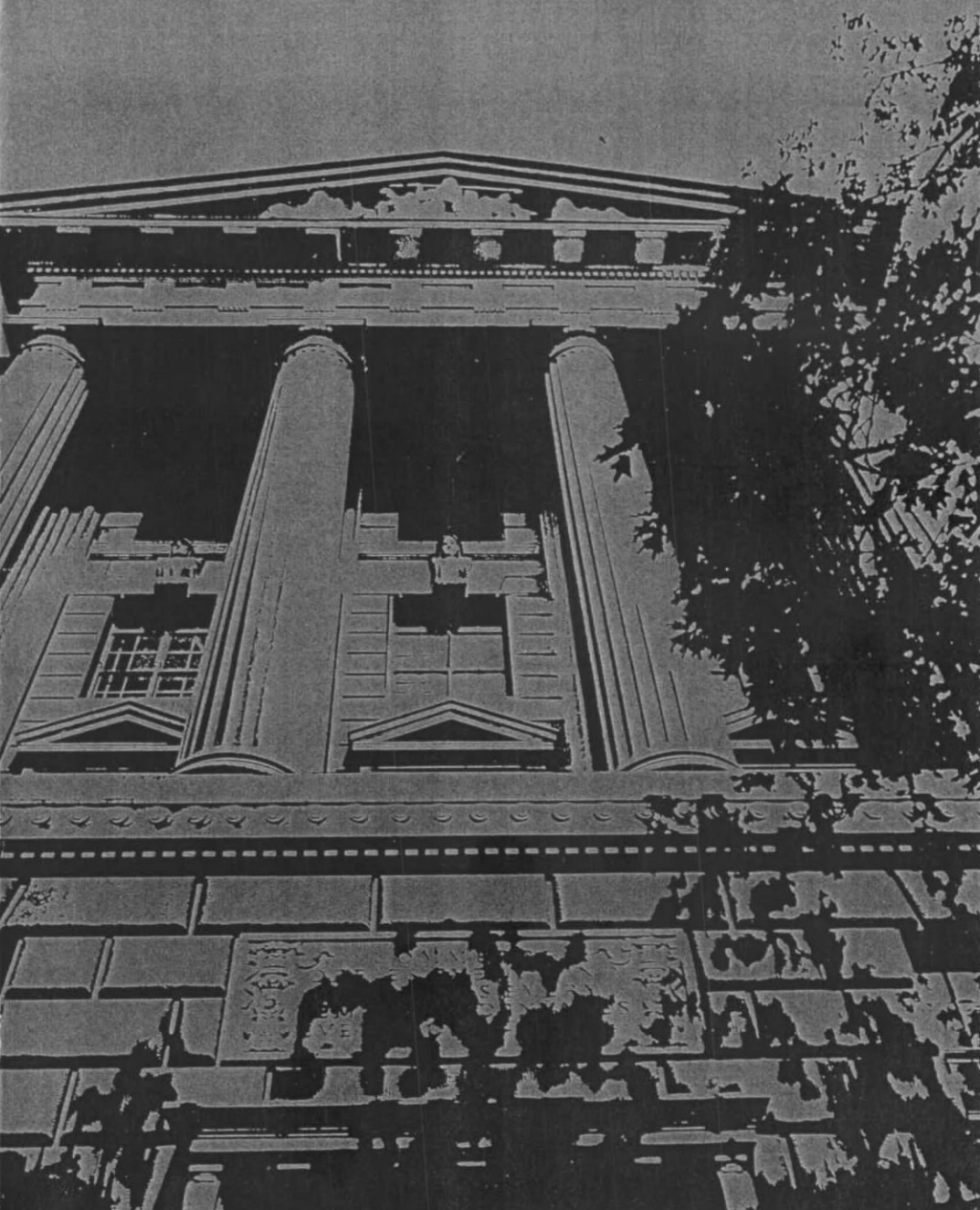
26TH ANNUAL HONOR AWARDS PROGRAM

U.S. DEPARTMENT OF COMMERCE / 1974



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PROGRAM

October 30, 1974 / 2:00 P.M.
Department of Commerce Auditorium
Fourteenth Street between E Street
and Constitution Avenue, N.W.
Washington, D. C.

MUSIC	U.S. Merchant Marine Academy Regimental Band
INTRODUCTION	Wade B. Ropp Director of Personnel
PRESENTATION OF COLORS	U.S. Merchant Marine Academy Color Guard
NATIONAL ANTHEM	Band
ADDRESS	Frederick B. Dent Secretary of Commerce
PRESENTATION OF AWARDS	Secretary of Commerce Assisted by Departmental Officials
ANNOUNCEMENT OF AWARDS	Guy W. Chamberlin, Jr. Acting Assistant Secretary for Administration
ORDER OF PROGRAM: Presentation of Silver Medals Musical Selection by Band Presentation of Gold Medals	
CLOSING REMARKS	Acting Assistant Secretary for Administration

Gold Medal Award Winners

Joel B. New

Director, Office of Field Operations
Domestic and International
Business Administration

Mr. New's professional competence and inspirational leadership have been significantly instrumental in upgrading the stature of the Field Service. His work included negotiation with the Bureau of International Commerce of a cooperative Export Promotion Program, embodying a National Marketing Plan, implementation in the field of the "Account Executive" concept, and the assignment of specific goals and objectives to the various District Offices for new-to-export and new-to-market penetrations. The new Export Program greatly increased the productivity of the 43 District Offices.

S. Stanley Katz

Deputy Director, Bureau of
International Economic Policy and
Research
Domestic and International
Business Administration

Mr. Katz has made major contributions to the formulation of U.S. international trade, finance, and investment policy and has brought outstanding leadership to the management of Commerce programs in these fields. As a member of the First U.S.-U.S.S.R. Commercial Commission Mission to Moscow, he helped negotiate the settlement of financial problems that led to improved commercial relations with the U.S.S.R. Under his direction, the Department's role in the development of financial and investment policies has been materially enhanced; a successful "Invest in the U.S.A." program was launched; programs of research, analysis, and publication on multinational corporations and U.S. international competitiveness were begun; and Commerce international economic policy and research activities have been consolidated and strengthened.

