

EFFECT OF WEAK MAGNETIC FIELD ( $\sim 300$  Gs)  
ON THE INTENSITY OF TERAHERTZ EMISSION  
OF HOT ELECTRONS IN  $n$ -Ge AT HELIUM  
TEMPERATURES

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S u m m a r y

Experimental results of studying the effect of a weak magnetic field ( $\sim 300$  Gs) on the intensity of the terahertz emission ( $\lambda \approx 100 \mu\text{m}$ ) of hot electrons in  $n$ -Ge (crystallographic orientation  $(1,0,0)$ ) at helium temperatures ( $T \sim 5$  K) are presented and discussed. It is shown that the strong influence of this field (decrease of the emission intensity by  $500 \div 1000\%$ ) is related to a decrease of the carrier concentration at weak electric fields and the appearance of the magnetoresistance at stronger fields. The longitudinal magnetoresistance becomes significant due to the anisotropy of the energy dispersion law of electrons and a strong deformation of the electron velocity distribution function by the electric field (which is beyond the framework of the diffusion approximation).