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Campbell penetration depth in single crystals of $CaPd_2Ge_2$ superconductor[1] KYUIL CHO, SERAFIM TEKNOWIJOYO, MAKARIY A. TANATAR, VIVEK K. ANAND, DAVID C. JOHNSTON, RUSLAN PROZOROV, Ames Laboratory and Iowa State University, USA, ROLAND WILLA, Argonne National Laboratory, USA — The low-amplitude AC magnetic penetration depth (Campbell length) was measured in a single crystal of $CaPd_2Ge_2$ using tunnel diode resonator in a dilution refrigerator down to 100 mK and in the presence of a DC magnetic field. Depending on cooling and warming protocol, hysteretic behavior was found for the most part of the mixed state in fields ranging from 10 Oe to 800 Oe with the strongest irreversibility near H = 300 Oe. The results are analyzed in terms of a recently developed model based on the microscopic theory of strong vortex pinning.

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