1023-44-511 **Juan-Carlos Alvarez Paiva*** (`juan-carlos.alvarez-paiva@math.univ-lille1.fr`), UMR de Mathematiques, Universite des Sciences et Tech. de Lille, 59 655 Villeneuve d'Ascq, France, and **Gautier Berck**, Scuola Normale Superiore di Pisa. *Some applications of integral geometry to Finsler geometry.* Preliminary report.

I will sketch some interesting applications of integral geometry to the study of Finsler manifolds as well as exhibit a puzzling duality between a natural generalization of the Pompeiu problem and the problem of determining all non-reversible Finsler metrics with prescribed geodesics. (Received September 15, 2006)