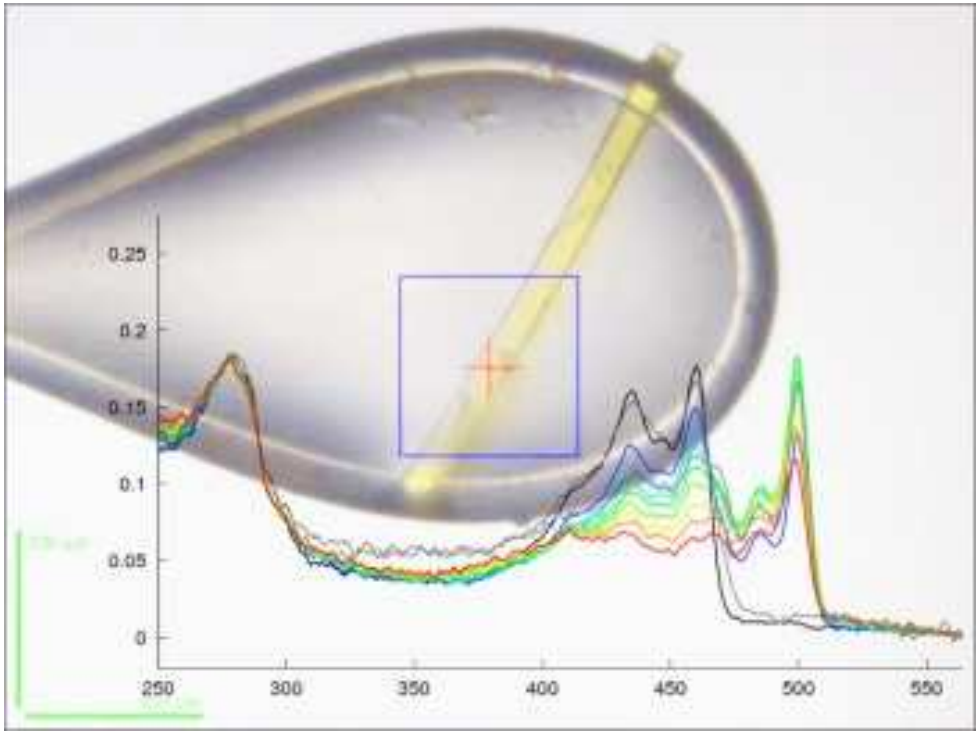
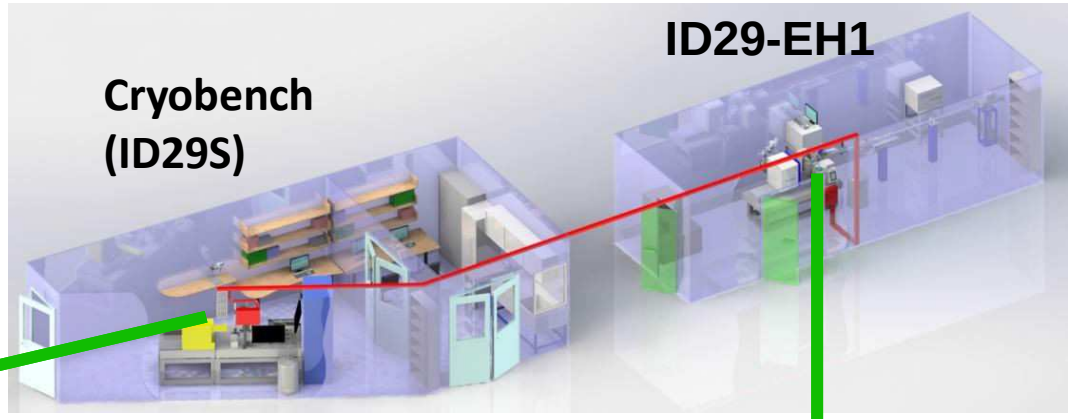
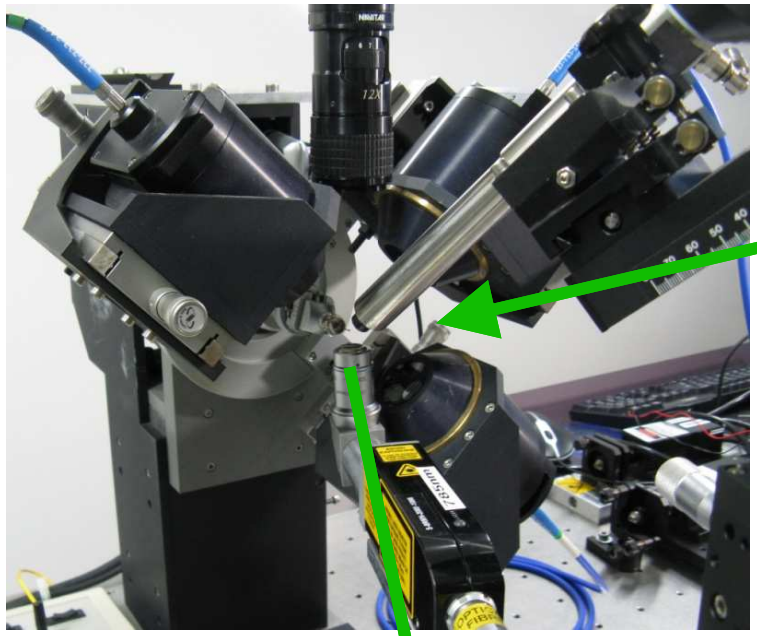


