PECULIARITIES OF A GLOW DISCHARGE IN MIXTURES OF GASES WITH LOW AND HIGH IONIZATION POTENTIALS [[1]](#footnote-1)\*)

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A study of plasma in gas mixtures is boss a necessary and a difficult task, primarily in relation to diagnostic methods [1, 2, 3]. Recently, the relevance of this problem has been associated with technological processes [4] and investigations of dusty plasma in a trap in plasma-forming gases that differ greatly in mass [5–7].

This report presents a spectral method for determining the temperature of electrons in mixtures of gases with very different masses: neon and krypton. It is shown that with the addition of krypton in a few units of percent, it is possible to determine the relative change in the energy (temperature) of electrons. The obtained spectroscopic data are compared with the available literature data obtained by the probe method [8], as well as with the results of numerical calculations of the characteristics of ions and electrons in gas mixtures [9, 10].

The applicability of the method and its limitations are shown. The dependence of the change (the decreasing) in the electron temperature upon the addition of a highly ionizable component up to 10% is obtained. It is compared with results of experiments on the selection of dust particles in traps in striations in the similar number of the mixtures.

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