

Current events

1. SESAME moves towards completion of 2.5 GeV storage ring

The council and advisory committees of SESAME met during the last week of November 2015 in Amman, Jordan. This provided an opportunity to see the progress of the SESAME machine and experimental beamlines. The advisory committees heard details of the progress. Funding by a number of member countries supplemented by an EU grant has proved to be a turning point as the final stages of the construction project begin. In addition, Italy, an observer country, has provided EUR 1.8 M for the RF cavities. The EC, which became an observer of SESAME in 2015, has provided its EUR 5 M contribution to the construction of the magnetic system for SESAME's storage ring being led by CERN. The staff strength has increased to 41, with 28 being professional scientific and engineering staff directly involved in the construction project of the machine and Day One beamlines. The staff strength is expected to increase to 67 by 2018. Representatives of the member and observer countries' governments as well as several other agencies including IAEA and ICTP attended the council meeting. On this occasion, EU Ambassador H. E. Mr Andrea Matteo Fontana said, 'We are delighted that we have become an observer of SESAME. In view of its importance of science cooperation and regional harmony we have invested close to \$15M and have allocated a specific topic within the next frame work to strengthen regional cooperation – step up our support so that we can help realise its full potential. Some earmarked funds are announced for training and capacity. Science diplomacy is very important in this complicated world.'

The construction project, defined as the storage ring and two beamlines (one for IR application and the other XAFS/XRF applications), is expected to complete in early 2017 with commissioning of beamlines. Macromolecular crystallography, to be based on an in-vacuum undulator, received a boost with an initial grant of USD 2M given by Jordan Scientific Research Support Fund, a financially and administratively independent government institute responsible for encouraging and supporting scientific research in



(a) Installation of the 2.5 GeV storage ring has started. One of the 16 cells of the SESAME storage ring assembled on the girder. The components were constructed in collaboration between SESAME members and observers with magnets assembly coordinated by CERN. Dipole magnets were manufactured in the UK, sextupoles coils in France, quadrupoles and girders in Spain, vacuum chambers in Germany, sextupoles in Pakistan and quadrupoles coils in Turkey. (b) Director of SESAME Khaled Toukon, DG CERN Rolf Heur, Coordinator CERN–SESAME collaboration Jean-Pierre Koutchouk and current President of SESAME Sir Chris Llewellyn Smith admiring the magnets. (c) Delegation in the experimental hall of SESAME. (d) SESAME with new white roof.

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Jordan. The support came in response to a proposal jointly submitted by SESAME and Jordan University for funding of the construction of a macromolecular crystallography beamline and laboratory. In addition, Dr Areej Abuhammad, a protein crystallographer who has recently returned from Oxford to Jordan University, has been awarded a grant by the Jordanian Research Council to set up a protein platform and a crystallization facility. Another USD 2M is expected next year. This beamline, together with the materials science beamline based on a multipole wiggler, are expected to come on-line in early 2018, completing the suite of four beamlines of Phase 1 of the project.

2. New Zealand invests in Australia's synchrotron

The New Zealand government, alongside the New Zealand research sector, has allocated a total of AUD 4.5 M to support the Australian Synchrotron. The AUD 1.5 M to be donated every year for three years sees the total investment into the synchrotron from Australia's trans-Tasman neighbours reach AUD 13.5 M since it began operations in 2007.

The Australian Synchrotron has been operated by the Australian Nuclear Science and Technology Organization since 2013 and, according to the Minister for Industry, Innovation and Science, Christopher Pyne, it benefits over 4000

researchers annually, including from Australia and New Zealand.

Australia's synchrotron is also the largest piece of scientific infrastructure in the southern hemisphere. "The synchrotron is one of Australia's most important research infrastructure platforms, delivering ground-breaking scientific discoveries", Pyne said. "This is world-leading technology that allows researchers and industry to work together to solve nationally and in some cases globally significant challenges across a diverse user community. New Zealand has been a long-time backer and user of the synchrotron for important work that supports their scientific work and I am delighted that they will continue to participate in and support this valuable piece of research infrastructure."



The Australian Synchrotron.