

Abstract Submitted  
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**Interface Induced Antiferromagnetism in High-Tc/Manganite Superlattices**<sup>1</sup> N. HABERKORN, Universidad Nacional del Sur, Bahía Blanca, 8000 Bs.As., Argentina and Centro Atómico Bariloche, S. C. de Bariloche, 8400 R. N., Argentina, J. GUIMPEL, Centro Atómico Bariloche, S. C. de Bariloche, 8400 R. N., Argentina, W. SALDARRIAGA, E. BACA, M.E. GÓMEZ, Departamento de Física, Universidad del Valle A. A., 25360 Cali, Colombia, L. CIVALE, Superconductivity Technology Center, Los Alamos National Laboratory, Los Alamos, NM 87545 USA — We study the magnetic properties of perovskite based superconducting High-Tc / ferromagnetic manganite superlattices. The zero field cooled hysteresis loops show the expected ferromagnetic behaviour. However, field cooled low temperature hysteresis loops show the unexpected presence of exchange bias, signature of the existence of ferromagnetic/antiferromagnetic (F/AF) interfaces. The origin of the AF material is probably associated to interface disorder and Mn valence shift towards  $Mn^{4+}$ . The blocking temperature is found thickness dependent and the exchange bias field is found inversely proportional to the F layer thickness, as expected.

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