



March 2003

JOB REGISTER

American Astronomical Society

2000 Florida Ave., NW, Suite 400, Washington, DC 20009, USA
202-328-2010 * FAX 202-234-2560 * aas@aas.org

Editorial - March 2003

Payment Changes

Beginning with the March 1 Job Register, the American Astronomical Society will no longer be accepting purchase orders for payment of advertisement fees. This policy change is necessary to facilitate a change from the current Job Register submission and billing system to an online database-driven system. This change will make the submission, billing, proofing and publishing processes simpler from both an administrative perspective and for our advertisers. Should your organization have any special problems with this policy change, please contact Dr. Kevin B. Marvel, Deputy Executive Officer (marvel@aas.org). Invoicing will still be available to those institutions where credit card use is not allowed. Beginning with the May 1 Job Register, each job posting will cost \$114 and credit card payments will carry a discount of \$5.00. Your advertisement will not be published until payment is received by the AAS.

Job Register Change

The AAS Job Register is undergoing a significant upgrade, which we hope will be almost transparent to job seekers and advertisers, but will make the publication of the job register much easier for the AAS.

In the past, job ads were submitted online along with payment information, which was then processed by AAS staff. The new Job Register, which will become active in its initial form as of May 1, 2003, will be based on a Database system. Job ads will be submitted and stored in this database, which will greatly ease the editorial process and make ads more accessible to advertisers. Payments, either by Credit Card or Invoice, will be handled electronically. The Job Register itself will be published dynamically using Cold Fusion tools, greatly reducing the staff effort required to bring the Register to our readership.

Although this transition will appear almost seamless (we hope!), a great deal of staff effort has gone into the design, development and implementation of the new system. Happily, much of the design effort can be carried over to other areas of AAS services, such as the Small Research Grant and International Travel Grant programs.

We hope that this upgrade of our already extant publishing system will be appreciated by our readership, although the success of the transition will be judged on how little the change will be felt.

Kevin B. Marvel
Deputy Executive Officer

Publication Policy for the AAS *Job Register*

[\[Deadline\]](#) [\[Rate\]](#) [\[Word Count\]](#) [\[Requirements\]](#) [\[Submission\]](#) [\[Circulation\]](#) [\[Member Notification\]](#)

Deadline

The deadline for submission of job announcements is the 15th of each month for publication in the subsequent issue.

15 March - Deadline for the April *Job Register*

15 April - Deadline for the May *Job Register*

Rate Sheet

There is a publication charge of \$109 per job announcement, per issue. The maximum announcement length is 250 words. We reserve the right to edit announcements that exceed this maximum.

Employers must note how they will pay for their announcement at the time of submission. We accept payment by:

Check, in US currency drawn on a US bank.

VISA and MasterCard, and AMEX be sure to include expiration date.

Purchase Orders

Checks and purchase orders should be made payable to American Astronomical Society and sent to the following address:

American Astronomical Society
2000 Florida Ave., NW, Suite 400
Washington, DC 20009-1231, USA

FAX: 202-234-2560

The AAS is a small, scientific, non-profit organization. The AAS Federal Identification number is 21-0735173.

If your institution requires a purchase order for billing, we must have the purchase order number no later than fifteen (15) days after the job is submitted for publication. We will invoice for job announcements at the end of each month.

Announcement Requirements

Jobs will not be published without the following:

- (1) an accompanying statement assuring that the vacancy is bona fide and the position has not been promised to anyone;
- (2) for first time publication, an application closing date that falls no earlier than the last day of the month of publication; and
- (3) a check or appropriate billing information as described above.

We encourage advertisers to include URLs to relevant web sites with their job announcements.

Previously published jobs may be re-published in the current issue with an application closing date earlier than the last day of the current month.

The decision to run an ad without 30 days response time is left to the originators.

The *AAS Job Register* cannot require overseas employers to comply with any U.S. regulations regarding employment discrimination.

Submission

Please read the requirements above before submitting your job. If possible, use the **Web Submission Form** or send your advertisement by electronic mail to jobs@aaas.org. If electronic mail is not available, job announcements are also accepted by US mail, and by FAX at 202-234-2560.

