EUROPEAN SPALLATION SOURCE

Giuseppe Aprigliano

NMX Instrument Project Engineer

Introduction

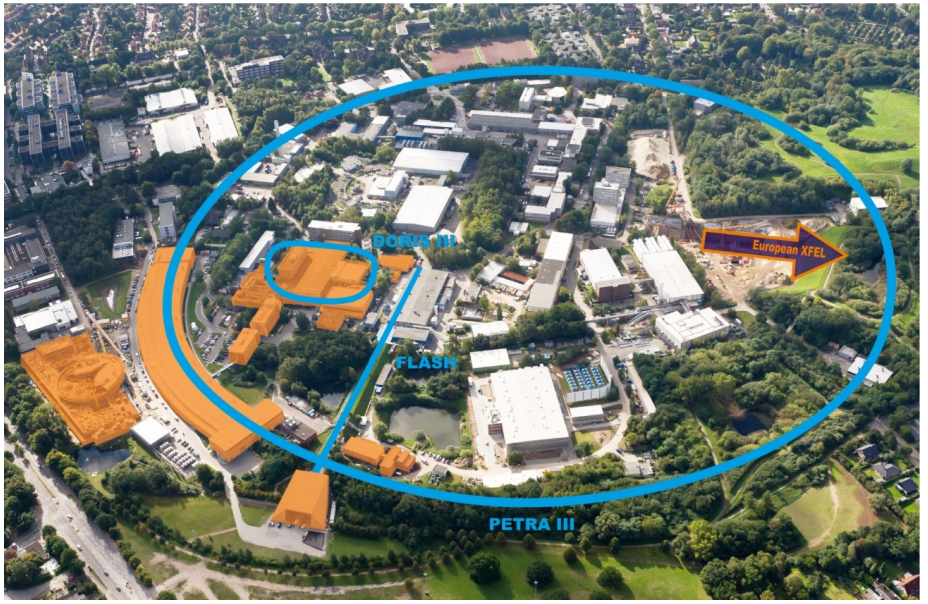
www.europeanspallationsource.se

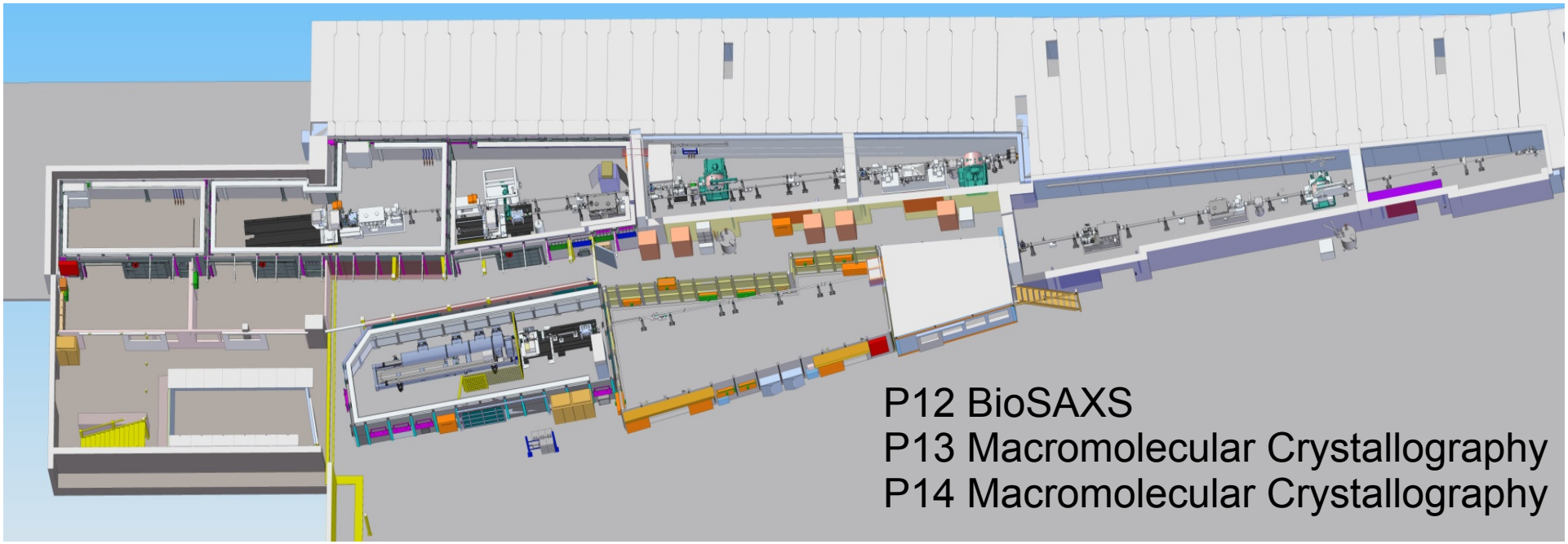
XIV School of Neutron Scattering 01st April , 2016

Previous Employment

2008 -2013 European Molecular Biology Laboratory-Hamburg outstation, Germany

Mechanical Engineer of the Instrumentation team
Responsible for mechanical integration of X-ray beamlines at the Synchrotron Radiation Source PETRA III (DESY).