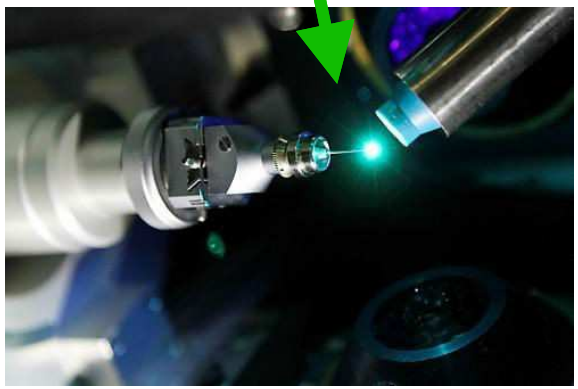
ID29S-Cryobench News

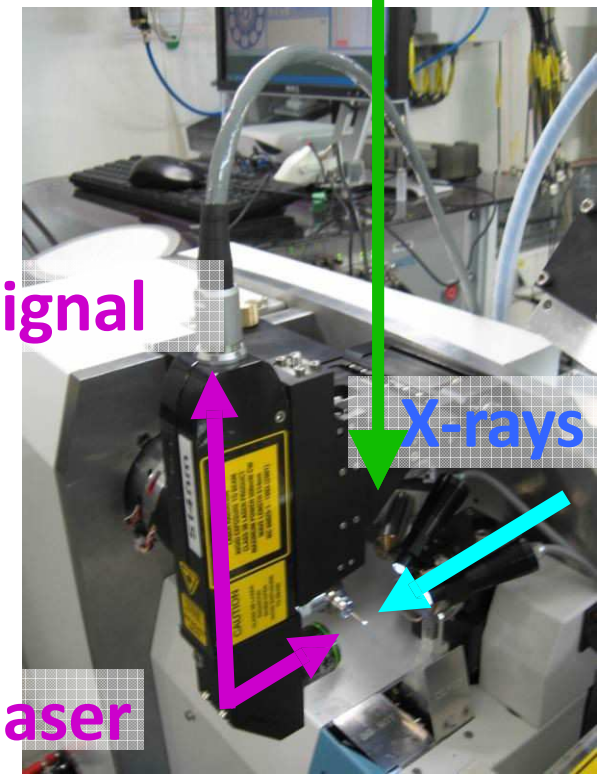
MX BAG Meeting, February 8th 2016

The Cryobench





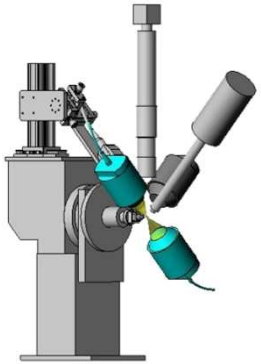


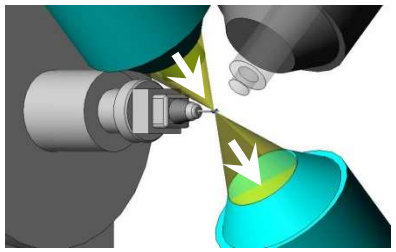


Publication: von Stetten et al., *Acta Crystallographica D* (2015)

