INTERVIEW WITH BOB SERAFIN, ATD'S NEW DIRECTOR

In January, the UCAR Board of Trustees authorized the appointment of Robert Serafin as director of the Atmospheric Technology Division (ATD). At the time of the board's meeting, Bob was in Australia and New Zealand. Staff Notes finally caught up with Bob and the resulting interview appears below.

"ATD's mission is to provide facilities and field support for atmospheric research," Bob said. The community we serve is broad—including NCAR, the universities, and government agencies. Since this support includes state-of-the-art research tools, much of our work involves developing new instrument systems. Being capable of both field support and instrument development has given ATD a distinguished reputation in the community. It is a unique and powerful combination," he added, "and one that I will continue to foster as ATD's director."

Bob said that one of the division's principal activities will be continued involvement in large cooperative programs. "Large-scale field programs like SESAME or the upcoming CCOPE project exploit most of ATD's talents," he said. The Cooperative Convective Precipitation Experiment (CCOPE), scheduled to begin this May, is being sponsored primarily by NCAR's Convective Storms Division and the U.S. Department of the Interior's Water and Power Resources Service. ATD will provide aircraft, 27 portable automated mesonetwork (PAM) stations, and three Doppler radars.

"CCOPE is a good example of how instrument development dovetails with field operations," Bob explained. "The CP-2 Doppler radar, for example, was first used by the National Hail Research Experiment (NHRE); it is now being substantially redesigned and will be used by CCOPE. By this summer CP-2 will be operational as a new transportable state-of-the-art radar with several unique features designed by the Field Observing Facility (FOF). Similarly, the PAM system was designed and built by the Research Systems Facility and FOF back in the mid-1970s. Its first field test occurred during the NHRE field season in 1976 and it has evolved considerably since then in response to user suggestions.

"As these two instrument systems illustrate, ATD is in the unique position of being able to design an instrument, deploy it in the field, and then redesign or improve it on the basis of field experience."

"The recent designation of the computing facility as a separate division," Bob continued, "allows the work of ATD to be more sharply focused. We will now concentrate on instruments and techniques for experimental meteorology and atmospheric chemistry."

Bob said that the division's long-range goals include substantially improving aircraft platforms...
and sensors; developing remote and immersion atmospheric sensing devices and using satellite communications to disseminate real-time data; and developing interactive computing systems for assimilating, editing, and analyzing data.

"Developing interactive computing capabilities is critical to our field operations," Bob said. "One of the major problems in the field is knowing whom to send where at any given moment and what data are being obtained. Interactive computing with real-time displays will result in major improvements for directing large and complex field studies."

In addition to CCOPE, ATD is likely to participate in a number of cooperative programs currently being planned, such as the National Winter Cyclone Study. "ATD will work more closely both with other divisions within NCAR and with the university community," Bob said. "We intend to broaden our personnel resources through staff exchange and by expanding our visitor program. We believe that an exchange of staff with universities, for example, will enable us to draw on the abilities of others and to improve our communications with the community."

In 1972 Bob received his doctoral degree in engineering from the Illinois Institute of Technology (IIT), where he also had worked as a research engineer. While with the IIT Research Institute, Bob helped to develop several research radar systems.

Bob joined NCAR in 1973 as manager of FOF. "My principal accomplishments in FOF," Bob added, "were implementing the change in FOF's focus, from providing routine logistical support to providing state-of-the-art facilities and instruments. This change in focus was initiated by ATD director David Atlas in 1972 and carried on by his successor Clifford Murino. As director of ATD, I would like to continue to be heavily involved in the technical details of our division as well as in our interactions with the atmospheric sciences community."

Since most of ATD's staff is situated off the mesa, Bob intends to move his office to NCAR's 30th Street location, although he will maintain a liason office in the Mesa Laboratory. Harold Baynton has recently been appointed as ATD's deputy director and Richard Carbone will head FOF.

"I am optimistic about ATD's future," Bob concluded. "We have a strong, creative professional staff, which we hope to augment further through exchange and visitor programs, and we have interesting and complex field programs on the offing. With such a foundation to work from, who wouldn't be optimistic!"  

