

Abstract Submitted  
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**Superconducting proximity effects in  $\text{YBa}_2\text{Cu}_3\text{O}_7/[\text{Co}/\text{Pt}]$  multilayers**<sup>1</sup> J.E. VILLEGAS, C. VISANI, Unite Mixte de Physique CNRS/Thales, France, A. VERSO, Centro de Fisica de Materiales, CSIC/UPV, Spain, F. CUELLAR, C. DERANLOT, R. BERNARD, Unite Mixte de Physique CNRS/Thales, France, A.F. VOLKOV, Ruhr-Universitat Bochum, Germany, F.S. BERGERET, Centro de Fisica de Materiales, CSIC/UPV, Spain — We have studied the penetration of superconducting correlations into Co/Pt multilayers and single Pt thin films deposited on top of c-axis  $\text{YBa}_2\text{Cu}_3\text{O}_7$ . We used tunneling conductance measurements across an  $\text{AlO}_x$  barrier in order to track changes in the electron density of states of the Co/Pt (or Pt) films. A large number of junctions were studied, varying several parameters. We found more pronounced, longer-ranged signatures of proximity-induced superconductivity (energy-gap below  $T_C$ ) in Co/Pt than in single Pt films. This is interpreted by considering a series of magnetic effects specific to the Co/Pt interface, which induce inhomogeneities in the exchange field felt by the conduction electrons and explain the presence of long-range proximity effects.

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