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FCC-ee booster as ultimate storage ring photon source

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Many synchrotrons are upgrading their lattice to reach lower horizontal emittances below 100 pm rad. The project foreseeing the lowest emittance is PETRA IV with the aim of reaching about 10 pm rad. The very large circumference of the FCC-ee booster combined with damping wigglers allows to reach a horizontal beam emittance down to 0.5 pm rad. This would push the diffraction limit from 10 keV (1 Angstroem) achievable with PETRA IV down to 100 keV (0.1 Angstroem).
In this contribution, the study of a possible use of the FCC-ee booster as ultimate storage ring photon source is presented.
The performance in terms of photons output is compared with the most advanced existing and planned light sources.

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