

Staff Notes

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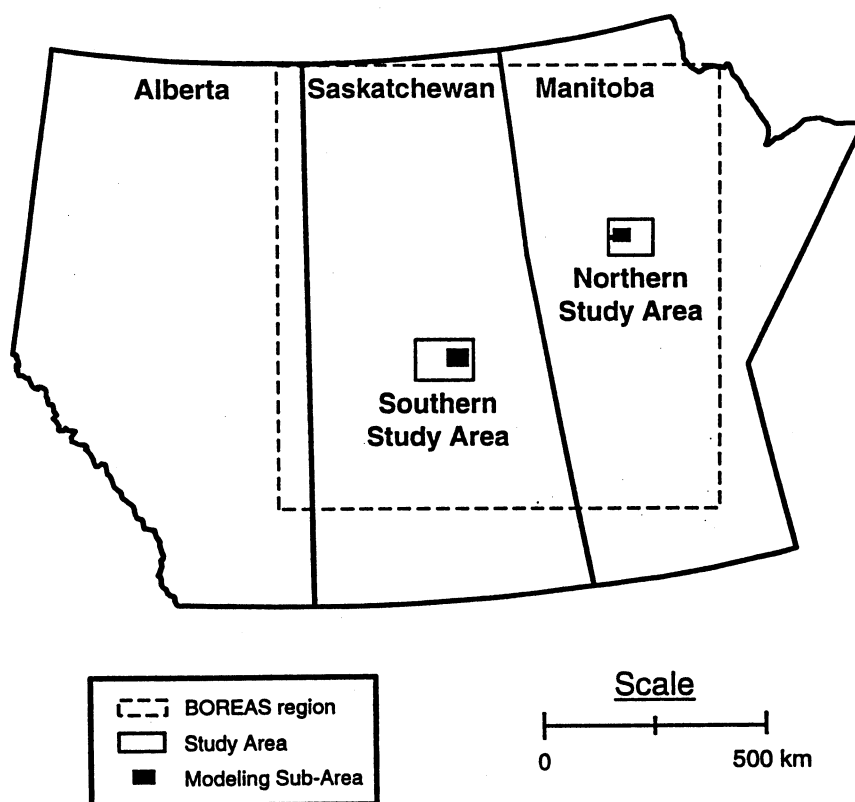
National Center for Atmospheric Research

NCAR Scientists, Electra Head to Canada for BOREAS

Are the vast woodlands of Canada playing a major role in the evolution of climate over North America and the entire globe? A large field experiment now under way in south central Canada is using satellites, aircraft, and ground-based observing stations, along with computer models, to profile the relationship between the boreal (northern) forests and the surrounding atmosphere.

BOREAS, the Boreal Ecosystem Atmosphere Study, is a two-year international project culminating in three field phases this summer that will trace the beginning, peak, and end of the northern growing season, from mid-May to mid-September. NCAR scientists participating in BOREAS include Al Cooper (Mesoscale and Microscale Meteorology Division, or MMM, and Atmospheric Technology Division, or ATD), Ken Davis (Advanced Study Program), Jim Greenberg (Atmospheric Chemistry Division, or ACD), Don Lenschow (MMM/ATD), and Steve Oncley (ATD). The Electra research aircraft is also joining the project this summer.

The primary U.S. sponsor of BOREAS is the National Aeronautics and Space Administration. Other major U.S. sponsors include the National Oceanic and Atmospheric Administration, the National Science Foundation (NSF), and the Environmental Protection Agency. Canadian support is coming primarily from National Resources Canada, the Atmospheric Environment Service, Parks Canada, Agriculture Canada, and the



This map of the BOREAS domain shows the northern and southern study areas (located on either side of the boreal forest belt) and the subareas to be studied with intensive computer modeling.

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National Research Council. At the field sites this summer will be several hundred participants from Canada, Denmark, France, Germany, Russia, the United Kingdom, and the United States.

Remote and sparsely populated, the boreal forest separates the prairies of the Great Plains from the tundra of the Arctic. It extends in a northwest-southeast belt running from the Yukon Territory to Ontario. The BOREAS study region is a rectangle covering most of Manitoba and Saskatchewan. Two smaller intensive study areas are located within this

region on either side of the boreal belt, near Prince Albert, Saskatchewan, and Thompson, Manitoba.

