line and chemical forces. The role of nonclassical conformations is important for chain termination; this provides some insight for biological analogies. Finally, E. Clementi (G. Donegani Institute, Novara, Italy) described various techniques for calculating the effects of reactivity, solvents, and temperature on proteins and biopolymers.

The activities of the meeting were concluded by P. O. Löwdin (Uppsala University) who will be the local host of the next (1982) Congress in Uppsala. He noted that the traditional approach of quantum chemistry has been to seek an understanding of fundamental principles underlying a particular application in order to extend our knowledge to additional applications. Despite the progress that quantum chemistry has achieved, there is a long way to go before a full understanding of all of chemistry can be reached.

In conjunction with the Kyoto Congress, five satellite meetings were arranged on related but more specialized topics. One was a three-day symposium on Many-Body Theoretical Approaches to Electron Correlation in Molecules, held in Kobe. Attendance was limited to 80 participants, half of whom were from Japan. Eight of the 25 lectures were presented by Japanese scientists. (I presented an invited lecture, "Electron Correlation and Interaction Energies Between Closed Shell Systems Using Many-Body Perturbation Theory".) The meeting was supported by the Chemical Society of Japan and was financially aided by the Yamada Science Foundation and the Commemorative Association for the Japan World Exposition of 1970. The meeting was extremely well organized and offered a stimulating scientific program. Funding was also at a high level. For example, each invited speaker from outside Japan was provided a generous stipend to cover international travel expenses plus room and board at the Inter-University Seminar House of Kansai, the conference residence.

The remaining four meetings were smaller and of two days' duration each. One was held in Nara on Future Aspects of the Education of Theoretical Chemistry in Asia. Another met in Okazaki to discuss Theoretical Aspects of Molecular Interaction and Chemical Reaction. The other two met separately in Kyoto and covered the Design of Inorganic and Organic Materials of Technological Importance and Quantum-Chemical Aspects of Biomolecules—Their Structures and Functions.

An adjunct activity for some of the attendees from outside Japan was an invitation to visit a university or laboratory. (For instance, I was invited to present a seminar, "Electron Correlation in Simple Chemical Systems," at the Department of Materials Science of the University of Electro-Communications in Tokyo.) Such visits provided an excellent way to make closer contact with scientists and their facilities in Japan.

In conclusion, the Third International Congress of Quantum Chemistry and its affiliated meetings were enjoyable and rewarding considering the depth and breadth of the presentations. Of course, the occasion promoted interactions within the international community of scientists but, equally important, it afforded the participants from abroad the opportunity to explore parts of Japan and glimpse its customs and culture.

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DEPARTMENTS

PUBLICATIONS September—December, 1979 (*and others from 1979 not previously reported*)

F. J. Adrian and L. Monchick, "Theory of Chemically Induced Magnetic Polarization. Effects of $S-T_{\pm 1}$ Mixing in Strong Magnetic Fields," *J. Chem. Phys.* **71**, No. 6, pp. 2600-2610.

W. S. Amey, "The Computer Assisted Software Engineering (CASE) System," *Proc. 4th Software Engineering Conf.*, pp. 111-115.

M. J. Amir and W. B. Newman, "Information: Unlimited Demands—Limited Funds (Testing the viability of a scientific journal collection in light of economic realities)," *Collection Management* **3**, No. 1, pp. 111-119.

A. E. Berger, M. Ciment, and J. C. W. Rogers, "The Alternating Phase Truncation Method for Numerical Solution of a Stefan Problem," *J. Numer. Anal.* **16**, pp. 563-587.

W. G. Berl and B. M. Halpin, "Human Fatalities from Unwanted Fires," *Fire J.* **73**, pp. 105-123.

J. Bohandy and B. F. Kim, "Conventional and Dye Laser Optical Spectra of Zinc Porphin in Anthracene," *Spectrochim. Acta* **35A**, pp. 415-420.

J. N. Campbell (JHMI), R. A. Meyer (APL), and R. H. LaMotte (JHMI), "Sensitization of Myelinated Nociceptive Afferents That Innervate Monkey Hand," *J. Neurophys.* **42**, No. 6, pp. 1669-1679.

