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

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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.

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Yes

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