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PS3-26 Low Energy 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 noncoherent bremsstrahlung radiation of the relativistic electrons with 40-50 MeV energy and the 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 appears in the range of ~1keV. The quartz single crystal of X cut with the thickness of 0.6 mm was used as a target. The obtained results well coincide with the theoretical calculations [1].

[1] A. R. Mkrtchyan, A. A. Saharian. Soft X-ray coherent bremsstrahlung induced by hypersonic waves. Channeling 2014, 5-10 October 2014, Capri-Naples, Italy.

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