Frequency and Circulation

The *Job Register* is published monthly. On the average, 60 new jobs are announced in each issue. Since the *Job Register* is freely available to anyone with Internet access, circulation numbers are hard to estimate. In February 2001, over 6,000 unique IP addresses accessed the *Job Register*.

Job Register statistics are published on the Career webpages and in the Annual Report of the Society in the *Bulletin of the American Astronomical Society*.

The *Job Register* is published on the Web at: <http://www.aas.org/JobRegister>.

Member Notification

The AAS maintains a list of members that like to be notified when a New Job Register is posted. Members may be added to the *Job Register* email notice list by sending a message to address@aaas.org.

Jobs from Previous Months

(Note: Some jobs reposted from prior months may have closing dates during the current month. Readers should pay careful attention to the posted closing dates.)

No. 13143

Postdoctoral & Senior Research Awards in Space and Planetary Sciences at US

Government Laboratories
NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES
Tel: 202-334-2760
FAX: 202-334-2759
Email Inquiries: rap@nas.edu
URL: www.national-academies.org/rap

Attention: National Research Council Research Associate Programs

National Research Council Research Associateship Programs:

Postdoctoral Research Awards
Senior Research Awards
Summer Faculty Fellowships

In 2003, the National Research Council will offer 350 awards for independent scientific research at the postdoctoral level and beyond for research to be conducted in residence at US Government laboratories.

Among participating laboratories are:

Air Force Research Laboratory
Naval Research Laboratory
Naval Postgraduate School
NASA Astrobiology Institute
NASA Ames Research Center
NASA Goddard Space Flight Center
NASA John Space Center
NASA Marshall Space Flight Center
NASA Kennedy Space Center
NASA Glenn Research Center
NASA Jet Propulsion Laboratory
NASA Langley Research Center

Awardees design their own research projects to be compatible with the interests of the sponsoring laboratory. Awards include a generous stipend as well as support for relocation, professional travel and health insurance.

Application postmark deadlines are February 1, May 1, August 1 and November 1. Application forms and information on specific research opportunities can be found on the NRC Web site at: www.national-academies.org/rap

For questions or assistance, contact the NRC at:

Tel: 202-334-2760
Fax: 202-334-2759
E-mail: rap@nas.edu
Mail: National Research Council
Associateship Programs
500 5th Street NW, GR 322A
Washington, DC 20001

No. 13223

**Programmer - Software Development Astrophysics
COMBINED ARRAY FOR MILLIMETER-WAVE ASTRONOMY
Astronomy Department
University of Maryland
College Park, MD 20742
Email Submission Address: mpound@astro.umd.edu
Email Inquiries: mpound@astro.umd.edu**

Attention: Marc Pound, Astronomy Department

The Combined Array for Millimeter-wave Astronomy (CARMA) consortium is seeking experienced programmers to participate in software development for a new interferometric array of radio telescopes. The successful candidates will work with a team including several other programmers and scientists to design and implement software for telescope control and monitoring, data acquisition and processing, and user interface. We are looking for candidates with experience in object-oriented programming, especially C++. The development platform is Linux. CORBA experience a plus, as is knowledge of radio interferometry or general astronomy. A description of the instrument is available at <http://www.mmarray.org/>.

CARMA expects to hire a total of 3-4 programmers to be distributed among its consortium members: University of California, Berkeley; University of Chicago; University of Illinois, Champaign-Urbana; University of Maryland, College Park; and Caltech's Owens Valley Radio Observatory. Applicants should indicate their location preference. Positions should commence early in 2003 and are initially for three years, with renewal possible beyond that period. CARMA is EOE/AEE.

