ERRATA

Purification of Noisy Entanglement and Faithful Teleportation via Noisy Channels [Phys. Rev. Lett. 76, 722 (1996)]

Charles H. Bennett, Gilles Brassard, Sandu Popescu, Benjamin Schumacher, John A. Smolin, and William K. Wootters

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(1) The parenthetical expression beginning five lines before Eq. (4) should be replaced by "[A continuum of rotations is unnecessary. An arbitrary two-spin state can be rendered into Bell-diagonal form by randomly applying one of the four discrete bilateral rotations $\{I, B_x^2, B_y^2, B_z^2\}$. If desired, the three triplet terms on the diagonal can then be equalized, producing a Werner state, by randomly applying one of the three bilateral rotations $\{B_x, B_y, B_z\}$. Here $B_{x,y,z}$ denote bilateral versions of the rotations $R_x(\pi/2) = \begin{pmatrix} 1 & 1 \\ -1 & 1 \end{pmatrix}, R_y(\pi/2) = \begin{pmatrix} 1 & i \\ i & 1 \end{pmatrix}, R_z(\pi/2) = \begin{pmatrix} e^{i\pi/4} & 0 \\ 0 & e^{-i\pi/4} \end{pmatrix}$)]". (2) Two lines before Eq. (7) the fraction $\frac{1}{4}$ should be replaced by $\frac{5}{9}$. (3) The text immediately following Eq. (10) should be replaced by "each having entropy of entanglement equal to the right side of Eq. (9), while for $F \leq \frac{1}{2}$, W_F can be prepared by combining equal mixtures of two Bell states. To see that such two-Bell mixtures are unentangled, note that an equal mixture of Φ^+ and Φ^- is the same as an equal mixture of $\uparrow\uparrow$ and $\downarrow\downarrow$, while the other two-Bell mixtures can be prepared from the $\Phi^\pm$ mixture by local B and σ operations". (4) In line four of the next-to-last paragraph "is" should be inserted after "This." In the last line of this same paragraph "probably" should be changed to "provably."

We thank David DiVincenzo for pointing out error (1) and finding a correct set of discrete rotations (cf. [1]). We thank Asher Peres for pointing out error (3). These changes do not alter any of our conclusions.

[1] C. H. Bennett, D. DiVincenzo, J. A. Smolin, and W. K. Wootters, Phys. Rev. A **54**, 3824–3851 (1996), Appendix A.