## Abstract Submitted for the MAR08 Meeting of The American Physical Society

**Resonant Electromagnetic Interaction in Low Energy Nuclear Reactions** SCOTT CHUBB, Research Systems, Inc, 9822 Pebble Weigh Ct., Burke, VA — Basic ideas about how resonant electromagnetic interaction (EMI) can take place in finite solids are reviewed. These ideas not only provide a basis for conventional, electron energy band theory (which explains charge and heat transport in solids), but they also explain how through finite size effects, it is possible to create many of the kinds of effects envisioned by Giuliano Preparata. The underlying formalism predicts that the orientation of the external fields in the SPAWAR protocol<sup>1,2</sup>.has direct bearing on the emission of high-energy particles. Resonant EMI also implies that nano-scale solids, of a particular size, provide an optimal environment for initiating Low Energy Nuclear Reactions (LENR) in the PdD system.

<sup>1</sup>Krivit, Steven B., New Energy Times, 2007, issue 21, item 10. http://newenergytimes.com/news/2007/NET21.htm

<sup>2</sup>Szpak, S.; Mosier-Boss, P.A.; Gordon, F.E. Further evidence of nuclear reactions in the Pd lattice: emission of charged particles. Naturwissenschaften 94,511(2007).

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