W. M. Cronyn, S. D. Shawhan, J. J. Rickard, and D. G. Mitchell (Univ. Iowa) and E. C. Roelof and B. L. Gotwols (APL), "IPS Activity Observed as a Precursor of Solar Induced Terrestrial Activity," *AGARD Proc. No. 238* (Conf. on Operational Modelling of the Aerospace Propagation Environment), pp. 30-1/30-17.

E. P. Cunningham, "Probability of

Crashing from Monte Carlo Simulation," *J. Spacecr. Rockets* **16**, No. 5, pp. 348-350.

M. Davidson and J. L. Machamer, "High-Density Digital Magnetic Recording Using the [5,6] Alternating Disparity Block Code," *Electron. Lett.*, 20 July 1978, pp. 459-460.

G. L. Dugger, "Is There a Chance for OTEC?," *Astronaut. Aeronaut.* November, pp. 36-42.

T. W. Eagles and T. S. Margulies (APL) and J. Cohon and C. ReVelle (JHMI), "Multiobjective Regional Energy Location Model: Cost Versus Population Proximity Trade-Offs," *Trans. Am. Nucl. Soc.* **33**, pp. 613-615.

P. B. Edwards, S. Favin, and J. L. Teesdale, "Evaluation of Educational Programs: Why? How? By Whom?," *Proc. 1979 Conf. on Frontiers in Education*, pp. 323-330.

L. W. Ehrlich, "On Some Iterative Methods for Solving Coupled Equations of Fluid Flow," *Proc. IMACS Conf.* **3**, pp. 304-312.

L. W. Ehrlich, "Solving the Biharmonic Equation on Irregular Regions," *ACM Trans. Math. Software* **5**, No. 3, pp. 251-258.

L. W. Ehrlich, "The Numerical Solution of a Navier-Stokes Problem in a Stenosed Tube: A Danger in Boundary Approximations of Implicit Marching Schemes," *Comput. Fluids* **7**, pp. 247-256.

M. R. Feinstein, J. W. Halley and P. Scholfield, "Dynamics of Molten Salts," *J. Phys. Chem.* **12**, No. 20, p. 4185.

D. W. Fox, "A Method for Lower Bounds for Frequencies of Thin Skew Plates," *Developments in Mechanics* **10** (Proc 16th Midwestern Mechanics Conf.), pp. 127-130.

D. W. Fox, "An Initial Value Problem for Slow Flow in Stratified Fluids," *Developments in Mechanics* **10** (Proc. 16th Midwestern Mechanics Conf.), pp. 179-182.

D. W. Fox, "Lower Bounds for Energies of Atoms," *Proc. 1978 Workshop on Mathematical Properties of Schrödinger Operators and Wave Functions*, pp. 73-84.

J. Goldhirsh, "Cumulative Slant Path Rain Attenuation Statistics Associated with the Comstar Beacon at 28.56 GHz for Wallops Island, VA," *IEEE Trans. Antennas Propagat.* **AP-27**, No. 6, pp. 752-758.

B. F. Hochheimer, "A Dye for Experimental Choroidal Angiography," *Exp. Eye Res.* **29**, pp. 141-143.

A. N. Jette and F. J. Adrian, "Identification of the V_t Center (F_3^{2-}) in LiF as an Interstitial F Atom," *Phys. Rev. Lett.* **43**, No. 15, pp. 1119-1123.

Y. Kamide, (Kyoto Sangyo Industrial Univ., Japan), J. S. Murphree, C. D. Anger, and F. T. Berkey (Univ. Calgary), and T. A. Potemra (APL), "Nearly Simultaneous Observations of Field-Aligned Currents and Visible Auroras by the Triad and Isis 2 Satellites," *J. Geophys. Res.* **84**, No. A8, pp. 4425-4431.

S. M. Krimigis (APL), T. P. Armstrong (Univ. Kansas), W. I. Axford (Max-Planck Inst. Aeronomy), C. O. Bostrom (APL), C. Y. Fan (Univ. Arizona), G. Gloeckler (Univ. Maryland), L. J. Lanzerotti (Bell Labs.), E. P. Keath, R. D. Zwickl, and J. F. Carbary (APL), and D. C. Hamilton (Univ. Maryland), "Hot Plasma Environment at Jupiter: Voyager 2 Results," *Science* **204** (23 November), pp. 977-984.

