

# STAFF NOTES

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

Vol. 17, No. 50

17 December 1982

## RAF CELEBRATES NEW KING AIR ARRIVAL



*The King Air on a demonstration flight over the Mesa Laboratory. (Photo by Charles Semmer.)*

The Research Aviation Facility (RAF) threw open its hangar doors last Monday, 13 December, to display its new Beechcraft King Air. Staff members from all NCAR locations flocked to the Jefferson County Airport to admire the aircraft, which arrived in Boulder last week.

"This will be the last chance any of us have to see the King Air in one piece for awhile," RAF manager Byron Phillips told *Staff Notes*.

"Beginning tomorrow [Tuesday], we'll be adding our instruments to it."

When fully instrumented, the King Air will carry as standard equipment the nose boom developed for the Queen Airs with its fixed-vane gust probe. Under the wings, RAF staff will be adding particle measuring spectrometer probes and temperature, air speed, static pressure, ice rate, and two liquid water probes. RAF's newly developed aircraft data

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This Week in *Staff Notes* . . .

King Air  
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Byron Phillips (left) and NCAR director Bill Hess prepare to toast the new aircraft. (Photo by Ginger Wadleigh.)

system (a unique dual-computer system for collecting data and for developing real-time graphic displays of that data) will be installed inside, along with dew-point hygrometers, precision static pressure transducers, and a Lyman-alpha hygrometer. Instrumenting the aircraft will take RAF about three months. ●SB



Visitors to the new King Air in its new home--the RAF hangar at Jeffco. (Photo by Ginger Wadleigh.)

## ANNOUNCEMENTS

### EARLY DEADLINES

Friday, 24 December, is an official NCAR holiday. Because of the holiday, request-for-staff forms should be in the Employment Office by noon today, 17 December. The deadline for items for *Staff Notes* will be 5:00 p.m. on Monday, 20 December, and for items for *Calendar Notes* it will be 5:00 p.m. on Tuesday, 21 December.

Friday, 24 December, is also a holiday for the University of Colorado Credit Union, which will close early, at 2:00 p.m., on Thursday, 23 December.

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Copy deadline is 5:00 p.m. on Tuesday for publication on Friday. Office: Mesa Laboratory room 259.  
Phone: 303-494-5151, ext. 644.

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### LIBRARY HOLIDAY PARTY

The NCAR library will be hosting a holiday party in the RL-3 library (room 267A) on Tuesday, 21 December, from 3:00 to 4:30 p.m. NCAR staff members are invited to partake of juice and cookies (literature searches can be done on the side).

### CAFETERIA NEWS

The "special special" for next Wednesday, 22 December, will be meat loaf, potato, a vegetable, apple pie, and a \$0.25 beverage, all for \$2.25.

The breakfast special for next week will be two eggs, bacon, and a small juice for \$1.35.

The winner of this week's free luncheon is:

BARB BATEMAN

NOTE: To prepare for the staff party, the cafeteria will close early--at 2:00 p.m.--on Friday, 17 December. The cafeteria and bank will also be closed between Christmas and New Year's: 27, 28, 29, 30, and 31 December. Although lunch will *not* be served, coffee, tea, juice, milk, and rolls will be available during that week.

ZOT

The next regular quarterly purge of VSNs from the TMS-4 will occur on 8 January 1983, and will affect VSNs not accessed since 3 October 1982 (later than usual so as not to conflict with the holiday season.)

Purges affecting VSNs not accessed during a calendar quarter take place regularly at the beginning of the following calendar quarter. Users must access VSNs before the purge date if they wish to keep them. VSNs on dedicated and archival reels and PLIB (P04xxx or P05xxx) VSNs will not be purged.

For further details consult the 1 November *Record* (vol. 3, no. 11). Questions may be addressed to Mary Trembour, ext. 450.

FTS DIRECT DIALING

As of 20 December, area codes 608, 414, and 715 (Wisconsin) may be dialed directly on FTS.

