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**Tuning the static spin stripe phase and superconductivity in  $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$  ( $x = 1/8$ ) by hydrostatic pressure** ZURAB GUGUCHIA, Physik-Institut der Universitat Zurich, ALEXANDER SHENGELAYA, Department of Physics, Tbilisi State University, ALEXANDER MAISURADZE, Physik-Institut der Universitat Zurich. Laboratory for Muon Spin Spectroscopy, Paul Scherrer Institute, GIORGI GHAMBASHIDZE, Department of Physics, Tbilisi State University, EKATERINA POMJAKUSHINA, KAZIMIERZ CONDER, Laboratory for Developments and Methods, Paul Scherrer Institute, HUGO KELLER, Physik-Institut der Universitat Zurich — Muon spin rotation ( $\mu\text{SR}$ ) and magnetization measurements were performed in stripe-stabilized  $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$  as a function of pressure up to  $p \simeq 2.25$  GPa. At ambient pressure this system exhibits static spin stripe order below  $T_{\text{so}} \approx 30$  K. Zero-field  $\mu\text{SR}$  experiments indicate that the volume fraction  $\omega$  of static spin-stripe order significantly decreases with increasing  $p$ , while the size of the ordered moment and the ordering temperature remain constant. The magnetization measurements show that the sample exhibits a tiny superconducting (SC) volume fraction at ambient pressure. However, by the application of pressure the SC phase volume increases proportionally to the non-magnetic volume fraction  $(1-\omega)$ . These results indicate that in  $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$  magnetism and superconductivity occur in mutually exclusive spatial regions.

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