L. J. Lanzerotti (Bell Labs.), S. M. Krimigis and C. O. Bostrom (APL), W. I. Axford (Max-Planck Inst. Aeronomy), and R. P. Lepping and N. F. Ness (NASA/GSFC), "Measurements of Plasma Flow at the Dawn Magnetopause by Voyager 1," *J. Geophys. Res.* **84**, No. A11, pp. 6483-6488.

A. T. Y. Lui and C.-I. Meng, "Relevance of Southward Magnetic Fields in the Neutral Sheet to Anisotropic Distribution of Energetic Electrons and Substorm Activity," *J. Geophys. Res.* **84**, No. A10, pp. 5817-5827.

J. H. Manley, "Implementing Change in Very Large Organizations," *TIMS Studies in the Management Sciences* **13**, pp. 189-203.

T. S. Margulies, "Evaluation and Comparison of High Population Density Sites," *Trans. Am. Nucl. Soc.* **33**, pp. 615-617.

C.-I. Meng, "Conjugate Low Energy Electron Observations Made by ATS-6 and DMSP-32 Satellites," *Geophys. Monogr.* **21**, pp. 96-109.

C.-I. Meng, "Diurnal Variation of the Auroral Oval Size," *J. Geophys. Res.* **84**, No. A9, pp. 5319-5324.

R. R. Newton, *The Moon's Acceleration and its Physical Origins. Vol. 1: As Deduced from Solar Eclipses* (The Johns Hopkins Univ. Press, Baltimore). In this book the acceleration of the moon is determined with respect to the sun. The author concludes that during the past three thousand years the rate of acceleration has varied in relation to the square of the strength of the earth's magnetic field. To explain this variation, he hypothesizes that the gravitational constant is gradually decreasing with time. These findings challenge existing scientific theory.

V. O'Brien and L. W. Ehrlich, "Variation of Wall Stress with Arterial Geometry," *Proc. 32nd Annual Conference, Alliance for Engineering in Medicine and Biology*, p. 145.

W. R. Powell, "Simulation of the Community Annual Storage Energy System," *Efficient Comfort Conditioning: The Heating and Cooling of Buildings*, eds. W. G. Berl and W. R. Powell (Westview Press, Boulder), pp. 25-51. This book deals with the heating and cooling of buildings using innovative systems, particularly solar energy, that can reduce fossil fuel and electric energy requirements by as much as 80%. Emphasis is placed on thermal storage, utility rate structures, peak load problems, and co-generation of heat and power in small-scale applications.

V. L. Pisacane, A. Eisner, S. M. Yionoulis, R. J. McConahy, H. D. Black, and L. L. Pryor, "A Geos 3 Orbit Determination Experiment," *J. Geophys. Res.* **84**, No. B8, pp. 3926-3932.

D. W. Rabenhorst, "Low Cost Flywheel Demonstration," *Proc. 1978 Mechanical and Magnetic Energy Storage Contractors' Review Meeting*, pp. 44-54.

D. W. Rabenhorst, "Low Cost Flywheel Energy Storage System Demonstration," *Proc. 14th Intersociety Energy Conversion Engineering Conf.* **1**, pp. 374-378.

E. C. Roelof, "Solar Energetic Particles: From the Corona to the Magnetotail," *Geophy. Monogr.* **21**, pp. 220-241.

E. C. Roelof and R. E. Gold, "Prediction of Solar Energetic Particle Event Histories Using Real-Time Particle and Solar Wind Measurements," *AGARD Proc. No. 238* (Proc. Conf. on Operational Modelling of the Aerospace Propagation Environment), pp. 29-1/29-13.

J. C. W. Rogers (APL) and A. E. Berger and M. Ciment (Naval Surface Weapons Center), "The Alternating Phase Truncation Method for Numerical Solution of a Stefan Problem," *J. Numer. Anal.* **16**, No. 4, pp. 563-587.

