1057-35-333   **Jeff Baker** and **Michael Loss*** (`loss@math.gatech.edu`), School of Mathematics, Georgia Tech, 686 Cherry Street, Atlanta, GA 303320160, and **Guenter Stolz**. *Low energy properties of the random displacement model.*

We study low-energy properties of the random displacement model, a random Schrödinger operator describing an electron in a randomly deformed lattice. All periodic displacement configurations which minimize the bottom of the spectrum are characterized. While this configuration is essentially unique for dimension greater than one, there are infinitely many different minimizing configurations in the one- dimensional case. The latter leads to unusual low energy asymptotics for the integrated density of states of the one-dimensional random displacement model. (Received January 25, 2010)

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