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h/e-Flux Periodicity in Superconducting Loops¹ ARNO KAMPF, FLORIAN LODER, THILO KOPP, JOCHEN MANNHART, CHRISTOF SCHNEI-DER, University of Augsburg, YURI BARASH, Russian Academy of Sciences, Chernogolovka — We apply the BCS theory to superconducting rings with unconventional order parameter symmetries. An external magnetic flux changes the character of the states in the condensate; as a consequence the energy of the superconducting ground state varies with a flux period of h/e. This h/e periodicity is caused by the flux-induced reconstruction of the supercurrent carrying condensate.

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