One major question the BOREAS researchers hope to answer concerns the role that the boreal region plays in storing carbon. Scientists are presently unable to track the destination of some of the carbon that is released into the atmosphere in the form of carbon dioxide and other gases. Recent studies suggest that the boreal region may be one of the missing "sinks" for this carbon.

Because the processes of atmospheric chemistry are so tightly linked, the researchers in BOREAS will be sampling many kinds of gases. The Electra research aircraft, owned by NSF and based at Jeffco, will fly between the Prince Albert and Thompson field sites, taking air samples along the way. Some samples will be shipped to Boulder for analysis by ACD to determine the amounts of carbon dioxide, methane, and other constituents present.

Air-flow measurements taken from aboard the Electra—flying as low as 100 feet (30 meters)—will reveal how trace gases are circulating in and around the BOREAS region and what factors control the exchanges of energy between the boreal forest and the atmosphere. One new instrument on the Electra measures the concentrations of trace gases in air parcels moving upward or downward to determine the net transport of carbon by those gases. Another instrument, developed and operated by the Institute of Atmospheric Physics of the German Aerospace Research Establishment, is a lidar (similar to radar but using laser beams instead of radio waves) that measures atmospheric water vapor and aerosol distributions between flight level and the ground.

The second major question being addressed by BOREAS is the potential impact of climate change on the boreal forest itself. Computer models show that the subpolar northern latitudes from around 45° to 65°N could be the region of earth most affected by global warming due to increased carbon dioxide and other greenhouse gases. Such warming—which could average as much as 10°C (18°F) in these regions over the next century—might substantially change the makeup and functioning of the boreal forest. Changes in the forest, in turn, would alter local weather and climate patterns. Studies of the north and south fringes of the forest, where temperature contrasts are the greatest, will shed light on what might happen to the forest in a changing climate. Seasonal variations also will be analyzed across the three study periods.

In order to improve computer models of global climate, a better understanding is needed of how small-scale interactions between plants and the atmosphere translate to larger scales. Specialists in plant ecology at BOREAS will be measuring variables such as soil moisture, leaf area, and radiation absorption for regions as small as a single tree. These data will be connected to local measurements of air, heat, and momentum flow, then extended to progressively larger scales and eventually connected to global satellite data and climate models. •BH

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Printed on recycled paper using soy-based ink.

Summer and SEP Return to UCAR

As reliably as the swallows return to Capistrano, summer brings a select group of eager undergraduates to UCAR for an introduction to the career world of a national scientific laboratory.

For the 14th summer, UCAR's Human Resources-sponsored Summer Employment Program (SEP) will fulfill the dreams of young minority students who aspire to careers in a scientific environment. For ten weeks, the SEP students will be residing in Boulder and reporting to work under the tutelage of UCAR staff. Included in the curriculum of each student will be a technical writing course to prepare them for the culmination of their stay: writing the results of their work in technical papers and presenting the papers to an audience of their peers and other employees.

Coordinator Anna Reyna-Arcos provides a special touch of nurturance in her oversight of the program. Among the annual activities she plans is a field trip to Colorado State University's graduate school of atmospheric science. There the students will see the path that UCAR hopes many of them will follow—the path to a career in atmospheric research.

Following are the names, majors, institutions, and UCAR advisers for the students who were selected from more than 200 applicants to participate in the 1994 program. All staff are invited to welcome this year's SEP students at a reception this afternoon, 23 June, from 3:30 to 5:00 p.m. in the Foothills Lab cafeteria atrium. •*Madeline Williams, HR*



(Photo by Curt Zukosky.)

Bottom row, left to right:

Manuela DeSantiago, mathematics, University of Texas at El Paso.

Adviser: Grant Branstator, CGD

Sandra Pulido, mechanical engineering, San Diego State University.

Adviser: Dan Gablehouse, HAO

Kimberly Presley, electrical engineering, North Carolina Agricultural and Technical State University. *Adviser:* Larry Cornman, RAP

Tanya McLendon, communication, University of Colorado at Boulder. *Advisers:* Karon Kelly and Nita Razo, Information Support Services

Kandis Boyd, meteorology, Iowa State University. *Adviser:* Peggy LeMone, MMM

Top row, left to right:

David Flores, aerospace engineering, University of Colorado at Boulder. *Adviser:* Julie Haggerty, ATD

Quindi Franco, economics and science/technology/society, Pomona College. *Adviser:* Greg McArthur, SCD

Preston Heard, Jr., mathematics/meteorology, Jackson State University. *Adviser:* Steven Williams, UCAR

