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Title: Volumes of Projections of Convex Bodies via Fourier Transform

Abstract: We would like to discuss a connection between volume of hyperplane projection of a symmetric convex body and the Fourier transform of its curvature function. These connections lead to Fourier analytic proofs of the Shephard problem (solved by Petty and Schneider in the 60's) and to the recent results on extremal projections of l_p^n-balls by Barthe and Naor. (This is a joint work with A. Koldobsky and D. Ryabogin.)