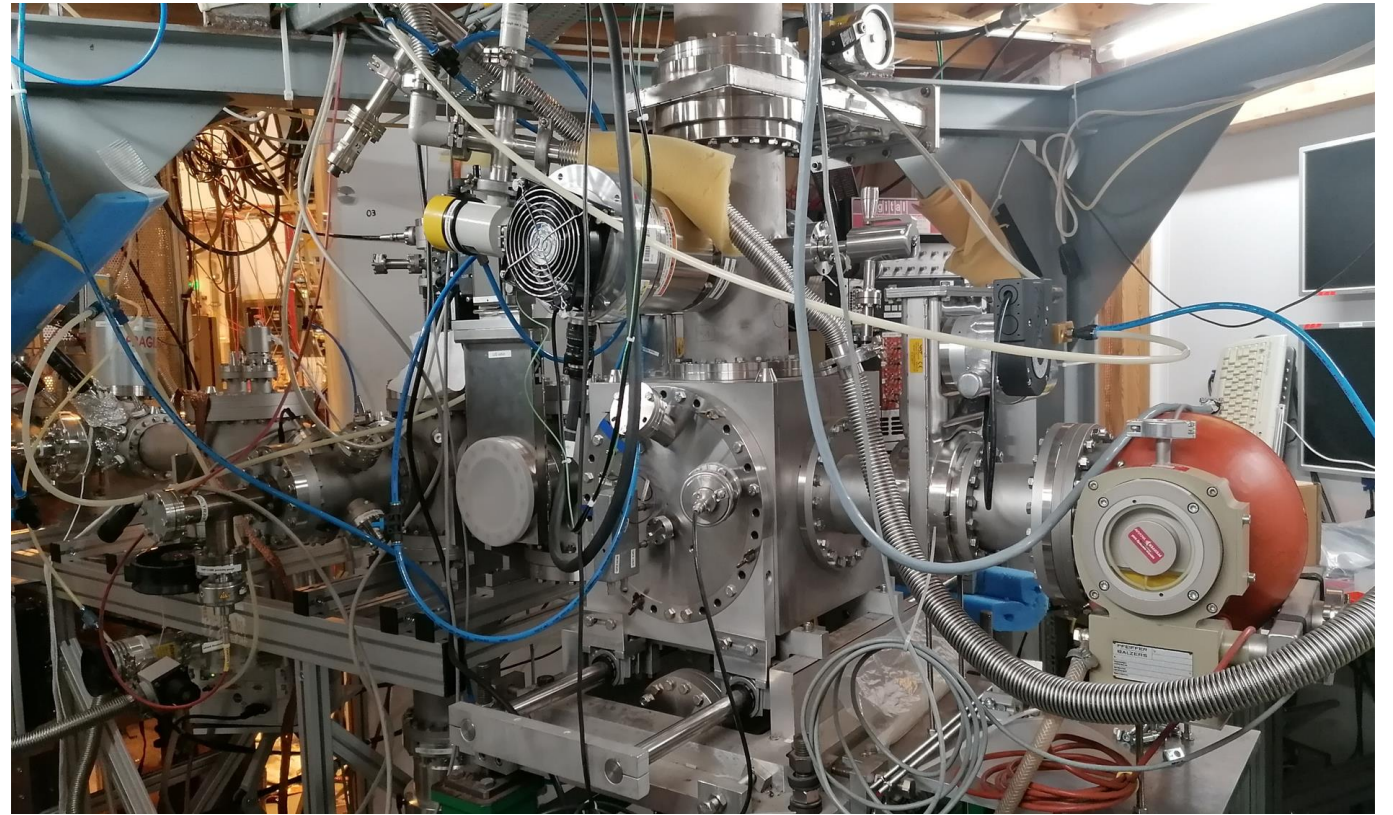
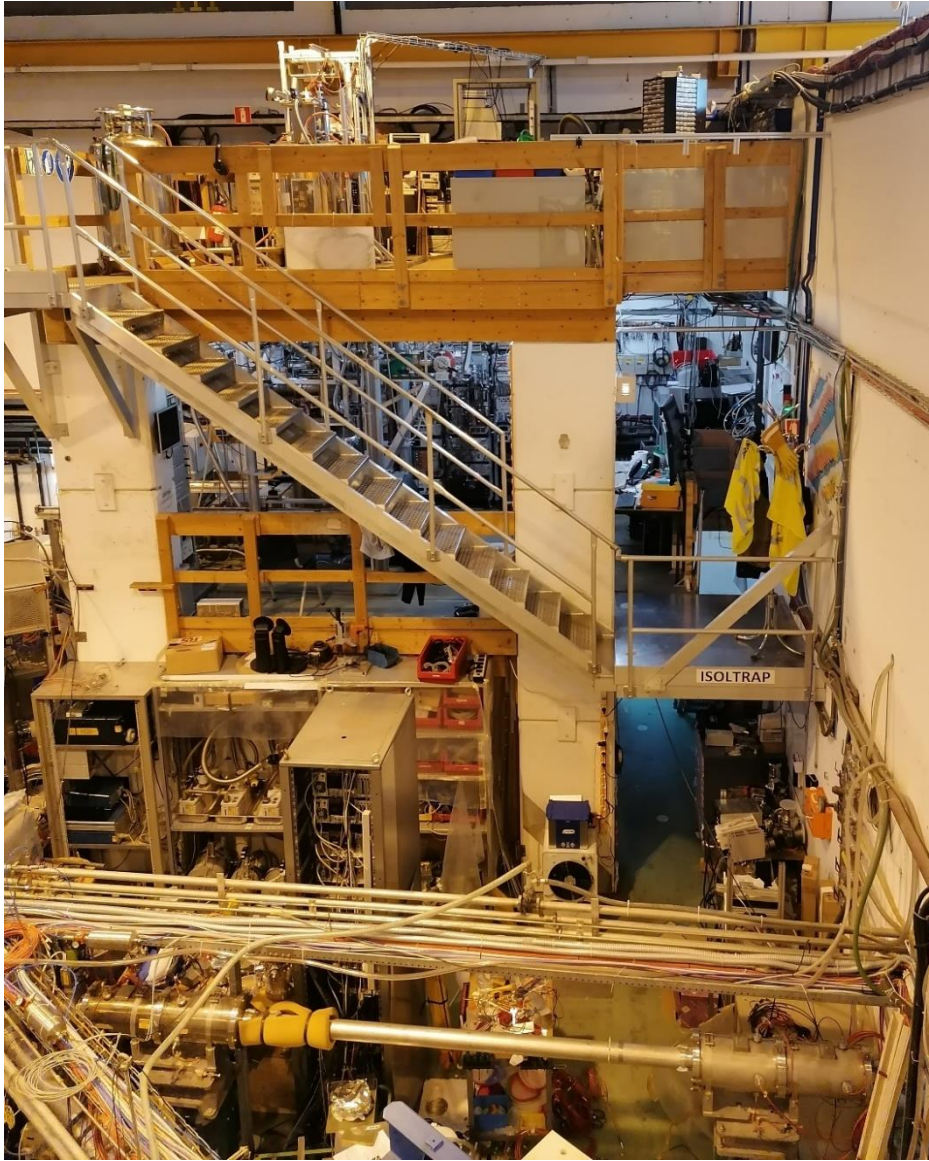
HP Compaq LA2405x