THE NCAR POCKET-TELLER?

No, it is not a new select-a-seat outlet, horse-betting window, wishing well, nor McDonalds walk-up window. Staff members trying to order pizza or buy kisses will also be disappointed. However, the new hall-facing window in ML room 136 (which has earned Office Services the title "the hole in the wall gang") will be used to cash checks, handle petty cash, and sell stamps. These services will no longer be available at the front reception desk.

Located behind the Mesa Laboratory cafeteria across from the tray conveyor belt, the window will be open daily for the above purposes, between 10:00 and 11:00 a.m. and 2:00 to 3:00 p.m. Because of the limited hours of operation, the Office Services staff asks that staff members plan ahead for obtaining petty cash, and make out personal checks before arriving at the window. The grand opening of the new NCAR "bank" will be on 1 April. For additional information on the new bank, call Betty Davie, ext. 223.  

NEW NCAR PARKING STICKERS

New NCAR parking stickers are now available at the reception desk of the Mesa Laboratory. The list of NCAR employees with stickers has never been updated," security guard Carl Randall explained. "We had several cars left with their lights on this winter, for example, and although they carried NCAR stickers, we could not find their owners."

In addition to helping to locate the owners of cars left with lights on or with gas leaking, or (as happened one year) the owner of a car that was blown entirely out of the lot during a high wind storm, the stickers allow parking in the designated lot at NCAR's 30th Street location.

"The new stickers are marked with two red dots and begin with number 7500," Carl said. "After the first of June, all the records pertaining to the old stickers (carrying pre-7500 numbers) will be discarded. We urge everyone to replace their stickers before 1 June."

NCAR employees at off-mesa locations may receive stickers by phoning the reception desk on ext. 266.
ANNOUNCEMENTS

ISIG GROUP FORMED

The Atmospheric Technology Division (ATD) held an informal luncheon meeting on 18 March at RL-6 to discuss the formation of an Instrumentation Special Interest Group. The initial purpose of this group is to acquaint interested personnel with the instrumentation uses, needs, and problems within the various facilities of ATD. Representatives from the Research Aviation Facility, the Global Atmospheric Modeling Group, the Field Observing Facility, and the Research Systems Facility discussed the format that they would like future meetings to follow. It was agreed that the next four meetings would be devoted to learning more about each of the ATD facilities.

The next meeting will be held at the Jefferson County airport Thursday, 2 April, at 12:00 noon, and will include a short tour and description of this facility. Anyone interested in attending should pack their lunch.

CAFETERIA NEWS

The "special special" for next Wednesday, 1 April, will be barbequed chicken, potato salad, baked beans, peach chip pudding, and coffee or tea, all for $2.

PLEASE NOTE: Half orders cannot be given on the "special special."

The breakfast special for next week will be a cheese omelette with cinnamon toast and a pear for $1.10.

The winner of this week's free luncheon is:

RON FEREK

NSF REHEARSAL

Each year UCAR and NCAR present to NSF a summary of NCAR's and the National Scientific Balloon Facility's current activities, future plans, and proposed budgets. This year's presentation will be made at NSF on 14 April, and preparation of the materials is now under way. On Tuesday, 31 March, Bill Hess, Robert Serafin, and Ralph Cicerone will give a dress rehearsal in the Main Seminar Room of the Mesa Laboratory at 1:00 p.m. The presentation rehearsal will last about one hour. In years past, comments and suggestions received at this open rehearsal have helped to sharpen the presentation, and the speakers have found it helpful to practice before a live audience. All interested staff members are therefore invited and encouraged to attend the rehearsal.

