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$CePt_2In_7$: Shubnikov-de Haas measurements on micro-structured samples under high pressures J. KANTER, P. MOLL, Laboratory for Solid State Physics, ETH Zurich, Zurich, Switzerland, S. FRIEDEMANN, P. ALIREZA, M. SUTHERLAND, S. GOH, Cavendish Laboratory, University of Cambridge, Cambridge, UK, F. RONNING, E.D. BAUER, Los Alamos National Laboratory, Los Alamos, New Mexico, USA, B. BATLOGG, Laboratory for Solid State Physics, ETH Zurich, Zurich, Switzerland — $CePt_2In_7$ belongs to the $Ce_mM_nIn_{3m+2n}$ heavy fermion family, but compared to the $CeMIn_5$ members of this group, exhibits a more two dimensional electronic structure. At zero pressure the ground state is antiferromagnetically ordered. Under pressure the antiferromagnetic order is suppressed and a superconducting phase is induced, with a maximum T_c above a quantum critical point around 31 kbar. To investigate the changes in the Fermi Surface and effective electron masses around the quantum critical point, Shubnikov-de Haas measurements were conducted under high pressures in an anvil cell. The samples were micro-structured and contacted using a Focused Ion Beam (FIB). The Focused Ion Beam enables sample contacting and structuring down to a sub-micrometer scale, making the measurement of several samples with complex shapes and multiple contacts on a single anvil feasible.

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