Ernest M. Levin*

Research Chemist
Institute for Materials Research
National Bureau of Standards

Mr. Levin has authored several editions and supplements of the book "Phase Diagrams for Ceramists". This book is utilized extensively as a standard reference and is also used as a text book in many university courses. Mr. Levin is well known as the author of not only this compilation but also many original research articles, especially in the field of phase equilibria in glass forming systems. He has also contributed greatly to our understanding of the phenomena of immiscibility in such glass forming systems. Mr. Levin undertook the enormously increased responsibility of attempting to analyze critically all of the phase equilibria diagrams to be included in his new supplement to "Phase Diagrams for Ceramists". This supplement containing about 1000 new diagrams with critical analyses is now completed and is scheduled to appear by the end of 1974. These analyses should greatly enhance the value of the work and increase its scope so that every scientist working with oxide and salt systems will have a reason to refer to it often.

*Awarded posthumously

James E. Skillington, Jr.

Budget Officer
Office of the Associate Director for Administration
National Bureau of Standards

Dr. Skillington is recognized for his outstanding performance and leadership in the planning, review, and operation of the financial management of science and technology budgets for the Department of Commerce and the development of new program activities at NBS. His service and guidance to the Office of the Assistant Secretary for Science and Technology have been commended for their impact on the Department's current budget cycles. In a highly complex budget operation, Dr. Skillington has consistently provided rapid responses without compromise to accurate and objective analysis. His expert knowledge and management ability, combined with the program planning and management system at the Department level, have ensured a balanced and professional approach to financial management.

Stanley Block

Research Chemist

Gasper Piermarini

Research Chemist

Institute for Materials Research
National Bureau of Standards

Dr. Block and Dr. Piermarini are recognized for the design, construction, and application of a complete high pressure system including the pressure cell, measurement method, and characterization technique including x-ray diffraction spectroscopy, and optical microscopy. The system is unique in combining the ability to measure pressure accurately, to reach extreme pressures (above 50 GPa), and to allow x-ray diffraction, spectroscopy and microscopy measurements under accurately known pressures. The technology as developed by Drs. Block and Piermarini has been extensively transferred to other laboratories where it is being applied to the determination of glass transition pressures of lubricants, to electronic properties of materials, to the properties of explosives, and to a wide range of solid state chemistry and solid state physics problems.

Boulder Laboratories

Institute for Basic Standards
National Bureau of Standards
Boulder, Colorado

Drs. Richard L. Barger, Bruce L. Danielson, Gordon W. Day, Kenneth M. Evenson, John L. Hall, F. Russell Peterson, and Joseph S. Wells are recognized for their four year collaborative efforts which resulted in the wavelength frequency measurement of the methane stabilized HeNe laser, 3.39 μm wavelength, 88THz frequency measuring techniques. This work led to a redetermination of the speed of light 30 times more accurate than the presently accepted value. The program involved significant responsibility on the part of each member of the team in order that timely results could be obtained. Parallel programs on (1) frequency stabilization of the HCN laser, (2) stabilization of the CO_2 laser, (3) stabilization of the HeNe laser, (4) wavelength determination of the HeNe laser, and (5) frequency measurement of the HCN, H_2O, CO_2 and HeNe lasers were carried on. The success of each of these programs was essential to an accurate determination of the speed of light. Had these experiments been done serially, another three to five years would have been necessary to complete the experiment. This experiment, therefore, represents a coordinated group effort in which each member made crucial contributions to the success of the entire program and has had impact on international standards.

John R. Apel

Director, Ocean Remote Sensing Laboratory
Environmental Research Laboratories
National Oceanic and Atmospheric Administration
Miami, Florida

Dr. Apel has made outstanding scientific and technical contributions to the National Aeronautics and Space Administration's Earth and Ocean Physics Applications Program. From this program grew the concept of SEASAT-A, the Nation's first dedicated ocean-looking satellite. Through his efforts, the original concept of a strictly altimetric satellite was enlarged to include a broad spectrum of oceanic measurements of direct practical application to prediction of high seas, improved warnings of storms at sea, optimum ship routing, ice navigation, and basic oceanographic research. Once the plan was conceived, he personally chaired the SEASAT-A Program Definition Planning Group, the NASA Review Team, and the SEASAT-A User Working Group—all at NASA's request. He prepared and presented testimony on SEASAT to both the House and Senate. It was his briefing that was largely responsible for the decision to fund the $58 million program.

Ben B. Balsley

Physicist
Environmental Research Laboratories
National Oceanic and Atmospheric Administration
Boulder, Colorado

Dr. Balsley is a leader in the radar study of field-aligned irregularities in the ionosphere, including irregularities in the equatorial electrojet, the auroral electrojet, and equatorial spread F. His observations and interpretations provide most of our observational knowledge of irregularities in the equatorial electrojet and are the basis for almost all recent theoretical studies, some of which he is a coauthor. He and his group have also made fundamental advances in the study of the auroral electrojet and equatorial spread F. Much of his dominant position in the field is due to his development of novel experimental techniques. In particular, Dr. Balsley has developed a portable phase-coherent radar system, including a portable and precise VHF antenna, which has most of the capability of much larger systems. Dr. Balsley's preeminence in this field has been achieved in only about five years, during which he has published over 30 papers. His great success is a direct result of his scientific and technical skill, his enthusiasm and energy, and his ability to stimulate and work with other scientists.

Joshua Z. Holland

Physical Science Administrator
Environmental Data Service
National Oceanic and Atmospheric Administration

Dr. Holland has made major contributions to three large-scale scientific field experiments—the Barbados Oceanographic and Meteorological Experiment (BOMEX), the International Field Year for the Great Lakes (IFYGL), and the Global Atmospheric Research Program Atlantic Tropical Experiment (GATE). As chief scientist of the BOMEX Sea-Air Interaction Program, he provided on-site direction during the field operations. His dedication, his tireless efforts, and his ability to motivate those around him were key factors in the success of the field program which has resulted in a truly unique data set. He has played an equally fundamental and critical role in the planning of data management and in the structuring of scientific analysis programs for both IFYGL and GATE. Both as administrator and scientist, he has made contributions that have been of inestimable value in increasing our understanding of man's environment and in furthering the Department's role in environmental exploration.

Chester P. Jelesnianski

Storm Surge Specialist
National Weather Service
National Oceanic and Atmospheric Administration

Dr. Jelesnianski designed and developed an automated method of forecasting storm tides caused by hurricanes. His computer program called Special Program to List Amplitudes of Surges from Hurricanes (SPLASH) is activated by forecasters of the National Hurricane Center when a hurricane threatens the Atlantic or Gulf Coasts of the United States. SPLASH produces both a graphical portrayal and a digital printout of storm tide height along the coasts. He has also applied SPLASH to determine tide potential for various coastal areas and to calculate effects of seeding hurricanes. As such, it has proven very valuable in the Housing and Urban Development flood insurance program in setting insurance rates and to NOAA in designing hurricane modification experiments.