VISITORS

Robert Braman, University of South Florida. Field of interest: Atmospheric chemistry. 1-4 April. ML room 374, ext. 248.
--Allan Lazrus, Atmospheric Chemistry and Aeronomy Division

Taroh Matsuno, University of Tokyo, Japan. Field of interest: Dynamic meteorology. 29 March-5 April. ML room 402A, ext. 670.
--Akira Kasahara, Atmospheric Analysis and Prediction Division

The following visitors will attend the Research Aviation Facility Advisory Panel meeting on 8-9 April:

Joost Businger, University of Washington
William Cooper, University of Wyoming
Warren Johnson, SRI International
Richard Passarelli, Massachusetts Institute of Technology
Joanne Simpson, Goddard Laboratory for Atmospheric Science (NASA)
John Winchester, Florida State University

The following visitors will attend the Field Observing Facility Advisory Panel meeting to be held on 9-10 April:

Marx Brook, New Mexico Institute of Mining and Technology
William Cotton, Colorado State University
NEW BOOKS

GB980 S63 1978. THE RIVER BASIN AN INTRODUCTION TO THE STUDY OF HYDROLOGY. Smith D. I.
QA76.6 B88 1971. QUEING NETWORK MODELS OF MULTIPROGRAMMING. OUTSTANDING DISSERTATIONS IN THE COMPUTER SCIENCES. Buzen J. P.
QA76.7 W43 1980. STUDIES IN EXTENSIBLE PROGRAMMING LANGUAGES. OUTSTANDING DISSERTATIONS IN THE COMPUTER SCIENCES. Wegbreit B.
QA76.7 P2R63 1980. THE SYMMETRIC EIGENVALUE PROBLEM. Parlett B. N.
QA267.3 B76 1980. DETERMINISTIC TRANSLATION GRAMMARS OUTSTANDING DISSERTATIONS IN THE COMPUTER SCIENCES. Broggol B. M.
QA331 C635 1980. SOFTWARE MANUAL FOR THE ELEMENTARY FUNCTIONS. Cody W. J.
QH530.5 S94 1979b. DECOMPOSITION IN TERRESTRIAL ECOSYSTEMS STUDIES IN ECOLOGY; V. 5. Swift M. J.
T385 G68 1979. COMPUTER DISPLAY OF CURVED SURFACES. Gouraud H.
T385 S83 1980. SKETCHPAD: A MAN-MACHINE GRAPHICAL COMMUNICATION SYSTEM. Sutherland I. E.

NEW TECHNICAL REPORTS

ATMOSPHERIC SCIENCE
1-9671. AN INVESTIGATION OF LEE CYCLOGENESIS AND BEHAVIOUR OF UPPER AIRFLOWS IN LARGE-SCALE MOUNTAINS. Chung Y. S. 1980.
1-9678. STRATIFORM CLOUDS AS A PROGNOSTIC VARIABLE IN A GLOBAL PREDICTION MODEL: RESULTS FROM A FIVE DAY FORECAST. Sundqvist H. 1980.
1-9680. A NUMERICAL INVESTIGATION OF EQUATORIAL OCEAN DYNAMICS WITH REFERENCE TO EL NINO. Han Y.-J., et. al. 1980.
1-9682. SHORT TERM HF FORECASTING AND ANALYSIS. Manley J. A. 1981.

ENGINEERING AND TECHNOLOGY
NEW MICROFICHE

ASTRONOMY AND ASTROPHYSICS

ADA086221. ASSESSMENT OF MAGNETOSPHERIC PROCESSES OF IMPORTANCE IN HANE. Cladis J. B., et. al. 1979.

CHEMISTRY

PB80221930. AEROSOL SIZE MEASUREMENT BY ELECTRICAL MOBILITY AND DIFFUSION ANALYSIS – A COMPARISON OF METHODS. Bricard J., et. al. 1980.
FE3084. COMPLETE BURNING AND EXTINCTION OF A CARBON PARTICLE IN AN OXIDIZING ATMOSPHERE. Matalon M. 1980.
FE271010. DEVELOPMENT OF INDUSTRIAL METHODS OF ANALYSIS OF SULFUR COMPOUNDS IN COAL PROCESS STREAMS. Jordan J. 1980.
PB80198526. EVALUATION OF SOLID ADSORBENTS FOR COLLECTING ATMOSPHERIC CHLORINATED HYDROCARBONS. Bidleman T. F., et. al. 1980.