CIRES SEMINAR

NCAR scientist Harry van Loon (Atmospheric Analysis and Prediction Division) will be the speaker at the next Cooperative Institute for Research in Environmental Sciences/NCAR climate seminar. The seminar will be held on Wednesday, 22 December, in RL-1 room 268, beginning with refreshments at 3:15. Van Loon's talk is entitled "Large-Scale Heat Transport Mechanism Differences between the Northern and Southern Hemispheres: A Look at Quasi-Stationary Waves." All NCAR staff and visitors are invited.

# LIBRARY NEWS

17 December 1982

## MESA LIBRARY MICROFICHE COPYING AVAILABLE

In recognizing the value of microfiche technical reports, we will provide, at no cost to you, MICROFICHE copies of library-owned microfiche technical reports. Depending on the load, we will duplicate up to five library-owned microfiche per scientist per week. Your copy is in the form of microfiche - NOT paper. Turnaround time is about one week. To order your microfiche copies, either check off the desired microfiche from Library News or other library announcements of new microfiche, or send in the microfiche reference(s) separately. Send to Gayl Gray.

## LIBRARY SERVICES

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My acquisitions recommendation is: \_\_\_\_\_

for the RL-6, MESA, RL-3, MAR, or RAF Library. (circle one) Name: \_\_\_\_\_.

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THE FOLLOWING MATERIAL WILL BE DISPLAYED IN THE MESA LIBRARY DEC. 17 - DEC. 23, AND IN THE RL-6 LIBRARY DEC. 23 - DEC. 31. NEW ACQUISITIONS ANNOUNCED LAST WEEK (DEC. 10) ARE PRESENTLY ON DISPLAY IN THE RL-6 LIBRARY THROUGH DEC. 23. YOU MAY RESERVE THEM DURING DISPLAY FOR SUBSEQUENT CHECK-OUT.

NCAR staff members located off the Mesa site may borrow new books, reports, and microfiche by checking the item of interest below and returning to Gayl Gray.

## NEW BOOKS

New books for the Mesa and the Branch Libraries are in the following list.  
REFERENCE material does not circulate.

### CALL NUMBER

INTRODUCTION TO THE MATHEMATICS OF INVERSION IN REMOTE SENSING AND INDIRECT MEASUREMENTS. Twomey, S., 1977.	G70.4 T86 1977 c.3 Also in RAF
SCIENTIFIC BASIS OF WATER-RESOURCE MANAGEMENT. National Research Council, Geophysics Study Committee. 1982.	GB652 N37 1982 In MESA & RL-6.
DETERMINISTIC MODELS IN HYDROLOGY. Fleming, George., 1979.	GB656.2 M33F57 1979
EQUALANT I & EQUALANT II : OCEANOGRAPHIC ATLAS, v.1 - Physical oceanography., International Co-operative Investigations of the Tropical Atlantic. 1973.	GC481 I57 1973 v.1 Map Rm.
THE WRECK OF THE AMOCO CADIZ. Jordan, Philip, 1980.	GC1321 F34 1980
WATER AND ENERGY DEVELOPMENT IN AN ARID ENVIRONMENT : The Colorado River basin. Skogerboe, Gaylord V., 1982.	HD1695 C6W29 1982
A GUIDE TO NSF SCIENCE RESOURCES DATA. NSF Div. of Science Resources Studies.	Q180 A1G79 1980
ASSOCIATIVE NETWORKS : representation and use of knowledge by computers. Findler, N. V. 1979.	Q360 A87 1979.
APPROXIMATION WITH RATIONAL FUNCTIONS. Newman, Donald J., 1979.	QA221 N45 1979
APPLIED TIME SERIES ANALYSIS, v.1 Basic techniques. Otnes, R. K., et al. 1978	QA280 086 v.1 c.4 RL-6
THEORY OF LINEAR OPERATORS IN HILBERT SPACE. Akhiezer, N. I. 1981.	QA322.4 A3813 v.1 1981
DIFFERENTIAL EQUATIONS AND NUMERICAL MATHEMATICS : selected papers presented to a national conference held in Novosibirsk, Sept. 1978. Marchuk, G.I.	QA371 D45513 1982
NUMERICAL SOLUTIONS OF PARTIAL DIFFERENTIAL EQUATIONS : proceedings of the 1981 Conference on the Numerical Solutions of Differential Equations held at Queen's College, Melbourne University, Australia. Noye, John. 1981.	QA374 C654 1981
CASE STUDIES IN MATHEMATICAL MODELING Applicable mathematics. Boyce, ed.	QA401 C35 1980 c.2
SYSTEM THEORY: A HILBERT SPACE APPROACH. Feintuch, Abraham, et al. 1982.	QA402 F43 1982
PRACTICAL METHODS OF OPTIMIZATION. Fletcher, Roger. v.1 1980, v.2 1981.	QA402.5 F43 v.1 & v.2

