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A new type of gamma-source

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The combination of high energies, high intensities, and very low emittances of electron and positron beams at the FCC-ee offers an extraordinary possibility of making a unique γ -source. This involves using a novel technique, which in addition allows one to operate such a source concurrently with the nominal e^+e^- collisions.

Using a low-energy ERL beam with short bunches, the proposed facility would produce the polarised gamma beams of very high brilliance and flat energy spectra for photon energies from 0.1 to 500 MeV.

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