OCEANOGRAPHY

PB80217581. COASTAL ACCRETION AND EROSION IN SOUTHWEST WASHINGTON. Phipps J. B., et. al. 1978.
ADA087785. CATASTROPHIC EVENTS IN A SURFACE MIXED LAYER. Dillon T. M., et. al. 1978.
ADA085727. ELECTROMAGNETIC FIELDS INDUCED BY OCEAN CURRENTS. Wasylkiwskyj W. 1979.
ADA085445. SURFACE CURRENTS, NORWEGIAN AND BARENTS SEAS. 1980.
ADA085384. TESTS FOR SIZE AND SHAPE DEPENDENCY IN DEEP-SEA MIXING. Ruddiman W. F., et. al. 1980.
ADA086107. CONCEPT EVALUATION FOR OCEAN SHEAR PROFILER. Dugan J. P. 1980.

POLLUTION

PB81101685. AN INVESTIGATION OF FUTURE AMBIENT DIESEL PARTICULATE LEVELS OCCURRING IN LARGE-SCALE URBAN AREAS. Helser D.P. 1979.
UCID18594. USER MANUAL FOR SILVA: A COMPUTER CODE FOR ESTIMATING EFFECTS OF POLLUTION... California Univ. Livermore Ca. 1980.
P80227572. TEXAS EPISODIC MODEL, USER'S GUIDE. Texas Air Control Board, Austin. 1979.
Applications Programmer II - III - #2721

AAP - Oceanography Section
Exempt range 61: $18,660 - 27,996/year (level II)
 or 62: $22,584 - 35,016/year (level III)

DUTIES: Will participate in design, construction, implementation, and maintenance of large computer codes associated with Ocean General Circulation Model development as well as developing and applying special purpose codes for a variety of mathematical, statistical, graphical, and data analytical calculations.

REQUIRES (for level II):
--M.S. in computer science, mathematics or physical sciences, or engineering or equivalent
--Knowledge of mathematical techniques applied to scientific problems
--Skill in FORTRAN programming

Level III person would be expected to have greater depth of knowledge of requirements listed above, a strong scientific background working with complex problems and would be expected to work independently in development of codes.
Margareta Domecki, X581

Computer Service Technician II - #2760

SCD - Maintenance Group
Non-exempt range 28: $1,264 - 1,642/month (1981)

DUTIES: Immediate responsibility will be connection of users to the 10 satellite computer, via hardware communications in the mesa building, as well as modem hookup. Other responsibilities will include providing hardware support of data communications, debugging modem and data communications problems, maintaining terminals and handling inventory of the spares system. Will also assist senior personnel in the maintenance of the DICOMED D48 COM system.

REQUIRES:
--Basic understanding of EIA-CITT RS232 standard
--Limited understanding of data communications hardware
--Skill in soldering techniques and fabrication of data communication cables
--Skill in repairing various data terminals
--Skill in use of scopes, digital multimeters and data analyzers
--Basic knowledge of computer architecture
--Elementary understanding of disk and tape recording
--Basic DC power supply theory
--Skill in logical approach to troubleshooting
Margareta Domecki, X581

Division Director - #2697

AAP
Exempt range 92: $38,757 - 60,079/year

DUTIES: Is responsible for the overall scientific productivity, creativity and excellence of the division; for the formulation and execution of both long-range and short-range plans, within the overall NCAR guidelines; for the quality of the scientific and support staffs; for personnel management, including meeting the goals of the affirmative action program; and for planning and management of budgets and other resources. Will participate in management deliberations, advising the Director of NCAR on such matters as scientific goals and standards, budgets, policies and programs and in the pursuit of budget and planning strategies.

REQUIRES:
--Ph.D. or equivalent in physical science, engineering or related field
--Demonstrated high level scientific productivity, breadth of interest and leadership
--Demonstrated sound scientific judgment in broad range of topics within atmospheric dynamics and associated disciplines
--Demonstrated high level skills in techniques of planning, organization and management of activities, staff and budgets and ability to make and put into effect clear and incisive decisions
--Demonstrated effective scientific advocacy in order to persuasively promote goals and strategies
--Willingness/ability to manage the division in ways consistent with NCAR policies and affirmative action program goals

Prospective candidates may apply by submitting a letter of candidacy and a curriculum vitae to G. W. Curtis, Wilmot Hess or Ed Wolff. Applications should be received by 15 April 1981. NCAR would like to have the selected individual assume this position by 1 September 1981.
Marsha Hanson, X517

Electro-optical Technician II - III - #2749

ACAD-GOMOT Project
Non-exempt range 28: $1,264 - 1,642/month (1981)
 or 29: $1,529 - 1,987/month (1981)

DUTIES: Will assist primarily in the development and
operation of a tunable laser absorption spectroscopy system for use in both ground-based and airborne experiments to measure atmospheric trace gases. Will also build, operate, modify and repair a Fourier transform infrared spectrometer and other optical equipment.

