

447. Title:Autowave of electron population depletion and sub terahertz self-modulations of light absorption and intrinsic stimulated emission in GaAs

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Abstract:During picosecond photogeneration of electron-hole plasma (EHP) in GaAs, intensive picosecond emission arises. Self-modulations of light fundamental absorption and of emission characteristics are found out. These self-modulations disclose origination in GaAs of wave of a new type, i.e., autowave of carrier populations depletion in energy space, a new type of collective excitation of carriers and a new form of EHP instability.