J. T. Stadter and R. O. Weiss, "Analysis of Contact Through Finite Element Gaps," *Comput. Struct.* **10**, pp. 867-873.

C.-M. Tang, "Electromagnetic Fields Due to Dipole Antennas Embedded in Stratified Anisotropic Media," *IEEE Trans. Antennas Propagat.* **AP-27**, No. 5, pp. 665-670.

V. J. Vigorita and P. K. Gupta (JHMI), C. B. Bargeron (APL), and J. K. Frost (JHMI), "Occurrence and Identification of Intracellular Calcium Crystals in Pulmonary Specimens," *Acta Cytologica* **23**, No. 1, pp. 49-52.

S. Wilson (Science Research Council, UK) and D. M. Silver (APL), "Diagrammatic Perturbation Theory: Evaluation of Fourth-Order Energy Terms Involving Quadruply-Excited States for Closed-Shell Systems," *Mol. Phys.* **36**, No. 5, 1539-1548.

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UK) and D. M. Silver (APL), "Diagrammatic Many-Body Perturbation Expansion for Atoms and Molecules: IV. Fourth-Order Linked Diagrams Involving Quadruply-Excited States," *Comput. Phys. Commun.* **17**, pp. 47-50.

S. Wilson and D. M. Silver, "Fourth-Order Terms in the Diagrammatic Perturbation Expansion for the Electronic Energy of Atoms and Molecules," *Int. J. Quantum Chem.* **XV**, pp. 683-692.

S. M. Yionoulis, A. Eisner, V. L. Pisacane, H. D. Black, and L. L. Pryor, "Geos 3 Ocean Geoid Investigation," *J. Geophys. Res.* **84**, No. B8, 3883-3888.

M. L. Zeichner and P. J. Brusil (Mitre Corp.) and S. G. Tolchin (APL), "Distributed Processing Architecture for a Hospital Information System," *Proc. Third Annual Symp. on Computer Applications in Medical Care*, pp. 1-7.

PRESENTATIONS September 1—December 31, 1979 (*and others from 1979 not previously reported*)

R. H. Andreo, J. A. Krill, and R. A. Farrell, "Variational Methods for Electromagnetic Wave Scattering from Aerosol Clusters," CSL Scientific Conf. on Obscuration and Aerosol Research, Aberdeen Proving Ground, Md., 17 – 21 Sep.

C. B. Bargeron and R. A. Farrell (APL), W. R. Green (JHMI), and R. L. McCally (APL), "Endothelial Alterations from Exposure to Infrared Radiation," 38th Clinical Meeting of Wilmer Ophthalmological Inst., Johns Hopkins Hospital, Baltimore, 25 – 27 Apr.

C. B. Bargeron and R. B. Givens, "Precursive Blistering in the Localized Corrosion of Aluminum," Corrosion Research Conf., Atlanta, 12 – 14 Mar.

L. W. Ehrlich, "Numerical Solution of the Flow of a Fluid of Second Grade," Fall SIAM National Meeting, Denver, 12 – 14 Nov.

L. W. Ehrlich, "On Some Iterative Methods for Solving Coupled Equations of Fluid Flow," 3rd IMACS International Symp., Lehigh Univ., 20 – 22 Jun.

M. R. Feinstein, "Dynamics of Molten Salts," Gordon Conf. on Molten Salts and Metals, Wolfeboro, N.H., 20 – 24 Aug.

M. R. Feinstein, R. A. Farrell, and R. W. Hart, "Variational Calculations of Scattering from a Sphere," CSI Scientific Conf. on Obscuration and Aerosol Research, Aberdeen Proving Ground, Md., 17 – 21 Sep.

D. W. Fox, "A Method for Lower Bounds for Frequencies of Thin Skew Plates" and "An Initial Value Problem for Slow Flow in Stratified Fluids," 16th Midwestern Mechanics Conf., Kansas State Univ., 20 – 21 Sep.

D. W. Fox, "Bounds for Frequencies of Elastic Structures at Johns Hopkins" and "Two-Sided Rayleigh-Ritz Bounds" EUROMECH Colloq. on Eigenfrequencies of Continuous Structures, Metrafured, Hungary, 21 – 23 Feb.

