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Dorina Mitrea* (dorina@math.missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. *On the Regularity of Green potentials for Elliptic Systems.*

Let G be the solution operator for the Poisson problem with Dirichlet boundary condition associated to the a second order, constant coefficient, strongly elliptic system in a bounded Lipschitz domain Ω in R^3 . In this talk, we will discuss the proof of the fact that G maps $L^1(\Omega)$ into weak $L^{3/2}(\Omega)$. (Received February 01, 2008)