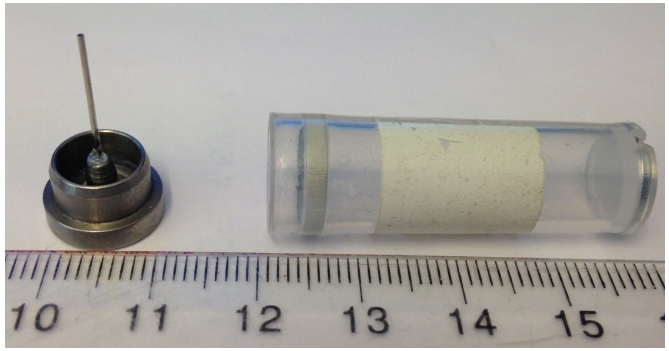
Neutron Macromolecular Crystallography instrument at ESS

Since 2013 Mechanical Engineer at ESS, Lund, (Sweden)

- Since January 2014, Instrument Project Engineer for the neutron instrument NMX, responsible together with the instrument scientist to deliver one of the first instruments of the ESS instrument suite.

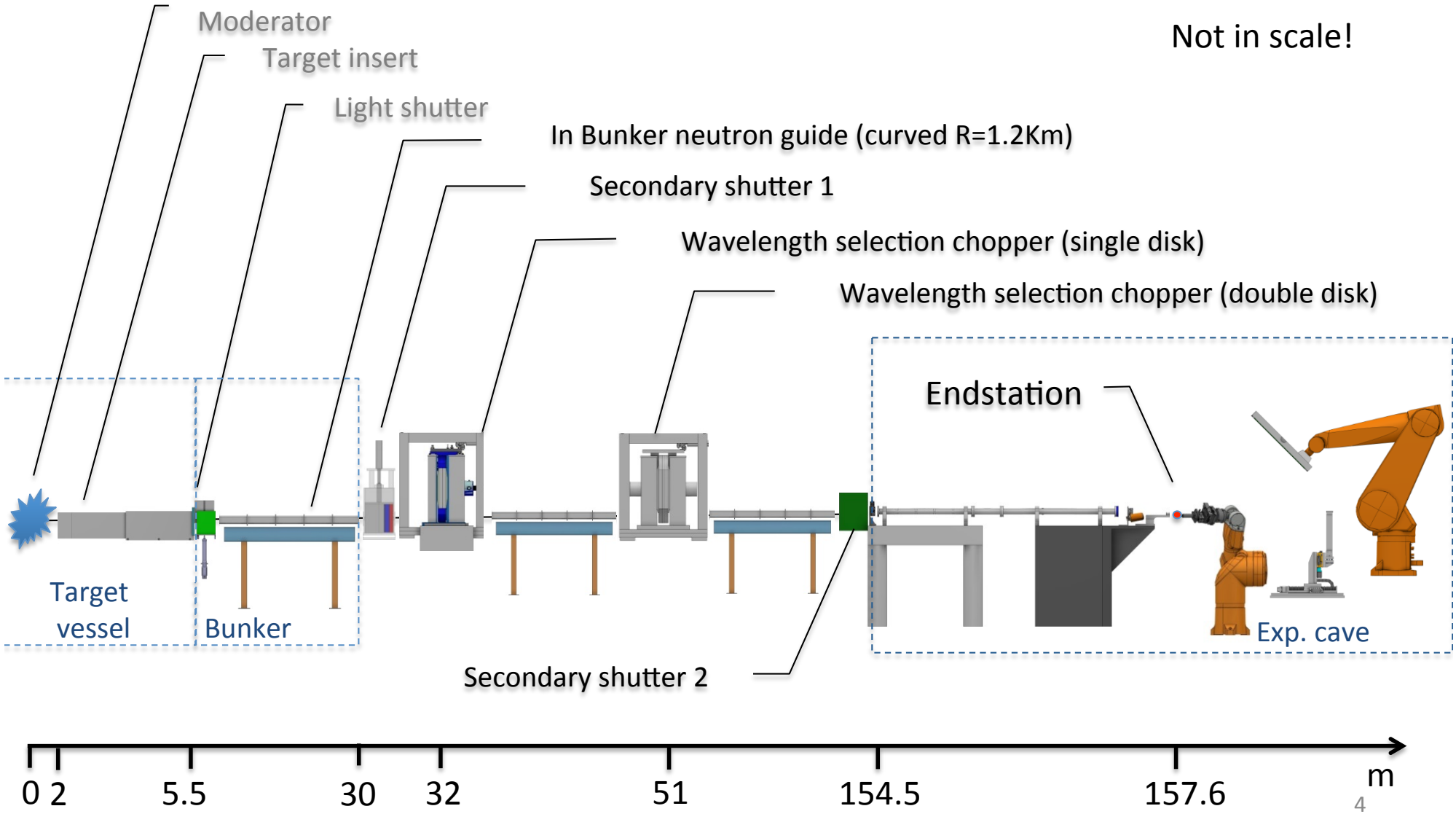
-NMX is a Quasi-Laue time of flight diffractometer with Macromolecular Crystallography as primary scientific case.

