

Abstract Submitted  
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**Strong pressure dependence of the magnetic penetration depth in single crystals of the heavy fermion system CeCoIn<sub>5</sub> studied by muon spin rotation** LUDOVIC HOWALD, ALEXANDER MAISURADZE, University of Zurich, Switzerland, PIERRE DALMAS DE RÉOTIER, ALAIN YAOUANC, CEA Grenoble, France, CHRISTOPHER BAINES, Paul Scherrer Institut, Switzerland, GERARD LAPERTOT, KARINE MONY, JEAN-PASCAL BRISON, CEA Grenoble, France, HUGO KELLER, University of Zurich, Switzerland — The pressure dependence (0 – 1 GPa) of the in-plane magnetic penetration depth ( $\lambda_a$ ), the penetration depth anisotropy ( $\gamma = \lambda_c/\lambda_a$ ) and the temperature dependence of  $1/\lambda_i^2$  ( $i = a, c$ ) were studied in single crystals of the heavy fermion system CeCoIn<sub>5</sub> by means of muon spin rotation. A strong decrease of  $\lambda_a$  with pressure was observed, while  $\gamma$  and  $\lambda_i^2(0)/\lambda_i^2(T)$  are pressure independent. A linear relationship between  $1/\lambda_a^2(270 \text{ mK})$  and Tc was also found. The large decrease of  $\lambda_a$  with pressure is the signature of an increase of the number of superconducting quasiparticles by a factor of about 2.

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