Benjamin Barreras, environmental engineering, University of Washington. *Adviser:* Margaret Bruehl, UCAR

Matthew Uller, atmospheric science, University of California, Los Angeles. *Advisers:* Michael Exner and Charles Spaur, UCAR

Edgar Estupinan, chemistry, North Carolina State University. *Adviser:* Elisabeth Holland, ACD

Raul Martinez, mechanical engineering, University of Colorado at Boulder. *Adviser:* Ramalingam Saravanan, CGD

Graphic Services Is Now under One Roof

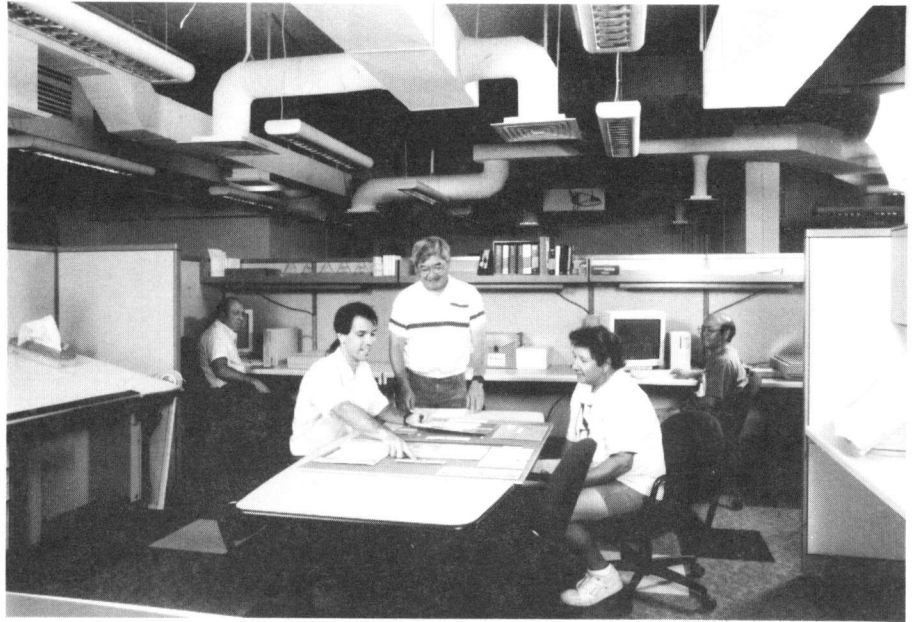
Miles of walking are sure to be eliminated—and new modes of digital communication are set to be explored—as Graphic Services (Graphics, Audiovisual Services/Photographics, and Copy Center/Process Camera) consolidate in a newly remodeled space. The airy, open layout fills a square in the midst of the Mesa Lab's second basement.

Accomplished two weeks ago, the move came nearly 20 years since the last move for Graphics and even longer for Photographics and the Copy Center. The new quarters feature an open-space motif for all except the Copy Center and a small darkroom.

"I think most of the group is excited about the move," says Justin Kitsutaka, Graphic Services manager. "The new space fits our identity as a group working on common projects and sharing the latest technology."

Along with the physical move comes the beginning of a much different move for Graphic Services—a shift toward all-digital treatment of images and publications. The process will take months, even years, to complete, but it promises quantum leaps in efficiency and versatility for scientists and others who make use of the group's services. "The bottom line," says Justin, "is reduction in turnaround time, total control of every image, and the elimination of redundant tasks."

All photographs eventually will be scanned from slide or negative film and stored in digital format. Some images will be transferred to Photo CDs, which "seems to be the most cost-effective format right now," says Justin. Using software such as Adobe PhotoShop, the Photographics staff will be able to remove scratches and imperfections from any image. Instead of traditional prints, the shop expects to be providing digitally



High ceilings overlook the Graphics meeting area. From far left are Lee Fortier, David McNutt, Justin Kitsutaka, Wil Garcia, and Mike Shibao. Not pictured: Barb Mericle. (Photo by Carlye Calvin.)



The new Graphic Services layout includes studio space and individual offices for Photographics staff (right to left) Bob Bumpas, Carlye Calvin, and Curt Zukosky. At far left is the Copy Center's Rhonda Wyckoff. (Photo by Mike Shibao.)

produced dye-sublimation prints by later in the year.

