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Magnetic excitations in a 5d-based double perovskite Ba₂FeReO₆¹ ARUN PARAMEKANTI, K. PLUMB, A. COOK, P. CLANCY, A. KOLENSIKOV, YOUNG-JUNE KIM, University of Toronto, B.-C. JEON, T.-W. NOH, Seoul National University — There is great interest in double perovskite materials, from a fundamental viewpoint of studying correlated electron magnetism as well as spintronics applications. We report theoretical calculations and experimental powder inelastic neutron scattering data on magnetic excitations in the 5d-based double perovskite Ba₂FeReO₆. We find evidence of multiple spin wave branches consistent with local moment magnetism on Fe sublattice coexisting with highly correlated and spin-orbit coupled local moments on Re.

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