L. W. Hunter, "APL Models of Cable Fires," Joint Meeting, NBS/NRC, Gaithersburg, Md., 8 Nov.

L. W. Hunter, "Prediction of the Fire Resistance of Cable Penetration Seals," 7th Water Reactor Safety Research Information Meeting, Nuclear Regulatory Commission, Gaithersburg, Md., 5 – 9 Nov.

A. N. Jette, "The Disturbance Due to a Line Source in a Semi-Infinite Elastic Medium. Three Dimensional Treatment," American Physical Society Meeting, New York, 1 Feb.

S. M. Krimigis, "Energetic Particle Environment of Jupiter as Determined by Voyagers 1 and 2," Univ. Iowa Colloq., 15 Oct.

S. M. Krimigis, "Hot Plasma in the Jovian Magnetosphere," NASA/GSFC Space Physics Seminar, 18 Oct.

S. M. Krimigis, "Investigation of the Planet Jupiter and the Outer Planets by Voyagers 1 and 2," Greek National Academy of Sciences, Athens, 16 Nov.

S. M. Krimigis, "Measurements of Hot Plasma in Jovian Magnetosphere by Voyagers 1 and 2," Univ. Calgary Seminar, 7 Dec.

L. Monchick, "Vibrational Excitation of Oxygen and Enhanced Radiation of $^1\Delta_g$ O_2 during Certain Aurorae," Max-Planck Inst. Physik und Astrophysik, Munich, 22 May.

L. Monchick (APL) and J. Schäfer (Max-Planck Inst. Physik und Astrophysik), "Ab Initio Calculations of the Transport Cross-Section of H_2," VIIth International Symp. on Molecular Beams, Riva del Gorda, Italy, 28 May.

J. C. Murphy, "Applications of Laser Interferometry to Photoacoustic Spectroscopy," Univ. Maryland Seminar, 19 Oct.

J. G. Parker, "Active Acoustic Detection of Leaks in Underground Pipelines," The Johns Hopkins Univ. Mechanics and Materials Seminar, 3 Oct.

V. L. Pisacane and S. C. Dillon, "Terrestrial Coordinates of the Pole from Multiple Satellite Data," 6th Annual Meeting, European Geophysical Society, Vienna, 11 – 14 Sep.

T. A. Potemra, "Characteristics of Auroral Currents as Determined by Triad," International Magnetospheric Study Workshop, Skokloster, Sweden, 3 – 7 Sep.

T. A. Potemra, "Hall Currents in the Aurora," Hall Symp., The Johns Hopkins Univ., 13 Nov.

J. C. W. Rogers, "Downstream Boundary Conditions for Incompressible Flows," ICASE Colloq., Hampton, Va., 12 Dec.

J. C. W. Rogers, "Free Boundary Problems and Turbulence in Hydrodynamics," CNRS, Marseille, 25 Sep 1979, and Mathematics Colloq., Montpellier, 27 Sep.

J. C. W. Rogers, "Relation of the One-Phase Stefan Problem to the Seepage of Liquids and Electrochemical Machining" and "The Formulation of Free Boundary Problems as Conservation Laws," Intensive Seminar on Free Boundary Problems, Pavia, Italy, 19 – 20 Sep.

J. C. W. Rogers, "The Dam Problem" and "Free Boundary Problems as Conservation Laws," Univ. Florence, Italy, 2 – 3 Oct.

D. M. Silver, "Application of Many-Body Perturbation Theory to the Calculation of Potential Energy Surfaces," 3rd International Congress of Quantum Chemistry, Kyoto, 2 Nov.

D. M. Silver, "Electron Correlation and Interaction Energies Between Closed-Shell Systems Using Many-Body Perturbation Theory," Symp. on Many-Body Theoretical Approaches to Electron Correlation in Molecules, Kobe, 28 Oct.

D. M. Silver, "Interaction Potentials for Chemical Reaction Systems," Howard Univ. Chemistry Seminar, 28 Sep.

D. M. Silver (APL), E. F. Jendrick and M. H. Alexander (Univ. Maryland), and B. E. Wilcomb and P. J. Dagdigian (The Johns Hopkins Univ.), "Rotationally Inelastic Scattering of LiH (j=1) by He," American Physical Society Meeting, Washington, 25 Apr.