William H. Klein

Laboratory Director
National Weather Service
National Oceanic and Atmospheric Administration

Under Dr. Klein's expert and dynamic leadership, the Techniques Development Laboratory (TDL) has become internationally known for its work in weather forecast and analysis technique development. His contributions have been not only in the area of overall management of TDL, but he has also provided effective technical leadership. His own scientific work is described in the more than forty papers he has written while Director of TDL. Examples of the objective forecasting techniques that have been implemented under his leadership include temperature, winds, precipitation, clouds, severe storms, storm surge, water levels on the Great Lakes, ceiling and visibility, and waves and swell on the open ocean. Dr. Klein has demonstrated a high degree of responsiveness, adaptability, and resourcefulness in refocusing TDL's research and development energies toward support of the expanding and accelerating Automation of Field Operations and Services Program. He has also shown outstanding managerial ability in selecting individual scientists whose training, aptitude, and experience have successfully meshed with program needs.

Reuben Lasker

Physiologist (Research Administration)
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
La Jolla, California

Dr. Lasker is recognized for his outstanding contributions as both scientist and scientific editor. In connection with his role as a scientist, he has made significant contributions to the solution of specific problems affecting the survival/mortality of fish larvae, as evidenced by his research efforts which resulted in the successful rearing of pelagic marine fish in a laboratory. For the first time, more than 30 species of pelagic fishes, including the commercially valuable sardine, anchovy, and mackerel, have been reared in a laboratory from eggs through larvae to subadult stages. As a scientist-editor, he has greatly influenced and improved the scientific image of NMFS publications. He is singularly responsible for the upgrading of the 80-year old *Fishery Bulletin* to its present acceptance as an indispensable research journal to those in the field of fisheries.

Allen D. Pearson

Director
National Severe Storms Forecast Center
National Weather Service
National Oceanic and Atmospheric Administration
Kansas City, Missouri

Mr. Pearson's outstanding leadership and direct participation in the preparation of the forecast products of the National Severe Storms Forecast Center for nearly nine years have resulted in a steady improvement in tornado and severe thunderstorm forecasting. The outstanding tornado forecasts issued by Mr. Pearson and his staff during the catastrophic tornado outbreak of April 3, 1974, were undoubtedly a large factor in the saving of many lives. He has had the lead role nationally in the promotion of community preparedness against tornadoes and in the education of the general public in tornado safety. His efforts in these fields of preparedness and safety education have been instrumental in significantly lowering tornado casualties. Mr. Pearson has made outstanding contributions in tornado climatology. His compilation of intensity-rated statistics form a solid base for future gains in tornado forecasting.

Roland F. Smith

Chief, Living Resources Office
Office of Marine Resources
National Oceanic and Atmospheric Administration

Dr. Smith has shown outstanding leadership in the development and management of living marine resource programs, principally initiation of an internal review and evaluation of the options open to the United States for international management of fishery resources. This effort was essential to the development of the United States position for the United Nations Law of the Sea Conference held in Caracas, Venezuela, as well as for the establishment of a U.S. policy with regard to fisheries resources off its own coastline. He is also cited for his organizational and technical competence in formulating a plan to respond to growing national needs for environmental-ecological investigations for energy, ocean dumping and coastal zone management which ultimately resulted in the NOAA Marine Ecosystem Analysis Project for the regional study of the New York Bight. This study will become the model for other studies to be conducted at selected sites off the U.S. coasts.

Robert B. Ellert

Assistant General Counsel for Science and Technology
Office of the General Counsel
Office of the Secretary

Mr. Ellert, as the Assistant General Counsel for Science and Technology, by his outstanding leadership and exceptional professional abilities has provided major contributions of national significance in the development of legislative and regulatory programs of the Department of Commerce and the Administration. His efforts and abilities in these areas have been his major involvement in the formulation and drafting of the Consumer Product Safety Act; Metric Conversion Act of 1973; International Voluntary Standards Act of 1973; National Appliance and Motor Vehicle Energy Labeling Act of 1974; and the Federal Fire Prevention and Control Act.

James P. Taff

Associate Administrator for Administration
Social and Economic Statistics Administration

Mr. Taff is recognized for the outstanding leadership, vision, and wisdom he has brought to bear in the fields of executive and administrative management. He has served with distinction as Associate Administrator for Administration since January 1972, when the Social and Economic Statistics Administration was established. In the executive councils of this new organization, he has been a powerful and skillful advocate of management precepts and practices which have significantly strengthened the organization and advanced its major programs of data collection, data processing, and data analysis. He has, in addition, directed the many administrative functions and services which support the data programs, constantly introducing and implementing progressive measures which have facilitated the work of the organization and benefited all of its employees.

Robert L. Hagan

Deputy Director
Bureau of the Census
Social and Economic Statistics
Administration

Mr. Hagan is recognized for his conceptualization of, and outstanding contributions to, the development and preparation of the Metropolitan Map Series, the only standardized nationwide set of urban maps available in the United States, and the Address Coding Guides, without which developments of a mailout/mailback census would not have been possible. The Address Coding Guides are the conceptual foundation of the Geographic Base (Dual Independent Map Encoding) Files. These files are the structural base of the computer thematic mapping technique and the geo code system for small area data needs. He is also recognized for his demonstrated leadership in the direction and management of the 1970 Decennial Census processing operations.

Beatrice N. Vaccara

Associate Director for
National Analysis and Projections
Bureau of Economic Analysis
Social and Economic Statistics
Administration

Mrs. Vaccara has furthered the understanding of the functioning of the United States economy through her contributions to input-output techniques and to the analysis of economic growth. Input-output shows how the industries of the Nation interact in producing the Gross National Product, and provides a unique framework for tracing the interconnection between industrial production and consumer, capital goods, foreign and other final markets. She directed the input-output study of the Bureau of Economic Analysis which was published in February 1974. She contributed to the study of economic growth by progressively improving an econometric model of the United States and using it to trace the causes and consequences of economic growth, and by devising techniques for forecasting changes in inter-industrial relationships that result from new technologies and other factors.