"We are looking at keeping the digital stock of images on-line in some type of archive, possibly the NCAR mass storage system," says Craig Ruff (Scientific Computing Division, or SCD), who is working with Justin on digital imagery techniques. "These images would then be available to all staff. In-house compact-disc mastering is another possibility."

SCD's Text and Graphics Server (TAGS) now can put either 35-millimeter or four-by-five inch images onto slides. "We are working on new TAGS macros that use the full frame of 35-mm mounted slides for high-quality presentation slides. Digital images could even be incorporated into videotape output."

Another source of high-quality transparencies in sizes as large as 8 1/2 x 11 inches is the DICOMED film recorder. A recent improvement in the DICOMED process now allows full-frame recovery of standard slides, whereas formerly some of each image was lost in the conversion to 8 1/2 x 11-inch sizes. On request, Graphics can use the DICOMED to add text and to supply professional backgrounds for slides.

To help subsidize their new services within the current UCAR accounting system, Graphic Services will shift to a cost-recovery procedure for its services, including black-and-white prints, in the coming fiscal year. Color separations will go to an outside production house, as before.

If you'd like to see the new Graphic Services space, you're invited to an open house to be held in the near future. Watch *Staff Notes* for details. •BH



Colleen Ertle and Rhonda Wyckoff settle into the new Copy Center/Process Camera space. Not pictured is Martha Lankton. (Photo by Carlye Calvin.)

1994 CEDAR Workshop Brings 350 to NCAR This Week

The National Science Foundation's CEDAR program (Coupling, Energetics, and Dynamics of Atmospheric Regions) is holding its ninth summer workshop in Boulder this week, 20–25 June. The workshop is hosted by the High Altitude Observatory (HAO), with support from the University of Colorado. It includes plenary meetings and workshops on topics related to ground-based studies of the atmosphere between the stratosphere and the magnetosphere. Around 350 persons are attending from 35 universities and 28 research installations, including 13 locations outside the United States. NSF supports students every year; this year, 161 are participating.

Tutorial speakers are addressing the mesosphere, ionospheric effects of lightning, auroral acceleration processes, and other planetary ionospheres. A special session is focusing on computer networking and telescience (the latter involves directing instruments toward long-distance data acquisition). HAO senior scientist Ray Roble is giving the CEDAR Prize Lecture, "Modelling the Circulation, Temperature and Compositional Structure of the Upper Atmosphere (30–500 kilometers [20–300 miles])." Ray's and other lectures are being videotaped and transcripts made available for students and researchers following the workshop.

Posters are a regular part of the CEDAR workshop, with about 75 presented this year. Most are presented by students, and prizes are awarded for the best student posters. Last year, an additional prize for one student, Monica Coakley (University of Wisconsin–Madison) was being asked to participate as the first student member of the CEDAR Steering Committee. A special workshop this year on student experiences was developed by students and recent graduates. •Barbara Emery, HAO

Announcements

Paul Rotar Retires

Paul Rotar of the Scientific Computing Division will be retiring after 31 years at NCAR. There will be a reception for him Wednesday, 29 June, at 4:00 p.m. in the west end of the cafeteria. Paul's friends are invited.

Correction

Loretta Quinn was listed in last week's New Hires as being an administrative secretary with JCP/PO. She actually is with UCAR/GLOBE.

Take Advantage of Development Courses

All staff should have received a 1994 Staff Development Catalog through interoffice mail earlier this month. The catalog lists courses developed by Human Resources to address the needs of UCAR employees as identified by the Divisional Equity Committees and the Institutional Equity Committee. All courses listed are available at no cost to employees. To enroll in a course, please contact Jodi Wiemer, employment and staff development administrator, ext. 8717.

No SN the Week of 4 July

Due to the Fourth of July holidays, *Staff Notes* will not be published on 7 July. Any material that needs to appear before 14 July should be submitted by the regular deadlines for the 30 June issue. If you have questions, contact Bob Henson, ext. 8605, e-mail bhenson@ncar.ucar.edu.

Still Time to Volunteer

The Outreach Program seeks volunteers to serve on the Art Advisory Committee, which selects artists whose work is displayed in the Mesa Lab gallery and cafeteria. The committee is made up of three NCAR staff members, each appointed by the NCAR director to serve two-year terms, and two professional artists from the local community to serve as advisers. Twice a year, the committee examines samples submitted by local artists and selects artists to display their work for one month each in the gallery and for two months in the cafeteria. The next judging will be held 11 August.