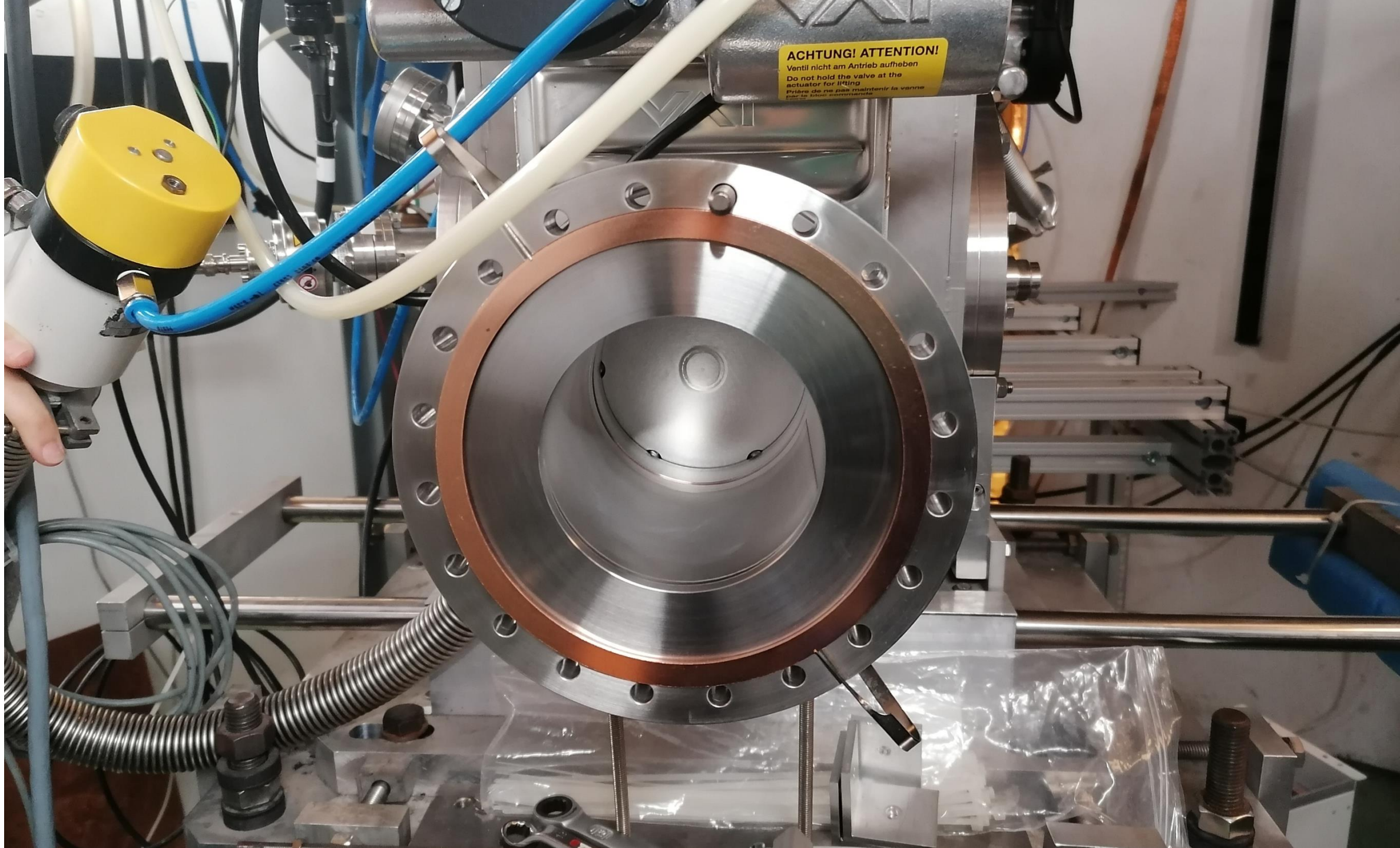


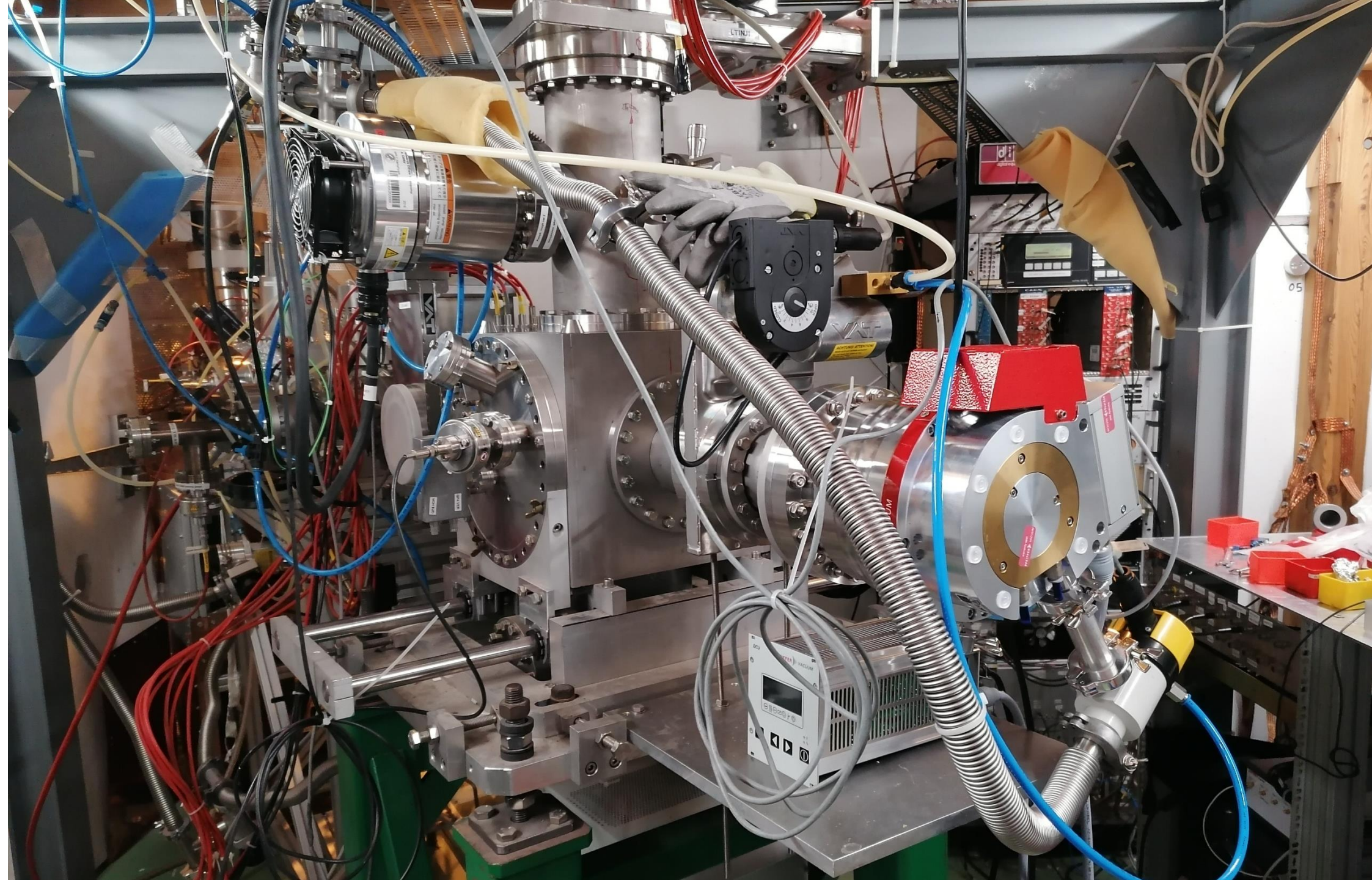
Control Systems