Silver Medal Award Winners

Sara L. Haslett

International Trade Specialist
Office of Field Operations
Domestic and International
Business Administration
Birmingham, Alabama

Mrs. Haslett is recognized for exceptional leadership in planning and administering the export programs of the Department of Commerce which have been of great benefit to the states of Georgia and Alabama as well as the United States. Her exceptional work in the Birmingham District Office has made that office one of the best of the 43 District Offices. Mrs. Haslett conducted her work with great energy and with a high degree of initiative and effectiveness.

Bradford H. Rice

Director, Memphis District Office
Office of Field Operations
Domestic and International
Business Administration
Memphis, Tennessee

Mr. Rice has shown exceptional leadership in planning and administering Departmental programs which have been of great benefit to the states of Tennessee and Arkansas as well as the United States. Mr. Rice's direction of the Memphis District Office has made that office one of the best of the 43 District Offices. In addition, he assisted the Office of Field Operations in planning operational programs which resulted in greatly improving the quality and quantity of the work of the District Offices. Mr. Rice conducted his work with great energy and with a high degree of initiative and effectiveness.

Esther L. Martin

Secretary
Office of Business Research and Analysis
Bureau of Domestic Commerce,
Domestic and International
Business Administration

Miss Martin is recognized for her outstanding administrative and secretarial skills. Because of her thorough knowledge of the administrative interfaces with all levels of organization, her extensive knowledge of the substance of the programs, and her active cooperation, the Office of Business Research and Analysis has been able to meet its objectives.

Edward G. Smith

Deputy Director, Office of the Ombudsman for Business
Bureau of Domestic Commerce
Domestic and International
Business Administration

Mr. Smith has demonstrated outstanding and innovative leadership in the management of major programs affecting vital U.S. trading interests, in fostering development of Federal managers, and in reporting factors influencing commodity shortage situations. Each represents a major contribution to administration. Following adoption of his proposals for removal of barriers, U.S./Canadian automotive products trade expanded tenfold from 1964 to 1973.

Edward K. Zabrowski

Special Assistant to the Director
Bureau of Domestic Commerce
Domestic and International
Business Administration

Mr. Zabrowski has played a key role over the last seven years in bringing advanced quantitative economic analysis skills to bear on critical issues and problems affecting U.S. industry. Throughout this period, he has been in the forefront in the Department in developing modeling and analytical techniques that assist policy officials in understanding and dealing with a myriad of industry problems. His continuing contributions to advancing the application of quantitative economic analytical techniques to resolving critical business issues and problems including inflation, international competition and materials, and energy shortages have been invaluable to the Bureau and to the Department.

Ann H. Garcia

Director, Legislative and Tariff
Policy Division
Bureau of International Economic
Policy and Research
Domestic and International Business
Administration

Mrs. Garcia has consistently demonstrated technical skills, judgment, dependability, supervisory capability, initiative, and leadership resulting in significant advancement of the Department's program to promote international trade. She has responded swiftly and effectively to sudden changes in foreign economic policy and has been particularly effective in representing the Department's position in interagency work on the trade bill, in hearings, and in reviews of actions requiring Presidential decisions.

Robert W. Hamerschlag

Director, Canada-Western Europe
Staff
Bureau of International Economic
Policy and Research
Domestic and International
Business Administration

Mr. Hamerschlag is recognized for his contributions to the Department's program to promote international trade and economic and commercial relations with foreign countries. From 1964-1967, Mr. Hamerschlag served as head of the United Kingdom/ European Free Trade Association team on the U.S. Delegation to the Kennedy Round of International Trade Negotiations. His negotiating skill contributed importantly to improved market access for U.S. exports to these countries. Since 1967, Mr. Hamerschlag has had responsibility in Commerce for U.S. economic and commercial relations with Canada. His outstanding work has led to increased Commerce influence in the formulation of policy toward and the conduct of negotiations with that country.

Stuart M. Ball

Director, Office of Management Information Systems
Maritime Administration

Mr. Ball is recognized for his management contributions to improving the data processing capabilities of the Maritime Administration. Through Mr. Ball's leadership and initiative, a wide range of projects and organizational changes were introduced which have significantly improved the effectiveness of the computer operation and data processing services available to the Maritime Administration. Mr. Ball initiated development of the Maritime Data Coding System, managed the installation of the Maritime Financial Information System, and replaced Maritime's single job stream computer with a multi-programmed, on-line telecommunications oriented system.

Samuel B. Nemirow

Supervisory General Attorney
Office of the General Counsel
Maritime Administration

Mr. Nemirow is recognized for outstanding ability in the performance of his duties which has resulted in program advancement. As an attorney of high professional standing with experience and skill in laws and regulations affecting the maritime industry, he has proven to be an able and effective negotiator. During maritime negotiations in Moscow in May 1973, he rendered valuable aid in dealing with the question of liner cargo accountability. He has also made a significant contribution to the mission of the Maritime Administration in drawing up an agreement on procedural rules for future meetings of the designated representatives of both countries.

George J. Ryan

Maritime Attache
Office of International Activities
Maritime Administration
American Embassy
London, England

Mr. Ryan has gained recognition, not only in the Maritime Administration and the State Department, but in the European shipping community, as a technical and economic expert on major maritime matters. He has contributed valuable advice and information to the Maritime Administrator and other officials of Maritime as well as to other government departments, international organizations, and private shipping companies. He has been influential in the field of market development, cargo promotion for U.S. ships, and stressing the capabilities of U.S. shipyards.

Wallace T. Sansone

Deputy Director, Office of Domestic Shipping
Maritime Administration

Mr. Sansone is recognized for outstanding initiative, leadership, and management ability in achieving the Maritime Administration goals and policies which have provided assistance and support to all segments of the maritime industry. His initiative and leadership in the planning and development of the Administration's efforts to limit the impact of the recent energy shortages which became Maritime's plans and policies during the crisis, substantially assisted the maritime industry in obtaining fuel to continue essential operations. He organized a vigorous and successful industry-wide energy conservation program which has resulted in energy savings exceeding the national goal of seven percent. Skillfully deploying limited resources and manpower, he managed to achieve maximum results, thus generating a unique contribution to the Maritime Administration's overall objectives.

Elliott G. McLean

Public Information Officer
Office of Minority Business Enterprise

During a major Inter-Departmental press conference involving Cabinet officials and major media representatives, Mr. McLean displayed exceptional resourcefulness in providing emergency resuscitation to a striken member of the press conference audience. The collapse and unconsciousness of another person frequently result in fear or shock that makes one feel helpless or bewildered. Mr. McLean, however, immediately took charge and skillfully provided lifesaving action. His coolness and capacity for quick action under the most trying of circumstances was an important factor in the eventual recovery of the stricken party.