No. 13227

**Postdoctoral Fellowship in Theoretical Stellar/Binary Astrophysics
BISHOP'S UNIVERSITY
40 College, Johnson 117D
Bishop's University
Sherbrooke, Quebec J1M 1Z7
Canada
Tel: 819-822-9600x2355
FAX: 819-822-9661
Email Submission Address: jporter@ubishops.ca
Email Inquiries: jporter@ubishops.ca
URL: www.ubishops.ca/cc/c/div/sci/phy/pdf/**

Attention: Jean Porter, Departmental Secretary

Applications are invited for one or more postdoctoral research fellowships in the Department of Physics at Bishop's University. The focus of the research will be in the area of theoretical astrophysics with particular emphasis on stellar evolution and interacting binaries containing compact objects. Preference will be given to candidates who have had experience with thermonuclear flash codes or the evolution of

brown dwarfs, cataclysmic variables, novae, and degenerate dwarfs. We hope to be able to complete the selection process before the middle of March 2003, but late applications will be accepted until the appointments are made. The expected starting dates of the fellowships are negotiable but will normally be on or after March 31st, 2003. The appointments are for one year, renewable annually based on satisfactory performance and the availability of funding, for up to a total of two additional years. The principal selection criterion for all appointments will be outstanding research accomplishment and promise of future achievement. Fellows may be offered teaching duties at the undergraduate level, in which case they will receive additional remuneration.

Interested individuals should send a Curriculum Vitae, a brief statement (two-page limit) of research interests, and the names of at least three referees who have been asked to submit letters of recommendation to Jean Porter, at the above address. Applications that are received by 3 March 2003 will receive full consideration.

No. 13240

Postdoctoral Scholars / Virtual Observatory Development

MS 105-24

Pasadena, CA 91125

Tel: 626-395-4415

FAX: 626-568-9352

Email Submission Address: george@astro.caltech.edu

Email Inquiries: roy@cacr.caltech.edu

URL: <http://us-vo.org/>

Attention: Prof. S. G. Djorgovski, professor

One or more postdoctoral positions to work on projects related to the National Virtual Observatory may be offered, subject to available funding. Appointments may be at a level of a Postdoctoral Scholar or a Senior Postdoctoral Scholar, depending on the applicant's background and qualifications.

The work would be on an interface of astronomy and computation, related to the development of the National Virtual Observatory, in the groups supervised by Dr. Roy Williams and Prof. S. George Djorgovski. Interested applicants should contact by email both: roy@cacr.caltech.edu and george@astro.caltech.edu. All application materials should be provided by email or ftp. They should include the applicant's c.v., publication list, a statement of research interests, and names of 3 scientists who could be contacted as references. We are seeking applicants with a demonstrated expertise and interests in the areas of large digital sky surveys, massive data sets, databases, virtual observatories, and the suitable computational/programming skills.

The initial appointments would be for 1 year, extendable for up to 3 years subject to a mutual agreement and availability of funds. The start dates are negotiable. PhD in astronomy, computer science, or a related field is required.

Caltech is an AA/EO employer. Women, minorities, veterans, and persons with disabilities are encouraged to apply.

No. 13248

Predocctoral Fellowships 2003

SMITHSONIAN ASTROPHYSICAL OBSERVATORY
60 Garden St.
MS-17
Cambridge, MA 02138

Attention: Dale Alianiello

The Smithsonian Astrophysical Observatory (SAO) announces the availability of predoctoral fellowships beginning in July 2003, designed to allow students from other institutions throughout the world to do their thesis research at SAO. A wide variety of research projects may be proposed, with about 200 SAO scientific staff available as research advisors. Applicants should contact directly Smithsonian scientists in their areas of interest to discuss possible research topics. Applicants must have completed preliminary course work and examinations and be ready to begin dissertation research at the time of the award. Fellowships are awarded for one year at a time with possible renewal up to a maximum of three years. Stipends for the coming year will be \$21,840. Application forms and instructions are available at cfa-www.harvard.edu/predoc and also in hard copy upon request. Applications are due by 15 April 2003. Electronic or fax submissions will not be accepted.

The CfA is an Equal Opportunity/Affirmative Action Employer where all qualified applicants receive consideration for employment without regard to race, creed, sex or national origin.

No. 13254

Postdoctoral Research Associate in X-ray Astronomy
JOINT CENTER FOR ASTROPHYSICS, UNIVERSITY OF MARYLAND,
BALTIMORE COUNTY
1000 Hilltop Circle
Baltimore, Maryland 21250
Tel: 410-455-1980
FAX: 410-455-1072
Email Submission Address: mark@jca.umbc.edu
Email Inquiries: mark@jca.umbc.edu
URL: www.jca.umbc.edu

Attention: Dr. Mark Henriksen, Director

The Joint Center for Astrophysics at the University of Maryland, Baltimore County has a Postdoctoral Research Associate position beginning September 2003. The postdoctoral duties will be divided between research in the field of clusters of galaxies, administering a small cluster of Linux machines for the astronomy group, and helping with an optical telescope on campus for a few evenings per semester. The successful applicant's research responsibilities will include analyzing cluster X-ray data from the XMM and Chandra satellites, and preparing observing proposals.

