

8-coils system to produce an uniform magnetic field in a dilution refrigerator

S. Uchaikin^a, A. Eltony^{b, a}, and X. Han^{c, a}

^aD-Wave Systems Inc., Burnaby, BC, Canada

^bDepartment of Engineering Physics, University of British Columbia, Vancouver, BC, Canada

^cSchool of Engineering Science, Simon Fraser University, Burnaby, BC, Canada

Developments of superconducting chips often require an extended region with a highly uniform magnetic field. Frequently used for such purpose Helmholtz, solenoidal and Maxwell coils produce a limited volume where magnetic field is uniform. The report suggests a method of calculations of the multi-coil device with the maximum volume of the equilibrium field. An 8-coil system calculated based on the method. An influence of manufacturing tolerances is discussed in the report.