1117-52-82 **Michael T Lacey***, Mathematics, Georgia Institute of Technology, Atlanta, GA 30332, and **Dmitriy Bilyk**, Mathematics, University of Minnestoa, Minneapolis, MN 55455. *One Bit Sensing, Discrepancy, and Empirical Processes.*

A signal is a high dimensional vector x, and a measurement is the inner product $\langle x, y\rangle$. A one-bit measurement is the sign of $\langle x, y\rangle$. These are basic objects in that (1) liking a page on Facebook is a very common example of a one bit measurement, (2) one can make impressive tradeoffs between the size of measurements, and their frequency, and (3) it is a canonical example of a non-linearity in measurement. The import of this talk is that one bit measurements can be as effective as the measurements themselves. Joint work with Dimtriy Bilyk. (Received January 04, 2016)