If you would like to serve, please call Milli Butterworth, ext. 8601, for an application by 30 June. The final selection from the list of volunteers is made by the Director's Office.

UNICOS Orientation Introduces Programming Tools

The UNICOS Orientation Class will be held from 8:30 a.m. to 4:30 p.m. on Wednesday, 29 June, at the Foothills Lab and repeated on Wednesday, 21 September, at the Mesa Lab. This class introduces UNIX/UNICOS programming tools and the NCAR computing environment and requires a good understanding of basic UNIX. Topics covered include make and makefiles, shell scripts, NCAR hardware and access methods, Mass Storage System commands, CFT77 and CF77, library and segldr considerations, fmgen, the NQS (Network Queueing System) batch system, job accounting, graphics facilities, and debugging with cdbx. To register, send e-mail to scdinfo@ncar.ucar.edu or call ext. 1225.

What's Cooking in the Cafeteria

Monday, June 27

Bear River Barley Soup
Chicken Cordon Bleu Sandwich/
Grapes
Tacos—Meat or Bean
Hungarian Goulash with Wide Egg
Noodles and Vegetable
*Start off the week with a Root Beer Float!
(regular or diet)*

Tuesday, June 28

Sopa de Maiz Soup
BLTT - Bacon, Lettuce, Tomato and
Turkey
Tuna Melt with Fresh Veggie Sticks
Super Nachos (meat or vegetarian)

Wednesday, June 29

4TH OF JULY - HOLIDAY SPECIAL
Connecticut Corn and Bean Soup
Dandy Dagwood
Spicy Tofu Cheeseburgers/Chips
Barbecue Ribs, Baked Beans, Fresh
Corn on Cob
*Firecracker cake and ice cold watermelon
complimentary with meal!*

Thursday, June 30

Tomato Rice Soup
German Sausage, Sauerkraut, and
Grated Swiss Cheese Sandwich
Pizza - Sausage Alfredo or Artichoke
Alfredo
Chicken Tenders and Honey Mustard
Dip with French Fries and Cole Slaw

Friday, July 1

HAPPY JULY 4TH HOLIDAY!

Luncheon Winners:
FL—Michael Booth
ML—Dave Trimble

Take Part and Give to United Way

Last week was the start of UCAR/NCAR's annual Boulder County United Way Campaign. You should have received United Way literature and a pledge form from your campaign representative. If you did not, refer to the 16 June issue of *Staff Notes* for the names of the United Way Campaign Representatives. If your division or program does not have a representative, please contact Kay Miloshevich (COMET) or Rachel Ames (RAP).

In keeping with its theme of participation, the campaign committee encourages staff to support United Way or other charitable organizations within the community. This can be provided with your time or with a monetary donation. Those who benefit from your participation are friends, neighbors, and even coworkers. Here's more about this year's campaign:

- Fill out your pledge card and return it with the raffle ticket to Kay (FL3) or Rachel (FL2). Regardless of your choice to make a monetary donation, please consider volunteering some time. Note the information in your packet regarding the Volunteer Connection, an agency that matches volunteers with non-profit organizations.
- In addition to the end-of-campaign drawing, there will be weekly raffle prize drawings. Look for the winners in *Staff Notes* in the weeks to come. Some of the prizes include NCAR shirts and sweatshirts, movie tickets, restaurant gift certificates, \$100 cash, gift certificates for local merchants, and free massages.
- The campaign committee has made special preparations with the EAC for the upcoming inaugural family picnic to be held this Saturday, 25 June. Look for balloons and face painting for the little ones.
- Don't miss future articles featuring staff members who have volunteered for or who have been helped by United Way-funded agencies, as well as information about how to volunteer your time to a nonprofit agency.

The United Way Campaign Committee extends its thanks for your participation in this year's fund-raising effort and in supporting your community.

Visitors

Abdalrhani Boucham, Belgian Institute for Space, Brussels. Interest: Atmospheric chemistry. 1 March–31 August. ML room 569, ext. 1874.