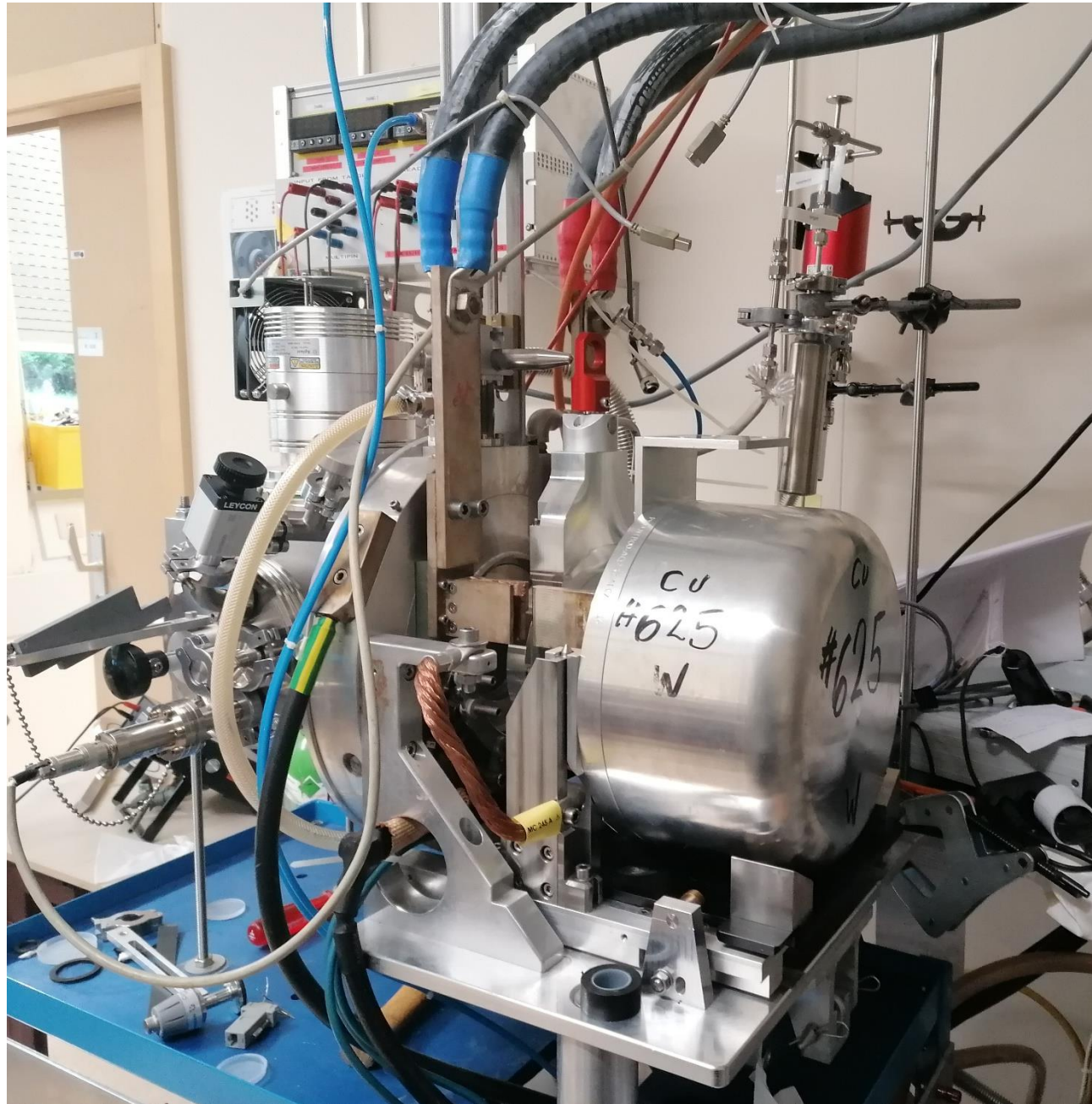


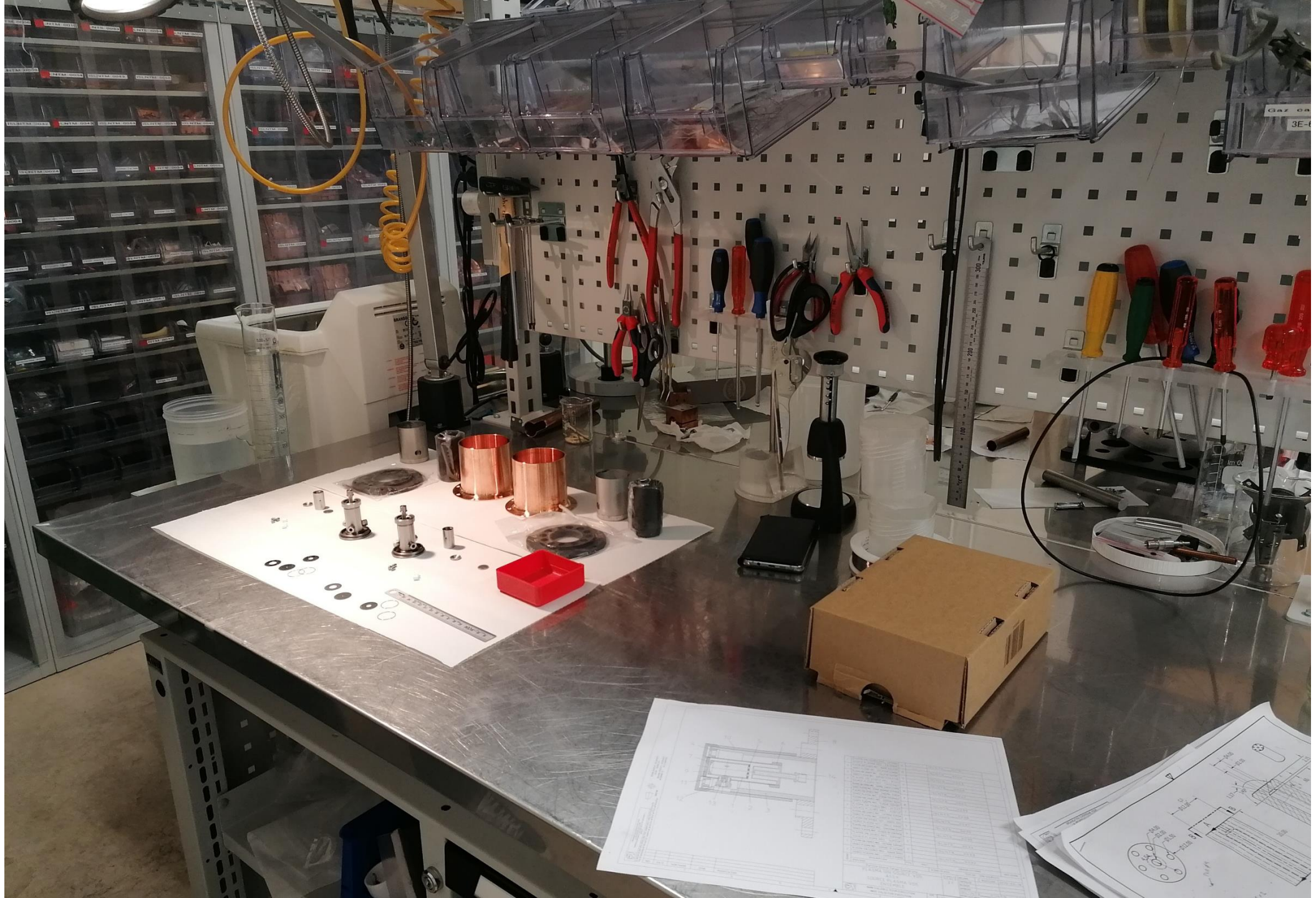
ISOLTRAP

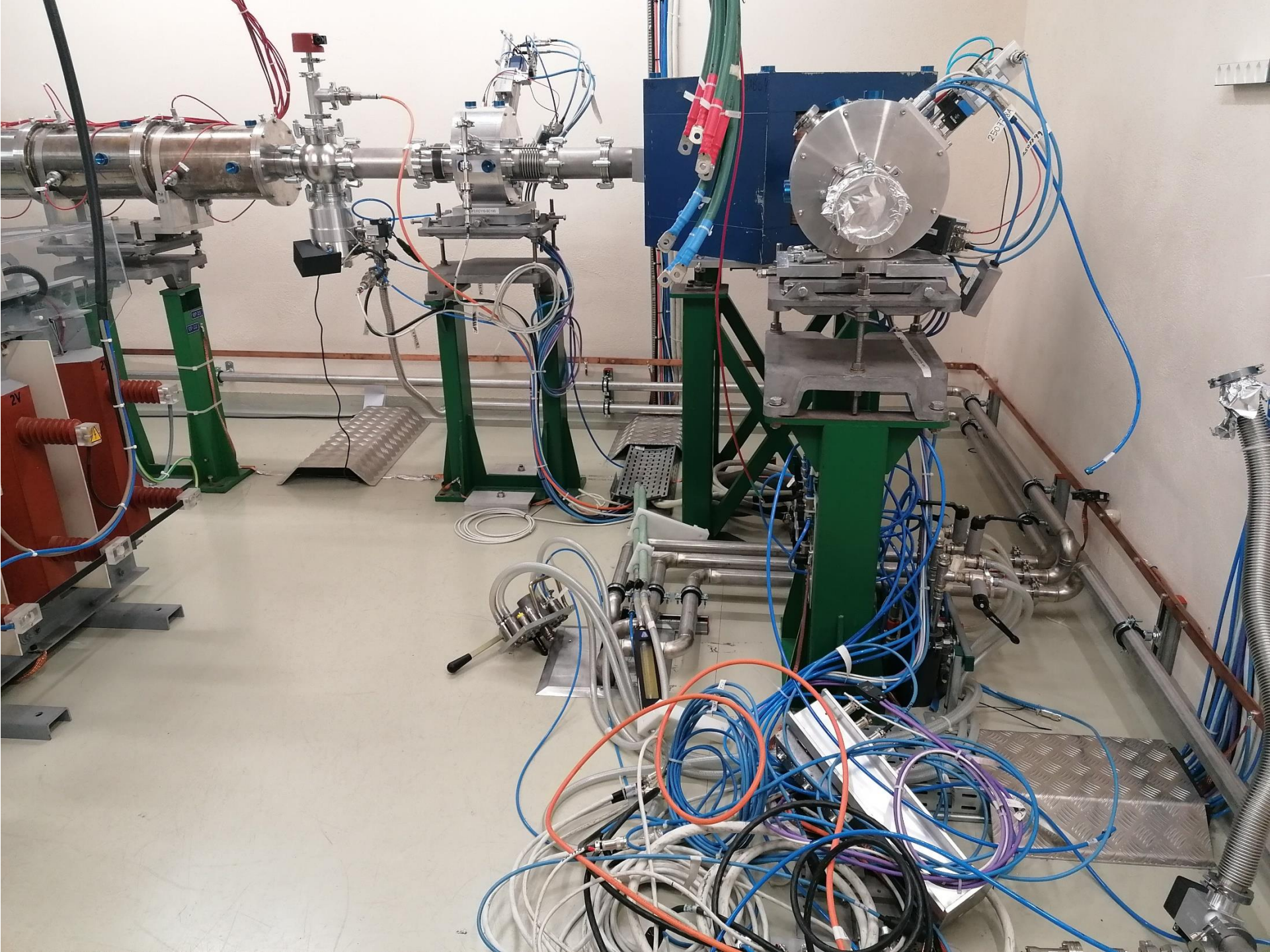


