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Heterodyne Near-Field Speckle simulations using SRW at the ALBA FE21

Tuesday, 10 September 2024 16:00 (1h 30m)

Several experiments were done to measure the transverse beam size at the NCD ALBA beamline using the Heterodyne Near Field Speckles (HNFS) technique. Inside the FCC collaboration, it was decided to move these experiments to the ALBA Front End 21, where currently an x-ray pinhole camera is working since 2021. The goal is that the two measurement techniques can work alternatively and measure the electron beam size of the same source point, so that a direct comparison between both techniques can be done. This paper reports the SRW simulations performed in order to investigate the feasibility of the HNFS experiments at this new location. In particular, it focuses on the effect of the dipole radiation and the design of the high energy and high bandwidth monochromator requirements.

Footnotes

Funding Agency

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Yes

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