1176-52-347 **Eric L Grinberg*** (eric.grinberg@umb.edu), Department of Mathematics, UMass Boston, Boston, MA 02125. *The Problem of Admissibility for Integral Geometry Over Finite Projective Spaces and Allied Fields.* Preliminary report.

The problem of admissibility for the Radon transform in a finite geometry such as a projective space over a finite field is a discrete analog of restricting a CAT scanner to take a minimal number of X-rays while still recovering a complete image. While a number of admissibility results exist in the finite or combinatorial domain, these are fewer and less uniform than in the continuous category. We discuss some known results, usually in small dimensions and counts, and then propose extensions to larger geometries, along with prospective approaches to handle the increased complexity. (Received January 25, 2022)