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[201] The PSI Positron Production (P-cubed) Project

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P-cubed, currently in development at Paul Scherrer Institut (PSI), is the proposed proof-of-principle experiment for the Future Circular Collider (FCC-ee) positron source. Capture and transport of the secondary positron beam released by the production target is a key challenge. P-cubed main goal is the test of a high temperature superconducting (HTS) solenoid as adiabatic matching device (AMD) for the initial focusing of the positrons. Beam dynamics simulations show considerably higher positron yield with respect to the state of the art. The experiment aims at validating this expectations, taking advantage of the available 6 GeV electron beam of SwissFEL, which will be used as drive beam for the positron generation.

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