New books continued on next page.

## NEW BOOKS Continued

- WAVES IN FLUIDS. Lighthill, M. J. 1978.  
MEASUREMENTS OF OPTICAL RADIATIONS : August 29-30, 1979, San Diego, Ca.  
Field, Harold P, et al. 1979.  
GEOPHYSICAL PREDICTIONS. N.R.C. Geophysics Study Committee. 1978.  
SOME APPLICATIONS OF STATISTICS TO METEOROLOGY. Panofsky, Hans A. 1958.  
THE UPPER ATMOSPHERE AND MAGNETOSPHERE. N.R.C. Geophysics Study Committee.  
CAUSES AND EFFECTS OF STRATOSPHERIC OZONE REDUCTION : An update. N.R.C.  
Committee on Chemistry and Physics of Ozone Depletion, et al. 1982.  
CARBON DIOXIDE AND CLIMATE : A SECOND ASSESSMENT. N.R.C. CO<sub>2</sub>/Climate Review  
Panel. 1982.  
MAN'S IMPACT ON THE TROPOSPHERE : LECTURES IN TROPOSPHERIC CHEMISTRY.  
Levine, Joel S., et al. 1978.  
AN INTRODUCTION TO ATMOSPHERIC RADIATION. Liou, Kuo-Nan. 1980.  
THE EARTH'S CLIMATE, PAST AND FUTURE. Budyko, M. I. 1982.

## CALL NUMBER

- QC157 L53 1978 c.3  
QC474 M42 1979 in Mesa & RAF  
QC807 G4 1978 c.2 RL-6  
QC874 P3 c.4  
QC879.2 N37 1977 c.2 RL-6  
QC879.7 N32 1982 c.2 RL-6  
QC879.8 N37 1982 in Mesa & RL-6  
QC881.2 T75M28 1978 in Mesa, RL-6  
QC912.3 L56 1980 c.4 RL-3  
QC981.8 C5B8313 1982 c.2 RL-6

