Spectral characteristics of plasma antennas (amplitude modulation)

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Investigations of the spectral characteristics of the signals emitted by the plasma antenna at 430 MHz and the different modulation frequencies (200 Hz to 2000 Hz) for varying the power oscillator and comparison with the signals emitted by the metal antennas. Changing the master oscillator power allows you to change the density of the plasma column and the effective height of the plasma antenna. The spectral characteristics of plasma antennas is reserved Fig.1. The noise level remains at the same level as that of the metal antenna. The main feature of these modes is a change in the width of the emission spectrum according to the frequency of the modulating signal. The results show that there is a possibility of creating a broadband plasma antenna operating range which lies in the 100MHz - 600MHz. This antenna is a collection of elements, combined into a common block, the resonance frequencies are spaced over the operating range. The maximum frequency of the transmission message frame (pulse time) of the antenna will be determined by the plasma density in the high frequency components.