

MEETING SCHEDULE AND PROGRAM

PROGRAM

Monday August 27

8:30 AM Welcome - Dr. H. Gursky, Superintendent, Space Science Division
Naval Research Laboratory, USA
Comments - Dr. G.A. Doschek, Naval Research Laboratory, USA

SESSION 1. SOLAR ASTROPHYSICS Chairperson: Dr. R.W.P. McWhirter
Rutherford Appleton Laboratory, UK

9:00 AM Invited Paper

I.1 The Soft X-ray and EUV Spectra of Solar Flares
K. Nishi
Tokyo Astronomical Observatory, Japan

9:30 AM Contributed Papers

O.1 Soft X-ray Spectroscopy from the X-ray Polychromator on the Newly
Repaired Solar Maximum Mission

K.T. Strong
Lockheed Palo Alto Research Laboratory, USA
J.R. Lemen
Mullard Space Science Laboratory, UK
K.J.H. Phillips
Rutherford Appleton Laboratory, UK

O.2 Measurement of the Increase in Altitude of the Soft X-ray Emission
Regions of Solar Flares

J.F. Seely and U. Feldman
Naval Research Laboratory, USA

O.3 Derivation of the Ionization Balance for Fe XXIV/Fe XXV
Using Solar X-ray Data

E. Antonucci and M.A. Doderio
Universita di Torino, Italy
A.H. Gabriel
Rutherford Appleton Laboratory, UK
K. Tanaka
Tokyo Astronomical Observatory, Japan

O.4 Observational Evidence for Coronal Magnetic Reconnection During
the Two-Ribbon Flare of 21 May 1980

R.A. Kopp
Los Alamos National Laboratory, USA
G. Poletto
Osservatorio Astrofisico di Arcetri, Italy

0.5 Variation of the Observed Coronal Calcium Abundance for Various
X-ray Flare Plasmas

J. Sylwester

Space Research Center, Polish Academy of Sciences, Poland

J.R. Lemen

Mullard Space Science Laboratory, UK

R. Mewe

Laboratory for Space Research, The Netherlands

10:30 AM COFFEE

11:00 AM Invited Paper

I.2 HRTS Ultraviolet Solar Spectroscopy

K.P. Dere

Naval Research Laboratory, USA

11:30 AM Contributed Papers

0.6 Interpretation of Electric Fields in Coronal Magnetic Loops

P. Foukal

Atmospheric and Environmental Research, Inc., USA

D. Landman

University of Hawaii, USA

0.7 The Solar Wind Generation Experiment for the Spartan 2 Mission

J.L. Kohl, H. Weiser, and G.L. Withbroe

Harvard-Smithsonian Center for Astrophysics, USA

R.H. Munro

High Altitude Observatory, USA

0.8 HRTS Observations of Spicular Emission at Transition Region
Temperatures Above the Solar Limb

J.W. Cook, G.E. Brueckner, J.-D.F. Bartoe, and D.G. Socker

Naval Research Laboratory, USA

12:10 PM LUNCH

SESSION 2. LOW DENSITY LABORATORY PLASMAS Chairperson: Professor W.R.S. Garton
Imperial College, UK

2:00 PM Invited Papers

I.3 X-ray Satellite Lines of Highly Ionized Atoms

J. Dubau

Observatoire de Paris, France

I.4 The Relevancy of Magnetically Confined Plasmas - Tokamak and Mirror
- for Atomic Spectroscopy and Astrophysical Plasma Diagnostics

M. Finkenthal

The Hebrew University of Jerusalem, Israel

3:00 PM COFFEE

3:30 PM Contributed Papers

0.9 Intensities in Complex Spectra of Highly Ionized Atoms

M. Klapisch, A. Bar-Shalom, and A. Cohen

Hebrew University of Jerusalem, Israel

0.10 Supra-Thermal Electron Tail Effects on X-ray Line Emission in a Tokamak Plasma

R. Bartiromo, F. Bombarda, and R. Giannella

Associazione EURATOM-ENEA sulla Fusione, CRE Frascati, Italy

0.11 Recombination Process from a Metastable State

T. Kato, K. Masai, and K. Sato

Nagoya University, Japan

0.12 New Calculations of Inner-Shell X-ray Lines in Ti, Cr, and Ni as Density Diagnostics

J.R. Lemen

Mullard Space Science Laboratory, UK

K.J.H. Phillips

Rutherford Appleton Laboratory, UK

G.A. Doschek

Naval Research Laboratory, USA

R.D. Cowan

Los Alamos National Laboratory, USA

5:30 PM RECEPTION

Tuesday August 28.

