

Назва	Modeling of superradiance modes and resonator field formation
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Короткий огляд (реферат):	It is shown that the resulting total field of moving active elements-oscillators in the volume of the resonator is capable of forming a resonator field due to reflections from the ends. At a high injection rate of particles with a random phase, the conditions for their phase synchronization are suppressed and generation is disrupted. In the case of noticeable reflection and fulfillment of the conditions for synchronization of emitters at a relatively high injection rate, the resonator field significantly exceeds the total field of emitters and a traditional mode of resonator field generation is formed. In the case of an open resonator with small reflection coefficients from the ends, the amplitudes of the total radiation of the oscillators exceed the amplitudes of the resonator field and the superradiance regime is realized. The zones where the breakdown of generation is observed, generation of the resonator field and generation under superradiance conditions are shown on the plane "injection velocity – reflection coefficient".