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Mau Nam Nguyen* (mnn3@pdx.edu), Department of Mathematics and Statistics, 725 SW Harrison Street, Portland, OR 97201. *A D.C. Algorithm via Convex Analysis Approach for Solving a Location Problem Involving Sets.*

We study a location problem that involves a weighted sum of distances to closed convex sets. As several of the weights might be negative, traditional solution methods of convex optimization are not applicable. After obtaining some existence theorems, we introduce a simple effective algorithm for solving the problem. Our method is based on the Pham Dinh - Le Thi algorithm for d.c. programming and a generalized version of the Weiszfeld algorithm. (Received September 12, 2014)