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Positron source for FCC-ee

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Positron sources are critical components of the future linear (circular) collider projects. Due to the large 6D production emittance and important thermal load in the production target, the positron injector, in particular the positron source, is one of the key elements of the FCC-ee, requiring special attention. To ensure high reliability of the positron source, conventional and hybrid targets are currently under study. The final choice of the positron target will be made based on the estimated performances. In this framework, we present a preliminary design of the FCC-ee positron source, with detailed simulation studies of positron production, capture and primary acceleration.

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