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William Paul Meyerson* (meyerson@ucla.edu), 555 Levering Avenue # 557, Los Angeles, CA 90024. *Lipschitz and biLipschitz Maps on Carnot Groups.*

Suppose A is an open subset of a Carnot group G and H is another Carnot group. We show that a Lipschitz function from A to H whose image has positive Hausdorff measure in the appropriate dimension is biLipschitz on a subset of A of positive Hausdorff measure. We then construct Lipschitz maps from open sets in Carnot groups to Euclidean space that do not decrease dimension. Finally, we discuss two counterexamples to explain why Carnot group structure is necessary for these results. (Received July 26, 2010)