

Advanced Positron Sources

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Positrons sources are a critical system for the future lepton colliders projects. Due to the large beam production emittance and the limitation given by the target mechanical stress and heating, the main collider parameters fixing the luminosity are constrained by the e^+ sources. In this context also the damping ring performances boundary conditions are given by the positron beam injected. Different schemes are at present taken into account to increase the production and capture efficiency, to reduce the impact of the deposited energy in the production target and to increase the injection efficiency in the damping ring. The main schemes and new development for the next colliders will be reviewed and the different developed technologies illustrated.

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