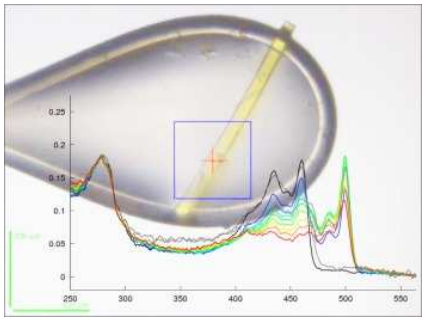
Different modes of operation

Absorption mode

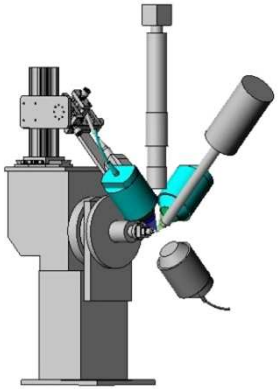


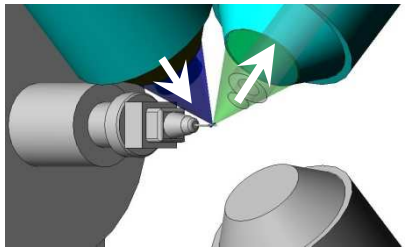


Transmission geometry (0°)

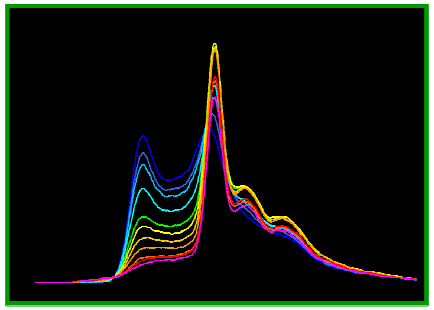


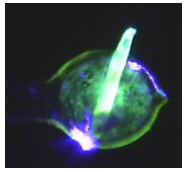
Fluorescence mode



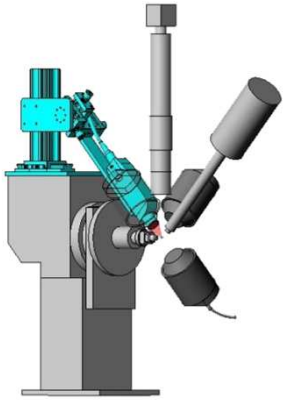


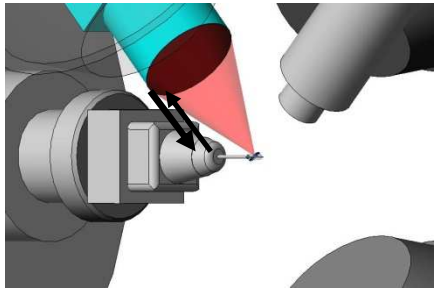
Reflection geometry (90°)



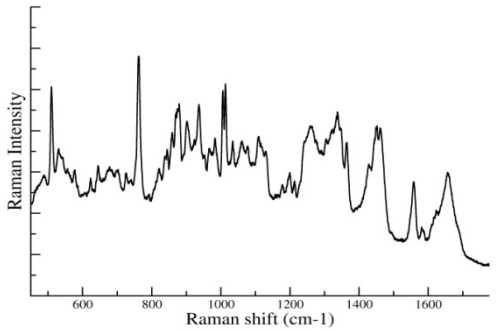


Raman mode



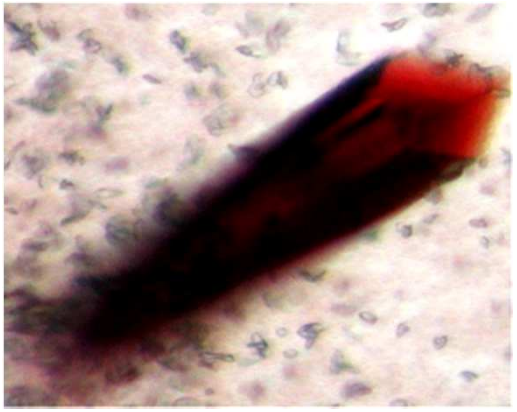


Back-scattering geometry (180°)