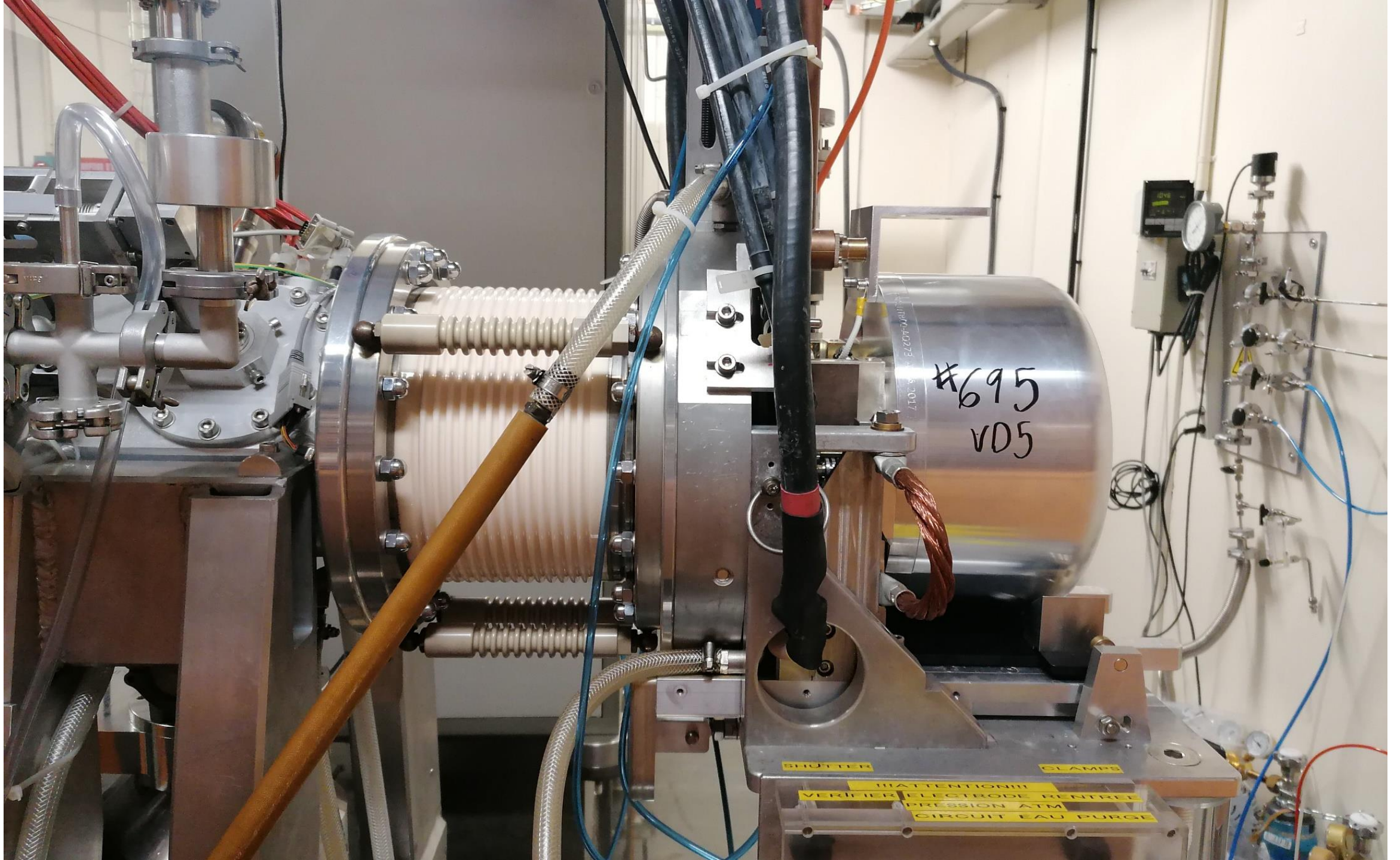


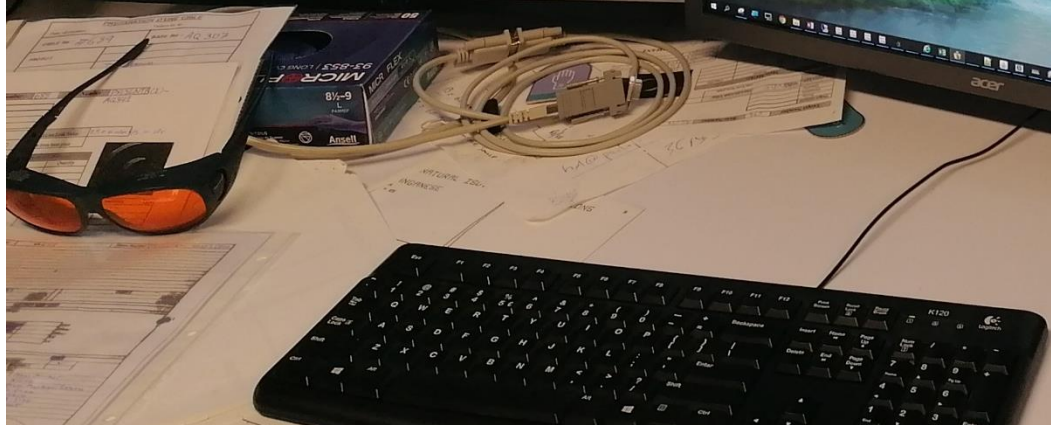