"Small" crystals : 0.2mm to 5mm

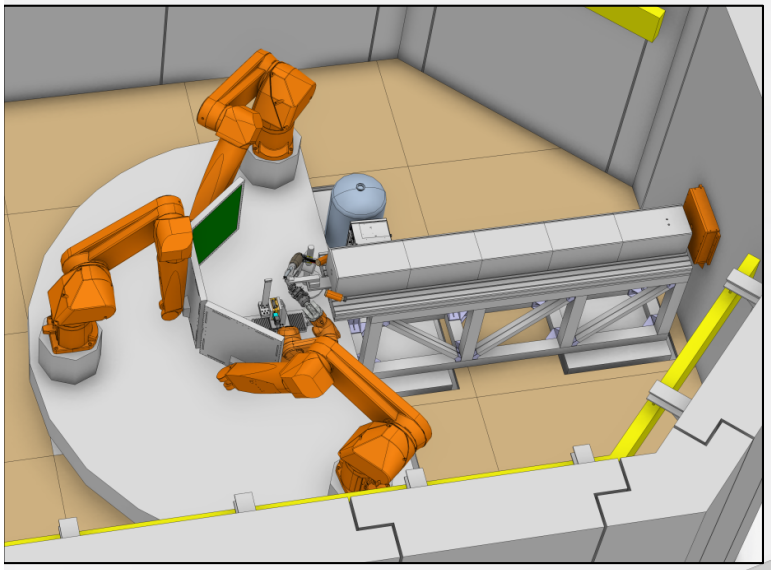


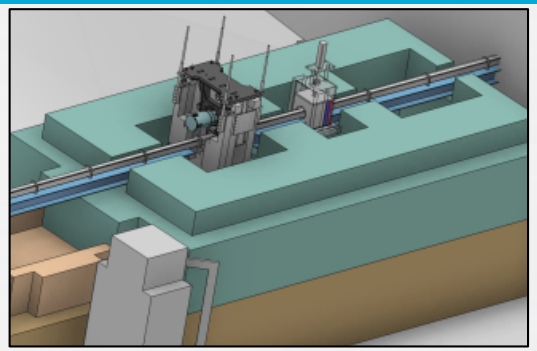
Beam property	min	max
Beam size	0.2mm x 0.2mm	5mm x 5mm
Wavelength	1.8Å	3.55Å
Max divergence	±0.2°	
Sample-Source distance	157.6m	

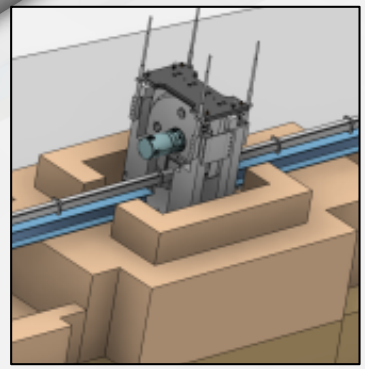
Neutron Macromolecular Crystallography instrument at ESS

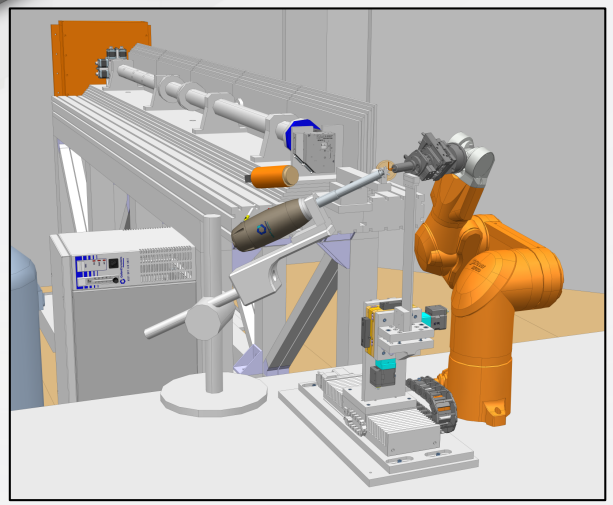


Neutron Macromolecular Crystallography instrument at ESS









Why am I at the school?

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- To learn about different approaches to the instrument construction process from both engineering and scientific perspective

- To have an insight on different investigation techniques other than MX/NMX

- To Improve my understanding of the challenges the requirements of the neutron scattering experiment.

- To close the gap Scientist-Engineer ??? Just kidding, you'll never get us…

Thank you for your attention
Grazie per la vostra attenzione