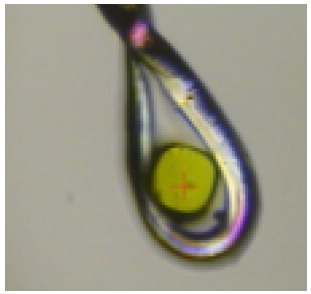


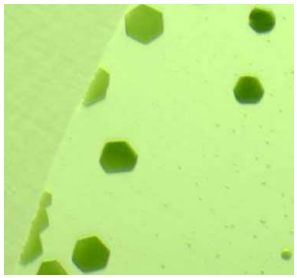
Samples

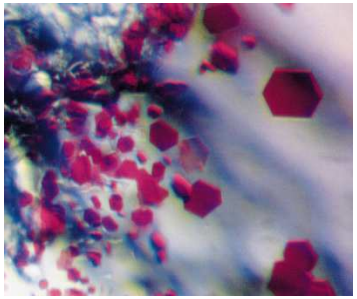
- Metal centers (redox state)

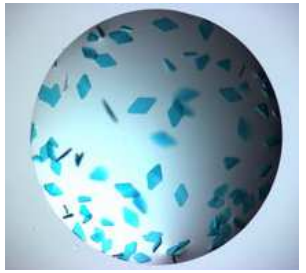


- Light-absorbing cofactors (chromophores)



