SPECTROSCOPIC MEASUREMENTS OF PLASMA JET PARAMETERS GENERATED in PLASMA FOCUS IN different working GASES

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The results of measuring plasma temperature and concentration in the axial jets are presented. Jets are formed due to compression of the current-carrying noncylindrical shell during the formation of the plasma focus in different gases at different distances from the point of generation. There are values of: helium plasma jet concentration and temperature at a distance of 35 and 65 cm (by the lines of helium and hydrogen); helium background plasma temperature and ion-concentration at a distance of 35 cm before the arrival of the jet (by the lines of helium, in the experiment with a slit that diminish the thickness of the plasma); neon plasma jet concentration and temperature at a distance of 35 cm (by the Stark broadening of hydrogen-like helium line); hydrogen plasma jet concentration and temperature at a distance of 65 cm – by neutral helium lines.

Keywords: plasma focus, spectral measurements, the Stark broadening, plasma jet, background plasma, plasma concentration and temperature.