The candidate should have strengths in one or more of the following: experience with X-ray astronomical data analysis methods and analysis packages (FTOOLS, CIAO, XSPEC), fluency in a scientific programming language (IDL, C, etc.), and familiarity with emission from diffuse plasma in the

For full consideration, completed applications should be received before 31 March 2003, although applications will be reviewed until the position is filled. Applicants should submit their CV, bibliography, research interests, and the names of three references to the attention of the Joint Center for Astrophysics at the above address.

Email inquires may be addressed to Dr. Mark Henriksen, mark@jca.umbc.edu.

No. 13258

Visiting Assistant Professor

VALPARAISO UNIVERSITY

Valparaiso, IN 46383

Tel: 219-464-5379

FAX: 219-464-5489

Email Submission Address: Bruce.Hrivnak@valpo.edu

Email Inquiries: Bruce.Hrivnak@valpo.edu

URL: www.physics.valpo.edu

Attention: Dr. Bruce J. Hrivnak

The Department of Physics and Astronomy at Valparaiso University invites applications for a visiting assistant professor position for the 2003-04 academic year to begin in August 2003. The appointment is for one year, but there is a possibility of subsequent renewals, based upon satisfactory performance. Candidates must possess a Ph.D. by the start of the fall term 2003. The duties of the position involve quality undergraduate teaching in physics and astronomy. The successful candidate should give evidence of a strong desire to teach well; prior teaching experience is preferred but not required.

Valparaiso University is a highly regarded private school with 3000 undergraduates, and is associated with the Lutheran church. It is located 60 miles SE of Chicago. Areas of active research in the Department include nuclear physics, condensed matter physics, and stellar astrophysics. More details about the Department, including students, active research programs, facilities, and curriculum can be found at the above [www](http://www.valpo.edu) site. Additional information about Valparaiso University is available at the University [www](http://www.valpo.edu) site www.valpo.edu. Salary will be based upon teaching and research experience.

Applicants should send a curriculum vita, summary of teaching experience and teaching philosophy, bibliography, statement of research interests, and list of three references. Review of applications will begin 3 March and continue until the position is filled. EOE.

No. 13259

NRC Postdoctoral Research Award at the Jet Propulsion Laboratory

JET PROPULSION LABORATORY

4800 Oak Grove Drive

Pasadena, CA 91109

Tel: 818-354-7774

Email Inquiries: dj@sgra.jpl.nasa.gov

Attention: Dayton L. Jones

The Astronomical Measurements Group at the Jet Propulsion Laboratory (JPL), California Institute of Technology, is inviting applicants to apply for a National Research Council (NRC) Research Associate award at JPL. The Research Associate will participate in basic astronomical research, either observational or theoretical. Our group has ongoing programs in observational radio astronomy, numerical general relativity, end-to-end astrophysical mission simulation, and numerical studies of accretion disks and jet formation in galactic microquasars and in active galactic nuclei. We are also involved in the design of large arrays of radio antennas for the future Deep Space Network. We seek applicants who are interested in contributing to one or more of these areas. Qualified applicants should have a Ph.D. in astronomy by the proposed starting date and strong written and verbal communications skills. The successful applicant will have access to good research facilities and support at JPL including considerable computing resources and access (through competitive proposals) to antennas of the Deep Space Network and the Palomar 5-m Hale Telescope. The award is for one year, renewable for an additional year. Annual starting salary for a recent Ph.D. is approximately \$45,000 and can vary somewhat depending on the applicant's qualifications. Separate funds for travel are also available.

To apply, refer to the NRC Web site at <http://www.nationalacademies.org/rap> for instructions, forms, and deadlines. Applications may also be submitted online on the NRC Web site. Note that the next deadline for applications is 1 May 2003. Before applying, please contact Dr. Dayton Jones at the address listed above.

