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## Mini-beta optics for the European Synchrotron Radiation Facility

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The ESRF presently operates with the HMBA lattice that features beta-functions of 6.9 m and 2.7 m in the horizontal and vertical planes at the center of the the straight sections. These are not optimal for a length of in-vacuum undulator of approximately 2 m that is used at ESRF. New optics with reduced beta functions at the center of the straight section were designed to better match the electron and photon beams, allow for a reduction of the in-vacuum undulator gap and increase the brilliance delivered to the beam line. This paper presents the optics design, brilliance calculation and plans for experimental validation at the ESRF.

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## Footnotes

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