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## Session RP01 - Poster Session VI.

POSTER session, Wednesday afternoon, March 24

Exhibit Hall, GWCC

# **[RP01.47] Normalization of the Measured Relative Electron Differential Cross Sections for $2^1\Sigma^+$ and $^1\Pi$ States of $N_2$ .**

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The measured relative electron differential cross sections (DCSs) for excitation of the  $2^1\Sigma^+$  and  $^1\Pi$  States of  $N_2$  have been normalized through a recent forward scattering function for the generalized oscillator strength (GOS) [1]. Measurements were obtained at electron impact energies of 15, 20, 30, 50 and 80 eV, using the electron spectrometer with crossed electron-molecule beam arrangement [2]. Measured data are corrected at and near zero scattering angles following the analytic behavior of the momentum dispersion method [3].

Absolute DCS values for the  $^1\Pi$  state are compared with the only available set of theoretical data [4], while for the  $2^1\Sigma^+$  state results are presented for the first time. \begin{tabular}{l} \multicolumn{1}[1] & N.B. Avdonina, et. al, J. Phys. B\bf30, 2591 (1997) \multicolumn{1}[2] & B. Marinkovic, C.Z. Szmytkowski, V. Pejcev, D. Filipovic and \multicolumn{1} & L. Vuskovic, J. Phys. B\bf19, 2365 (1986) \multicolumn{1}[3] & A. Haffad, et. al., Phys. Rev. Lett. \bf76, 2456 (1996) \multicolumn{1}[4] & S.E. Michelin, T. Kroin and M.T. Lee, J. Phys. B\bf29, 2115 (1996)

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Abstract Submitted  
for the APR99 Meeting of  
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**Normalization of the Measured Relative Electron Differential Cross Sections for  $2^1\Sigma^+$  and  $1\Pi$  States of  $N_2O$ .**<sup>1</sup> B. MARINKOVIC, R. PANAJOTOVIC, Z.D. PESIC, D.M. FILIPOVIC, *Inst. of Physics, Yugoslavia*, Z. FELFLI, A.Z. MSEZANE, *CTSPS/Clark Atlanta U.* — The measured relative electron differential cross sections (DCSs) for excitation of the  $2^1\Sigma^+$  and  $1\Pi$  States of  $N_2O$  have been normalized through a recent forward scattering function for the generalized oscillator strength (GOS) [1]. Measurements were obtained at electron impact energies of 15, 20, 30, 50 and 80 eV, using the electron spectrometer with crossed electron-molecule beam arrangement [2]. Measured data are corrected at and near zero scattering angles following the analytic behavior of the momentum dispersion method [3]. Absolute DCS values for the  $1\Pi$  state are compared with the only available set of theoretical data [4], while for the  $2^1\Sigma^+$  state results are presented for the first time.

- [1] N.B. Avdonina, et. al, J. Phys. B30, 2591 (1997)
- [2] B. Marinkovic, C.Z. Szmytkowski, V. Pejcev, D. Filipovic and L. Vuskovic, J. Phys. B19, 2365 (1986)
- [3] A. Haffad, et. al., Phys. Rev. Lett. 76, 2456 (1996)
- [4] S.E. Michelin, T. Kroin and M.T. Lee, J. Phys. B29, 2115 (1996)

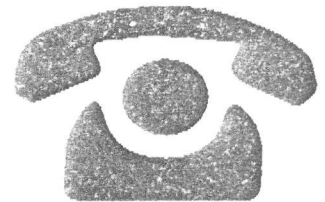
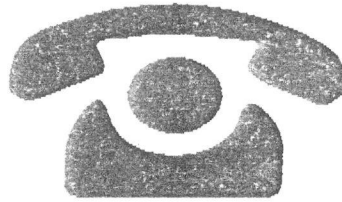
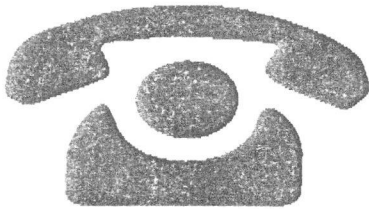
<sup>1</sup>Research at CTSPS supported by DoE Division of Chemical Sciences, OBES, OER and NSF and at Inst. of Phys., by the MST project 01E02 of R. of Serbia.