No. 13260
Schwinger Fellowship in Origins of Solar Systems
UNIVERSITY OF CALIFORNIA, LOS ANGELES
Box 951562
Los Angeles, CA 90095-1562
Tel: 310-206-0420
FAX: 310-206-2096

Attention: Andrea Ghez, Prof

The Department of Physics & Astronomy at the University of California, Los Angeles, is pleased to announce a solicitation of applications for the Julian Schwinger Fellow. The Schwinger Fellow honors the late Professor Schwinger and recognizes his many contributions to the advancement of physics. This year we are seeking an outstanding young scientist in the area Origins of Solar Systems (observational or theoretical). The Schwinger Fellow is a three-year, non-renewable appointment at the rank of Adjunct Assistant Professor. The Fellow is expected to teach a reduced load of two courses per academic year (one lecture and one seminar course) and to carry out personal and collaborative research. The appointment can start on or after July 1, 2003.

Facilities available to the Schwinger Fellow include Keck Observatory, Lick Observatory, and the UCLA Infrared Laboratory. UCLA is also a member of NSF's Center of Adaptive Optics in Astronomy & Vision Science, NASA's Astrobiology Institute, and NASA's Stratospheric Observatory For Infrared Astronomy (SOFIA)

Applications should be sent to the Selection Committee, Schwinger Fellow, c/o Andrea Ghez at the above address.

Applications should include a curriculum vitae, a statement of research interests and the names of at

least three people who can be contacted for further information. Deadline is 15 April 2003. The University of California is an affirmative action and equal opportunity employer. For further information contact Andrea Ghez (ghez@astro.ucla.edu).

No. 13261
Post-Doctoral Position in Adaptive Optics
UNIVERSITY OF CALIFORNIA, LOS ANGELES
Box 951562
Los Angeles, CA 90095-1562
Tel: 310-206-0420
FAX: 310-206-2096

Attention: Andrea GhezProf

The Department of Physics and Astronomy at University of California Los Angeles (<http://www.astro.ucla.edu>) invites applications for a postdoctoral research position in adaptive optics. The successful applicant will join Prof. Andrea Ghez's effort on galactic center research in the NSF Science & Technology for Adaptive Optics in Astronomy and Vision Science. This work will be carried out primarily at the W. M. Keck 10-m telescopes.

A PhD in astronomy or physics and previous experience in the general area of high spatial resolution is preferable. The initial appointment is for two years, with the possibility of a third year, beginning in the Fall 2003. To apply, send your curriculum vitae, a letter of application, and 3 letters of reference to Prof. Andrea Ghez at the above address by 15 April 2003.

For further information contact Andrea Ghez (ghez@astro.ucla.edu). UCLA is an affirmative action/equal opportunity employer; women and members of minorities are especially encouraged to apply for these positions.

No. 13263
Postdoctoral position in astronomy
ASTRON
Postbus 2
Dwingeloo, 7990 AA
The Netherlands
Tel: 31-521-595257
FAX: 31-521-597332
Email Submission Address: ger@astron.nl
Email Inquiries: ger@astron.nl
URL: <http://www.astron.nl/>

Attention: ger@astron.nl, Professor

The Netherlands Foundation for Research in Astronomy (NFRA, Dutch name ASTRON) has one or more positions available for postdoctoral research in astronomy. Candidates are expected to pursue research in any of the fields covered by the available facilities. ASTRON operates the WSRT, which

participates in the EVN and global VLBI networks. The WSRT has recently completed a major upgrade with a wide suite of new receivers and extremely powerful and versatile backends. Other frontline research facilities available to astronomers in the Netherlands are the JCMT and the VLT/VLTI.

The ASTRON institute also hosts the Joint Institute for VLBI in Europe (JIVE). ASTRON and JIVE staff are engaged in many frontline research activities: HI kinematics and studies of nearby galaxies, AGN (structure, variability, spectroscopy), starburst galaxies, molecular lines, cosmology, pulsars and the ISM in our and nearby galaxies.

ASTRON also has a world-class technical division engaged in the design of future radio telescopes and backends (LOFAR, ALMA, SKA) and optical instrumentation for the VLT, VLTI and NGST.

