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Mark Agranovsky (agranovs@macs.biu.ac.il), Bar Ilan University, Ramat Gan, ISRAEL, and
Eric Todd Quinto* (equinto@tufts.edu), Tufts University, Medford, MA, USA. *Geometry of
Stationary Sets for the Wave Equation in R^n . The Case of Finitely Supported Initial Data.*

We consider the Cauchy problem for the wave equation in the whole space R^n , with initial data which are distributions supported on finite sets. The main result is a precise description of the geometry of the sets of stationary points of the solutions to the wave equation. Properties of harmonic polynomials and a support theorem for a spherical Radon transform are keys to the proof. (Received September 08, 2000)