A set of entanglement monotones for characterising experimental data PETER LOVE, D-Wave Systems Inc, ALEC MAASSEN VAN DEN BRINK, D-Wave Systems Inc, MOHAMMED AMIN, D-Wave Systems Inc, ANATOLY SMIRNOV, D-Wave Systems Inc, MIROSLAV GRAJCAR, Institute for Physical High Technology, P.O. Box 100239, D-07702 Jena, Germany, EVGENI IL'ICHEV, Institute for Physical High Technology, P.O. Box 100239, D-07702 Jena, Germany, ANDREI IZMALKOV, Institute for Physical High Technology, P.O. Box 100239, D-07702 Jena, Germany, ALEX ZAGOSKIN, University of British Columbia — We define a set of elementary entanglement monotones and give a single measure of entanglement in terms of these monotones which is zero except on globally entangled states. We compute this measure for the ground state of a four qubit superconducting experimental system, and thus confirmed the presence of genuine four-qubit entanglement in the ground state.

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Date submitted: 30 Nov 2005   Electronic form version 1.4