

POLARIZED RADIATION
INTERFEROMETRY RESEARCH
OF THERMOELASTICITY IN SILICON CRYSTAL
WITH THE USE OF MODULATION POLARIMETRY

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S u m m a r y

By registering the polarization state of probing radiation transmitted through a silicon crystal wafer, the optical anisotropy induced in the crystal by the heat flow from an external contact heater has been studied. The modulation polarimetry technique is used, the high resolution of which allowed the measurements to be made under conditions of the low temperature gradient and, hence, temperature-independent coefficients. A superposition of two- and multibeam interferences of circularly polarized radiation is detected. It is shown that the corresponding parameters provide information on the magnitude of mechanical stresses (dielectric anisotropy), as well as on some optical coefficients.