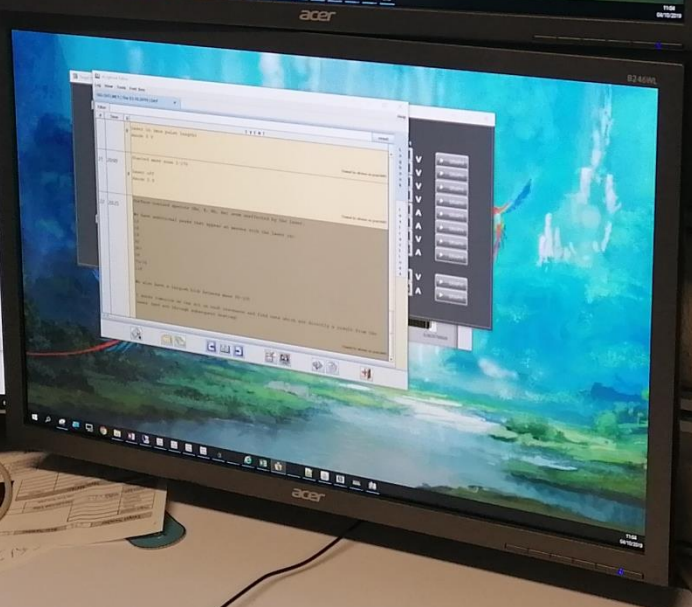
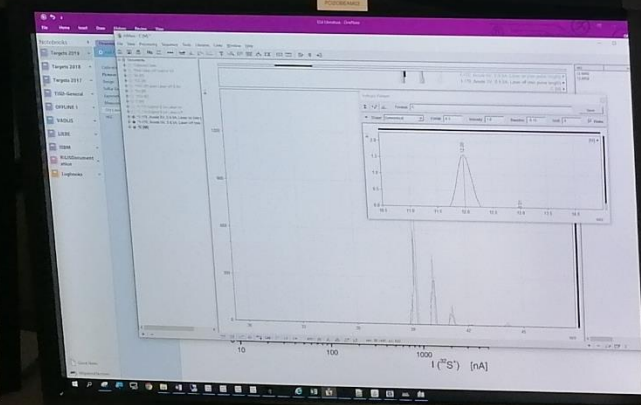
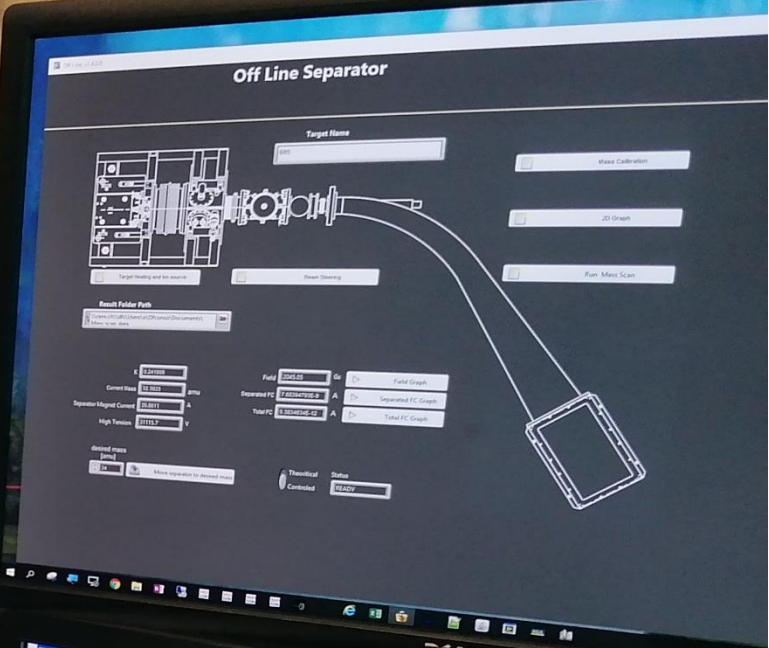


