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Conductance and transmission times of electrons and electromagnetic wave packets PEDRO PEREYRA, UAM-Azcapotzalco, HERBERT SIMAJUNTAK, Universitas Indonesia, Indonesia — We study the conductance and transmission times of electrons and electromagnetic wave packets through semiconductor superlattices and optical superlattices, respectively. We follow the space- time evolution (described by the Schrödinger or Maxwell equations) of Gaussian packets with centroid at resonance, in a gap or opaque region and at the edge between the gap and the allow band. The time spent by the wave packets inside the potential region, or the optical structures, agrees extremely well with the phase time predictions and the superluminal experimantal results.

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