

The subject of the master thesis is the extension of the measurement of plasma parameters by the Langmuir probe in a system with a planar magnetron and a hollow cathode operating in pulse mode. The main tasks are to modify the measuring circuit to increase the maximum probe current and to put the USB oscilloscope into operation for data collection with higher resolution and higher sampling rate. Furthermore, the function of the entire device will be verified using test circuits and also by measuring the probe characteristics in discharges in a system with a magnetron and a hollow cathode in both continuous and pulse mode.