



Contribution ID: 173 Contribution code: WEP47

Type: **Contributed Poster**

Design of the Innovative Apple-X AX-55 for SABINA Project, INFN Laboratori Nazionali di Frascati

Wednesday, 24 August 2022 17:10 (20 minutes)

Kyma S.p.A. was awarded the design and production of the APPLE-X undulator for SABINA project at INFN - Laboratori Nazionali di Frascati. SABINA (Source of Advanced Beam Imaging for Novel Applications) is a project aimed at the enhancement of the SPARC_LAB research facility. The two user lines that are going to be implemented are; a power laser target area and a THz radiation line.

Here we present the magnetic design and a novel mechanical implementation of this APPLE-X undulator for the THz/MIR radiation line. Undulator is made from three 1.35 m long sections. Each section consist of an APPLE-X magnetic array with 55 mm undulator period, a minimum gap of 10 mm and a mechanical frame. The undulator design is both compact and lightweight. This is achieved by novel mechanical design and implementation of the multiple dynamic corrections through the motion control system.

I have read and accept the Privacy Policy Statement

Yes

Primary authors: POČKAR, Jure (Kyma Tehnologija d.o.o.); KOKOLE, Mirko (Kyma Tehnologija d.o.o.); MILHARČIČ, Tadej (Kyma Tehnologija d.o.o.); PRIMOŽIČ, Uroš (Kyma Tehnologija d.o.o.); GEOMETRANTE, Raffaella (Kyma S.p.A.); DEL FRANCO, Mario (INFN Laboratori Nazionali di Frascati); Dr SELCE, Andrea (INFN Laboratori Nazionali di Frascati); Dr GIANNESI, Luca (Elettra Sincrotrone Trieste and Istituto Nazionale di Fisica Nucleare); PETRALIA, Alberto (ENEA Fusion and Technology for Nuclear Safety and Security Department (FSN)); GHIGO, Andrea (INFN Laboratori Nazionali di Frascati); DI PIRRO, Giampiero (INFN Laboratori Nazionali di Frascati)

Session Classification: Wednesday posters**Track Classification:** Photon beamline instrumentation & undulators