



Contribution ID: 81

Type: Oral Presentations

## IAEA support to utilization of large scale facilities by developing countries.

*Wednesday, 30 January 2019 10:30 (30 minutes)*

IAEA supports a variety of activities concerning large scale facilities. With respect to neutrons, our activities include technical meetings and coordinated research projects on topics such as neutron detection, and modern cold moderators for research reactors and accelerator-based neutron sources. We also support via national Technical Cooperation projects the development of neutron scattering instrumentation at research reactors.

IAEA also supports access to, and training in, synchrotron-based methods: we have sponsored projects in support of SESAME in Jordan since its inception, providing training for staff engineers and scientists and future users of synchrotron light, supplying experts during design and commissioning of the ring, and purchasing hardware, such as radiation protection and monitoring equipment. We also run, in partnership with Elettra, the XRF beamline in Trieste, Italy for which we provide some support for access to people from developing countries. This beamline hosts an Ultra High Vacuum chamber, whose core instrument is a motorized 7-axis manipulator. This enables the use of different excitation/detection geometries, integrating and implementing in one facility different X-ray spectrometry techniques with complementary analytical performance, such as XRF and XANES in conventional, grazing incidence or exit incidence geometries as well as total reflection XRF and X-ray reflectometry (XRR). At our laboratories in Seibersdorf, Austria we have a duplicate of this: the "mirror chamber". Training on its operation can take place offline in Austria before experiments are conducted at Elettra. Finally, we provide travel support via cooperation agreements to a small number of meetings that cover topics in this area.

### Summary

KEYWORDS: synchrotron light sources, neutron sources

Description of IAEA activities in large scale facilities.

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**Session Classification:** AfLS2

**Track Classification:** AfLS2 track