

## ERRATA

**Erratum: "Semiclassical calculation of collisional dissociation cross sections for N+N<sub>2</sub>" [J. Chem. Phys. 117, 6556 (2002)]**Catherine Tully<sup>a)</sup> and Robert E. Johnson*Department of Engineering Physics and Astronomy, Thornton Hall, University of Virginia, Charlottesville, Virginia 22903*

[DOI: 10.1063/1.1620504]

In this Erratum we correct the cross sections for the N+N<sub>2</sub> collisions published earlier. These are relevant to the interaction of energetic nitrogen atoms in Titan's nitrogen atmosphere. The results shown in Figs. 2–4 should be multiplied by a factor of 2 to obtain the correct values. Also in Figs. 3 and 4 the units for the double differential cross sections should be  $\text{cm}^2 \times 10^{-16}/\text{steradians/eV}$ . For this atom molecule collision, the double differential cross sections in Figs. 3 and 4 are for the outgoing N atoms. This includes simple scattering of the incident N, reactions, in which case the outgoing N was initially an atom in N<sub>2</sub>, and dissociation, in which case there are three outgoing N atoms. These are displayed for an initial center of mass kinetic energy of 20 eV and for final center of mass kinetic energies with a range about the final energy + or -1 eV. The change in the center of mass energy is due to vibrational excitation of the N<sub>2</sub> and/or dissociation. The corrected figures are given below with their captions.

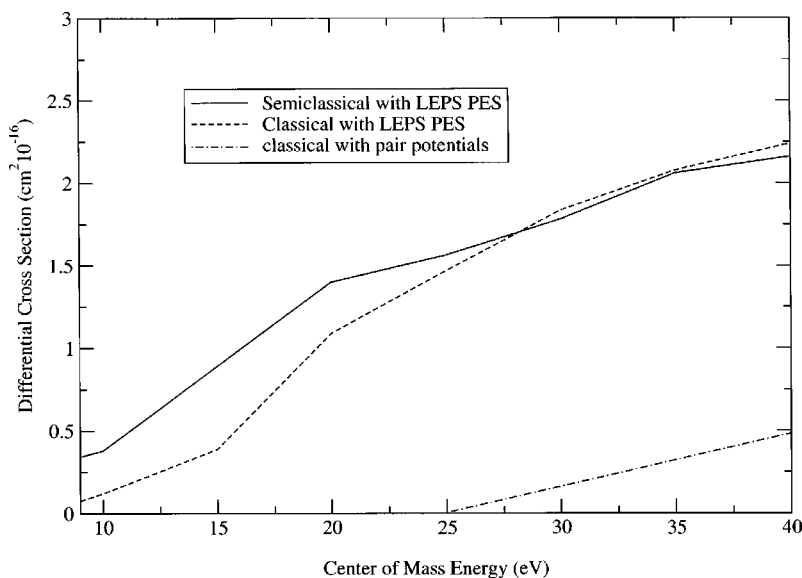


FIG. 2. Integrated dissociation cross sections vs center of mass energy  $E$  (eV) ranging from 9 to 40 eV for the semiclassical (solid) and classical (dashed) calculations using the LEPS PES. Also shown is the dissociation cross section calculated using the repulsive pair potentials (dot-dashed).

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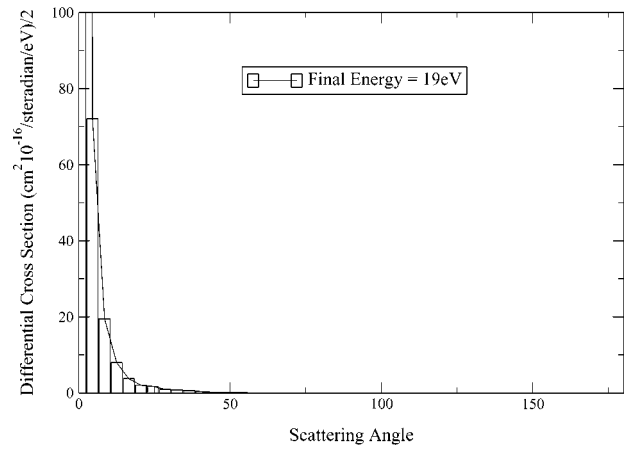
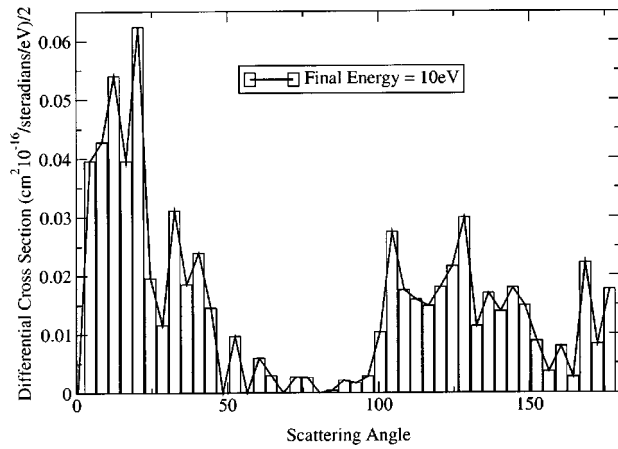
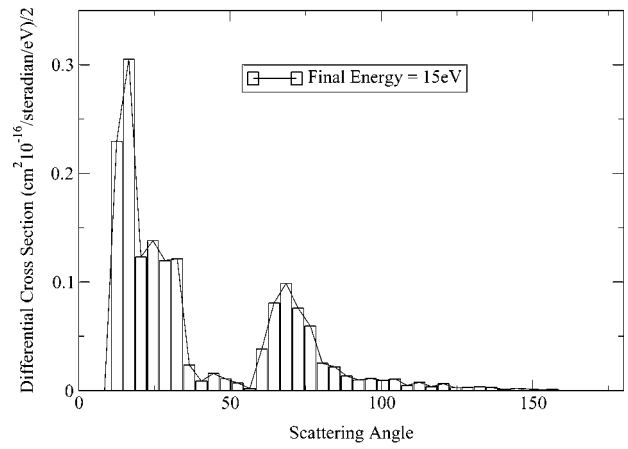
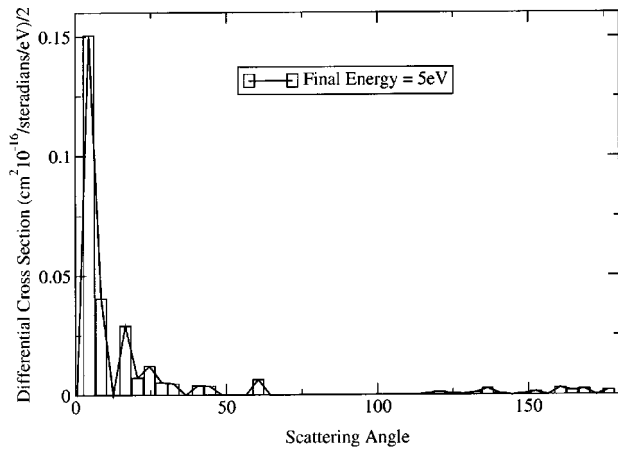


FIG. 3. Doubly differential cross sections plotted against scattering angle  $\chi$  for different values of final center of mass energy  $\epsilon=5$  eV (top) and  $\epsilon=10$  eV (bottom), where the initial center of mass energy is 20 eV.

FIG. 4. The same as Fig. 3 but for center of mass energy  $\epsilon=15$  eV (top) and  $\epsilon=19$  eV (bottom).