- Prefer Oral Session
- Prefer Poster Session

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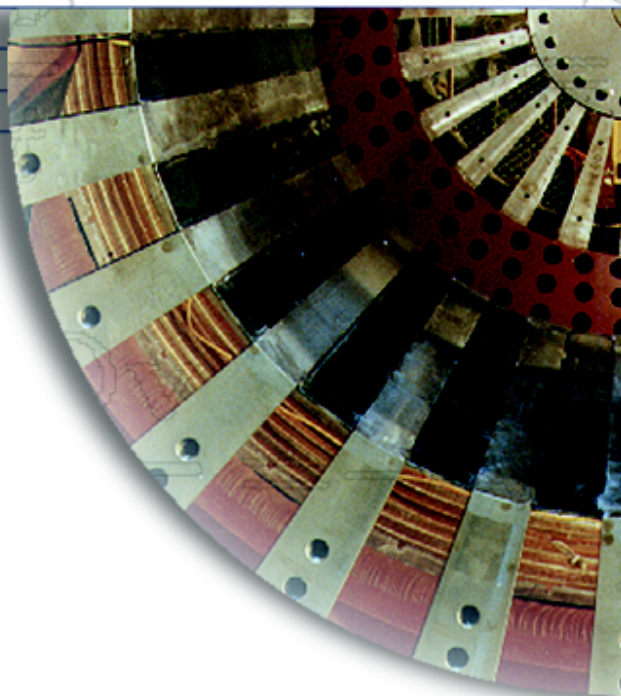
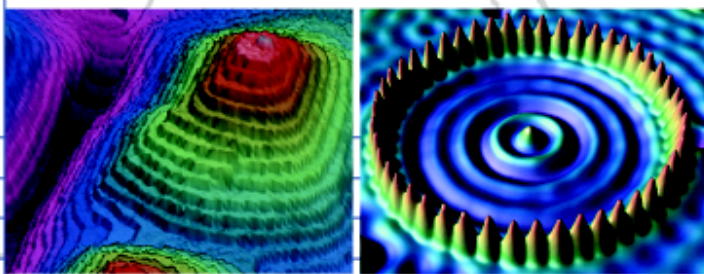
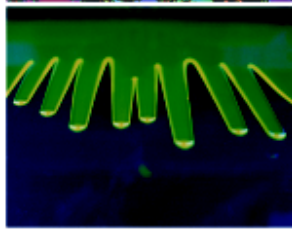
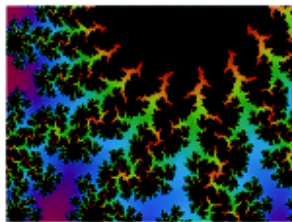
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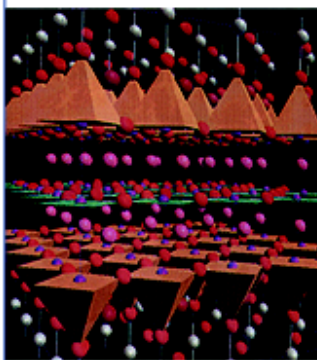
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ABSTRACT FOR THE 1999 CENTENIAL  
MEETING OF THE AMERICAN PHYSICAL  
SOCIETY  
ALFRED MSEZANE



*Centennial Year Report*



*American Physical Society*

# The APS Centennial



## CENTENNIAL CELEBRATION AND MEETING

To mark its Centennial year, the American Physical Society organized a Centennial Celebration and Meeting, held in the Georgia World Congress Center in Atlanta, Georgia, March 20-26, 1999. A combination of the annual APS March and April Meetings, the Centennial Meeting drew physicists from all fields and more than 60 countries to Atlanta to celebrate the last one hundred years of physics, review its remarkable achievements and look toward the future. A top-notch scientific program was featured, which drew the largest attendance ever at an APS meeting. Approximately 11,200 physicists from academia, government, and industry traveled to Atlanta to join in the festivities. An unusually high turnout of both our retired colleagues and students of all ages allowed attendees to enjoy the energy and enthusiasm of the future generations of physicists while honoring those who taught and nurtured their own generation.

## CENTENNIAL PROGRAM

The occasion of the APS Centenary provided the opportunity to celebrate the many great discoveries in physics of the last one hundred years. Of equal importance was the opportunity to highlight current ground-breaking work that points toward the next century. The APS organized a series of special plenary sessions on a broad range of topics and invited a number of world-renowned scientists to share their views with the physics community. In addition, there was a panel discussion which included many of the past Presidential Science Advisors. Chaired by D. Allan Bromley, the panel explored the role of the Presidential Science Advisor in U.S. policy and reflected on what has been learned over the past 50 years.

APS Divisions, Topical Groups, and Forums developed Centennial symposia which showcased both the major accomplishments in each area of physics during the 20<sup>th</sup> century and the many challenges and opportunities in the next. Special invited sessions broadly illustrated the cultural, social, and political impact of physics, in addition to discussing the important scientific breakthroughs of the century. All of these sessions are available on-line at <http://www.apscenttalks.org>.

## CENTENNIAL SPECIAL EVENTS

The Nobel Laureate Luncheon Program on Saturday, March 20, served to promote and highlight the importance of science education. This invited luncheon, sponsored by The Coca-Cola Company, honored an outstanding high school science teacher from each state and science teachers and students from Atlanta, Georgia and the surrounding area.

