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**The intrinsic electronic structure of bilayer manganites from Angle Resolved Photoemission** SANNE DE JONG, SLAC National Accelerator Laboratory/ LCLS, R. KUKREJA, M.A. HOSSAIN, SLAC National Accelerator Laboratory/ SIMES, M.S. GOLDEN, E. VAN HEUMEN, F. MASSEE, Y. HUANG, University of Amsterdam, WZI, A.T. BOOTHROYD, P. PABHAKARAN, University of Oxford, Dept. Phys., A. WALTER, A. BOSTWICK, E. ROTENBERG, ALS, Lawrence Berkeley National Laboratory, H.A. DURR, SLAC National Accelerator Laboratory/ PULSE, SIMES — The Colossal MagnetoResistant (CMR) manganites are one of the most studied condensed matter physics systems since decades. Yet, the mechanism behind the CMR effect and their electronic structure are still under hot debate. Recent angle resolved photoemission (ARPES) studies on the bilayer manganite $La_{(2-2x)}Sr_{(1+2x)}Mn_3O_7$, LSMO327, reported contradictory results [1]. Here we present an ARPES study unveiling the intrinsic $k$– and temperature dependent electronic structure of LSMO327, while carefully steering away from the recently reported sample inhomogeneities [2] that have caused all the confusion.

[1] N. Mannella, Nature (2005); S. Sun Nature Phys. (2007); S. de Jong, PRB (2007)
[2] F. Massee, Nature Phys(2011)

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