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Insertion devices for the ultralow emittance storage ring ALBA II

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The ALBA synchrotron light source is undergoing a transformative upgrade to become a state-of-the-art fourth-generation facility, known as ALBA II. This upgrade will reduce the electron beam emittance to approximately 200 pm·rad, achieving a twentyfold improvement over the current performance. A key goal of the project is to maintain the existing source points for the insertion device beamlines; in fact, most of the currently installed devices will be kept after the upgrade. Nevertheless, selected insertion devices will be replaced to fully exploit the enhanced capabilities of the upgraded electron beam. Additionally, two available straight sections will be utilized to support the development of ultra-long beamlines exceeding 250 meters, enabling advanced nano-probing and coherence-based experimental techniques. This paper outlines the strategic plans for the new insertion devices, detailing the design criteria and the constraints guiding their development.

Footnotes

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LaTeX

Region represented

Europe

Funding Agency

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