Walter Braun

Research Chemist
Institute for Materials Research
National Bureau of Standards

Dr. Braun has pioneered in the development of the vacuum-ultraviolet flash photolysis technique, which has been used for the generation of a large number of atoms and free radicals under conditions permitting the monitoring of the time dependence of their concentrations. The technique has also been coupled with that of resonance fluorescence, permitting exceptionally accurate determinations of the rates of various atom-molecule reactions. The results of these studies have been of great interest not only because of their accuracy but also because of their importance in modeling of the processes characteristic of combustion, cracking, the earth's stratosphere, and planetary atmospheres. They have inspired much research activity within NBS and within the national and international scientific communities.

William S. Brower, Jr.

Research Chemist
Institute for Materials Research
National Bureau of Standards

Mr. Brower has made many valuable contributions to the science of crystal growth, especially as applied to techniques of growth from the melt. He has been responsible for the development of growth techniques and production of crystals of many different compounds, structures, and potential uses. Among these are the scheelite phases of alkaline earth oxides with tungsten and molybdenum oxide for fluorescent and laser applications. He has recently collaborated in the growth of large crystals of cuprous oxide for possible solar energy applications and mercurous chloride for infrared polarizers. He was also responsible for the discovery of the potassium fluoride "flux-synthesis" of cubic alkali antimonates, which may well prove very valuable as superionic conductors and solid state electrolytes.

Brian Dickens

Research Chemist
Institute for Materials Research
National Bureau of Standards

Dr. Dickens has demonstrated outstanding leadership on a crystallographic research program that has provided physical science information essential to dental science. This program is concerned with the understanding of tooth structure, tooth structure mineralization and demineralization, and the role of the mineral components to teeth in the development, retardation, prevention, and repair to dental caries. This has also involved high precision structural investigation of a family of better than twenty biologically important calcium salts and has provided support and direction to development of improved topical fluoride treatment as a caries preventive treatment. This program, in addition, has potential for impact in the design of sophisticated adhesive dental materials.

Allen J. Farrar

Attorney-Adviser (General)
Office of the Director
National Bureau of Standards

Mr. Farrar's sound legal advice and guidance have contributed significantly to the development of interagency agreements between the National Bureau of Standards and other Federal agencies which it serves. As Legal Adviser to the Director, he most recently assisted the NBS Institute for Applied Technology in negotiations with the Consumer Product Safety Commission for continuing technical services as required by public law. Each such agreement presents unusual problems in protection of NBS interests. His services in complex litigations and petitions concerning Bureau missions have facilitated technological advancement in such varied areas as commercial television broadcasts, the National Standard Reference Data System, and mandatory standards for children's sleepwear.

John W. Hastie

Research Chemist
Institute for Materials Research
National Bureau of Standards

Dr. Hastie has made outstandingly creative programmatic and research contributions in the scientific aspects of flame retardancy. He is largely responsible for the design and conduct of a vigorous fundamental program on the molecular basis of flame inhibition mechanisms that offers insight and conceptual guidance to a wide range of applied workers, in industry and elsewhere, who are concerned with the abatement of the hazards of fire. He has designed and constructed a laboratory facility that gives NBS a preeminent capability for research in this field and has played an exemplary role in the application of basic high-temperature physicochemical concepts to a major national problem area.

John T. Herron

Research Chemist
Institute for Materials Research
National Bureau of Standards

Dr. Herron is an outstanding chemical kineticist. Since joining the National Bureau of Standards, he has carried out a very productive program of research directed to measuring accurately the rates of chemical reactions of atom and radical species. These measurements have proven to be of importance in developing quantitative understanding of the complex chemical changes occurring in polluted atmospheres. In addition, he has made major contributions to the experimental measurement and critical evaluation of experimental data on rates and mechanisms of chemical reactions of atomic oxygen. This work will be of great importance in furthering the quantitative understanding of oxidation and combustion phenomena.

Jon T. Hougen

Physicist
Institute for Basic Standards
National Bureau of Standards

Dr. Hougen is internationally recognized for his outstanding contributions to the understanding of the spectra of molecules. His work is noted for the careful attention given to bridging the communication gap which often exists between theoreticians and experimentalists. Dr. Hougen has also been a leader in applying spectroscopy to mission oriented Bureau programs. An outstanding recent example of this is his prediction and explanation of the fine structure in the spectral lines produced by the methane molecule. Infrared transitions of this molecule are utilized in producing the most precise standard of length presently known to science, and Dr. Hougen's theoretical analysis and predictions for the fine structure will lead to the establishment of a superior international standard upon which precision length measurements will be based.

Hsien Hsiang Ku

Mathematical Statistician
Institute for Basic Standards
National Bureau of Standards

Dr. Ku's authoritative application of statistical principles and methods to the evaluation of the uncertainties of scientific results has made distinguished contributions to the effectiveness of technical programs. His analyses help scientists to determine reliably when they can reach conclusions and move on to the next stage of an investigation, and his alertness to perceive anomalies in experimental data has often prevented misinterpretations or detours up blind alleys. His careful attention to the expression of uncertainty statements insures the correct communication of results to users.

Masao Kuriyama

Physicist
Institute for Materials Research
National Bureau of Standards

Dr. Kuriyama has made substantial advances in the quantum field theory of x-ray diffraction from perfect and imperfect crystals. In so doing, he has become the world leader in this field. In addition, he has set up and directs an outstanding experimental facility for the accurate measurement of crystal perfection by x-ray diffraction techniques. He has grown large metal single crystals and has proven, using his x-ray facilities, that they are among the most perfect crystals ever produced.

Laszlo J. Monostori

General Engineer
Office of the Associate Director
for Administration
National Bureau of Standards

Mr. Monostori designed and fabricated special purpose electron tubes, developed a technique for joining ultrahigh vacuum components, and assisted technical staff in overcoming difficult problems in design and fabrication of precision problems in design and fabrication of precision instrumentation. His contribution has been of special significance to technological programs developed in the National Bureau of Standards. Much of the credit for the Bureau's success in the field of precision welding and brazing is because of Mr. Monostori's effort.

