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Mott Physics in lightly doped $(Sr_{1-x}La_x)_3Ir_2O_7$ GREGORY AFFELDT, TOM HOGAN, University of California, Berkeley and Lawrence Berkeley National Laboratory, CHRISTOPHER SMALLWOOD, University of California, Berkeley, TANMOY DAS, Los Alamos National Laboratory, JONATHAN DENLINGER, SUNG-KWAN MO, Lawrence Berkeley National Laboratory, STEPHEN WILSON, University of California, Santa Barbara, ALESSANDRA LANZARA, University of California, Berkeley and Lawrence Berkeley National Laboratory — The layered perovskite iridates Sr_2IrO_4 and $Sr_3Ir_2O_7$ exhibit a spin-orbit Mott insulating state that becomes metallic upon sufficient carrier doping. While Sr_2IrO_4 presents striking similarities to cuprates upon electron doping, $Sr_3Ir_2O_7$ appears to be a correlated metal. We show a detailed doping and temperature-dependent ARPES study which reveals important similarities between $(Sr_{1-x}La_x)_3Ir_2O_7$ and doped Sr_2IrO_4, as well as other doped Mott insulators.

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