962-35-965 **David A Hartenstine*** (davidhartenstine@hotmail.com), 7740B Stenton Avenue #209, Philadelphia, PA 19118. *Regularity Properties of a Class of Solutions to the Monge-Ampere Equation.* Preliminary report.

Weak, convex solutions (in the sense of Aleksandrov) of the Monge-Ampere equation det $D^2u = \mu$ are considered where the measure μ is assumed to satisfy a condition (D_ϵ) on the sections of u, that generalizes the notion of the doubling property. This condition comes from Jerison's "A Minkowski problem for electrostatic potential" (*Acta Math.*, 1996). For global solutions, I have shown that the two conditions are equivalent. An example shows that this is not true on bounded convex domains. I have also shown that Caffarelli's result on extremal points for the set where u agrees with a supporting hyperplane also holds in this case. (Received September 29, 2000)