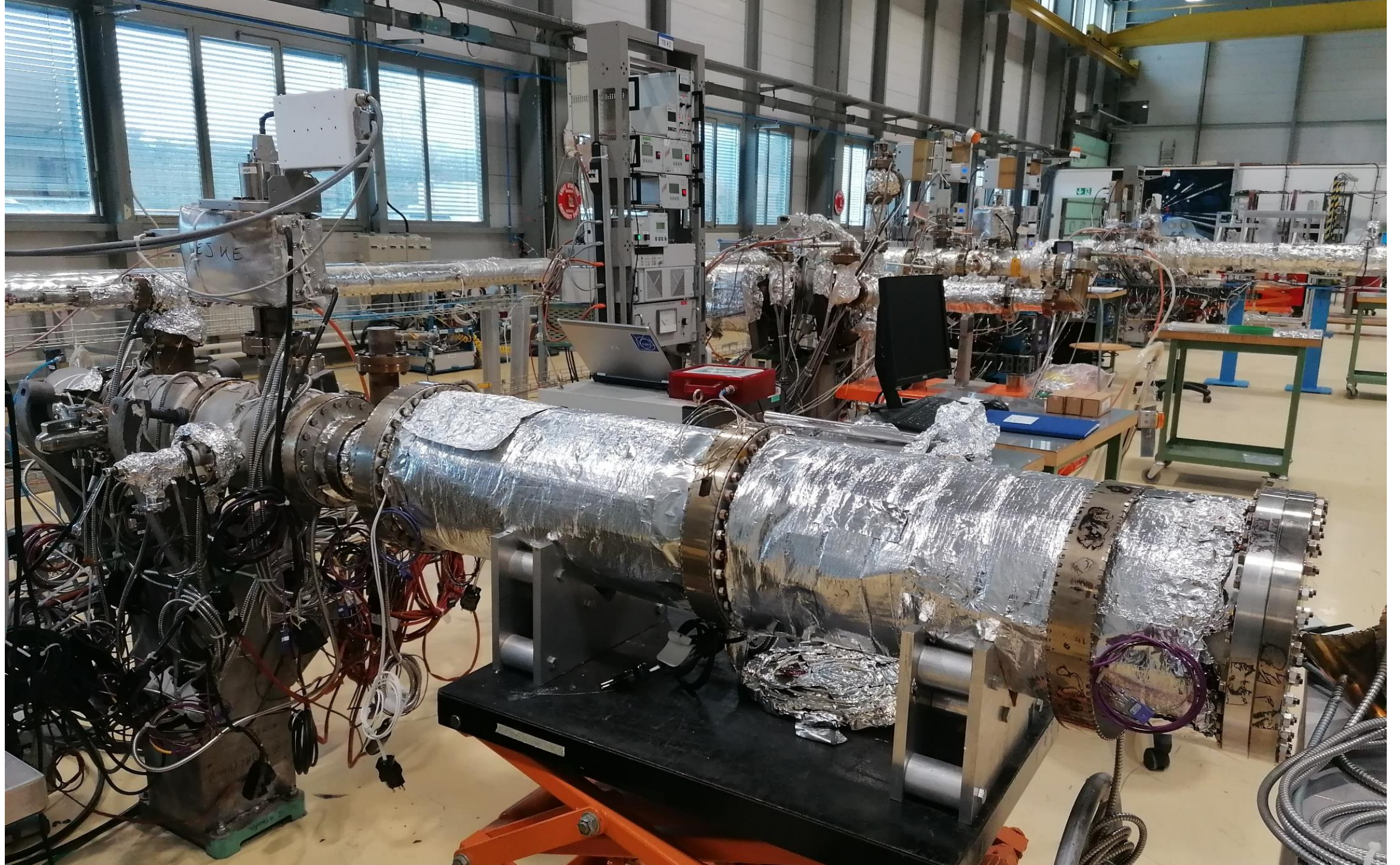












VACUUM PUMPS



OUR SEPARATOR MAGNET

The screenshot displays the ISOLDE Mass Control software interface. At the top, the window title is "ISOLDE Mass Control". Below the title bar, there is a "File Control" menu and a status bar showing "24 Oct 2011 14:17:35 ASYNC - 700" and "ASYNC".

