

Supplementary Materials for **Inverse correlation between quasiparticle mass and T_c in a cuprate high- T_c superconductor**

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Published 18 March 2016, *Sci. Adv.* **2**, e1501657 (2016)
DOI: 10.1126/sciadv.1501657

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Supplementary Materials

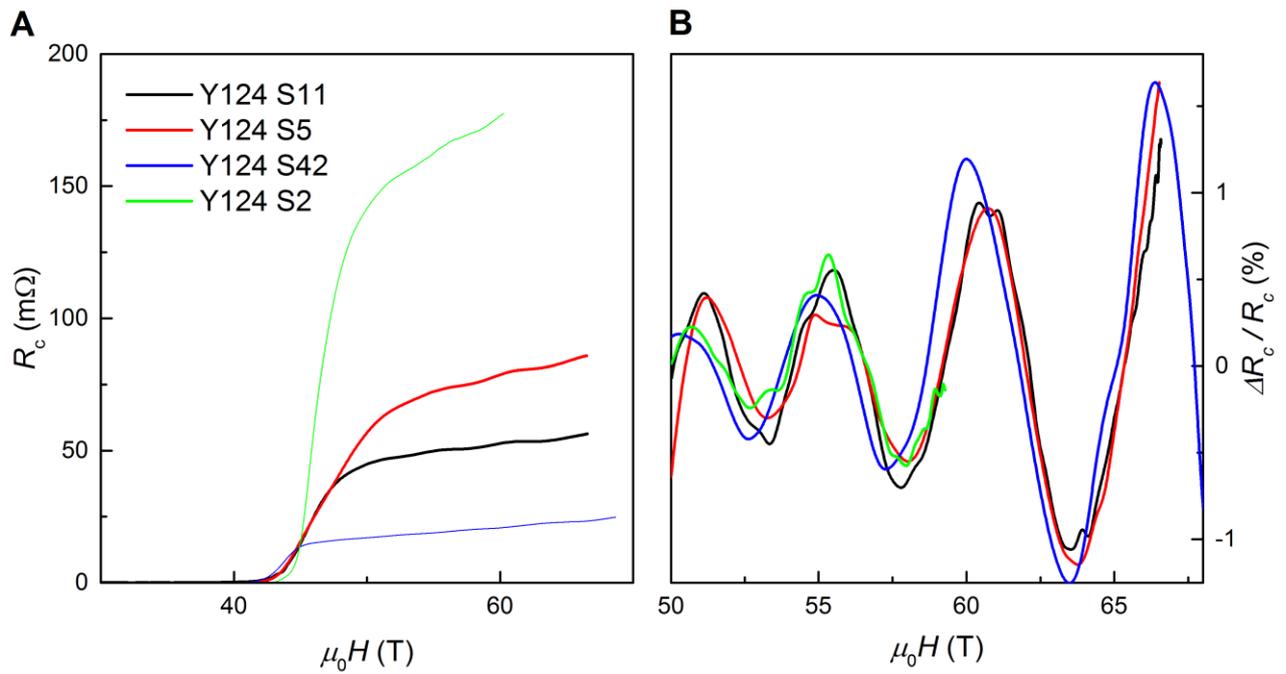


Fig. S1. Sample dependence of zero-pressure QOs. (A). c -axis resistance versus magnetic field for 4 different samples at $T = 2.5$ K. (B). The oscillatory part of the resistance after subtracting a smooth polynomial background. The large difference in absolute resistances in A are mainly due to the different dimensions of the samples.