REQUIRES (level II):
- Demonstrated skill in effective communication and productive interaction with a small research group (or group with similar requirements)
- Physical strength to lift about 60 lbs
- Moderate skill in algebra, geometry and elementary trigonometry
- Willingness/ability to participate in 1-2 field trips/year lasting about 1-2 weeks each
- Electronics: General understanding of basic analog and digital circuits; skill in selecting and using components such as transistors, opamps, resistors and capacitors; skill in troubleshooting moderately complex circuits; skill in soldering and wirewrapping; skill in using test instruments
- Optics: General understanding of basic reflective and refractive elements and skill in calculating focal lengths, image position and throughput and aligning and focusing optical systems
- Vacuum technology: Familiarity with types of vacuum pumps, valves and gauges and general understanding of cleanliness requirements and sealing techniques for high vacuum
- Cryogenics: Familiarity with cryogenic fluids, safety procedures and knowledge of properties of materials at low temperature
- Laser technology: General understanding of operating principles of tunable diode lasers and familiarity with laser safety standards and procedures

ALSO DESIRED, BUT NOT REQUIRED (level II):
- Experience with phase sensitive detection of low level signals and general understanding of problems of sampling and analog to digital conversion
- Experience with cooled infrared detectors
- Experience with cryogenically trapped high vacuum systems and mass spectrometer leak detectors

REQUIRES (level III):
- All of the above and most or all of the following:
  - Electronics: Skill in designing and building simple circuits using opamps, voltage regulators, TTL and CMOS logic; general working knowledge of low level signal processing and servo systems
  - Optics: General understanding of principal methods of infrared detection and use of optical instruments
  - Vacuum technology: Skill in use of gas handling system to prepare standards and samples

ALSO DESIRED, BUT NOT REQUIRED:
- General understanding of mechanical systems for obtaining low temperatures
- Previous experience with infrared tunable diodes

Marsha Hanson, X517

Head, Information Office - #2724

Manager, Business and Financial Services - #2754

ADM
Exempt range 77: $26,565 - 41,176/year
DUTIES: Will be responsible for carrying out or supervising all functions of the Information Office

including receiving the public (individuals and groups), responding to requests for information from the media, the public, and other organizations and taking the initiative with the media, through general-distribution news releases, generation of material tailored to the interests of individuals in the media, and personal contacts. Will be responsible for setting priorities and managing budget within management guidelines, and recommending additional activities that will advance NCAR's mission.

REQUIRES:
- Demonstrated skill in writing about science in a clear prose style that will be interesting to the lay reader without unwarranted distortion of the science involved
- Demonstrated skill in judging and editing the work of others
- Demonstrated skill in dealing effectively with national media figures
- Demonstrated skill in administering an information function in a scientific setting
- Demonstrated knowledge of graphics, photographs and printing
- Demonstrated coordination skills such as required to arrange tours for public visitors and community support
- High level of energy enabling the individual to deal with deadlines and a varied workload
- Diplomatic skills required to deal smoothly with scientific and administrative staff members and with UCAR and university officials

NOTE: A more detailed job description is available from the Employment Office.
Margaret Domecki, X581

Head, Administrative Computing and Systems Office - #2758

ADM
Exempt range 78: $29,247 - 45,335/year
DUTIES: Responsible for planning, organization and directing the business data processing activities including systems analysis, design, programming, computer operations and data entry.