Juan Garrido, Universidad de Extremadura, Badajoz, Spain. Interest: Stochastic modeling of precipitation. 27 June–30 September. FL2 room 2019A, ext. 8374.
—Richard Katz, ESIG

Martin Gorst, Pinewood Productions, London, England. Interest: TV series on wonders of weather. 20–22 June.
—Joan Frisch, UCAR

Chuck Leith, Lawrence Livermore Laboratory. Interest: Climate. 26 June–5 July. ML room 402C, ext. 1329.
—Joseph Tribbia, CGD

Daniel Martin, Center for Weak Radioactivity, Cedex, France. Interest: Atmospheric chemistry and instrumentation. 9–10 June.
—Brian Ridley, ACD

Masashiro Murakami, Meiji University, Tokyo, Japan. Interest: Inland seas. 22–23 June. FL2 room 2023, ext. 8117.
—Michael Glantz, ESIG

Joseph Sanak, National Center for Scientific Research, Yvette, France. Interest: Atmospheric chemistry. 9–10 June.
—Brian Ridley, ACD

Rudolf Shterk, Boulder. Interest: Central Asian irrigation management and climate. 15 June–15 August. FL2 room 2023, ext. 8117.
—Michael Glantz, ESIG

Mark Stoelinga, Pennsylvania State University. Interest: Simulation of mesoscale weather systems. 1 June 1994–31 May 1995. FL3 room 3002, ext. 8148.
—Bill Kuo

Yukari Takayabu, NASA Goddard Space Flight Center. Interest: Large-scale modeling. 27–29 June. ML room 220, ext. 1351.
—Roland Madden, CGD

Donna Tucker, University of Kansas. Interest: Orographic roots of MCSs on Great Plains. 18 June–15 July. FL3 room 3080, ext. 8914.
—Bill Kuo and Peggy LeMone, MMM

Ilana Wainer, Cicade Universitaria, Brazil. Interest: Oceanography. 15 June–15 September. ML room 602, ext. 1720.
—William Holland, CGD

Job Openings

June 23, 1994

EMPLOYMENT PROCESS PLEASE READ!

ACCESSING JOB OPENINGS AT UCAR (including the University Corporation for Atmospheric Research and the National Center for Atmospheric Research): Job Openings are updated each Thursday and can be accessed in the following ways.

- (1) The 24-hour UCAR jobline, 497-8707.
- (2) The print version of Staff Notes. To subscribe, call 497-8601 or write to outreach@ncar.ucar.edu.
- (3) The electronic-mail version of Staff Notes. To subscribe, send a message to the address majordomo@ucar.edu containing no title and only the words *subscribe staffnotes* in the body of the message. You will receive an acknowledgement message and further instructions.
- (4) The NCAR/UCAR Gopher. Job Openings can be accessed on the Internet by going to the NCAR/UCAR Gopher at gopher.ucar.edu and looking under "Employment Information" in the folder "NCAR/UCAR News and Information."

APPLYING FOR JOBS AT UCAR (including the University Corporation for Atmospheric Research and the National Center for Atmospheric Research): You may call our 24-hour jobline, 497-8707, for information about UCAR positions. Please follow this checklist to ensure that you are considered for positions for which you feel qualified:

- (1) Submit a separate application and/or resume for each position,
- (2) Indicate the job number and position title on your application materials, and
- (3) Hand carry or mail your application and/or resume to Human Resources by the closing date posted. Applications and/or resumes submitted by facsimile (fax machine) will not be accepted.

NOTIFICATION OF APPLICATION STATUS: Each applicant will receive an acknowledgement letter. After that, you will be contacted ONLY if you are chosen to be interviewed.

MORE INFORMATION ON SPECIFIC OPENINGS: You may obtain copies of previous "Job Openings" ads at the UCAR Human Resources Office, located at 3450 Mitchell Lane, Boulder.

UCAR EMPLOYEE APPLICATIONS: If you are a UCAR employee and wish to be considered for any of the positions listed, please complete an employee application (available from Human Resources, x8713), attach a resume, and return it to Human Resources, FL2.

NOTE TO UCAR STAFF: Requests for Staff must be received in the Human Resources Office no later than noon on Monday in order to appear in the following Thursday's edition of Staff Notes. However, the posting of new or unique positions will be delayed if market data (which is used to establish salary ranges) is not readily available.

The University Corporation for Atmospheric Research has a strong commitment to the principle of diversity in all areas. In that spirit, we are interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, veterans, and disabled individuals.

SOFTWARE ENGINEER III - #2053

PLEASE NOTE: This is a new position. Applications for this position will be accepted until 5:00 p.m. on July 8, 1994.

NCAR - CGD

Exempt Range: 59, \$3,791 - 5,687/mo.