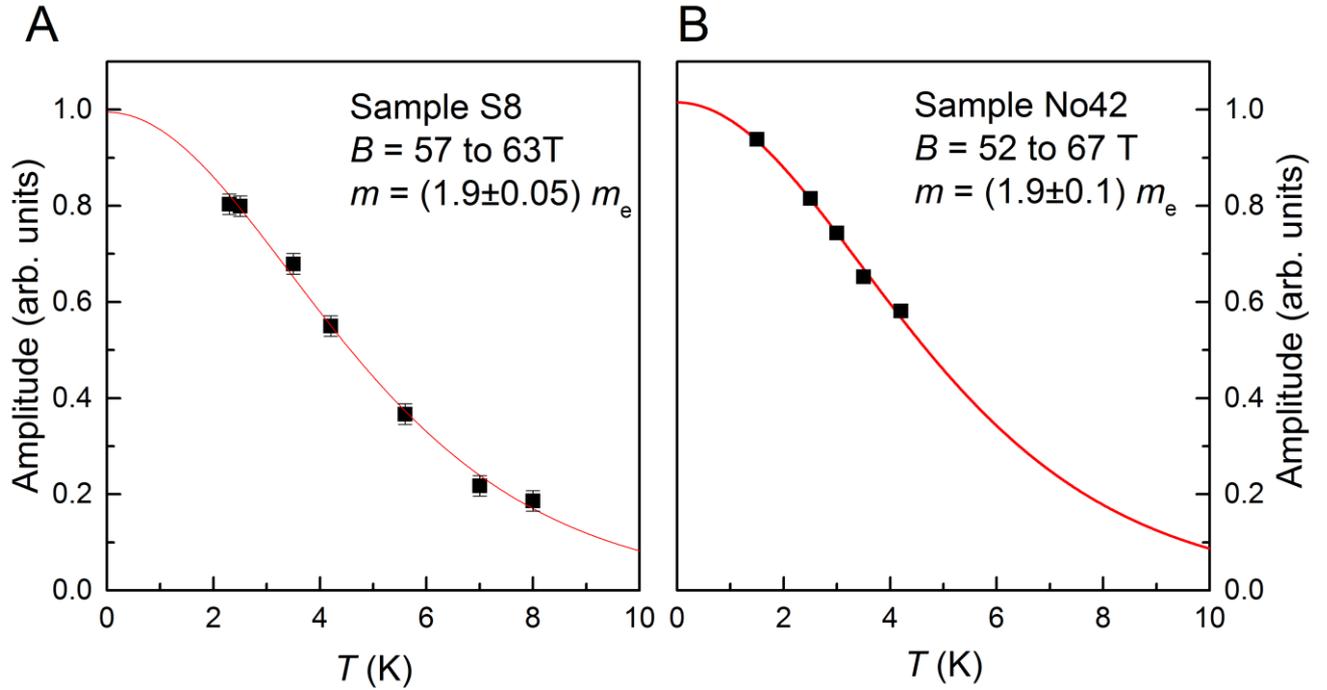


Fig. S2. Effective mass determination at $p = 0$ for two further samples.

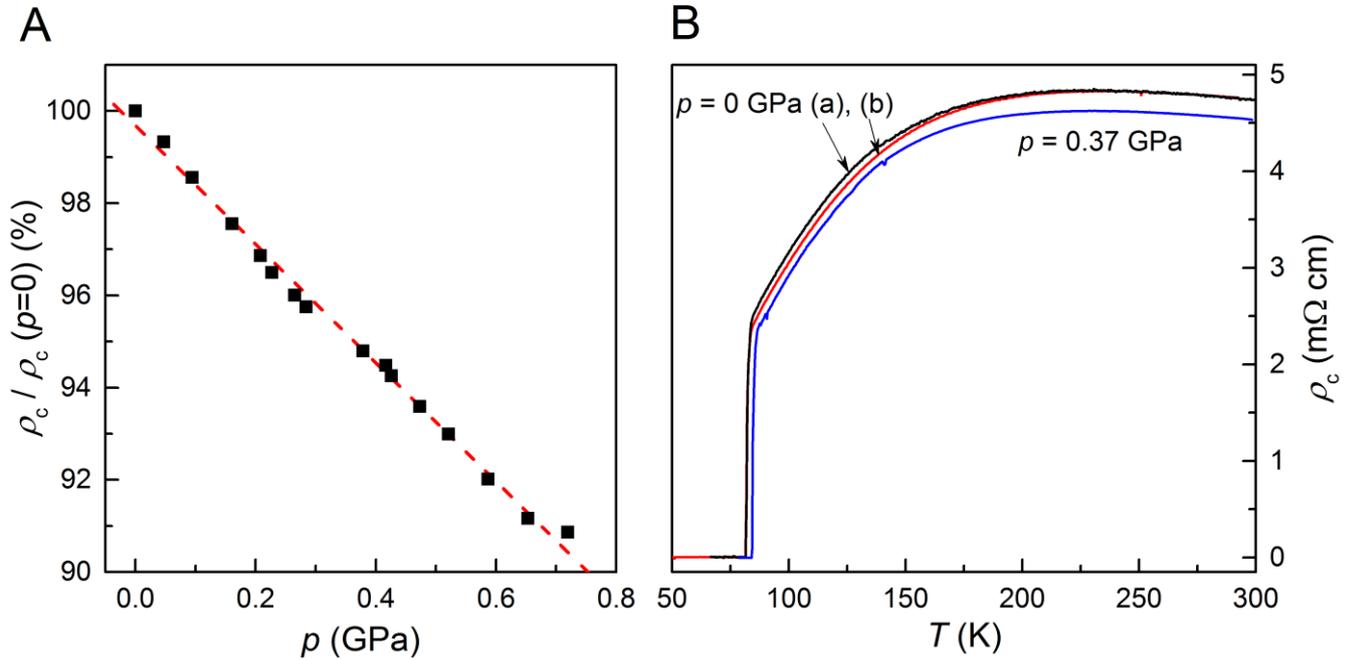


Fig. S3. Pressure dependence of $\rho_c(T)$. (A) Relative change in the room temperature c -axis resistivity (ρ_c) of Y124 sample S11 with pressure. (B) $\rho_c(T)$ at zero pressure (a) before pressurization and (b) after depressurization and also at $p=0.37$ GPa.