Robert C. Raybold

Physical Science Administrator
Institute for Basic Standards
National Bureau of Standards

Mr. Raybold was responsible for innovations in the management, procurement, and unification of automation equipment that will make possible a new era of excellence in NBS scientific laboratory activities. In addition, he was responsible for a comprehensive feasibility study relating laboratory needs to automation capability. An innovative plan for consolidated Bureau procurement was developed and a superb job done in presenting the benefits to top management of the Department and the General Services Administration. His thorough and innovative scientific documentation of the specific quantitative and qualitative benefits carried this new approach to the landmark decision in favor of the unified approach. Mr. Raybold has done an outstanding job in setting up and managing the IBS Laboratory Automation Group and has made major inputs to the technical programs of the Bureau in both the software and hardware aspects of laboratory automation.

Nancy J. Tighe

Solid State Physicist
Institute for Materials Research
National Bureau of Standards

Dr. Tighe is recognized for her demonstration and application of a new technique of specimen preparation that for the first time permitted widespread use of transmission electron microscopy as a tool for examining complex microstructures of brittle materials. This technique is now being used in laboratories throughout the country to enhance our understanding of physical and chemical processes that are important to national defense, to earth and lunar geology, to medicine, and to the ceramics and refractory industries.

Wing Tsang

Research Chemist
Institute for Materials Research
National Bureau of Standards

Dr. Tsang is recognized for a systematic, imaginative, and productive program of research on quantitative measurement and understanding of the thermal decomposition of complex gas molecules. He has developed a variety of new measurement techniques for reaction rates for measuring trace pollutants in water and for accurate calibration of air pollutant monitoring devices.
Dr. Tsang has, through a systematic program of accurate measurements, developed a way of quantitatively predicting the thermal decomposition behavior of many types of organic molecules. He has made significant contributions to the critical evaluation and estimation of reaction rate data needed for modeling of the chemical phenomena of the stratosphere.

Mabel Vickers

Computer Systems Analyst
Institute for Computer Sciences and Technology
National Bureau of Standards

Miss Vickers is recognized for outstanding technical contributions and sustained leadership in advancing standardization of the COBOL computer programming language and in coordinating government practices for the use of COBOL. She has developed technical criteria and procedures for government-wide testing of COBOL compiler programs, including the Federal COBOL Interpretations Committee, which she chairs to resolve language ambiguities for consistent testing. She has made major contributions to the COBOL language, including a feature which extends use of the ASCII code. She has been the government leader in the imminent revision of the Federal COBOL Standard, developing new specifications enhancing transferability. Her efforts benefit all computer users in improved quality and consistency of COBOL software.

Paul F. Wacker

Physicist (General)
Institute for Basic Standards
National Bureau of Standards
Boulder, Colorado

Dr. Wacker made outstanding contributions to antenna measurement theory in developing the extrapolation method for antenna gain and polarization and a practicable formulation for the spherical near-field scan method of determining complete antenna patterns. Extrapolation is the principal NBS method of evaluating primary standards since it is the most accurate method known. The spherical method, unlike other near-field methods, may be used for arrays steered well off-axis and antennas with widely-spaced beams and is especially attractive for physically large antennas. For many antennas, these new methods permit (1) higher accuracy, (2) smaller, less costly ranges, (3) weather-free measurements with laboratory-type control, and (4) measurements on systems which cannot be measured by conventional methods.

Harvey Yakowitz

Metallurgist
Institute for Materials Research
National Bureau of Standards

Dr. Yakowitz has made numerous, significant contributions to the fields of x-ray microanalysis and scanning electron microscopy. He has improved the theoretical understanding in these fields involving electron and x-ray interactions in solids. His experimental investigations have led to new information on the properties and behavior of materials and to the development of standard reference materials. In all of his areas of theoretical and experimental study, he has shown great professional ability and skill coupled with an understanding of practical problems.

Louis J. Zapas

Physicist (Mechanics)
Institute for Materials Research
National Bureau of Standards

Mr. Zapas has demonstrated outstanding leadership in a significant program on the mechanical properties of polymers. This program involves the development of methods for characterizing the viscoelastic behavior of polymers in actual usage. It has established important correlation between the molecular architecture of polymers and their mechanical properties. The results and outputs of this program have been applied directly to the understanding of practical problems in plastics processing, aerospace, desalination of water, and aging of polymers.

Frederick E. Brinckman

Research Chemist

Warren P. Iverson

Microbiologist

Institute for Materials Research
National Bureau of Standards

Dr. Brinckman and Dr. Iverson have made outstandingly creative contributions to research on problems of heavy metal pollution in the environment. They have developed a broadly-based program to investigate the means by which heavy metal pollutants are mobilized, transported, and transformed. Their work provides an exemplary model of effective and fruitful interdisciplinary research applied to a problem of major importance and has led to the discovery of novel metal transport mechanisms and to the development of effective experimental techniques for characterization of chemical and biological processes in the environment. Their scientific results have improved understanding of the complex interrelations of environmental chemistry and provide a basis for NBS contributions to assessment, measurement, and control of water pollution.

Robert Belesky

Weather Service Specialist
National Weather Service
National Oceanic and Atmospheric Administration
Cincinnati, Ohio

Mr. Belesky is recognized for his superior radar interpretations and outstanding performance under extreme stress during the violent outbreak of the April 3, 1974 tornadoes and severe thunderstorms over a large area covered by the Cincinnati radar. His speed and accuracy in forwarding his interpretative observations to the Weather Service Offices and Weather Service Forecast Offices under the Cincinnati radar umbrella enabled them to issue timely warnings to the public and to minimize the loss of life.

John R. Burke

Meteorologist in Charge
National Weather Service
National Oceanic and Atmospheric Administration
Louisville, Kentucky

Mr. Burke's outstanding leadership and his direct participation in the operations of the Louisville Weather Service Forecast Office have fostered a high degree of capability among his staff. WSFO Louisville provided warnings for most of the catastrophic tornadoes that occurred in Kentucky on April 3, 1974. Mr. Burke's advance community preparedness resulted in full-time warning coverage being provided by WHAS Radio prior to and during the tornado. Mr. Burke was broadcasting via telephone while watching the tornado-producing storm approach the airport. Although no funnel was visible, his personal reporting of the storm, while standing nearly in direct path of the tornado, alerted the public to take cover, resulting in much saving of life.

Clarence L. David

National Severe Local Storms Forecaster
National Weather Service
National Oceanic and Atmospheric Administration
Kansas City, Missouri

Mr. David is recognized for outstanding performance of duty as leading forecaster, Severe Local Storms, during the disastrous outbreak of tornadoes on April 3, 1974. In this capacity and under the stress of almost unmanangeable deadlines, Mr. David acted with professional calm and deliberation. He continuously monitored a wealth of incoming data, translating this information into extremely accurate tornado watches. For example, at one point he issued a series of 8 forecasts which correctly located 48 report tornadoes. Were it not for timely warnings based in considerable measure on his forecasting skills, many thousands of lives would have been lost.

