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Status of the Duke University soft x-ray undulator and beamline

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Previous magnetic field measurements on the entrance half of the NIST undulator showed errors that resulted in a beam path deflection of 5.2 mm [1]. Pole height variations of as much as 9 μm gave rise to field errors of up to 2% at a gap of 19 mm. We report on our effort to rebuild the NIST undulator through a series of *in-situ* and off-line measurements and modifications. Calculations of projected brightness based on current and future parameters of the Duke storage ring will also be presented. Initial results indicate that at 40Å, a brightness of 2.5×10^{18} can be achieved [2]. Finally, an overview of our initial soft x-ray imaging beamline will be covered. Commissioning of the undulator and beamline will take place in January 1996.

[1] S.M. Wallace, W.B. Colson, G.R. Neil, L. Hardwood, Nucl Instr. and Meth. A331 (1993) 759.

[2] L. Johnson, J.M.J. Madey, To be published.

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