TUNABLE TRANSPORT IN TOPOLOGICAL METAL MN2AU FOR SPINTRONICS APPLICATIONS. Arushi Deb, Tatsu Takeuchi & Vsevolod Ivanov, Dept. of Phys., Va Polytechnic Inst. & State Univ. Antiferromagnetic materials are actively being explored for spintronic applications due to their zero net magnetic moment, insensitivity to magnetic fields, and novel magneto-electronic properties, including giant magnetoresistance and spin-orbit torque. Coincidentally, antiferromagnetism also breaks time reversal symmetry, which is a necessary prerequisite for a compound to be a topological Weyl material. Antiferromagnetic Mn2Au is a well-studied spintronics material, exhibiting a high spin-orbit torque efficiency, and an exceptionally high Néel temperature of over 1500K. Here we compute the electronic structure of Mn2Au and for the first time, identify it as a candidate Weyl metal. We study the dependence of Weyl point positions on the orientation of magnetic moments and compute the resulting anomalous Hall effect. Our prediction of Weyl physics in Mn2Au can lead to potential new functionalities in this antiferromagnetic spintronics material. (Supported by: The Inclusive Excellence project at Va. Polytechnic Inst. & State Univ. project (https://ie.vt.edu/), based on a grant from the Howard Hughes Medical Institute.) Author contact: [vivanov@vt.edu](mailto:vivanov@vt.edu).