Denzil R. Davis

Supervisory Meteorologist
Environmental Study Service Center
National Weather Service
National Oceanic and Atmospheric Administration
Auburn, Alabama

Mr. Davis has made significant contributions to the Agricultural Weather Program of the NOAA-National Weather Service as evidenced by practical applications of scientific research and documented by over 30 professional papers on a diversity of subjects. Although Mr. Davis' work has extended to investigations and development of beneficial practices applicable to many crops, the application of his findings with respect to ozone and growth problems of broadleaf plants is typical. Following research on complex relationships between meteorological phenomena, terrestrial ozone, and the plant disease called "Weather fleck", he developed an ozone forecasting technique and operational advisories which saved farmers hundreds of thousands of dollars.

Joseph W. Dropp

Commander, Officer in Charge
NOAA Officer Training Center
Office of the Director, NOAA Corps
National Oceanic and Atmospheric Administration
Kings Point, New York

Commander Dropp has demonstrated outstanding technical and managerial leadership in the planning and development of an extremely effective training program for newly commissioned officers of the NOAA Corps. He has distinguished himself by graduating highly competent young men and women officers for leadership positions throughout the NOAA fleet. The development of this effective program has produced officers with the necessary drive and initiative to carry out the scientific and technical missions of the fleet.

James B. Elliott

Weather Service Specialist
Weather Service Forecast Office
National Weather Service
National Oceanic and Atmospheric Administration
Birmingham, Alabama

Mr. Elliott is cited for his extraordinary competence during a series of devastating tornadoes that occurred in Northern Alabama during 1973. His exceptional skill and devotion to duty in the timely and effective issuance of tornado warnings were instrumental in keeping the loss of life to a minimum. His initiative, talent, and dedication have enabled him to become a leader in the area of severe weather warnings. His performance under pressure is flawless.

Patrick Hughes

General Physical Scientist
Environmental Data Service
National Oceanic and Atmospheric Administration

Mr. Hughes is the author of scores of technical papers, popular articles, news stories, and management and program position papers that have helped define and explain The Environmental Data Service (EDS) and NOAA scientific and technical programs, policies, plans, and services to national and international user publics. Many of his articles have been widely reprinted and disseminated by the press, other government agencies,and international bodies such as the United Nations. In addition, Mr. Hughes has developed, directed, and monitored broad EDS publications programs of great benefit to the national and international user communities, programs that have materially advanced the goals and objectives of NOAA and the Department of Commerce.

Bernard D. Hull

Chief, Planning and Evaluation Branch
Personnel Division
Office of Administration
National Oceanic and Atmospheric Administration

Mr. Hull is recognized for his long and distinguished record of accomplishments in the personnel field. Although there are several areas in which he has excelled, his work in labor relations has been most notable. He made a unique contribution to the Federal service at large and to the Department of Commerce particularly when, in 1969, he negotiated the first multi-unit agreement with the National Association of Government Employees. This effort represented a major breakthrough in labor-management relations and continues to provide a positive framework for labor relations activity in NOAA. His expertise was a major force in the unusually smooth transition during two major reorganizations. His high sense of professionalism has set an example, and his leadership and guidance have resulted in a strengthened personnel program.

Hope I. Leighton

Physicist
Environmental Data Service
National Oceanic and Atmospheric Administration
Boulder, Colorado

Miss Leighton's knowledge of solar-terrestrial physics together with meticulous attention to detail and adherence to high quality standards has permitted NOAA's monthly publication *Solar-Geophysical Data* to obtain international recognition. Her resourcefulness in obtaining new types of data, in compiling data into the most usable forms, and in spotting errors and inconsistencies in the submitted data, has made the publication sought after by the worldwide solar-terrestrial physics community. The publication is constantly referred to as the source of data both in major journal publications and in presentations at scientific meetings. The rigorous publication schedule is also noteworthy since data observed only the month before publication are included.

Herbert S. Lieb

Deputy Director of Public Affairs
National Oceanic and Atmospheric Administration

Mr. Lieb's conception, supervision, and execution of NOAA public safety programs have been consistently outstanding. His achievements in articles, radio and television, slide presentations, films, and the organization and conduct of major special events have materially advanced the Nation's preparedness for natural hazards, particularly hurricanes and tornadoes. His participation in natural disaster survey teams has improved weather warning dissemination and public response to it. His efforts have brought closer relationships with other governmental and private safety organizations, such as the Defense Civil Preparedness Agency, the Federal Disaster Assistance Administration and the American Red Cross.

Harold S. McCrabb

Meteorologist
National Weather Service
National Oceanic and Atmospheric Administration
Fort Worth, Texas

The National Weather Service's Southern Region has one of the most outstanding storm warning systems in the Nation. Much of the credit for this achievement must go to Mr. McCrabb. He has become a nationally recognized expert in the development and management of warning systems. In addition to managing his warning program in an outstanding manner, he has contributed important original ideas on the detection of tornadoes and preparedness planning which are now being adopted nationally.

Paul L. Moore

Supervisory Meteorologist
National Weather Service
National Oceanic and Atmospheric Administration
Forth Worth, Texas

Mr. Moore is cited for his latest work, the numerical depiction—or digitization—of weather radar data, which may be his most significant effort because of its contribution to public safety. Specifically, he devised and implemented a method to collect radar data in digitized form. As a consequence weather forecasters throughout the country are now able to detect with better precision than before areas where disastrous local storms and flash flooding will soon occur. The new procedure has greatly increased the value of radar information by making it computer-compatible and subject to rapid retrieval and display. As a consequence, the National Weather Service is better able to warn civil preparedness agencies and the public of flash flooding of rivers and estuaries in sufficient time to prevent massive loss of lives during such occurrences.

John M. Robinson

Principal Assistant
National Weather Service
National Oceanic and Atmospheric Administration
Cincinnati, Ohio

Mr. Robinson is recognized for his performance and timely issuance of warnings that minimized loss of life on April 3, 1974, during the violent outbreak of several tornadoes and severe thunderstorms over a large area covered by the Cincinnati radar, and for his outstanding leadership, and cool and decisive actions under extreme stress. His direction of the operations of the Cincinnati Office, his skillful coordination with other weather offices in the four-state area, and his close cooperation with community action authorities were instrumental in the saving of an untold number of lives.

