

Abstract Submitted  
for the GEC07 Meeting of  
The American Physical Society

**Total and total ionization cross sections for  $\text{NH}_x$  and  $\text{NF}_x$  ( $x = 1, 2$  and  $3$ ) on electron impact**<sup>1</sup> C.G. LIMBACHIYA, P.S. Science College, Kadi, INDIA - 382 715, M. VINODKUMAR, V.P. Science College, V.V. Nagar, INDIA - 388 120, S. GANGOPADHYAY, K.N. JOSHIPURA, Dept.of Physics, S.P. Uni. V.V. Nagar, INDIA - 388 120 — Electron-impact induced ionization cross-sections for  $\text{NH}_3$  and  $\text{NF}_3$  and their chemically reactive free radicals,  $\text{NH}_X$  &  $\text{NF}_X$  ( $x = 1, 2$ ) are relevant to processes in planetary & cometary atmospheres. In this paper we have reported the total (complete) and total ionization cross sections for molecules  $\text{NH}_X$  and  $\text{NF}_X$  ( $x = 1, 2$  and  $3$ ) on electron impact from threshold to 5 keV. We used complex optical potential formalism (SCOP) [1] to calculate the total inelastic cross sections  $Q_{inel}$  and total (complete) cross sections  $Q_T$   $Q_{inel}$  includes  $Q_{ion}$  and we have developed a semi-empirical method, Complex Scattering Potential – ionization contribution (CSP-ic) to extract ionization cross sections  $Q_{ion}$  from calculated  $Q_{inel}$  [2]. **References** [1] M.Vinodkumar, K.N.Joshiyura, C.G.Limbachiya & B.K.Antony, Eur. J. Phys. D. **37** (2006) 67 [2] M.Vinodkumar, K.N.Joshiyura, C.G.Limbachiya & B.K.Antony, Phys. Rev A **74** (2006) 022721

<sup>1</sup>CGL, MVK thank UGC, KNJ thanks ISRO-India for research grants

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Date submitted: 15 Jun 2007

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