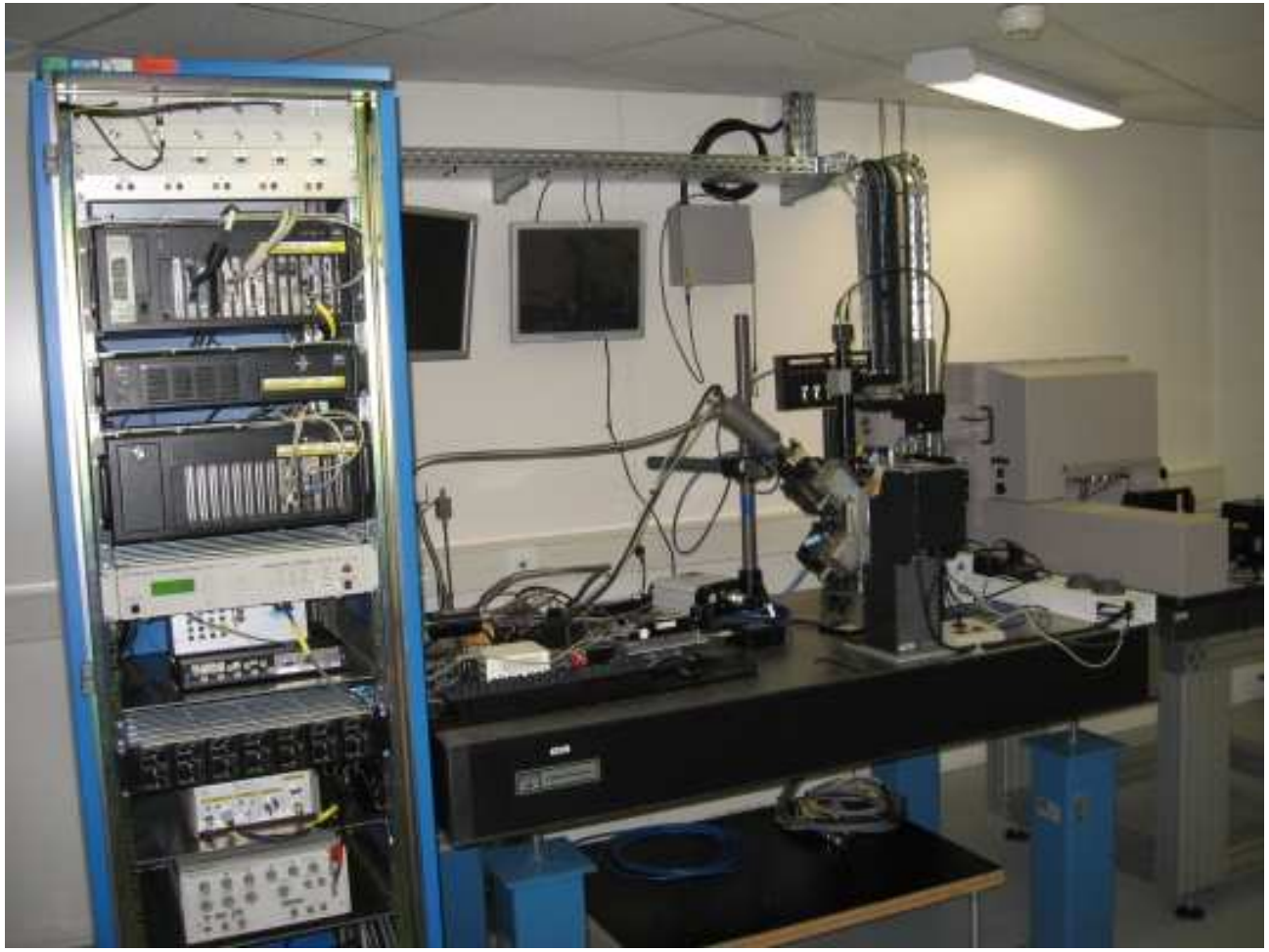




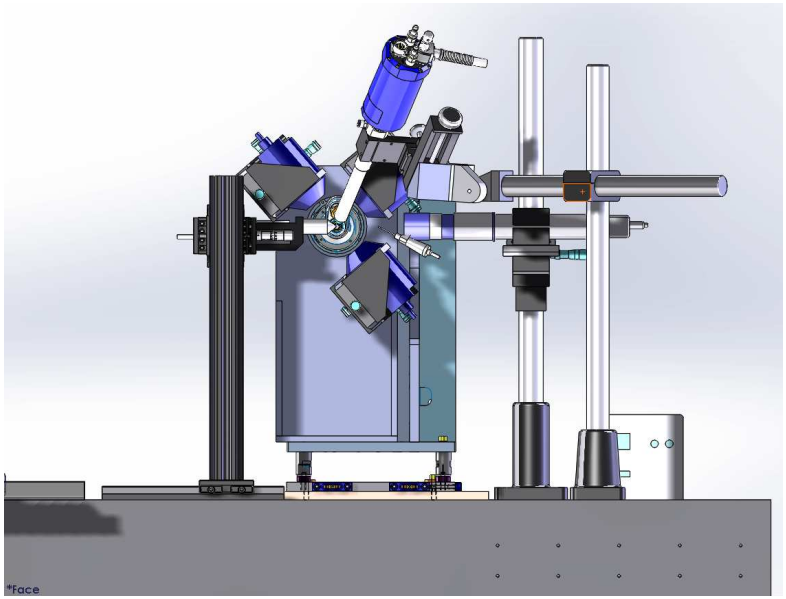


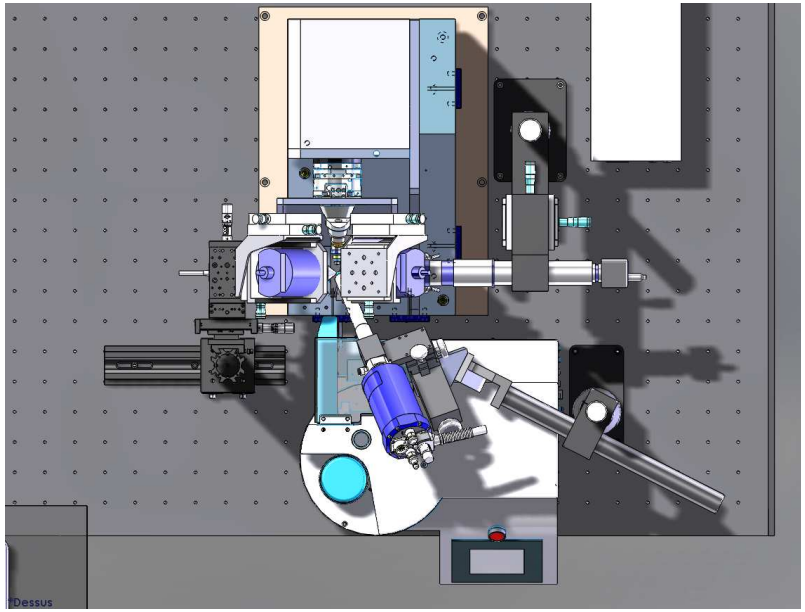
- Bonds involving heavy atoms (disulfide, C-Br, Fe-O) (non-coloured)