D. M. Silver (APL) and S. Wilson (Daresbury Labs, Warrington, UK), "Universal Basis Sets in Molecular Calculations," American Chemical Society Meeting, Washington, 10 Sep.

The following papers were presented at the American Geophysical Union Fall Meeting, San Francisco, 3 – 7 Dec:

T. P. Armstrong (Univ. Kansas) and S. M. Krimigis, J. F. Carbary, and R. D. Zwickl (APL), "Hot Plasma Bulk Motions in the Jovian Magnetosphere;"

C. O. Bostrom, S. M. Krimigis, and J. F. Carbary (APL), L. J. Lanzerotti (Bell Labs.), T. P. Armstrong (Univ. Kansas), and G. Gloeckler (Univ. Maryland), "Observation of a Magnetospheric Wind in the Jovian Magnetosphere;"

J. F. Carbary, "Periodicities in the Jovian Magnetosphere: Voyagers 1 and 2;"

R. B. Decker and S. M. Krimigis (APL) and G. Gloeckler (Univ. Maryland), "Energy Spectra and Flux Anisotropies of CIR-Associated <25 keV Ions;"

A. Eisner and H. D. Black, "Precision Orbit Determination With a Small Number of Ground Stations;"

A. Eisner and S. M. Yionoulis, "Long Period Terms in the Upper Atmospheric Air Density;"

G. Gloeckler (Univ. Maryland) and J. F. Carbary, S. M. Krimigis, and R. D. Zwickl (APL), "Hot Plasma in the Jovian Magnetosphere;"

A. D. Goldfinger, "Refraction of Microwave Signals by Water Vapor;"

D. C. Hamilton and G. Gloeckler (Univ. Maryland) and S. M. Krimigis (APL), "Charged Particle Composition in Jupiter's Magnetosphere;"

E. P. Keath, S. M. Krimigis, and J. F. Carbary (APL), W. I. Axford (Max-Planck Inst. Aeronomie), and L. J. Lanzerotti (Bell Labs.), "Evidence for an Inner Jovian Plasmasphere Boundary;"

S. M. Krimigis and R. D. Zwickl (APL), L. J. Lanzerotti (Bell Labs.), and T. P. Armstrong (Univ. Kansas), "Monoenergetic, Heavy Ion Plasma Beam Observed Near Jovian Magnetosphere Boundary by Voyager 2;"

L. J. Lanzerotti (Bell Labs.), S. M. Krimigis and E. P. Keath (APL), and N. F. Ness, L. F. Burlaga, and K. W. Behannon (NASA/GSFC), "Energetics of the Jovian Plasma Sheet;"

A. T. Y. Lui and C.-I. Meng (APL) and L. A. Frank and K. L. Ackerson (Univ. Iowa), "Substorm Behavior of the Magnetotail Plasma Sheet Near Its Midplane;"

C.-I. Meng and J. F. Carbary (APL), S.-I. Akasofu (Univ. Alaska), J. P. Sullivan (M.I.T.), and R. P. Lepping (NASA/GSFC), "Association of the AE-Index with the Solar Wind Poynting Flux Incident on the Magnetosphere;"

D. G. Mitchell and E. C. Roelof, ">50 keV Ion Events Upstream of the Earth's Bow Shock. 1. Dependence on Shock Parameters;"

M. Paonessa, S. Brandon, J. Nonnast, and T. P. Armstrong (Univ. Kansas) and J. W. Kohl (APL), "Energy and Species Dependence of Charged Particle Absorption by Io and Europa;"

V. L. Pisacane and S. M. Yionoulis, "Low-Low GRAVSAT Simulation Results;"

E. C. Roelof and D. G. Mitchell (APL) and R. P. Lepping (NASA/-GSFC), ">50 Ion Events Upstream of the Earth's Bow Shock. 2. Association with IMF Fluctuations;"

N. A. Saflekos (APL), B. M. Shuman (AF Geophysics Lab.), and T. A. Potemra (APL), "Dual Satellite Observations of Geomagnetic Disturbances in Auroral Regions;"

L. J. Zanetti and T. A. Potemra (APL) and J. P. Doering and J. S. Lee (The Johns Hopkins Univ.), "Characteristics of Low Energy Electron Precipitation;"

R. D. Zwickl and S. M. Krimigis (APL), T. P. Armstrong (Univ. Kansas), and G. Gloeckler and D. C. Hamilton (Univ. Maryland), "Energetic Ion Events of Jovian Origin."