## NEW TECHNICAL REPORTS

### ATMOSPHERIC SCIENCE

- 2-1189. APPLICATION OF THE SATELLITE TRIAXIAL ACCELEROMETER EXPERIMENT TO ATMOSPHERIC DENSITY AND WIND STUDIES.  
Marcos, F. A., et al. 1982  
2-1190. CHANGES IN THE NATURE OF FLUCTUATIONS OF TEMPERATURE AND LIQUID WATER CONTENT DURING THE LIFETIME OF  
A LARGE-SCALE STORM. Dyer, R. M., et al. 1982.  
2-1191. GLOBAL THERMOSPHERIC DENSITY MODEL BASED ON SATELLITE ACCELEROMETER DATA. Marcos, F. A., et al. 1982.  
2-1192. INFRARED ATMOSPHERIC EMISSION, I. Sakai, H. 1982.  
2-1194. INVESTIGATIONS OF LARGE SCALE STORM SYSTEMS Final report. Environmental Research Papers ; no. 779.  
Barnes A. A., Jr., et al. 1982.  
2-1195. KEILSON-ROSS PROCEDURE FOR ESTIMATING CLIMATIC PROBABILITIES OF DURATION OF WEATHER CONDITIONS.  
Gringorten, I. I. 1982.  
2-1197. MICROPHYSICAL PROPERTIES OF FOG AT OTIS A.F.B. Kunkel, B. A. 1982.  
2-1198. RESEARCH PROGRAM FOR ATMOSPHERIC CHEMISTRY, RADIATION AND DYNAMICS. Final Report December 1980 -  
June 1982. Sze, N. D., et al. 1982.  
2-1199. PROJECTS IN COMPUTER AIDED CLIMATOLOGY Final Report 1 July 1978 - 31 June 1981. Mettauer J. C. 1981.  
2-1200. SPECTRAL CHARACTERISTICS OF THE GLOBAL MOISTURE DISTRIBUTION AND THEIR IMPORTANCE IN OBJECTIVE  
ANALYSIS OF MOISTURE FOR NWP MODELS. Norquist D. C., et al. 1982.

### OCEANOGRAPHY

- 2-1174. SIMULTANEOUS USE OF TRACERS FOR OCEAN CIRCULATION STUDIES. Bolin, B., et al. 1982.  
2-1176. APPLICATION OF A NUMERICAL SEA ICE MODEL TO THE EAST GREENLAND AREA. Tucker, W. B. 1982.  
2-1177. ACOUSTIC EMISSIONS FROM POLYCRYSTALLINE ICE. St. Lawrence, W. F., et al. 1982.

### POLLUTION

- 2-1140. DOPPLER ACOUSTIC SOUNDING: OBSERVATIONAL INPUTS TO POLLUTANT DISPERSION MODELS Final Report.  
MacCreedy, P., et al. 1982.  
2-1141. NITROGEN OXIDE TRANSFORMATIONS IN POWER PLANT PLUMES Interim Report. Sverdrup, G. M., et al. 1982.  
2-1150. RESPONSE OF AGRICULTURAL SOILS TO ACID DEPOSITION Proceedings, Columbus, Ohio May 12-13, 1981.  
Arthur, M. F., et al. 1982.

## NEW MICROFICHE

We are not able to announce all of the microfiche the Library receives, because of the large volume. These are the most relevant titles.

To receive your personal microfiche copies of the following microfiche reports, check off the desired report(s) and send to Gayl Gray.

### ATMOSPHERIC SCIENCE

- ( ) AUSTRALIAN METEOROLOGICAL DATA SET FOR STUDIES OF PLUME RISE AND DISPERSION,  
PART 2. Spillane, K. T., et al. 1981.  
( ) THE PRECIPITATION ENHANCEMENT PROJECT (PEP). Paffrath D. 1979.  
( ) THE EFFECT OF SPATIAL SMOOTHING ON LAGRANGIAN RAINFALL STATISTICS. Hamrud 1982.  
( ) DROP SIZE DISTRIBUTION IN RAIN. Wickerts, S. 1982.  
( ) HANDBOOK ON ATMOSPHERIC DIFFUSION. Hanna, S. R., et al. 1982.  
( ) A STUDY OF MODEL PARAMETERS ASSOCIATED WITH THE URBAN CLIMATE USING HCMM DATA.  
Quarterly Progress Report. Research Triangle Inst. 1981.  
( ) METHODS FOR OBTAINING DAYTIME VERTICAL PROFILES OF CN<sub>2</sub> AND WIND. Ochs, G.R.,  
et al.

### MICROFICHE REPORT NUMBER

- N8223849  
N8223850  
N8223958  
N8223959  
DOETIC11223  
N8221667  
PB82217571

# JOB OPENINGS

15 December 1982

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

Salaries for new employees and for current employees receiving reassignments will be between the range minimum and maximum shown for each job. Specific starting salaries are determined by comparing the applicant's qualifications with the job requirements and assessing expected performance levels.

