

We proudly celebrate the 12th year of successful publications of our journal

Contents

1. Neutral Particles Broadening in the Frequency Fluctuation Approach 1-7
A. Yu. Letunov, V.S. Lisitsa, V.A. Astapenko
2. A Principle for Spectroscopic Diagnostics of Weak Electrostatic Waves in Magnetized Plasmas 9-16
E. Oks, E. Dalimier and P. Angelo
3. Principles of Spectroscopy of Diatomic Molecules 17-24
Christian G. Parigger
4. Evidence from Observations Points to the Existence of a Parallel Universe 25-29
E. Oks
5. Photoionization along the Cd Isonuclear Sequence 31-35
M. S. Pindzola and N. C. Sterling
6. Relativistic Description of Hydrogen Rydberg Atoms in a High-Frequency Laser Field 37-43
N. Kryukov and E. Oks

INTERNATIONAL REVIEW OF ATOMIC AND MOLECULAR PHYSICS

EDITORS/EDITORIAL BOARD

Editors-in-Chief
EUGENE OKS

Physics Department, 380 Duncan Drive.
Auburn University, Auburn, AL 36849, USA
E-mail: goks@physics.auburn.edu

MICHAEL S. PINDZOLA

Physics Department, 380 Duncan Drive.
Auburn University, Auburn, AL 36849, USA
E-mail: pindzola@physics.auburn.edu

EDITORIAL BOARD

Valeriy Astapenko

Moscow Institute of Physics and
Technology Institutskij Per. 9, Dolgoprudnyj
141700, Moscow region, Russia

Mark E. Bannister

Multicharged Ion Research Facility
Physics Division
Oak Ridge National Lab.
Bldg 6010, MS-6372
Oak Ridge, TN 37831, USA

James P. Colgan

Theoretical Division
Los Alamos National Lab.
Los Alamos, NM 87545, USA

Elisabeth Dalimier

Sorbonne Universites, Pierre et Marie
Curie F-75252 Paris Cedex 5, and
Ecole Polytechnique, LULI
F-91128 Palaiseau Cedex, France

Alexander Demura

HEPTI
Russian Research Center
"Kurchatov Institute"
Kurchatov square 1, Moscow 123182,
Russia

Andrei Derevianko

Physics Department, University of Nevada,
Reno, 1664 N. Virginia Street
Reno, NV 89557-0208, USA

Nils Elander

Department of Physics, Stockholm
University
Box 6730, S-11385, Stockholm, Sweden

Brett Esry

Department of Physics
Kansas State University
Manhattan, KS 66506, USA

Manuel A. Gonzalez

Departamento de Fisica Aplicada
E.T.S.I. Informatica
Universidad de Valladolid
47071 Valladolid, Spain

Motoshi Goto

National Institute for Fusion Science
Toki 509-5292, Japan

Hugo van der Hart

Dept. of Applied Mathematics and
Theoretical Physics
David Bates Building
Queen's University Belfast
Belfast, BT7 1NN, Northern Ireland
United Kingdom

John K.C. Lewis

Department of Physics & Physical
Oceanography
Memorial University of Newfoundland
St. John's, NL A1B 3X7
Canada

Martin O'Mullane

JET Joint Undertaking
Abington, Oxon OX14 3EA
United Kingdom

Christian G. Parigger

The University of
Tennessee Space Institute
Center for Laser Applications
411 B.H. Goethert Parkway
Tullahoma, TN 37388
USA

Gillian Peach

Department of Physics and Astronomy
University College London
Gower Street, London WC1E 6BT
United Kingdom

Adriana Predoi-Cross

Alberta Terrestrial Imaging Centre
Department of Physics and Astronomy
University of Lethbridge, Lethbridge, AB,
T1K 3M4, Canada

William L. Rowan

The University of Texas at Austin
1 University Station, C1510
Austin, TX 78712-0263, USA

Stefan Schippers

Institute for Atomic and Molecular Physics
Justus-Liebig-University Giessen
Leihgesterner Weg 217, 35392 Giessen
Germany

Roland Stamm

Universite de Provence
Physique des Interactions Ioniques et
Moleculaires
Centre de Saint Jerome, case 232
13397 Marseille cedex 20, France

Chantal Stehle

Laboratoire d'Etudes du Rayonnement et
de la Matière en Astrophysique
UMR 8112 du CNRS, Observatoire de
Paris
5 Place J. Janssen, 92195 Meudon,
France

Turgay Uzer

School of Physics
Georgia Institute of Technology
837 State Street, Atlanta
GA 30332-0430, USA

Call for Papers

The IRAMP is a peer reviewed international journal, created at the beginning of 2010, that publishes high-quality review articles and also high-quality original research papers. **Topics of interest are all areas of Atomic, Molecular, and Optical (AMO) physics in the broadest sense.** They include not only fundamental fields of AMO physics, but also *applied areas*, such as, for example (but not limited to):

- atomic and molecular processes in plasmas and gases
- optical and beam-probe nanophysics
- plasma spectroscopy
- X-ray lasers
- astrophysical applications

A distinctive feature of IRAMP is publishing both *review articles and original research papers* and having a relatively large share of the review articles in the mix. The journal is published *semi-annually*.

The publication is free of charge. There is no page limit.

A publication in the IRAMP creates a timely record of the authors results for a broad audience around the world - *without preventing the authors from submitting a modified/extended article elsewhere.*

The authors learn about the acceptance of their papers within just 2 weeks from the submission.

Each paper should be submitted electronically as 2 files (of the same content) simultaneously: a pdf-file and a source-file (such as a word-file or a LaTeX-file). The e-mail address for submissions is: goks@physics.auburn.edu



This document was created with the Win2PDF "print to PDF" printer available at <http://www.win2pdf.com>

This version of Win2PDF 10 is for evaluation and non-commercial use only.

This page will not be added after purchasing Win2PDF.

<http://www.win2pdf.com/purchase/>