DUTIES INCLUDE: Provides programming support for the development of a climate system model. Manages the modeling software, develops code, prepares data sets, assists in the analysis of climate model simulations, and supports visitors and collaborators in using modeling software. Assists supervising scientists in the design, implementation, maintenance, and documentation of a distributed computational framework for coupled climate system modeling. Assists supervising scientists in adapting atmosphere, ocean, sea-ice, land surface, or other climate system component models for use with coupled modeling framework. Compares and appraises alternate algorithms and numerical methods. Configures component models for, and manages coupled climate system simulations on a variety of high performance computing systems. Develops and maintains procedures and software for the management and analysis of scientific databases. Assists supervising scientists in the analysis of climate system simulations.

REQUIREMENTS INCLUDE:

- B.S. plus 5 years in applied mathematics, physical science, or computer science or a M.S. plus 2 years experience
- High level programming skills involving proficiency in the design, implementation, testing, maintenance, and documentation of large software systems
- High level knowledge of the Fortran 77 language, and its use on high performance (vector and parallel) computing systems
- Demonstrated knowledge of numerical methods, particularly as applied to partial differential equations
- Familiarity with physical oceanography, meteorology, and/or hydrology
- Proficiency in Fortran 90, C, and/or C++ desired
- Experience working with high performance computing systems (Cray, Convex, Connection Machine or other vector or parallel systems) desired
- Experience in software development for distributed computing environments (e.g. PVM, P4, Express, NX or MPI) desired

Jodi Wiemer

ASSOCIATE SCIENTIST IV - #2052

PLEASE NOTE: This is a new position. Applications for this position will be accepted until 5:00 p.m. on July 15, 1994.

NCAR - MMM/CGD

Exempt Range: 61, \$4,382 - 6,573/mo.

UCAR/NCAR is an equal opportunity/affirmative action employer.

Mail resumes to:
P.O. Box 3000
Boulder, Colorado 80307

Pick up applications at:
3450 Mitchell Lane
Boulder, Colorado 80301

Job Line: (303) 497-8707
Human Resources: (303) 497-8713

DUTIES INCLUDE: Conducts climate-related research using satellite data, and collaborates with NCAR scientists in research projects that use satellite data. Assumes primary responsibility for establishing a workstation with appropriate tools to support access to satellite data and analyses of satellite data sets, and for assembling other programs by which NCAR scientists can access satellite data. Assists NCAR scientists who want to use these tools in their research. Contributes to use of satellite data as a basis for verification of results from global-scale and cloud-scale models, and as a means of assessing the representativeness of observations collected during field campaigns. Interacts with other organizations active in the acquisition and use of satellite data for climate research, and transfers capabilities to NCAR where appropriate. Provides a general source of consulting through the maintenance of regular consulting hours, information sheets, and schedules for use of the programs and workstations.

REQUIREMENTS INCLUDE:

- Ph.D. or M.S. with equivalent experience in atmospheric science or related field
- 2 years experience in satellite data including data analysis, and a publication record
- Knowledge of sensor systems used on satellites
- Knowledge in atmospheric radiation transfer processes
- Basic knowledge of climate studies
- Ability to communicate with other scientists and support their work
- Familiarity with workstations used for data analysis
- Demonstrated ability to conduct original research
- Demonstrated ability to collaborate with others in research projects
- Ability to analyze experimental data to characterize sources of error and the reliability of measurements
- Excellent written and verbal communication skills
- Familiarity with radiative transfer, aerosols, cloud physics, and/or climate or cloud modeling desired
- Experience in field experiments or airborne research desired

PLEASE NOTE: This is a one year term position.

Jodi Wiemer

AIR MECHANIC II/CREW CHIEF - #2051

PLEASE NOTE: This is a new position. Applications for this position will be accepted until 5:00 p.m. on July 8, 1994.

ATD - Research Aviation Facility

Non-exempt Range: 32, \$2,692 - 3,497/mo

DUTIES INCLUDE: Performs electrical, mechanical, and structural modifications of WB-57F aircraft sub-systems. Coordinates and assists with maintenance effort to ensure the flight-worthy condition of the aircraft once it is adequately modified for science. Performs pre-flight and post-flight inspections, adjustment, and minor repairs to ensure safe and efficient operation of aircraft. Inspects aircraft prior to take off for defects, such as fuel or oil leaks and malfunctions in electrical, hydraulic, or pressurization systems according to pre-flight check list. Assists pilot with verification of crew and payload distribution and amount of fuel to ensure that weight and balance specifications are met. Maintains logs and documentation records. Records malfunctions which are not corrected during flight and initiates appropriate maintenance actions. Performs repairs upon completion of flights. Ensures safety equipment is on board and operational and instructs personnel on emergency procedures. Performs routine and non-routine maintenance of aircraft as specified by the Operating Group Head.

