Leridon *et al.* Reply: Luo *et al.* [1] report on the applicability of the formula proposed in Ref. [2] to extremely underdoped $YBa_2Cu_3O_{7-\delta}$ thin films. The fit remains accurate even for the more underdoped samples. The variations of the fitting parameters a, b, ξ_{c0}, and ε_0 are consistent with our results, with physically correct orders of magnitude. However, Luo *et al.* claim that the variations of two parameters "raise disturbing obscurities." We answer them on the following points.

(i) If "conventional wisdom" says that a residual resistivity cannot be negative, it also says that the extrapolation to zero temperature of the high-temperature behavior of the resistivity never gives the "residual resistivity." To estimate the residual resistivity one has to know the variation at low temperature of the normal-state resistivity, which is, by definition, impossible in a superconductor at zero frequency. Numerous examples could be shown where the extrapolation to zero of high-temperature resistivity gives a negative value: most of high-quality optimally doped high-T_c single crystals [3], underdoped samples [3,4], and even good metals as gold (between 40 and 295 K, the extrapolation to zero gives a negative resistance only 6 times smaller than the room temperature resistivity) [5]. However, the physical meaning of b remains an open question, as does the nature of the normal state in optimally doped and underdoped cuprates, and the apparent contradictory behavior between Hall effect and resistivity, etc. In absence of a clear consensual theory for the normal-state resistivity of high temperature superconductors, nobody is able to make predictions on the values of b and decide whether it is "artificial" or not. The value of b might nevertheless be related to the defect concentration, and, on this point, we have an observation. There is no reason to think that the oxygen concentration can be varied in the proportion given by the authors without increasing the level of defects in the sample. Underdoping implies then two different effects: the decrease of the number of carriers and the increase of disorder due to oxygen vacancies. Both can contribute differently to a, b, ρ_1, or T_0, and this may be the origin of the change of slope in the variation of b. It is probably not very accurate to test the expression proposed in [2] on the more underdoped samples where, obviously, carrier localization occurs and where two additional parameters (ρ_1 and T_0) may lead to a multivalued set of solutions. The interest of the work presented in [2] lies more in the observation of modified Aslamazov-Larkin fluctuations above T_c in the slightly underdoped compounds than in the existence or not of a variable range hopping term in the strongly underdoped. However, we found it of interest to offer a consistent scenario for the whole phase diagram.

(ii) The variation of the parameter Δ^* is somewhat more puzzling. The authors find that Δ^* increases and then decreases for the more underdoped samples. This effect is consistent with our own observations [2]. In the original Letter, we pointed out that Δ^* was of the same order of magnitude of the pseudogap energy as measured by other techniques. This is not enough to ascribe Δ^* to the pseudogap, and it was not the point of the Letter. However, if Δ^* is related to a pairing energy, it may not survive to antiferromagnetic fluctuations when approaching the Néel transition. To our knowledge, previous studies on $YBa_2Cu_3O_{7-\delta}$ [6] do not contain data for the pseudogap for T_c lower than 60 K, below which, in fact, this change of slope is observed.

(iii) The total energy cutoff model [7] produces an analytical formula which fits the high-temperature decay of the paraconductivity for optimally doped $YBa_2Cu_3O_{7-\delta}$. Therefore this expression is very close to the one we proposed. Although there is no clear justification for the introduction of an energy cutoff yet, this work is quite interesting and would be worth applying to the more underdoped compounds. However, it does not rule out any pseudogap effect, as the exact relationship between the superconducting fluctuations and the pseudogap has not been elucidated yet. At last, let us mention a work similar to the one in Ref. [2] performed on $Bi_2Sr_2CaCu_2O_{8+\delta}$ where a 2D formula is used [8].

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