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Coherent Bremsstrahlung of 50 MeV Energy Relativistic Electrons in Quartz Single Crystal Under the External Acoustic Oscillations

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The work is devoted to the suppression of a few peaks in spectral distribution of coherent bremsstrahlung radiation of the relativistic electrons with 40-50 MeV energy and obtaining of new coherent intensive peaks at the presence of external acoustic field of 1.024 GHz frequency. It was experimentally shown that a new peak appear in the range of ~1keV. The quartz single crystal of X cut with the thickness of 0.6 mm is used as a target. The obtained results well coincide with the theoretical calculations.

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