

Abstract Submitted
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K-shell x-ray spectroscopy of atomic nitrogen¹ DENNIS W. LINDLE, U. Nevada, Las Vegas, MARCELO SANT'ANNA, U. Federal do Rio de Janeiro, Brazil, ALFRED S. SCHLACHTER, Lawrence Berkeley National Laboratory, GUNNAR OHRWALL, MAX-Lab, Lund U., Sweden, WAYNE C. STOLTE, U. Nevada, Las Vegas, BRENDAN M. MCLAUGHLIN, Queen's U of Belfast, UK — Absolute K-shell photoabsorption cross sections for atomic nitrogen have been obtained experimentally and theoretically. Previous high-resolution K-shell measurements for this important atom have never been reported because of the difficulty of making a sufficiently dense target of nitrogen atoms. Interplay between experiment and theory enabled identification and characterization of strong np resonance features appearing throughout the 1s threshold region. An experimental value of 409.64 +/- 0.02 eV was determined for the K-shell binding energy of N.

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Dennis W. Lindle
University of Nevada, Las Vegas

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