## REGULAR, FULL-TIME

### ARCHITECT/PLANT SERVICE ENGINEER II - #0013

ADM - Facilities Planning and Design  
Exempt Range: 51, \$21,768 - 32,664/yr.

DUTIES: Will assist Manager, Facilities Planning and Design in establishing building programs and design parameters for UCAR/NCAR facilities. Will prepare drawings and specifications for and make inspection of construction, remodeling, and maintenance of buildings, facilities, and plant equipment.

#### REQUIRES:

- Strong theoretical knowledge of engineering and architectural design concepts and practices as exemplified by BA/BS in Engineering/Architecture.
- Sound understanding of principles of the practice of Architecture or Engineering on the professional level as is demonstrated by licensing by examination.
- Comprehensive practical knowledge of construction practices and procedures as gained by construction field assignments or experience in employment with building contractor or plant maintenance staffs.
- Proficiency in rendering accurate preparation of working drawings with a high degree of workmanship, and practical skill in writing reports, contract documents, and technical specifications to be demonstrated by submission of candidate's personal portfolio.
- Must have physical health, dexterity and visual acuity to make drawings and conduct inspection of facilities under construction and aural capacity to function safely around moving equipment.
- Ability to sort priorities and function effectively under deadline pressures and distractions.

#### ALSO DESIRED, BUT NOT REQUIRED:

- Skill in working effectively and constructively with clients, public officials, consultants, contractors, tradespersons, and suppliers.
- Familiarity with systems drafting and photo reproduction techniques.
- Working knowledge of Uniform Construction Index and Construction Specifications Institute "Sixteen Division Format".
- Ability to write lucid, comprehensive technical reports.

- Knowledge of sound control and acoustics for buildings.
- Background in environmental planning, interior and graphics design, and office ergonomics.
- Understanding of techniques of Value Engineering and Life-Cycle Costing.
- Knowledge of techniques of effective project management including CPM/PERT.
- Familiarity with use of programmable calculator, application programs on small computer, and terminal for accessing remote data bases and programs.
- Experience in the use of computer in preparation of Computer Assisted Design and Drafting documents and specification writing and editing.
- Interest and enthusiasm in acquiring additional skills.

Margareta Domecki, X517

### TECHNICIAN II/III - #0007

ACAD - Support Group

Non-Exempt Range: 28, \$1,264 - 1,642/mo.

Non-Exempt Range: 30, \$1,529 - 1,987/mo.

DUTIES: Must apply, under general supervision, a considerable knowledge of standard methods in electronic fabrication, testing, calibrating and troubleshooting, with particular emphasis on digital systems.

- Will construct a wide variety of atmospheric chemistry electronic instruments and instrument components, including data acquisition systems and micro and minicomputer and processors. Construction will be under general supervision and will be directed verbally and through written instructions and schematics.
- Will test, calibrate and troubleshoot electronic instruments used in atmospheric chemistry as described in Item 1, above.
- Will apply skills to a wide variety of technology in instrumentation ranging from semi-archaic vacuum tube construction to advanced state-of-the-art components.

#### REQUIRES (LEVEL II):

- Basic skill and knowledge level such as one might associate with an Associate Degree and some experience.

- High level analytical skills and skills in the use of electronic construction and testing tools and equipment.
- Skill in arranging and maintaining documentation.
- Detailed knowledge of and skill in application for at least one logic family, preferably CMOS.
- Ability to learn quickly and remember procedures for operating and testing research equipment.
- Willingness/ability to do competent work from sketches, notes, diagrams and verbal instruction.
- Willingness/ability to do both detailed lab work and more mundane tasks such as filing and maintenance of documentation.