The main interface is divided into several sections:

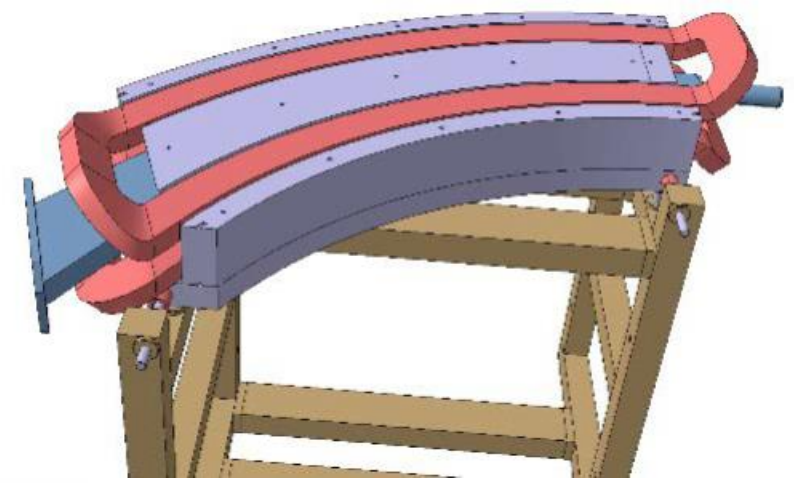
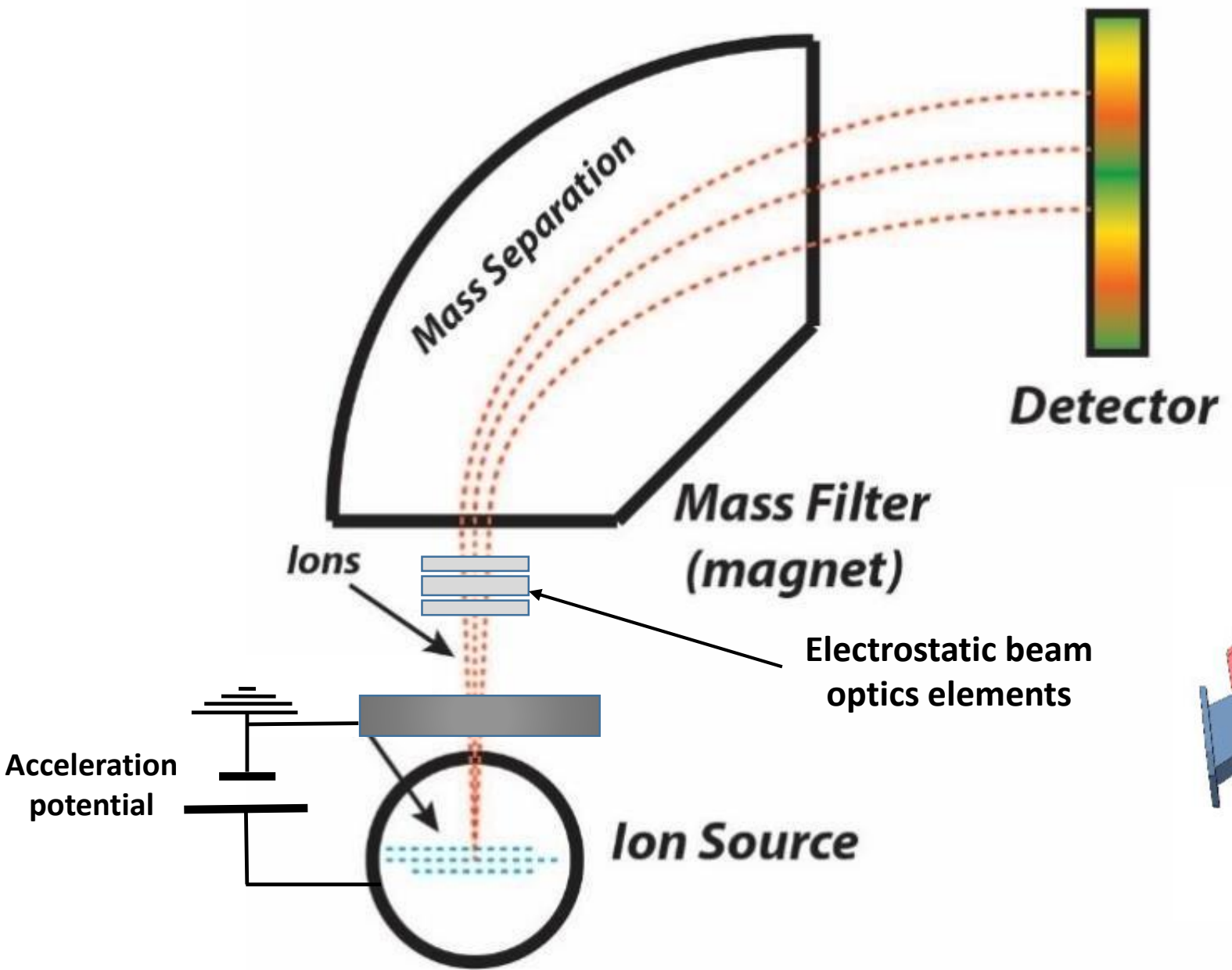
- HRS line**: A header for the current line.
- Mass Calculator**: A table with the following data:

Isotope	238U
Required Mass	238.050
Mass factor	799.41
High Voltage	30250.0 v
Required field	0.38747
- Field Readout**: A table with the following data:

Field CCV	0.38747 Tesla
Field AQN	0.38747 Tesla
Field Error	-1.123E-7
Measure Mass	238.05
- Mass Calibration Calculator**: A table with the following data:

Current field	0.38747
Distance to move	0.00 mm
Dispersion	1039.00
New field	
New Mass Factor	

Buttons labeled "Send" and "Compute" are visible next to the respective calculator sections. A "Status On Regulation" indicator is also present.



Acceleration potential: 30250V

Ion charge +1 ($1,602 \cdot 10^{-19} \text{C}$)

