

SHAPE OF ATOMIC LINES EMITTED BY POSITIVE CORONA DISCHARGE

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The corona discharge on point anode (positive corona) was realized if a radius of the electrode was small enough, $0.45\mu\text{m}$, and voltage was some larger than that in the case of the negative corona. The mobility of electrons and positive ions are close each other in LHe. Therefore, electric currents both negative and positive corona differ weakly. However the spectral analysis of the radiation from the positive corona shows qualitative differences of spectral features of these discharges. Both atomic lines and molecular bands were observed in the spectra of the positive corona in LHe at 4.2K under different pressures. The spectra observed in the positive corona have marked non-symmetric shape. The atomic spectra show an increased intensity of their long-length "red" tails. The red satellites have been observed in the vicinity of both atomic and molecular lines. Comparison of intensities of R- and P-branches of the rotational structure of band $d^3\Sigma_u^+ - b^3\Pi_g$ shows increased intensity of the P-branch lines. This effect is more significant than in spectra of negative corona.

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