#### ADDITIONAL REQUIREMENTS (LEVEL III):

- High skill level of technically progressive experience.
  - Skill in selecting among alternative procedures in successfully completing assigned tasks.
  - Skill in writing test routines in high level language; e.g., Basic, Pascal, etc.
  - Familiarity in assembly language for at least one microprocessor.
  - Ability to work under minimum supervision.
- Esther Blazon, X581

#### REGULAR, PART-TIME

#### BOOKKEEPER - #0011

UCAR - Administration and Finance

Non-Exempt Range: 26, \$522.50 - 678.50 (.50 FTE)

DUTIES: Will provide accounting support to the UCAR Finance Officer with respect to processing travel authorizations and vouchers, purchase orders, accounts payable invoices, journal entries, and general ledger entries. Will interface closely with NCAR Finance Office personnel, particularly with the Travel Clerk and Accounts Payable Supervisor to ensure UCAR accounting transactions are processed in a timely and accurate manner, consistent with corporate policy.

#### REQUIRES:

- General working knowledge of bookkeeping (i.e., AP, AR, budget and expenditure ledgers and general ledgers).
- Accurate typing skill at about 40-50 wpm. (mostly statistical typing). A typing test may be given to final applicants.
- Demonstrated skill in accurately performing detail work.
- Demonstrated skill in establishing and accomplishing work priorities and meeting deadlines.
- Demonstrated skill in basic math functions.

#### ALSO DESIRED, BUT NOT REQUIRED:

- Previous experience with CRT's and/or computers.
- Skill in 10-key calculator operation.

NOTE: Initially, position is half-time with a flexible schedule. Position may become full-time within a year, contingent on funding.

Margareta Domecki, X517

#### CASUAL

#### STUDENT ASSISTANT II - #0019

ACAD - Support Group

Flat Rate: \$6.10/hr.

DUTIES: Will assist in the everyday operation of an electronic, fabrication, maintenance and calibration lab. This will involve maintaining and organizing stock levels of most used items, filing system maintenance and electronic drafting (schematics, layouts, etc.) from sketches, notes, and verbal directions.

#### REQUIRES:

- Full-time student status in engineering or physics.
  - Ability to work 20 hours/week.
  - Skills in recognizing and classifying basic electronic components.
  - Skills in drafting, enabling the incumbent to make finished electronic drawings from sketches, notes, and verbal directions.
  - Will be performing routine as well as specialized tasks.
  - ALSO DESIRED, BUT NOT REQUIRED:
  - Familiarity with basic electronic construction.
- Esther Blazon, X581

#### STUDENT ASSISTANT III - #0022

AAP - Climate Section

Flat Rate: \$8.40/hr.

DUTIES: Provides high level programming support to the Climate Section. Involves optimizing computer programs associated with the models of the global atmosphere and ocean. Involves documenting the codes and modifying them when the computer system changes. Will learn the use of the IBM 4341 through a computer terminal.

#### REQUIRES:

- Full-time student status (excluding summer). Strong background in and extensive knowledge of mathematics and computer science.
- Senior college level or higher, preferably in the fields of mathematics, computer science, and/or physical sciences.
- FORTRAN programming experience may be substituted for formal classroom training, particularly high level programming.
- Skill in numerical analysis.

#### ALSO DESIRED, BUT NOT REQUIRED:

- Directly applicable work experience in FORTRAN programming.

Esther Blazon, X581

# CALENDAR NOTES

December 20 through December 27, 1982

## MONDAY, December 20

Open

## TUESDAY, December 21

- CSD Seminar -- Mesoscale Manipulation of Cloud Cover, Andrew Detwiler, State University of New York at Albany, ASP

1:30 p.m.  
RL-6 Seminar Room 179

- AAP Seminar -- Large-scale Systematic Errors in Recent NMC Operational Model Forecasts, Thomas Bettge, AAP

3:30 p.m.  
NCAR Mesa Lab, Main Seminar Room

## WEDNESDAY, December 22

- SCD Seminar -- Instabilities in Nonlinear Finite Difference Schemes, Bill Briggs, Clarkson College

11:00 a.m.  
NCAR Mesa Lab, Damon Room

## THURSDAY, December 23

Open

## FRIDAY, December 24

Holiday

## MONDAY, December 27

Open

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