Beam energy: 30250 eV

Velocity: 179603.84 m/s

Ion kinetic energy: $4.85 \cdot 10^{-15} \text{ J}$

Separator magnet magnetic field: $B = 0.3383 \text{ T}$

Isotope mass (181Ta) = 181 uma

Radius: 0.99 m

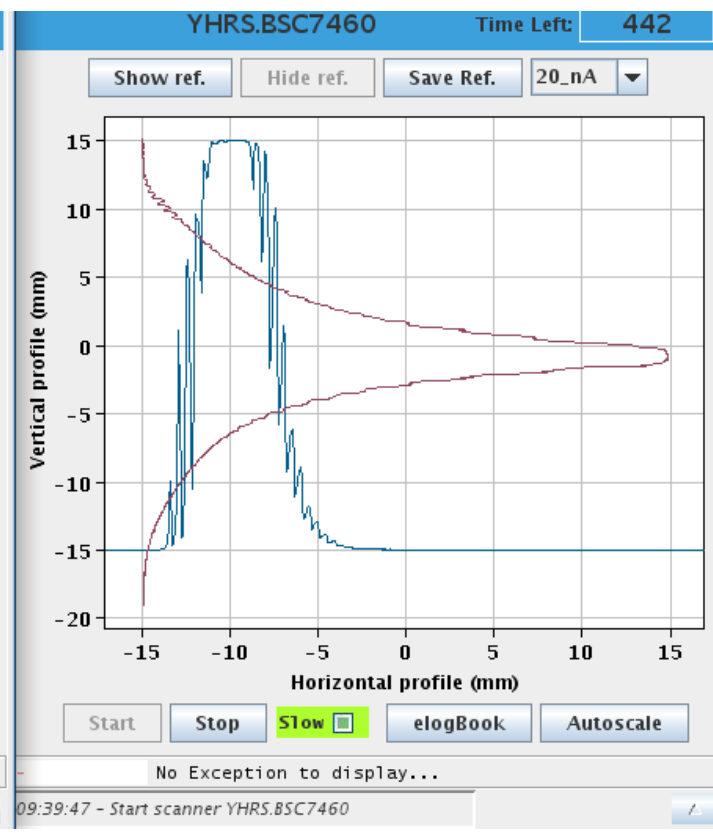
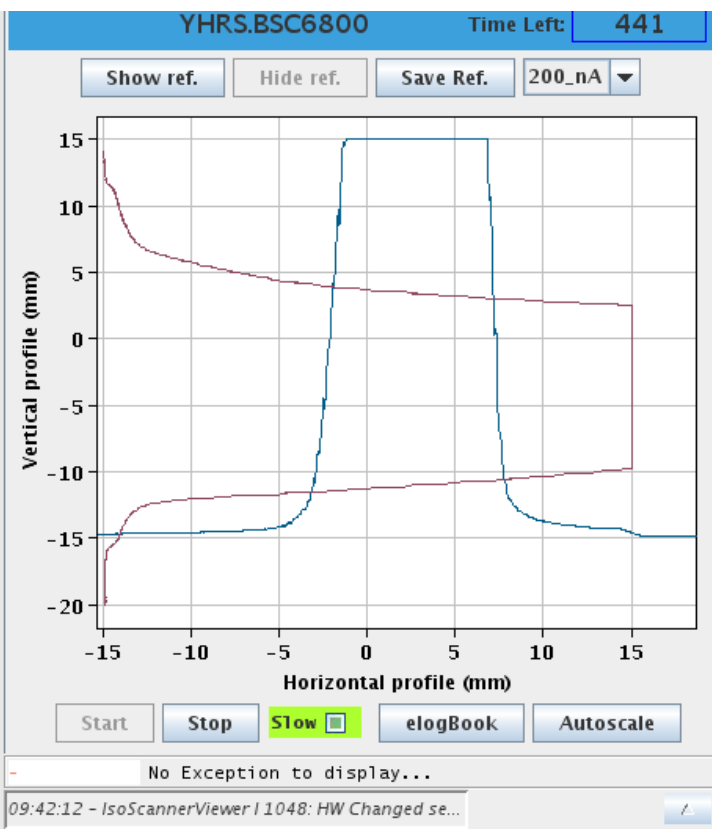
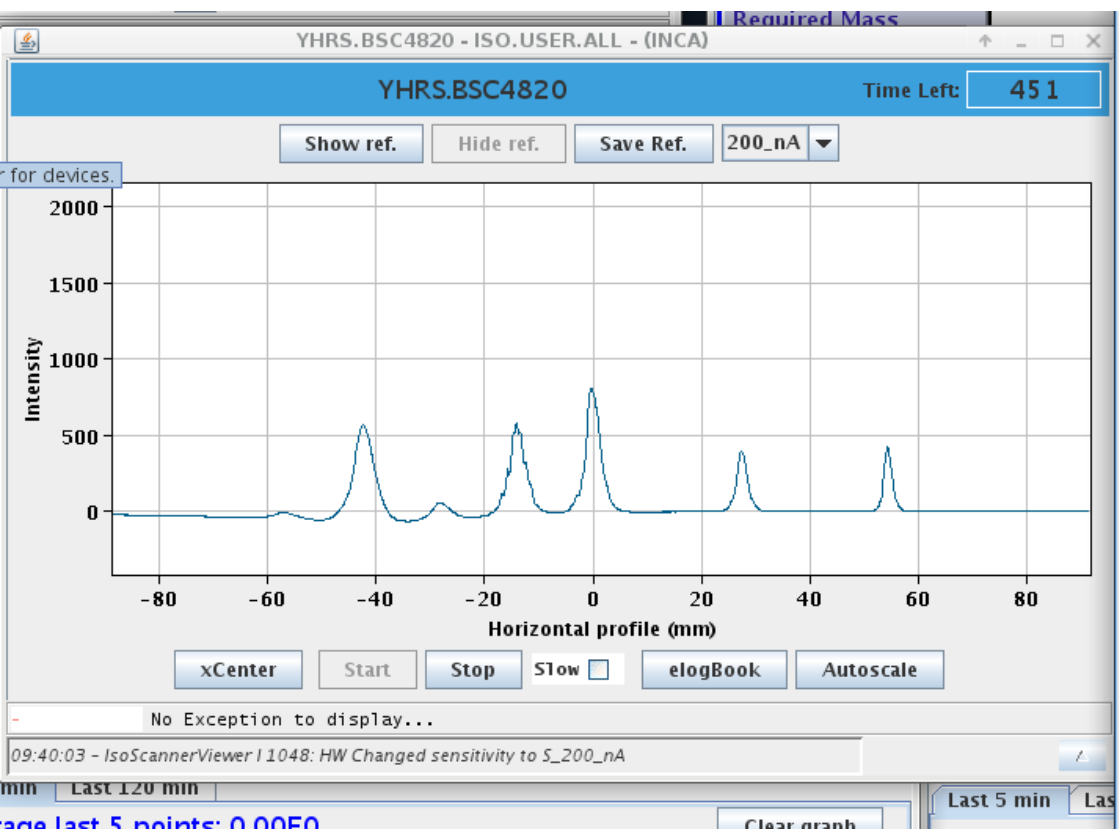
$$qV_{\text{acc}} = \frac{1}{2} mv^2$$

$$R = mv/qB$$

The screenshot displays the ISOLDE Mass Control software interface, titled "ISOLDE Mass Control - ISO.USER.ALL - (INCA)". The interface is divided into several sections:

- HRS Line Mass Calculator:** A table with fields for Isotope (181Ta), Required Mass (180.948), Mass factor (792.72), High Voltage (30250.0 v), and Required field (0.339238). A "Send" button is located to the right.
- Field Readout:** A table with fields for Field CCV (0.33924 Tesla), Field AQN (0.33924 Tesla), Field Error (0.000E0), and Measure Mass (180.94837). To the right, a status panel for "HRS.MAG90" shows: Ps Status (OK), Ps Mode (ON), Ps Control (REMOTE), Software Cycling (OFF), Software Regulation (AUTO), Tm Comm Err (false), Ps Comm Err (false), and Comm Err (false).
- Mass Calibration Calculator:** A table with fields for Current field (0.339238), Distance to move (1.00 mm), Dispersion (1855.00), New field (0.23375), and New Mass Factor (792.72). A "Compute" button is to the right of the first two rows, and a "Send" button is to the right of the last two rows.

At the bottom of the window, a status bar displays "No Exception to display..." and a timestamp "04:15:27 - Trying to relogin with policy: LOCATION".



Different masses out of the magnet. Each peak corresponds to a different mass. Central mass: 181 Ta.

Beam profiles

THANK YOU FOR YOUR ATTENTION