The following papers were presented at the 16th International Cosmic Ray Conference, Kyoto, 6 – 18 Aug:

W. I. Axford (Max-Planck Inst. Aeronomie), S. M. Krimigis (APL), E. Kirsch (Max-Planck Inst. Aeronomie) and D. Hamilton and G. Gloeckler (Univ. Maryland), "Anisotropies of Low Energy Particles in Corotating Interaction Regions as Measured by Voyager 1 and 2;"

R. E. Gold and E. C. Roelof, "Energetic Particle Recurrence and Escape During Solar Cycle 20;"

R. Reinhard (ESTEC Corp., The Netherlands) and E. C. Roelof and R. E. Gold (APL), "Separation of Coronal from Interplanetary Propagation Effects in the Solar Particle Event of 10 April 1969;"

R. D. Zwickl, E. C. Roelof, and R. E. Gold, "Transverse Interplanetary Propagation of <1 MeV Protons."

The following papers were presented to the Assoc. for Research in Vision and Ophthalmology, Sarasota, 30 Apr – 4 May:

R. H. Andreo and R. A. Farrell, "Calculated Corneal Small-Angle Light Scattering Patterns: Wavy Fibril Models;"

C. B. Bargeron and R. A. Farrell (APL) and W. R. Green (JHMI), "Corneal Damage from Exposure to Infrared Radiation: Rabbit Endothelial Damage Thresholds;"

R. A. Farrell, R. C. McCally, and C. B. Bargeron, "Corneal Damage from Exposure to Infrared Radiation: Calculated and Measured Endothelial Temperature Histories;"

R. L. McCally and R. A. Farrell, "Structural Implications of Small Angle Light Scattering from Rabbit and Bovine Cornea."

The following papers were presented at the American Physical Society Meeting, Chicago, 19 – 23 Mar:

M. E. Hawley, W. A. Bryden, A. N. Block, and D. O. Cowan (The Johns Hopkins Univ.), T. O. Poehler (APL), and J. P. Stokes (The Johns Hopkins Univ.), "Mott Transition and Magnetic Properties of HMTSF(TCNQ)$_x$ (TCNQF$_4$)$_{1-x}$;"

A. N. Jette and F. J. Adrian, "Structure of the V_t-Center in LiF;"

R. L. McCally and E. A. Michelson (APL) and E. S. Margolis (JHMI), "Photon Correlation Spectroscopy Investigations of Human Serum Low Density Lipoproteins;"

R. S. Potember and T. O. Poehler (APL) and D. O. Cowan (The Johns Hopkins Univ.), "Switching and Memory in Organic Semiconductor Thin Film;"

J. P. Stokes, A. N. Block, W. A. Bryden, D. O. Cowan, and M. E. Hawley (The Johns Hopkins Univ.) and T. O. Poehler (APL), "Mott Transition and Conductivity in the Organic Solid Solutions HMTSF(TCNQ)$_x$(TCNQF$_4$)$_{1-x}$."

APL COLLOQUIA

November – December, 1979

Nov. 2 – "The Anthropic Principle and the Structure of the Physical World: Does the Existence of Life Determine the Physical Constants?," by B. J. Carr, Cambridge Univ., U.K.

Nov. 9 – "Thin-Film Solar Cells: CdS-Cu_2S Heterojunctions," by K. L. Chopra, Indian Inst. of Technology and Cornell Univ.

Nov. 16 – "Science as a Source of Political Conflict," by D. Nelkin, Cornell Univ.

Nov. 30 – "Chaotic Dynamics," by J. A. Yorke, Univ. of Maryland.

Dec. 7 – "Structure Determination by X-Ray Absorption (EXAFS)," by E. A. Stern, Univ. of Washington.

Dec. 14 – "Solitons: Their Origin and Behavior," by K. M. Case, Rockefeller Univ.