1017-52-223   **Eric L Grinberg*** (`grinberg@unh.edu`), Dept. Mathematics & Statistics, Kingsbury Hall, W348, University of New Hampshire, Durham, NH 03824. *Integral Geometry in Octonionically defined contexts.* Preliminary report.

We discuss the classic problems of integral geometry in the context of a space whose construction is based on Octonions, e.g., the Cayley Projective Plane. The goal is to obtain integral formulas and inversions which are analogous to those of more common contexts, e.g., real, complex and quaternionic. (Received February 22, 2006)