REQUIRES:
- B.S. or equivalent in computer science, accounting, business administration
- Demonstrated high level skill in on-line data processing, including experience in systems analysis and design using structured methodology, applications programming, remote job entry and data base management
- Good knowledge of computing hardware and software and their capabilities in an administrative use context
- Good understanding of financial and other business applications of data processing
- High level organizational and communication skills
- Good understanding of high level business programming language (i.e. BASIC or equivalent)
- Willingness/ability to manage this group in ways consistent with NCAR policies and affirmative action program goals

Marsha Hanson, X517

Director's Office
Exempt range 77: $26,565 - 41,176/year
DUTIES: Provides high level advice and management concerning contracts, purchasing, insurance, patents,
data rights, banking, accounting, payroll, travel, government property, systems analysis and design, data processing and office automation. Staff is about 31 with an annual budget of about $900K.

REQUIRES:
--Demonstrated high level management skills at the mid-senior level (preferably in an organization similar in size and nature to NCAR)
--Demonstrated high level skills in planning, budgeting, management, communication and decision making and implementation
--Skill in dealing with government in contractor relationship
--General knowledge of procurement, finance and business computing and high level skill in the management of at least one of the above
--Willingness/ability to manage this group in ways consistent with NCAR policies and affirmative action program goals

ALSO DESIRED, BUT NOT REQUIRED:
--Management experience in a non-profit research institution
--B.S. or equivalent in business administration, accounting, public administration; an MBA is highly desirable

Marsha Hanson, X517

Manager, Physical Facilities Services - #2755

ADM
Exempt range 79: $35,342 - 54,779/year
DUTIES: Manages all physical facility and office services functions. Responsible for the quality, productivity and cost effectiveness in these areas which include facilities planning, design and construction, physical plant operation and maintenance, telecommunications, energy conservation, security, safety, food service, mail, shipping and receiving, transportation and conference support. Staff is about 66 persons with an annual budget of about $2.8 million.

REQUIRES:
--High level skills in budget development and implementation
--High level skills in mid-senior level management/leadership in directing support services (preferably on an organization-wide basis and in one similar in size and nature to NCAR)
--Excellent communication and organizational skills with exposure/good understanding of (in this order): 1) physical facility planning, design and construction, 2) physical plant operation and maintenance, 3) physical space utilization and allocation, 4) general office services, and 5) security and safety
--B.S. or equivalent in business administration, public administration, mechanical engineering, architecture and substantial management experience in the complementary area (i.e. business degree and technical experience or vice versa)
--Willingness/ability to manage this group in ways consistent with NCAR policies and affirmative action program goals

Marsha Hanson, X517

Secretary - #2756

ADM
DUTIES: Will provide secretarial and clerical support to a staff of four.

REQUIRES:
--Good knowledge of current office procedures
--Good knowledge of English grammar, spelling, punctuation and composition
--Accurate typing at about 55 WPM (typing test will be given to final applicants)
--Skill in establishing and maintaining effective working relationships with others
--Interest/willingness to learn to operate word processing equipment
--Interest/willingness to learn to use transcribing equipment

ALSO DESIRED, BUT NOT REQUIRED:
--Skill in use of word processing equipment
--Skill in shorthand
--Skill in handling confidential information
--Skill in transcribing from a dictaphone

Margareta Domecki, X581

Staff Scientist II - III - #2743

ATD - FOF
Exempt range 83: $26,064 - 40,404/year (level II)
or 84: $31,440 - 48,744/year (level III)
DUTIES: Will engage in research and service activities associated with immersion and remote sensors deployed by the FOF.

REQUIRES (level II):
--Ph.D. or equivalent experience in relevant areas
--Ability to organize and conduct field experiments utilizing meteorological remote and immersion sensors. This includes direction and supervision of all field technical specialists
--A demonstrated record of peer acceptance for research in cloud physics, cumulus dynamics, mesoscale research, boundary layer meteorology or radar meteorology
--Understanding of meteorological Doppler radar literature and willingness to pursue this area of research
--Willingness to promote and conduct joint research with the user community including universities, government laboratories and other institutions
--Ability to interact with FOF users in both scientific and service capacities
--Willingness to participate in the design and development of new hardware and software
--Willingness to cooperate with other ATD facilities such as Research Aviation and Research Systems

