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Adiabatic matching device development at CERN

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The adiabatic matching device is a critical component of any positron source for capturing the particles and has been as well a limitation of existing sources. CERN studies adiabatic matching devices for CLIC and FCCee. Magnetic design studies have been done to optimise the shape of these pulsed magnets in order to maximise the field and improve their robustness against field breakdowns. Prototypes are under construction to be tested in collaboration with KEK. Beside the traditional copper device obtained by EDM wire cutting a novel approach using 3D printing with Titanium has been tried. The presentation will describe the technical developments in detail.

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