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Ferromagnetic resonance in superconductor/ferromagnet bilayers[1] DAVID SANCHEZ[2], JACOBO SANTAMARIA[3], Universidad Complutense de Madrid, PIERRE MERGNY, HIROSHI NAGANUMA, ABDELMADJID ANANE, JAVIER E. VILLEGAS, Unite Mixte de Physique, CNRS, Thales, Univ. Paris-Sud, Universite Paris Saclay, France — We experimentally investigate broadband ferromagnetic resonance (FMR) in bilayers that combine the high-temperature superconductor $YBa_2Cu_3O_7$ with different ferromagnets, either Permalloy or the half-metallic $La_{1-x}Ca_xMnO_3$. The observed behavior is compared to that of reference ferromagnetic layers. In bilayers, the FMR signal contains contributions from both the superconducting and ferromagnetic layers. The FMR linewidth is studied as a function of temperature (2K-200K) and frequency (up to 20 GHz) to obtain the damping constant above and below the superconducting critical temperature. The results will be discussed in the frame of the spin-pumping theory considering the superconductor a spin sink where part of the FMR generated angular momentum relaxes in the superconductor martial trough spin-pumpin [1]. [1] Yokoyama, T. & Tserkovnyak, Y. Tuning odd triplet superconductivity by spin-pumping. Phys. Rev. B 80, 104416 (2009)

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