ALSO DESIRED, BUT NOT REQUIRED:
--Experience with multiple Doppler experimentation and analysis
--Understanding of pulsed Doppler radar signal theory
--Understanding of remote and immersion sensing system hardware
--Ability to direct development of general user software for analysis of meteorological data

REQUIRES (level III):
--Experience level normally associated with 5-10 years relevant research
--Publications record and peer acceptance normally associated with the associate professorship level
--Greater breadth and/or depth than implied by the minimum requirements

Margareta Domecki, X581
**Scientist I or Ph.D. Scientist II - #2746**

(1st or 2nd 3-year appointment)

ACAD
Exempt range 82: $21,383 - 33,408/year
or 83: $26,064 - 40,404/year

**DUTIES:** Independently, and in cooperation with the Division Director, will undertake numerical modeling experiments and theoretical studies of atmospheric photochemical processes. Will be expected to utilize a stratospheric constituent database to be acquired by NASA's HALOE satellite project in validating and guiding the theoretical modeling effort. May perform independent additional research into paleotemperatures, aeronomy, global chemical cycles, atmospheric radiation and dynamics and air pollution modeling, depending upon the successful candidate's background.

**REQUIRES (1st year appointment):**
- High level skills in numerical modeling and theoretical studies of atmospheric photochemistry as evidenced by educational accomplishments and published research
- High level skills in the programming of an advanced computer in FORTRAN
- Ph.D. in chemistry, physics or atmospheric science or equivalent
- Relevant postdoctoral experience in applicable scientific research
- High level skills in the numerical solution of differential equations applicable to atmospheric photochemistry, radiative and dynamic processes, as demonstrated by experience, reports and/or publications
- Approximately 3 years experience including rigorous research and publication of research findings

**ALSO DESIRED, BUT NOT REQUIRED:**
- Experience on the CDC 7600 and CRAY

Margareta Domecki, X581

**Systems Programmer III-IV - #2635**

**SCD - Systems**

Exempt range 62: $22,584 - 35,016/year (level III)
or 63: $27,300 - 42,288/year (level IV)

**DUTIES:** Will perform measurements of network performance and network data flow. Will design and code the necessary software to (1) perform simulations and analysis of data flow, (2) measure the actual network data flow and performance, and (3) enhance the measurement methodology during development and later production states.

**REQUIRES:**
- M.S. or equivalent in computer science, math, or engineering
- 5-9 years (level III) or more than 9 years (level IV) in systems programming on medium to large systems with the last 4-5 years concentrated in some of the following areas: computer communications, systems performance measurements, queuing theory applications and system analysis

**ALSO DESIRED, BUT NOT REQUIRED:**
- Demonstrated skills in designing, writing and integrating system level software packages, and connecting various network hardware components

Marsha Hanson, X517

**Systems Programmer III-IV - #2695**

**SCD - Systems**

Exempt range 62: $22,584 - 35,016/year (level III)
or 63: $27,300 - 42,388/year (level IV)

**DUTIES:** Will perform software maintenance and development of the CRAY 1 operating system.

**REQUIRES:**
- M.S. or equivalent in computer science or related field
- 5-9 years (level III) or more than 9 years (level IV) in system programming where duties included maintenance of operating system software on medium or large scale system and participation in file backup procedures
- Skill in assembly language programming and FORTRAN

Marsha Hanson, X517

**Computer Service Technician I - #2761**

**SCD**

Non-exempt range 26: $1,045 - 1,357/month (1981)

**DUTIES:** Will participate in construction and wiring of a distribution panel, fabrication of data communication cables, simple debugging of data communications hardware problems and data terminal repair.

**REQUIRES:**
- Skill in fabrication of cables and/or wiring harnesses
- Basic skills in understanding and following building diagrams and cable layout
- Skill in soldering techniques
- Basic knowledge of CEA - CITT RS232 Standard

**ALSO DESIRED, BUT NOT REQUIRED:**
- Skill in repairing data communications terminals
- Understanding of modems and data communications

**NOTE:** This position is expected to last 4 months, with very slight possibility of extension.

Margareta Domecki, X581

**Student Assistant II - #2757**

**CSD**

Flat rate: $5.80/hour

**DUTIES:** Will reduce, plot and analyze data acquired from aircraft and radar in severe storms. Will perform hand calculations, draw graphs, do some basic analysis and simple programming in the research area of growth mechanisms of precipitation.

