COHERENT STATES OF THE JAYNES – CUMMINGS MODEL

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S u m m a r y

Annihiation $\hat{A}$ and birth operators $\hat{A}^+$ for elementary excitations and the atomic operators of 'energetic spin“ $\hat{\Sigma}_\pm$ are found in the basis of dressed states of the Jaynes – Cummings model. By means of these operators, coherent states are built, and the statistical properties of field oscillators interacting with an atom are studied for these states. The deviation of average values from those in Glauber isolated oscillator’s coherent states is fount for coordinates, momenta, the photon number, their dispersions, and the probability distribution function for photons. They are revealed in the possibility of the sub- or super-Poissonian statistics of photons, in the time dependence of averages and dispersion, the correlation between coordinates and momenta of the oscillator, and the 'squeezing“ of fluctuations of a coordinate with respect to fluctuations of a momentum.