

EXCITED COHERENT PAIRS  
OF NONINTERACTING FERMI-PARTICLES

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S u m m a r y

Properties of a pair of coherent Fermi-particles with the same averages of coordinates and momenta are considered. In the case of substantial differences in uncertainties of coordinates and/or momenta, the states of particles are practically independent. A system with small difference in uncertainties is shown to be strongly correlated, i.e., it is not possible to distinguish between contributions of each of the particles to the values of observables. The energy of such a strongly correlated pair is proved to be much larger than the energy of a pair, for which averages of coordinates and/or momenta of particles are at least a little different. Thus, the system under consideration is found to be excited.