Inderhees *et al.* Reply: In our Letter,[1] we reported on measurements of the specific heat of two single crystals of $YBa_2Cu_3O_{7-\delta}$ near the superconducting transition temperature T_c. We observed a deviation from the usual mean-field discontinuity, which we attributed to Gaussian thermodynamic fluctuations. For a conventional superconductor, the amplitude ratio C^+/C^- would be expected to be that of an $O(n)$ Ginzburg-Landau theory, with $n=2$. In this case, the amplitude ratio is a universal number,[2] allowing us to test the hypothesis that $YBa_2Cu_3O_{7-\delta}$ is a conventional superconductor. Analyzing our data *as if* they corresponded to an $O(n)$ model, we found that $5.6 < n < 10.2$ for one crystal, and $6.2 < n < 8$ for the other. From this we concluded that the O(2) Ginzburg-Landau theory did not describe our data, and thus the order parameter in $YBa_2Cu_3O_{7-\delta}$ has more than two components.

Once this point has been established, the next step is to explore the possible allowed symmetries of the order parameter and their implications for the value of C^+/C^-. This has been carried out in work performed by Annett, Randeria, and Renn (ARR),[3] who have made an exhaustive study of the amplitude ratio expected for a variety of possible pairing states in both orthorhombic and tetragonal environments. Special cases of their results were mentioned in the preceding Comments by Brand and Doria and by Muzikar. The results of these authors are correct as far as they go, but they misstate our conclusions—we sought to establish that the O(2) Ginzburg-Landau theory was inadequate to describe the experimental results, not to assert that a large-n $O(n)$ model was appropriate.

Some additional remarks are in order, based partly on the work of ARR. First, if we assume for the moment that the crystal structure of $YBa_2Cu_3O_{7-\delta}$ only affects C^+/C^- through the "mass anisotropy," then the $O(n)$ model gives an upper bound on C^+/C^-. This is because the internal symmetry must contain an O(2) sector which couples to electromagnetism and gives rise to superconductivity. In d dimensions the longitudinal mode will always give a factor $2^{d/2}$ in the denominator of C^+/C^-; for internal symmetry groups other than $O(n)$, not all of the remaining modes will be Goldstone modes, in general, and so they can be expected to make a positive contribution to the denominator too. This can be seen explicitly in the preceding Comment of Muzikar. This implies that an exotic internal symmetry group, but with two components, could not explain our data.

Second, how does the actual crystal symmetry group affect C^+/C^-? ARR find that for orthorhombic $YBa_2Cu_3O_{7-\delta}$, only triplet superconductivity is consistent with our data. Since the lattice exhibits only a small deviation from tetragonal symmetry, this case may also be relevant. Here, ARR find that either triplet pairing or certain d-wave singlet states can be consistent with our data. In particular, the simple argument of counting Goldstone modes can yield too low a value for the upper bound on C^+/C^-.

Finally, we emphasize the urgent need for independent confirmation, or otherwise, of our experimental results.

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