SESSION 3. NON-SOLAR ASTROPHYSICS

Chairperson: Dr. H. Gursky
Naval Research Laboratory, USA

9:00 AM Invited Papers

I.5 Spectroscopy of Cool Stars from IUE
C. Jordan
Oxford University, UK

I.6 Soft X-ray Spectroscopy with EXOSAT
R. Mewe
The Astronomical Institute at Utrecht, The Netherlands

I.7 UV Spectra of Nebulae and Novae
M.J. Seaton
University College London, UK

10:30 AM COFFEE

11:00 AM Contributed Papers

O.13 Broad-band Spectroscopy of Late-Type Stars with EXOSAT
M. Landini, B.C. Monsignori-Fossi, and R. Pallavicini
Arcetri Astrophysical Observatory, Italy

O.14 The Proposed Columbus Mission: High and Low Resolution
Spectroscopy in the 100-2000 Å Spectral Region
J.L. Linsky, for the Columbus Science Working Group
Joint Institute for Laboratory Astrophysics, USA
University of Colorado, USA
National Bureau of Standards, USA

O.15 X-ray Spectroscopic Measurements of Non-Equilibrium Ionization
in Supernova Remnants
T. Markert, C.R. Canizares, T. Pfafman, and P. Vedder
Massachusetts Institute of Technology, USA
P.F. Winkler
Middlebury College, USA
A. Pradhan
Joint Institute for Laboratory Astrophysics, USA

O.16 Objective Grating Soft X-ray Spectra of Compact Binary X-ray Sources
S.M. Kahn and S.D. Vrtilek
Columbia University, USA

O.17 High Resolution EUV/Soft X-ray Spectrometers Using Variable
Groove Spacings
M. Lampton, M. Hettrick, and S. Bowyer
University of California, Berkeley, USA

0.18 The Statistical Equilibrium of H and He and the H/He Ratio in
WR Stars

A.B. Underhill and A.K. Bhatia
NASA/Goddard Space Flight Center, USA

12:00 PM LUNCH

SESSION 4. THEORETICAL SPECTROSCOPY Chairperson: Dr. A. Temkin
NASA/Goddard Space Flight Center, USA

2:00 PM Invited Paper

I.8 Distorted Wave Calculations: Application to Astrophysical and
Tokamak Plasmas

A.K. Bhatia
NASA/Goddard Space Flight Center, USA

2:30 PM Contributed Papers

0.19 Effect of Two Types of Non-Maxwellian Electron Distributions on
Temperature Spectroscopic Diagnostics

M. Lamoureux, C. Moller, and P. Jaegle
University of Paris-Sud, France

0.20 Radiative Corrections to the Intensities of Dielectronic Satellite
Lines Emitted from Helium- and Lithium-Like Argon

V.L. Jacobs and J.E. Rogerson
Naval Research Laboratory, USA

0.21 A Comparison of Various NLTE Codes in Computing the Charge-State
Populations of an Argon Plasma

S.R. Stone and J.C. Weisheit
Lawrence Livermore National Laboratory, USA

0.22 Collision Strengths and Line Strengths for Transitions from the
 $1s^2 3$ Levels to the $1s^2 \bar{3}$ Levels in Li-Like Ions

D.H. Sampson, S.J. Goett and G.V. Petrou
Pennsylvania State University, USA
R.E.H. Clark
Los Alamos National Laboratory, USA

0.23 New Results of the Unresolved Transition Arrays Method

M. Klapisch, A. Krasnitz, and P. Mandelbaum
The Hebrew University of Jerusalem, Israel
C. Bauche-Arnoult and J. Bauche
Lab. Aime Cotton, France

3:30 PM COFFEE

4:00 PM Invited Paper

I.9 Recent Laboratory Studies of Dielectronic Recombination

G.H. Dunn

Joint Institute for Laboratory Astrophysics, USA

4:30 PM CONTRIBUTED PAPERS

O.24 VUV High-Resolution Absorption Spectra Obtained with Synchrotron Light, and Interpretations