REQUIREMENTS INCLUDE:

- Possession of a current Airframe and Power Plant (A&P) license
- Minimum two years experience as a WB-57F aircraft mechanic, experience must have been current within the past six months
- Hands on experience in the maintenance of the extensively modified high altitude capable version of the TF33 jet engine
- Extensive experience in the maintenance of the J60 jet engine
- Extensive knowledge of all WB-57F aircraft systems and maintenance procedures
- Extensive knowledge of USAF and NASA supply acquisition systems

- necessary in the support of this aircraft
- Knowledge of Federal Aviation Administration regulations
- Comprehensive knowledge of aircraft performance
- Demonstrated skill in repairing, servicing, and overhauling jet engine aircraft
- Demonstrated skill in operating independently in sometimes remote regions with little support infrastructure
- Skill in reading and interpreting aircraft drawings and schematics
- Skill in interfacing with staff and management
- Skill in interpreting regulations and procedures
- Skill in assessing aircraft malfunctions and servicing needs
- Excellent oral and written communications skills
- Skill in working as a team member
- Skill in working independently
- Skill in adapting to flexible scheduling requirements
- Basic skill in the use of metal fabrication tools such as lathes, milling machines, sheet metal breaks and shears
- Must possess own hand tools
- Ability to travel for extended periods of time during worldwide field project deployments

PLEASE NOTE: This is a 13 month term position with possibility of extension.

Anna Reyna-Arcos

ADDITIONAL POSITIONS

ADMINISTRATIVE SECRETARY - #2048

PLEASE NOTE: This is a replacement position. Applications for this position will be accepted until 5:00 p.m. on June 27, 1994.

CGD - Climate Modeling Section (CMS)

Non-exempt Range: 28, \$1,907 - 2,477/mo

First Published in "Job Openings" on June 16, 1994

ASSOCIATE SCIENTIST III - #2046

PLEASE NOTE: The closing date for this position has been extended. This is a new position. Applications for this position will be accepted until 5:00 p.m. on July 8, 1994.

ACD - Measurement of Pollution in the Troposphere (MOPITT)

Exempt Range: 58, \$3,526 - 5,290/mo

First Published in "Job Openings" on June 9, 1994

FINANCIAL ASSISTANT - #2042

PLEASE NOTE: This is a new position. Applications for this position will be accepted until 5:00 p.m. on June 30, 1994.

UCAR - Joint International Climate Projects/Planning Office (JICP/PO)

Non-exempt Range: 29, \$2,079 - 2,700/mo

First Published in "Job Openings" on June 16, 1994

DIRECTOR, HIGH ALTITUDE OBSERVATORY - #2003

PLEASE NOTE: Applications for this position will be accepted until 5:00 p.m. on July 1, 1994.

HAO - Director's Office

Exempt Range: 68, \$7,270 - 10,905/mo

First Published in "Job Openings" on April 28, 1994

ADDITIONAL STUDENT ASSISTANT POSITIONS**STUDENT ASSISTANT III/IV - #2047 & 2050**

PLEASE NOTE: There are two positions available. One position is a replacement position. The other is a new position. Applications for these positions will be accepted until 5:00 p.m. on June 30, 1994.

UCAR - Climate System Modeling Program

Flat Rate: \$9.80/hr. (Level III)

\$11.80/hr. (Level IV)

HOURS: 20 hours per week during school, full-time during breaks

First Published in "Job Openings on June 16, 1994

* Asterisked positions are appearing in "Job Openings" for the first time.

Calendar

27 June through 17 July

WEEK OF 27 JUNE - 3 JULY

Friday, 1 July

Holiday

WEEK OF 4 - 10 JULY

Monday, 4 July

Holiday

Thursday, 7 July

- MMM/RAP Seminar - *Title to be Announced* - Roelof Bruintjes, RAP, NCAR

3:30 p.m.
Foothills Lab 2, Room 1022

WEEK OF 11 - 17 JULY

Thursday, 14 July

- MMM Seminar - *Title to be Announced* - Tom Warner, Penn State University

3:30 p.m.
Foothills Lab 2, Room 1022

Calendar announcements may be
mailed to Liz Kriete at FL2.
Tuesday 5:00 p.m. is the deadline.

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