

1020-35-209

Luis A Caffarelli, Department of Mathematics, University of Texas at Austin, Austin, TX 78712, **Cristian E. Gutierrez**, Department of Mathematics, Temple University, Philadelphia, PA 19122, and **Qingbo Huang***, Department of Mathematics & Statistics, Wright State University, Dayton, OH 45435. *Alexandrov type estimates for the reflector antenna problem and application to the regularity of weak solutions.*

We establish Alexandrov type estimates for weak solutions of the reflector antenna problem and use these inequalities to obtain strict antenna result and C^1 regularity of antennas when the density of reflector mapping is strictly bounded. (Received August 28, 2006)