Alan N. Sanderson

Chief, Spaceflight Meteorology Group
National Weather Service
National Oceanic and Atmospheric Administration
Houston, Texas

Mr. Sanderson has demonstrated outstanding leadership and initiative in guiding the National Weather Service support to spaceflight programs of the National Aeronautics and Space Administration. He has directed the complex weather operations needed for the Gemini, Apollo, and Skylab flights. The long Skylab flights in 1973 and 1974 and the associated earth observations aircraft flights were particularly demanding in their weather support needs from the Spaceflight Meteorology Group. Through his leadership, the extensive program of background studies, simulations, forecasts, and briefings was carried out very successfully and contributed substantially to the success of the Skylab mission.

Donald R. Tibbit

Deputy Associate Director
National Ocean Survey
National Oceanic and Atmospheric Administration

Commander Tibbit is recognized for his outstanding leadership and service to the Nation in the development and coordination of the Southern Coastal Plains Expedition (SCOPE), an entirely new concept in which National Ocean Survey resources were concentrated in systematic surveys of the continental shelf region of North and South Carolina, Georgia, and Florida. He displayed great dedication and a high order of professionalism in the formulation of plans, direction of field operations, and information processing aspects of SCOPE. Data from these surveys has reached users on a near real-time schedule–far sooner than would ordinarily be expected. This new system of surveying will serve as a model for future applications of this technique in areas of similar interest.

Friason G. Travis

Assistant Chief of Aeronautical Chart Division
National Ocean Survey
National Oceanic and Atmospheric Administration

Mr. Travis is recognized for exceptional leadership in planning and developing the Airway Fix File for the Federal Aviation Administration. This File is a library of information in digital format which supports the air route tracking program managed by the air traffic controllers of the FAA to direct safely air traffic in the National Airspace System. The File is used by air traffic controllers at FAA's 25 Air Route Traffic Control Centers and 354 Airport Control Towers to control over 22 million flights on 300,000 miles of U.S. airways, involving 54 million aircraft operations on takeoff and landing operations. Mr. Travis' resourcefulness and initiative in developing the Airway Fix File have contributed substantially to the success and safety of the National Airspace System.

Weather Service Office

National Weather Service
National Oceanic and
Atmospheric Administration
Huntsville, Alabama

Messrs. Douglas L. Davis, Wilton L. Rodgers, and Thomas E. Ward are cited for their devotion to duty and outstanding courage during the Huntsville tornado of April 3, 1974. The tornado was sighted in the late afternoon rapidly approaching Huntsville from the southwest on a projected path that included the Weather Service Office. They remained at their posts, disregarding their personal safety, to perform duties essential to the process of providing warnings of the impending danger to the public. Dramatic warning messages were broadcast over radio and TV alerting the surrounding area residents of the coming disaster. Many lives were saved by the dedication of these three Weather Service employees.

Norton Ansher

Group Director
Patent Examining Group 210
Patent Office

Mr. Ansher is recognized for his outstanding skills and abilities in the performance of duties which have resulted in valuable contributions to and significant advances in the programs of the Patent Office. He is cited for his leadership role in the administration of his Examining Group to accomplish major program advances in the Patent Office. Under Mr. Ansher's direction, Group 210 made major advances in the areas of pendency to first action of patent applications, of prompt responses to requests for reconsideration of patent applications, and of overall production.

William Gilbert

Photography and Platemaking
Foreman
Office of Publications
Office of the Assistant Secretary for
Administration

Mr. Gilbert's exceptional leadership, experience, and technical expertise have greatly contributed to the highly efficient and economical operation of the Department's offset printing plant. As a result of his studies of other printing plants and his knowledge of photography, the Department's plant has converted to a new system of producing printing negatives and processing printing plates that will save $14,000 annually over the previous system. Mr. Gilbert has donated hundreds of hours of his own time training interested employees in all phases of camera and negative production. His significant efforts in improving productivity in training employees have contributed substantially to the Department's plant being recognized as one of the best in the Federal Government.

Barbara J. Stanard

Supervisory Personnel Management Specialist
Personnel Division
Social and Economic Statistics Administration

Mrs. Stanard is recognized for creative and innovative achievements in developing unusually effective and responsive programs in the field of personnel management at the Social and Economic Statistics Administration. Especially noteworthy and typical among these is the Upward Mobility University of which she is the principal architect. The success of the programs she has developed, especially in the area of equal employment opportunity, has resulted in her recognition as a top expert in upward mobility and related programs.

Aaron Josowitz

Assistant Chief, Housing Division
Bureau of the Census
Social and Economic Statistics Administration

Mr. Josowitz supervised the 1970 Census of Housing publication program from its inception to its completion. In addition to his major contributions to the 7 series of regular housing reports consisting of nearly 1,000 publications, he was instrumental in developing the first series of detailed housing subject reports. He was also responsible for conceiving and producing 19 supplementary housing reports which provided census results in a simple and inexpensive series. His extensive experience in the 2 previous Components of Change Surveys (CINCH) and his ingenuity solved many of the complex problems in the 1970 CINCH Survey and produced improved data at no increase in cost. He also played a key role in initiating the HUD-sponsored Annual Housing Survey, launched in July 1973.

Gordon W. Pearson

Mechanical Engineering Technician
Engineering Division
Bureau of the Census
Social and Economic Statistics Administration

Mr. Pearson is recognized for consistently making substantive contributions to the mechanical design of data processing, high speed photography, and paper handling systems which are revolutionary in concept and very sophisticated in nature. He directs with great dedication and skill the mechanical design portion of new and innovative data processing systems for the Bureau and other government agencies. His contributions have been a major factor for the continuing success of the Division in endeavors to assist the Bureau in its effort to conduct the censuses productively and most economically.

Clark C. Watterson

Supervisory Electronic Engineer
Institute for Telecommunication Sciences
Office of Telecommunications
Boulder, Colorado

Mr. Watterson has developed methods and equipment to simulate radio propagation over an ionospheric channel. He designed and carried out an extensive experimental measurement program to determine the statistical parameters found in real channels, developed a statistical model, and confirmed its validity using the measured data. With experimental validation, he designed a radio channel simulator, now relied upon by the Armed Services to evaluate the performance of competitive communication systems under laboratory conditions. Highly cost-effective, simulation tests are performed at great savings in time and money as against field measurements.


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