1067-52-1959 Eric L Grinberg\* (eric.grinberg@umb.edu), Department of Mathematics, University of Massachusetts Boston, 100 Morrissey Boulevard, Boston, MA 02125, and David V. Feldman (david.feldman@unh.edu), Department of Mathematics & Statistics, University of New Hampshire, Durham, NH 03824. The Admissibility Problem for Radon transforms on projective spaces over finite fields. Preliminary report.

We discuss I.M. Gelfand's Admissibility Problem for Radon transforms that "integrate" over subspaces of projective spaces over finite fields. A great deal is known about the uniqueness problem for these transforms, so it is natural to investigate uniqueness for extremally limited data sets, which is tantamount to the admissibility problem. Special cases suggest that the collection of analogs of Gelfand's Admissible Complexes is rich and varied. (Received September 22, 2010)