

DYNAMICS OF BOUND STATES OF PARTICLES
IN THE SECONDARY QUANTIZATION METHOD

S.V. Peletminskii, Yu.V. Slyusarenko

National Science Center
“Kharkiv Institute of Physics and Technology”
(1, Akademichna Str., Kharkiv 61108, Ukraine;
e-mail: *slusarenko@kipt.kharkov.ua*)

S u m m a r y

We develop an approximate secondary quantization method for describing the many-particle systems in the presence of bound states of particles at low energies [1] (the kinetic energy of particles is small in comparison to the binding energy of compound particles). In this approximation, the compound particles are considered on an equal basis with elementary particles that means that the creation and annihilation operators of compound particles can be introduced. The Hamiltonians, which specify the interactions between compound and elementary particles and between compound particles themselves, are found in terms of the interaction amplitudes for elementary particles.