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Miguel Sama* (msama@ind.uned.es), Departamento de Matemática Aplicada, Universidad Nacional de Educación a Distancia, Calle Juan del Rosal, 12, 28040, Madrid, Spain, and **Akhtar A. Khan** (aaksma@rit.edu), School of Mathematical Sciences, Rochester Institute of Technology, 85 Lomb Memorial Drive, Rochester, NY 14623. *A new topological condition for the existence of lagrange multipliers in set-valued optimization.*

In the recent years new multiplier rules for set-valued optimization problems have been given in terms of the derivative of scalarized maps. For the finite-dimensional case these rules are given for calm and convex data without assuming any differentiability assumption. This is not longer true even when the ordering cones have nonempty interior. In this work we present a new topological condition based on of the weak-interior of the ordering cones which allow us to extend the multiplier rules from finite-dimensional space to more general infinite-dimensional spaces. The key result is a new estimate about the dual cones of weakly-solid cones. We show several examples showing that the hypotheses given are minimal. (Received September 20, 2010)