

Maximally Entangled Mixed States and the Bell Inequality

W. J. Munro and K. Nemoto^a

Special Research Centre for Quantum Computer Technology, The University of Queensland,
Brisbane, Australia;

Hewlett-Packard Laboratories, Filton Road, Stoke Gifford, Bristol BS34 8QZ, UK

^a School of Informatics, Dean Street, University of Wales, Bangor LL57 1UT, UK

Reprint requests to Dr. W. J. M. E-mail: bilmun@hplb.hpl.hp.com

Z. Naturforsch. **56 a**, 152–154 (2001); received February 11, 2001

*Presented at the 3rd Workshop on Mysteries, Puzzles and Paradoxes in Quantum Mechanics,
Gargnano, Italy, September 17 - 23, 2000.*

Recently a class of maximally entangled states has been proposed that has the maximum amount of entanglement for a given purity. We investigate how much such states violate the conventional Bell inequality and discuss its implication.

Key words: Entanglement; Mixed States; Bell Inequality.