

Abstract Submitted  
for the GEC11 Meeting of  
The American Physical Society

**Experimental Determination of Paschen Curve and First Townsend Coefficient of Nitrogen Plasma Discharge** SABAH WAIS — In the present work, an experimental study is performed to determine the first Townsend coefficient and Paschen curve for  $N_2$  gas chamber using a parallel plate geometrical configuration. Paschen curve coefficients are derived by exponential fitting of first Townsend coefficients data of plasma discharge. The experimental data is acquired at different working pressure and various electrode gap separations. Furthermore, the amplification process of the gas gain in non-uniform electric field is realized.

Sabah Wais

Date submitted: 25 Apr 2011

Electronic form version 1.4