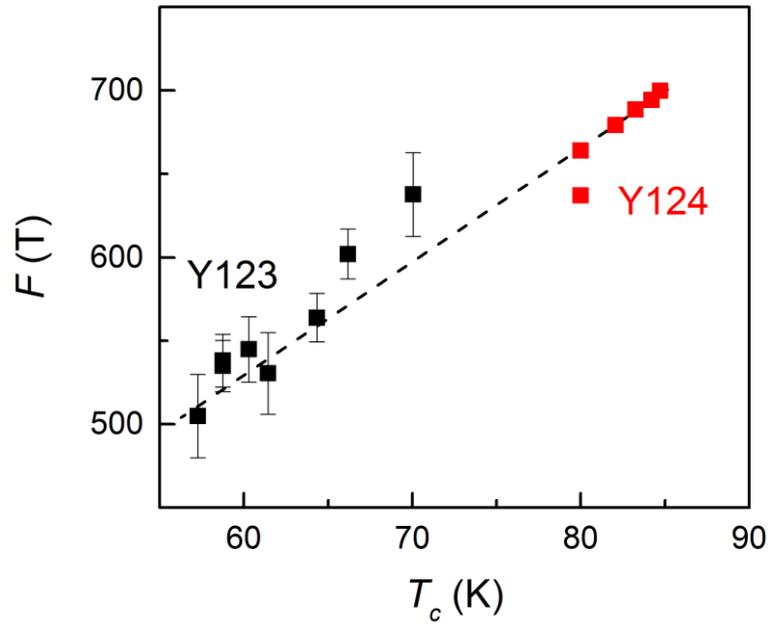


Fig. S4. Comparison of changes in QO frequency in Y123 and Y124: Data for Y124 are the same as shown in Figure 3. For Y123 where the oxygen content δ has been varied to change the doping state and hence T_c , the data were taken from Ref. (35).

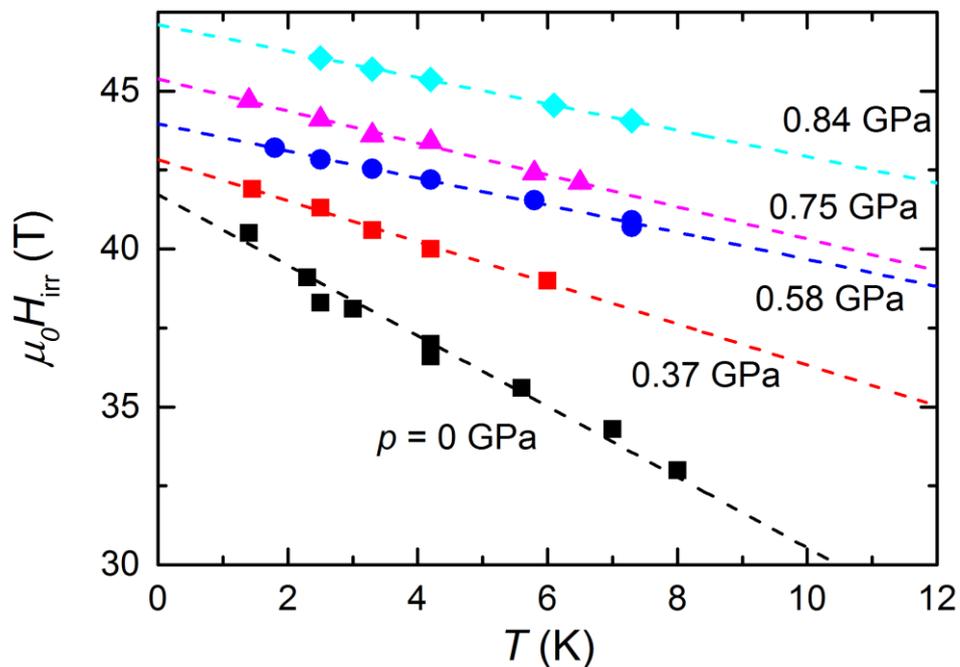


Fig. S5. Temperature and pressure dependence of the irreversible field H_{irr} . The data at $p=0$ were taken outside the pressure cell.

Pressure (GPa)	Field min (T)	Field Max (T)
0	55.0	64.0
0.37	52.0	55.2
0.58	53.4	58.7
0.75	53.4	58.5
0.84	52.5	58.0

Table S1. Field windows used for the fitting of temperature-dependent QO amplitudes at various pressures, as shown in Fig. 4.