Electronic structure of few-layer crystals of the magnetic topological insulator
\[ \text{MnBi}_2\text{Te}_4 \]

Gianmarco Gatti,\(^1\) Anyuan Gao,\(^2\) Anna Tamai,\(^1\) Suyang Xu,\(^2\) and Felix Baumberger\(^1\)

\(^1\) Department of Quantum Matter Physics, University of Geneva, Geneva, Switzerland
\(^2\) Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, USA

The interplay between non-trivial topology and magnetism in layered materials is fertile ground for the discovery of novel interesting phenomena. MnBi\(_2\)Te\(_4\) (MBT) is a topological insulator with anti-ferromagnetic ordering below \(\approx 24\) K \([1, 2]\). Upon exfoliation MBT can be thinned down to few septuple layers and exhibits exotic transport properties. In its six-septuple-layers form, MBT is an axionic insulator and the application of a magnetic field drives a transition to a Chern insulator with quantized Hall resistance \([3]\). Five-septuple-layers MBT shows the quantum anomalous Hall effect below 1.4 K, a phase previously reported only for non-stoichiometric crystals \([4]\). Despite the large interest in the ground state of MBT in its two-dimensional limit, little is known from experiments about its electronic structure. Here, we show preliminary results electronic structure measurements of few-layer MBT. We discuss its fabrication and compare our measurements to bulk MBT.