Appointments are initially for two years and can be renewed for a third year. Applications, including a CV and research plan, and two letters of reference, can be submitted by email and should be received by March 15, 2003. The employee will be in the formal employ of the Netherlands Organization for Scientific Research (NWO) at a salary commensurate with age and experience.

For further information contact Prof. Ger de Bruyn (ger@astron.nl) or Dr. Willem Baan (baan@astron.nl).

No. 13264

Postdoc/Research Programmer for Astrophysical Applications

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

152 CAB

605 E. Springfield Ave.

Champaign, Illinois 61820

Tel: 217-244-1214

FAX: 217-244-0287

Email Submission Address: rplante@ncsa.uiuc.edu

Email Inquiries: rplante@ncsa.uiuc.edu

Attention: Dr. Raymond Plante

The Radio Astronomy Imaging Group at the National Center for Supercomputing Applications (NCSA) is seeking to fill 1-2 Postdoctoral or Research Programmer positions to carry out software development for astrophysical applications. Primary areas of focus include distributed computing in a Grid environment, the National Virtual Observatory, and pipeline processing of radio astronomy data. Postdoctoral candidates should have a PhD in astronomy, computer science, or a related field. Research Programmer candidates should have a bachelor's degree in computer science, astronomy, or related field. Experience programming in C/C++, Java, and a high-end scripting language (Perl, Python, or Glish) is highly desired. Experience with observational radio astronomy is also preferred. Familiarity with the concepts of data grids, parallel processing, and distributed computing is helpful.

Applicants should submit a curriculum vita. Three letters of recommendation should be requested by the applicant and sent directly to the above address. Applications must be complete by 15 March 2003 to receive full consideration. Minorities and women are particularly encouraged to apply.

No. 12367

Postdoctoral position in Radio Astronomy with LOFAR
KAPTEYN INSTITUTE GRONINGEN / ASTRON
P.O. Box 800
Groningen, 9700 AV
The Netherlands
Tel: 31-521-595257
FAX: 31-521-597332
Email Submission Address: ger@astron.nl
Email Inquiries: ger@astron.nl
URL: www.astro.rug.nl; www.lofar.org

Attention: A.G. de Bruyn, Professor

LOFAR, the low frequency array, will open a new window on the Universe with unprecedented sensitivity and angular resolution. This year the project enters a crucial phase with a preliminary design review scheduled for March 2003.

At the Kapteyn Institute in Groningen, we are looking for a radio astronomer who is interested in technical and astronomical questions surrounding observations of redshifted HI at the Epoch of Reionization (EoR) using LOFAR.

Candidates must have a PhD in astronomy or related field and have affinity with, and become actively (50%) involved in, design issues related to the LOFAR. Relevant issues are the core configuration, the correlator/processor, data calibration and 3-D image processing. The candidate is also expected to pursue radioastronomical research in collaboration with local staff members using the low-frequency facilities at the WSRT, GMRT and/or VLA. Persons interested in redshifted HI, foreground contaminants to EoR-signals, and signal extraction methods at high (spectral) dynamic range are encouraged to apply.

The successful candidate will be based at the Kapteyn Institute at the University of Groningen but is expected to keep a strong liaison with the LOFAR group (engineers and scientists) at the ASTRON (NFRA) headquarters (www.astron.nl), in Dwingeloo, about 50 km south of Groningen. The appointment is for two years, renewable for a third year.

Applicants should send a CV, bibliography and research plan, as well as the names of three referees, to prof. A. G. de Bruyn (ger@astron.nl) before 15 March 2003.

No. 13268
Assistant Professor in Infrared Astrophysics
CORNELL UNIVERSITY
228 Space Sciences Building
Ithaca, NY 14853
Tel: 607-255-4805
FAX: 607-255-5875
Email Submission Address: lm19@cornell.edu
Email Inquiries: lm19@cornell.edu

Attention: Laurie McCall, Executive Staff Assistant

The Cornell University Astronomy Department invites applications for a tenure-track assistant professor position in its Infrared Astrophysics Group. Preference will be given to individuals with research interests and expertise in both infrared instrumentation and space and ground-based observational infrared astronomy. The successful applicant will have the opportunity to participate in the SIRTf Infrared Spectrograph (IRS) team at Cornell, as well as the department's project to explore building a 15 meter-class telescope in the high Atacama Desert in northern Chile. The Infrared Astrophysics group at Cornell is actively involved in a large number of research and instrumentation projects, including instruments for SIRTf, SOFIA, Palomar Observatory, JCMT, and AST/RO. Cornell facilities include the Palomar 200-inch telescope (25% of the observing time) and the Arecibo Observatory radio telescope, and group members are regularly awarded observing time at other national and international observatories.