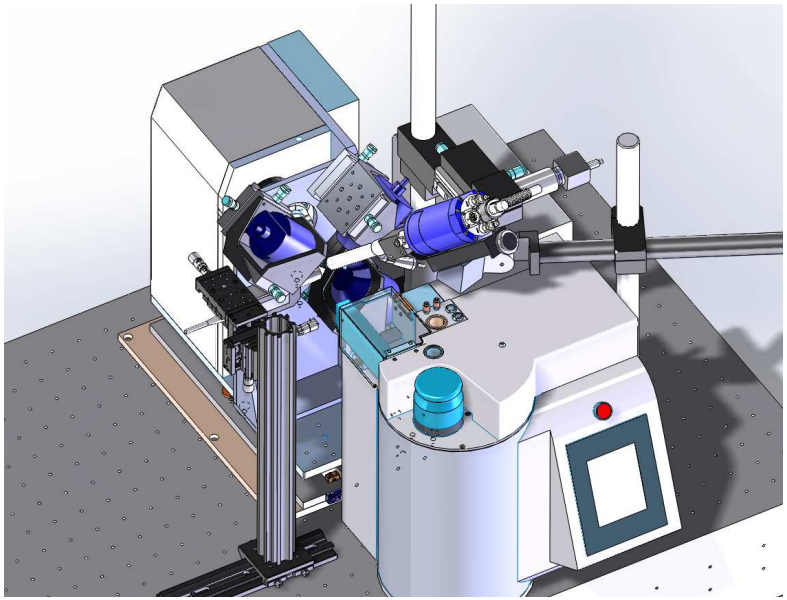
Old Cryobench

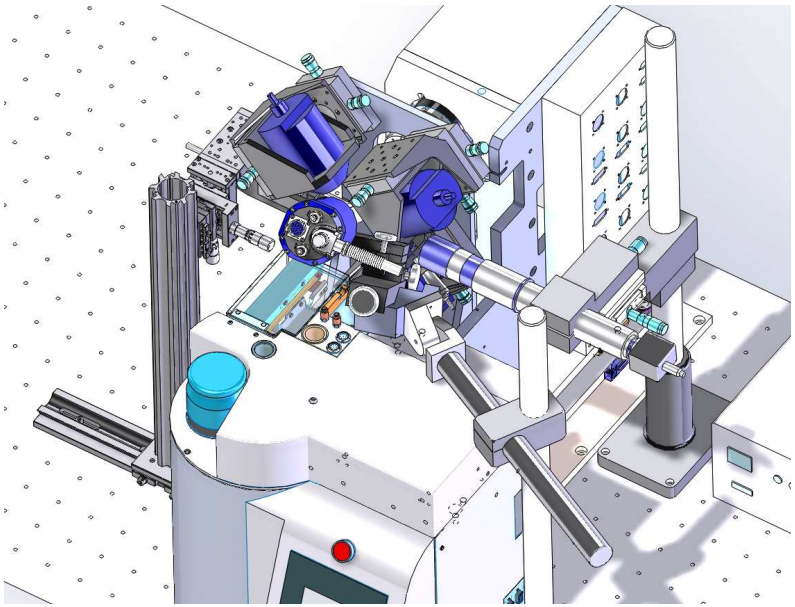


Future Cryobench – MD2 + SC3

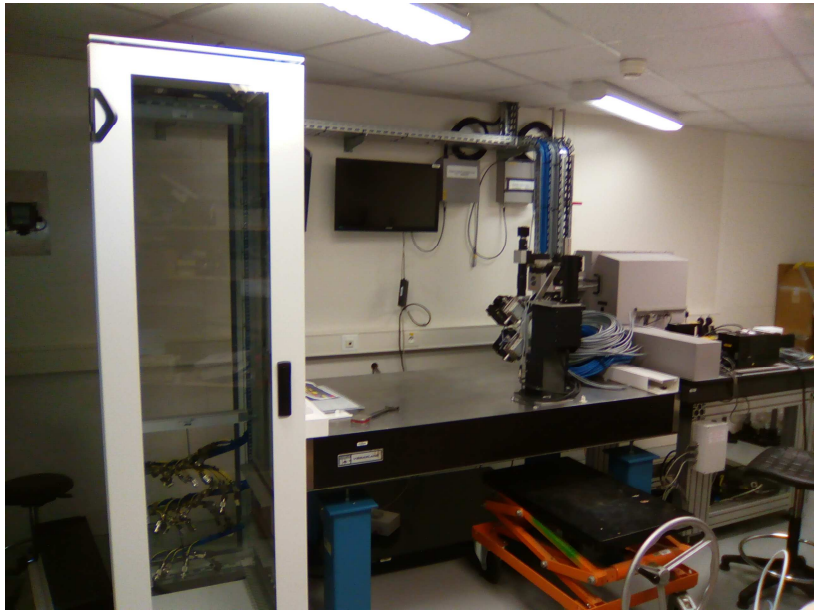




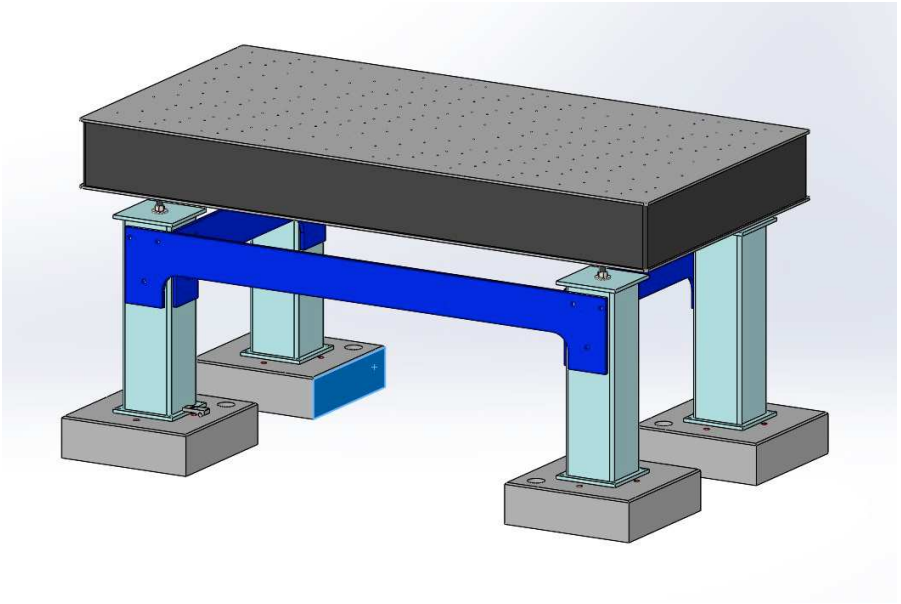




Newer Cryobench



Rack for IcePAPs, NIM and computers

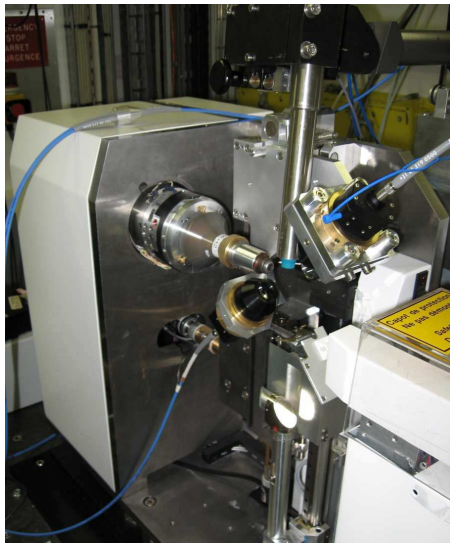


More stable optical table

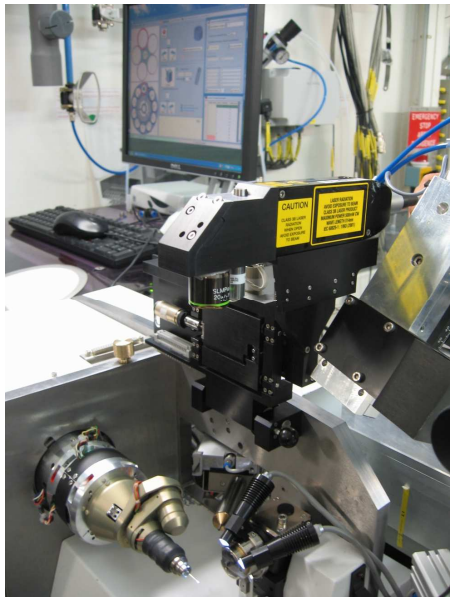
New Cryobench storage area

Cryobench-related equipment

- **UV-vis abs / fluo microspectrophotometer**
  - Permanently installed on MASSIF3 (1E+13 ph/s - 15 um Ø beam)
  - Can be mounted on FIP (1E+11 ph/s – 300 um square top-hat beam)



- **Online Raman**
  - Identify suitable radiation damage project



Future developments

- Minidiff – mid-2016
- Sample changer - 2017
- Microsec / millisec UV-vis abs spectroscopy
- Time-resolved correlated spectroscopy and diffraction experiments (RT)