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Lattice options for MLS II

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The Metrology Light Source (MLS) is a 630 MeV electron storage ring as a synchrotron radiation source for the terahertz (THz) to the extreme UV spectral range. Its upgrade project MLS II is defined as a compact 0.8 GeV storage ring with multiple operation modes, which pursues lower emittance (<50 nm) in standard user mode and preserves

the strong capability of MLS to manipulate the momentum compaction and its higher-order terms for short-bunch mode. This paper presents the lattice options based on double-bend achromat (DBA) and quadruple-bend achromat (QBA). The linear optics and nonlinear beam dynamics of both lattices were investigated.

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Footnotes

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Primary author: CHAISUEB, Natthawut (Helmholtz-Zentrum Berlin fuer Materialien und Energie GmbH (HZB))

Co-authors: Dr ABO-BAKR, Michael (Helmholtz-Zentrum Berlin für Materialien und Energie GmbH); FEIKES, Joerg (Helmholtz-Zentrum Berlin für Materialien und Energie GmbH); Dr GOSLAWSKI, Paul (Helmholtz-Zentrum Berlin für Materialien und Energie GmbH); KRUSCHINSKI, Arnold (Helmholtz-Zentrum Berlin); LI, Ji (Helmholtz-Zentrum Berlin fuer Materialien und Energie GmbH (HZB)); RIES, Markus (Helmholtz-Zentrum Berlin für Materialien und Energie GmbH); KLEIN, Roman (Physikalisch Technische Bundesanstalt Institut Berlin); SCHOLZE, Frank (Physikalisch Technische Bundesanstalt Institut Berlin)

Presenter: CHAISUEB, Natthawut (Helmholtz-Zentrum Berlin fuer Materialien und Energie GmbH (HZB))

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