The Planck – Kleinert Crystal

Marek Danielewski

Interdisciplinary Centre for Materials Modelling, AGH University of Science and Technology,
al. Mickiewicza 30, 30-059 Kraków, Poland

Reprint requests to Prof. M. D.; E-mail: daniel@agh.edu.pl

Z. Naturforsch. **62a,** 564 – 568 (2007); received May 10, 2007

The Planck – Kleinert Crystal hypothesis is analyzed for an ideal cubic fcc crystal formed by Planck particles. In this type of a quasi-continuum the energy, momentum, and mass transport are described by the classical balance equations. The transverse wave is the electromagnetic wave, and its velocity equals the velocity of light. The quasi-stationary collective movement of mass in the crystal is equivalent to the *particle* (body), and such an approach enables derivation of the Schrödinger equation. The diffusing interstitial Planck particles create a gravity field, and the computed value of G is within the accuracy of experimental data. The model predicts four different force fields and a vast amount of the "dark matter and dark energy" in the crystal lattice. It allows for a self-consistent interpretation of multiscale phenomena.

Key words: Planck Scale Physics; Gravity; Dark Matter; Maxwell Equations.