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Topological or not? An ARPES answer on the candidate high-TC FM TI Mn_{1+x}Sb_{2-x}Te_4

The combination of nontrivial band topology & magnetism results in a wide variety of exotic electronic phases that -if realised at high temperatures- could revolutionise fields like spintronics or low-power consumption electronics. The new, second-generation ferrimagnetic compound Mn1+xSb2-xTe4 ($0.1 \leq x \leq 1$, abbreviated here as MST) promises to host the quantum anomalous Hall effect (QAHE) and other topological phases at higher temperatures than any of its predecessors, wth TCurie's up to 73K. Their long-range magnetic order is confirmed and thus the big question is "**are they topologically non-trivial?**". MST crystals are significantly p-type doped, meaning the Dirac point of the putative TSS's is well above EF. Nevertheless, I will aim to persuade you that our temperature-dependent ARPES data (recorded at MAX-IV and CLS) clearly argue that the answer is "yes".

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