Erratum: Superconductivity without Inversion Symmetry: MnSi versus $CePt_3Si$ [Phys. Rev. Lett. 92, 097001 (2004)]

P. A. Frigeri, D. F. Agterberg, A. Koga, and M. Sigrist

(Received 28 July 2004; published 27 August 2004)

DOI: 10.1103/PhysRevLett.93.099903 PACS numbers: 74.20.–z, 71.18.+y, 99.10.Cd

We have two corrections to make to our original Letter [1]. The first involves a correction in the factor α_R in Fig. 2. The α_R values in Fig. 2 should be divided by a factor $\sqrt{3/2}$.

Also, we have omitted a contribution to the vector $\boldsymbol{g_k}$ for MnSi. Including this contribution gives $\boldsymbol{g_k} = \alpha_1[k_x, k_y, k_z] + \alpha_2[k_x(k_y^2 - k_z^2), k_y(k_z^2 - k_x^2), k_z(k_x^2 - k_y^2)]$ (in Ref. [1], we have $\alpha_1 = 0$). The vector multiplied by α_1 belongs to the A_{1u} representation of O_h, and that multiplied by α_2 belongs to the A_{2u} representation of O_h; both of these vectors map to the representation A_1 of T. Our result that the spin-triplet pairing vector $\boldsymbol{d_k}$ should be parallel to $\boldsymbol{g_k}$ for spin-triplet superconductivity to be stable is unchanged. Consequently, p-wave superconductivity is suppressed for MnSi if $\alpha_1 \lesssim \alpha_2$. To determine the relative size of α_1 and α_2 will require band structure calculations.

We are grateful to S. Cunroe, A. Rosch, and I. A. Sergienko for useful communications regarding MnSi.

[1] P. A. Frigeri, D. F. Agterberg, A. Koga, and M. Sigrist, Phys. Rev. Lett. **92**, 097001 (2004).

