

ОБЪЕДИНЕННЫЙ ИНСТИТУТ ЯДЕРНЫХ ИССЛЕДОВАНИЙ
Лаборатория теоретической физики им. Н. Н. Боголюбова



Семинар
«МАЛОЧАСТИЧНЫЕ СИСТЕМЫ»
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EVALUATION OF THE MULTI-CHANNEL S -MATRIX WITHOUT SOLVING THE SCATTERING EQUATIONS

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The new approach towards solving scattering problems via continuum discretization and the spectral shift function formalism is discussed. The discrete representation for such a function can be directly generalized to the multi-channel case where the total multi-channel S -matrix can be found from a single diagonalization of the total Hamiltonian matrix in the stationary wave-packet basis. As illustrations, some examples from atomic and nuclear physics are presented.