**REQUIRES:**
- Full-time student status with ability/willingness to work 20 hours/week during school year and full-time during summer
- Some knowledge of computer programming, including FORTRAN
- Knowledge of mathematics as acquired by a calculus course
- Willingness to/skill in performing tedious tasks neatly and accurately

Margareta Domecki, X581

**Student Assistant II - #2759**

**ATD**

Flat rate: $5.80/hour

**DUTIES:** To construct and test electronic circuits; operate electronic test equipment; to assist in performing laboratory and field tests on prototype circuits; and to produce schematics and parts lists for final draftperson use.

**REQUIRES:**
- Full-time student status, in physics or EE,
junior through graduate level or equivalent
--Ability/willingness to work 20 hours/week during school year and full-time during summer
--Skills in electronic assembly and testing
--Interest in working with hardware and practicing engineers in applied research environment

ALSO DESIRED, BUT NOT REQUIRED:
--Skill in operation of lathe, milling machine
--Familiarity with printed circuit layout and computer programming
--Ability to qualify for and obtain a GSA driver's license (one cannot have more than 2 moving violations in past 3 years to qualify)

Margareta Domecki, X501

TEMPORARY, FULL-TIME
IN MILES CITY, MONTANA, FOR THE COOPERATIVE CONVECTIVE PRECIPITATION EXPERIMENT (CCOPE), approximately 1 May to 15 August 1981:

FOR THE FOLLOWING POSITION, CONTACT MARSHA HANSON, X517

Computer Operator I - #2750

Flat rate: $6.50/hour
DUTIES: Will work as member of RAF staff and have responsibility for all phases of input/output operations of a Hewlett-Packard 1000 computer system, consisting of two magnetic tape drives and two terminals.
REQUIRES:
--High level skill in operations of HP 1000 or equivalent computer
--Moderate skills in organization, communication, problem solving and working independently
--Working knowledge of FORTRAN
CALENDAR NOTES
March 30 through April 6, 1981

MONDAY, March 30

* Class -- CPR & Multi-Media First Aid, Joe Choy and Dan Anderson, Instructors
1:00 p.m.
NCAR Mesa Lab, Damon Room

TUESDAY, March 31

* Class -- CPR & Multi-Media First Aid, Joe Choy and Dan Anderson, Instructors
1:00 p.m.
NCAR Mesa Lab, Damon Room

* NSF Presentation Rehearsal -- All interested staff members invited.
1:00 p.m.
NCAR Mesa Lab, Main Seminar Room

* AAP Seminar -- Higher-order Statistics of Temperature in Turbulence, Robert Kerr, Cornell University
3:30 p.m.
NCAR Mesa Lab, Main Seminar Room

WEDNESDAY, April 1

* AAP Special Seminar -- One Dimensional Model of the Middle Atmosphere Circulation Interacting with Upward Propagating Internal Gravity Waves, Taroh Matsuno, University of Tokyo
3:30 p.m.
NCAR Mesa Lab, Main Seminar Room

THURSDAY, April 2

* ISIG Meeting -- A tour and discussion of RAF at the Jefferson County Airport. All interested people and ISIG members invited.
12:00 noon
Jefferson County Airport

* ACAD Seminar -- Planetary Normal Modes in Nonuniform Background Configurations, Murry Salby, ACAD
1:30 p.m.
NCAR Mesa Lab, Main Seminar Room

THURSDAY, April 2 (continued)

* CSD Seminar -- Microphysical Parameterizations, William Hall, CSD
1:30 p.m.
RL/6 Seminar Room

* HAO Seminar -- Stellar Chromospheres and Coronae, Grant Athay, HAO
3:30 p.m.
NCAR Mesa Lab, Main Seminar Room

FRIDAY, April 3

Open

MONDAY, April 6

Open

Calendar Notes announcements may be mailed to Vonda Giesey, ML 136. Wednesday at 12:00 noon is the deadline for items to be included in the Calendar Notes.