

## The Stockholm years of CRYRING: Facility, research and the transition to CRYRING@ESR

*Tuesday, 25 April 2017 16:15 (1 hour)*

The CRYRING is a small synchrotron and storage ring with electron cooling. Based on technology developed at the low-energy antiproton ring LEAR at CERN, it was initiated in the early 1980's at the then Research Institute of Physics, AFI, (from 1988 Manne Siegbahn Institute and from 1993 Manne Siegbahn Laboratory, MSL, Stockholm University). It has been used for research with atomic and molecular ions at low energies during almost two decades 1992 – 2009.

In the talk the CRYRING facility at The Manne Siegbahn Laboratory in Stockholm will be described. Some historical remarks will be given about the construction of an accelerator facility for research with atomic and molecular ions at low energies at a laboratory/institute by tradition dedicated to accelerator-based nuclear physics research. The talk will include a review of the research program at the CRYRING facility during the period 1992 - 2009 with some examples of the most recognized results. Finally some comments will be given about the transition of CRYRING from Stockholm to Darmstadt for new applications in the years to come in CRYRING@ESR and hopefully within some years in the future as the central low energy storage ring LSR in the FLAIR facility.

CRYRING was dismounted in Stockholm and sent to GSI 2012/13 and has now been reassembled in the GSI Target Hall with some updates. The project is now gradually transiting into productive operation with commissioning presently ongoing. A vigorous and exciting proposed scientific program is in depth described in the publication "Physics book: CRYRING@ESR", M. Lestinsky, Y. Litvinov and T. Stöhlker (Eds.), Eur. Phys. J. ST 225, 5 (2016). The project status will be celebrated and the diversity of the future experimental program will be previewed by presentations and posters at the workshop 24-25 April 2017 at GSI on the topic of "Research with CRYRING@ESR".

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