M.A. Baig, J.P. Connerade, W.R.S. Garton, J. Hormes, C. Mayhew, G. Noldeke, and K. Sommer

Physikalisches Institut, Germany

Imperial College, UK

O.25 Absolute Wavelength Determination in the Soft X-ray Wavelength Range with Double Reflections in Single Crystals

B.S. Fraenkel

The Hebrew University of Jerusalem, Israel

O.26 High-Resolution Photoabsorption Spectrum of Cs^+ ($5p^6 1s^1 5p^5 ns, nd$) Between 504 Å and 600 Å Using a Laser Ionized Cs Vapor Column

T.J. McIlrath

University of Maryland, USA

V. Kaufman, J. Sugar, W.T. Hill, III, and D. Cooper

National Bureau of Standards, USA

O.27 The Measurement of Branching Ratios of Spontaneous Radiative Transition Probabilities for Be-Like Ions N IV and O V

J. Lang, R.A. Hardcastle, and P.H. Spurrett

Rutherford Appleton Laboratory, UK

O.28 Observation of Ionization of Laser Excited Atoms by Synchrotron Radiation

J.M. Bizau, F. Wuilleumier, P. Gerard, and P. Dhez

University of Paris-Sud, France

B. Carre and G. Spiess

Service des Atoms et des Surfaces, C.E.N. Saclay, France

D.L. Ederer

National Bureau of Standards, USA

J.L. Picque, J.L. Legouet, and J.C. Keller

Laboratoire Aime Cotton, C.N.R.S., France

P. Koch

State University of New York, Stony Brook, USA

O.29 Study of Electronic Capture in the $\text{N}^5\text{-He}$, H_2 Collision by UV Spectroscopy

P.H. Cotte and M. Druetta

Universite Lyon I, France

6:00 PM COCKTAIL HOUR

7:00 PM BANQUET

After-dinner topic and speaker: "On the Threshold of Space"
Dr. David H. DeVorkin
Curator, Space Science and
Exploration Department
National Air and Space Museum

Wednesday August 29

SESSION 6. POSTER PAPERS - 8:30 AM - 6:00 PM

- P.1 The Solar X-ray Line Spectrum 5.5-12 Å
D.L. McKenzie
The Aerospace Corporation, USA
- P.2 Solar Coronal Fe XVII X-ray Line Ratios
H.R. Rugge and D.L. McKenzie
The Aerospace Corporation, USA
- P.3 Atomic Calculations for the Highly Ionized Iron Ions Produced
in Solar Flares
H.E. Mason
University of Cambridge, UK
A.K. Bhatia
NASA/Goddard Space Flight Center, USA
- P.4 High Spectral Resolution Observations of Coronal X-ray Emission from
the RS CVn Binary Sigma Corona Borealis
G.R. Riegler
Jet Propulsion Laboratory, USA
P.C. Agrawal
Tata Institute of Fundamental Research, India
T.H. Markert
Massachusetts Institute of Technology, USA
- P.5 Spectroscopic Diagnostics of the UV Emitting Plasmas in Solar
Flares Observed from SMM
C.-C. Cheng
Naval Research Laboratory, USA
E. Tandberg-Hanssen
NASA/Marshall Space Flight Center, USA
- P.6 Precision Measurement of Wavelengths in Solar Flare X-ray Spectra
U. Feldman, J.F. Seely, and S. Daniels
Naval Research Laboratory, USA
- P.7 Analysis of Intensity Ratio for Mg XII Ly α Components from
Intercosmos 7 Observations
J. Sylwester, B. Sylwester
Space Research Center, Polish Academy of Sciences, Poland
J. Jakimiec, M. Tomczak
Wroclaw University, Poland
S.L. Mandelstam, I.A. Zhitnik, V.V. Korneev
P.N. Lebedev Physical Institute, USSR
- P.8 Effect of a non-Maxwellian Electron Distribution on the Linear
Polarization of Chromospheric Lines During Solar Flares
J.C. Henoux, G. Chambe, D. Herist-Chi, R. Shine, B. Woodgate,
and J. Beckers
Observatoire de Paris, France
NASA/Goddard Space Flight Center, USA
University of Arizona, USA

