

Turkish Journal of Physics

Turkish Journal


of

Physics

Experimental Separation of Phonon and Extrinsic Scattering in 2D Carrier Gases in GaAs

F.F. OUALI, H.R. FRANCIS, H.C. RHODES
School of Physics and Astronomy,
University of Nottingham, NG7 2RD, UK.

Abstract: A new method which separates phonon scattering from extrinsic scattering in 2D gases in GaAs is presented. In contrast to previous ones, the technique makes no assumptions about the temperature dependence of the extrinsic scattering. The preliminary measurements of the phonon limited mobility μ_{ph} on two electron gas samples show a Bloch-Grüneisen regime in the temperature range 1.2-4.5K and the results agree reasonably well with other experimental and theoretical work.

 [Keywords](#)
 [Authors](#)



phys@tubitak.gov.tr

[Scientific Journals Home](#)
[Page](#)

Turk. J. Phys., **23**, (1999), 717-724.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Phys.,vol.23,iss.4.](#)