Abstract Submitted
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ac conductivity in low dimensional structures: acoustic study[1]
A. SUSLOV, NHMFL, Tallahassee, FL 32310, USA, I. DRICHKO, I. SMIRNOV, A. DYAKONOV, YU. GALPERIN, Ioffe PTI, St Petersburg, 194021, Russia, V. VINOKUR, ANL, Argonne, IL 60439, USA — Surface acoustic waves (SAWs) were used for contactless measurements of ac conductivity in low dimensional structures. The value of complex ac conductivity was extracted from simultaneous measurements of the sound attenuation and velocity. The measurements were performed in the frequency range 17-300MHz, at temperatures down to 0.3K and in the magnetic fields up to 18T. Such measurements allowed to study, for example, mechanisms of conductivity in a dense array of SiGe quantum dots and localization of the 2D carries in GaAs/AlGaAs and Si/SiGe heterostructures in the ultraquantum limit. An extended list of coauthors will be presented during the presentation.

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