- P.9 The Solar and Heliospheric Observatory
 G. Noci
 Padua University, Italy
 Observatory of Arcetri, Italy
- P.10 Atomic Data in Astrophysics
 N.G. Bochkarev
 Sternberg State Astronomical Institute, USSR
- P.11 A New Type Spectrometer for Plasma Diagnosis
 T. Oshio
 Hiroshima Institute of Technology, Japan
 E. Ishiguro and R. Iwanaga
 Osaka City University, Japan
- P.12 Measurement of the A-Value of the $3s^2 1S_0 - 3s3p^3 P_1^0$ Intersystem
 Transition in Al II at 2670 Å: A Progress Report
 B. Carol Johnson and H.S. Kwong
 Harvard-Smithsonian Center for Astrophysics, USA
- P.13 Photodissociation of Neutral Free Radicals of Astrophysical Interest
 L.D. Gardner, M.M. Graff, and J.L. Kohl
 Harvard-Smithsonian Center for Astrophysics, USA
- P.14 Time-Resolved Spectra in the 5-330 Å Region Emitted from Tokamak
 Plasmas
 J.L. Schwob, A. Wouters, and S. Suckewer
 Princeton University, USA
 M. Finkenthal
 The Hebrew University of Jerusalem, Israel
- P.15 Relative Intensities of Lines in F I - B I - Like Ti, Cr, Fe, Ni,
 and Ge: A Comparison of Theory and Experiment
 B. Stratton and H.W. Moos
 Johns Hopkins University, USA
 U. Feldman and J.F. Seely
 Naval Research Laboratory, USA
 S. Suckewer
 Princeton University, USA
 M. Finkenthal
 The Hebrew University of Jerusalem, Israel
- P.16 Measurements of Absolute Collisional Cross Sections at Harvard-
 Smithsonian Center for Astrophysics
 J.L. Kohl, L.K. Deutsch, L.D. Gardner, G.P. Lafyatis, and A. Young
 Harvard-Smithsonian Center for Astrophysics, USA
- P.17 Atomic Potentials in Very Dense Aluminum Plasmas
 R. Cauble and U. Gupta
 Berkeley Research Associates, USA
 J. Davis
 Naval Research Laboratory, USA

- P.18 Comparative Study of Electron Bremsstrahlung in Various High
T- ρ Potentials
M. Lamoureux
Universite of Paris-Sud
R. Cauble
Berkeley Research Associates, USA
L. Kim
University of Pittsburgh, USA
F. Perrot
CEA Limeil, France
R. Pratt
University of Pittsburgh, USA
- P.19 Inverse Scattering Theory for Inelastic Collisions
Cao xuan Chuan
Institute of Physics, Algeria
- P.20 The Effect of Resonances on the Excitation Rates for the Ions
of the He-Like Isoelectronic Sequence
P. Faucher and F. Bely-Dubau
Observatoire de Nice, France
J. Dubau
Observatoire de Meudon, France
- P.21 Proton-Induced Fine-Structure Transitions
B. Zygelman and A. Dalgarno
Harvard-Smithsonian Center for Astrophysics, USA
- P.22 Charge State Distribution Measurement in an ECR-Discharge by
VUV Spectroscopy
E.H. Marlinghaus and K. Wieseemann
Ruhr-Universitat, Germany
- P.23 Critical Compilations of Atomic Energy Levels
J. Sugar, W.C. Martin, J. Reader, A. Musgrove, and C. Corliss
National Bureau of Standards, USA
- P.24 Critical Compilations of Atomic Transition Probabilities
G.A. Martin, J.R. Fuhr, and W.L. Wiese
National Bureau of Standards, USA
- P.25 XUV and Soft X-ray Radiation from Laser-Produced Plasmas as
Laboratory Spectroscopic Sources
P. Gohil, M.L. Ginter, and T.J. McIlrath
University of Maryland, USA
H. Kapoor, D. Ma, and M.C. Peckerar
Naval Research Laboratory, USA
- P.26 Theoretical Calculation of X-ray Emission from Laser-Produced
Plasmas
D. Duston, R.W. Clark, and J. Davis
Naval Research Laboratory, USA

- P.27 Interpretation of Pseudocontinua in the Spectra of Highly Ionized Atoms from Tm to W in Laser-Produced Plasmas
P. Mandelbaum, M. Klapisch, and A. Krasnitz
The Hebrew University of Jerusalem, Israel
- P.28 X-ray Measurements from the Tandem Mirror Experiment-Upgrade (TMX-U)
E.H. Silver, J.F. Clauser, and B.H. Failor
Lawrence Livermore National Laboratory, USA
- P.29 Electron Capture into Excited States for $A^{8+} + H_2$ Collisions at 3 keV/amu
M. Mayo, D. Hitz, M. Druetta, S. Dousson, J.P. Desclaux, and S. Bliman
Agrispa GIS, CEA/CNRS, C.E.N.G., France
- P.30 Population of Excited States of A^{+10} in a Plasma by a Time-Dependent Model
H. Guennou, and A. Sureau
Universite Paris-Sud and C.N.R.S., France
- P.31 Transitions of the Type 2s-2p in Highly-Ionized Copper to Rubidium
W.E. Behring and Leonard Cohen
NASA/Goddard Space Flight Center, USA
J.F. Seely and U. Feldman
Naval Research Laboratory, USA
Samuel Goldsmith
University of Maryland, USA
M. Richardson
University of Rochester, USA

SESSION 7. HIGH DENSITY LABORATORY PLASMAS Chairperson: Dr. W.H. Parkinson
Harvard-Smithsonian Center
for Astrophysics, USA

2:00 PM Invited Talks

- I.10 Diagnostics of Laser-Produced Plasmas
D. Matthews
Lawrence Livermore National Laboratory, USA
- I.11 Recombination Lasers in the XUV Spectral Region
G. Pert
University of Hull, UK

3:00 PM Contributed Papers

- O.30 3s-3p and 3p-3d Transitions in Neon-Like Ions of the Iron-Group Elements
U. Litzen and C. Jupen
Lund University, Sweden

- 0.31 Direct Comparison of Electron Density Measurements in Laser-Created Plasmas Using Stark Broadening and Satellite Line Intensities
Ph. Alaterre, P. Audebert, J.P. Geindre, C. Popovics, and J.C. Gauthier
Ecole Polytechnique, France
- 0.32 High Resolution Lithium-like Satellites to the $1s^2 1S_0 - 1s3p^1 P_1$ Line in Laser-Produced Dense Plasmas
P. Audebert, J.P. Geindre, J.C. Gauthier, Ph. Alaterre, and C. Popovics
GRECO ILM, Ecole Polytechnique, France
M. Cornille and J. Dubau
Observatoire de Paris, France
- 0.33 Opacity Broadening as a Density Diagnostic for Spot Spectroscopy
J.P. Apruzese
Naval Research Laboratory, USA
- 0.34 Absorption Spectra of Light Ions in the Extreme Ultraviolet
E. Jannitti
Istituto Gas Ionizzati del CNR, Padova, Italy
P. Nicolosi and G. Tondello
Universita di Padova, Italy
- 0.35 X-ray Spectroscopy to Determine Line Coincidences Between K- and L- X-ray Transitions
P.G. Burkhalter, D. Newman, J.V. Gilfrich, and D.B. Brown
Naval Research Laboratory, USA
P.D. Rockett and G. Charatis
KMS Fusion, Inc., USA
C. Hailey and D. Matthews
Lawrence Livermore National Laboratory, USA
B. MacGowan
Imperial College, UK
- 0.36 XUV Spectra of Ag XVII-Ag XXI and Cd XVIII-Cd XXII from Laser-Produced Plasmas
M.A. Khan and H.A. Al-Juwair
University of Petroleum and Minerals, Saudi Arabia
G.J. Tallents
The Australian National University, Australia
- 0.37 Calculation of Ar XI Spectral Line Intensities from High Density/High Temperature Plasmas
Y.T. Lee and K.J. Reed
Lawrence Livermore National Laboratory, USA
- 0.38 Dielectronic Recombination of Highly Stripped Argon Ions: Theoretical Calculations and Direct Observations in EBIS Source
M. Loulergue and J. Dubau
Observatoire de Paris-Meudon, France
J.P. Briand and P. Charles
Institut Curie, Universite P. et M. Curie, France

O.39 A High-Resolution VUV Spectrometer with Electronic Parallel Spectral
Detection

C.L. Cromer, J.M. Bridges, T.B. Lucatorro, and J.R. Roberts
National Bureau of Standards, USA

5:00 PM DISCUSSION OF NEXT CONFERENCE

6:00 PM END OF MEETING