Applicants should send a statement of research interests and prior experience, a curriculum vita, and the names of three individuals to be contacted for references to Laurie McCall, at the above address. Applications are currently being reviewed and will be accepted until 15 March 2003. The expected start date for this position is approximately 1 July 2003.

Cornell is an Equal Opportunity / Affirmative Action Employer.

No. 13271

**Postdoctoral Fellowship in Astrophysics for Theoretical Studies Massive Black Holes
WEIZMANN INSTITUTE OF SCIENCE**

Faculty of Physics

P.O. Box 26

Rehovot, 76100

Israel

Tel: 972-8-9344483

FAX: 972-8-9344477

Email Submission Address: tal.alexander@weizmann.ac.il

Email Inquiries: tal.alexander@weizmann.ac.il

URL: www.weizmann.ac.il/home/tal/pd.html

Attention: Dr Tal Alexander

A 2 year postdoctoral fellowship in theoretical astrophysics is available for working with Dr. Tal Alexander on issues relating to massive black holes in galactic centers, starting spring 2003 (starting date and duration flexible; extension possible upon successful completion).

A strong background in stellar dynamics or stellar physics and in computational physics is an advantage. Projects are available involving theoretical and simulational studies of stellar processes near massive black holes. Time will be available for independent research.

Applications should preferably arrive by 31 March 2003 but may be considered up to 30 April 2003. Material should include a CV, a list of publications, a brief summary of current research, and three letters of recommendation (to be sent in directly). It may be sent by e-mail (preferred), fax, or regular mail. Email inquiries are welcome. There are no restrictions on citizenship. Candidates must hold a PhD in astronomy or physics by the date of appointment.

Research and teaching at the Weizmann institute are conducted in English. A significant fraction of the students and postdocs are from overseas.

The fellowship is about US \$1600 per month tax free, but a higher amount may be possible depending on competitive fellowships (application deadline May 2003). Research costs (computing, professional travel) and airfare for one round trip from the country of origin will be provided. On-campus accommodations (for non-Israelis) are available, as well as medical insurance at about US \$45 per person per month. Some rent subsidy is possible. Additional information can be found at http://www.Weizmann.ac.il/feinberg/postdoc_fell_weiz.shtml

No. 13276

Postdoctoral Research Associate

BROWN UNIVERSITY

184 Hope Street

Providence, RI 02912

Tel: 401-863-1441

FAX: 401-863-3359

Email Submission Address: tucker@physics.brown.edu

Email Inquiries: tucker@physics.brown.edu

URL: <http://astro.physics.brown.edu>

Attention: Professor Greg Tucker

The Observational Cosmology Group at Brown University invites applications for one or two research associate positions. The group is working on three experiments: the Balloon-borne Large Aperture Submillimeter Telescope (BLAST), the Microwave Anisotropy Probe (MAP) and the Millimeter-wave Bolometric Interferometer (MBI). We are looking to fill positions to work on BLAST and/or MBI. The successful candidate will assume a large role in BLAST and/or MBI. The first flight of BLAST is expected to occur in 2003. We have started a design study for MBI and are funded to produce a prototype instrument. Applicants should have experience in one or more of the following areas: bolometers, cryogenics, interferometry, low-noise electronics, microwave/optical design, scientific ballooning. Applicants should have a Ph.D. in physics or a related field prior to starting this position. Candidates should send a letter of application, curriculum vitae, and three letters of recommendation to Prof. Greg Tucker, Department of Physics, Box 1843, Brown University, Providence, RI 02912. Applications received by 31 May 2003 will receive full consideration, but the search will remain open until the position is closed or filled. For more information please contact Prof. Tucker at tucker@physics.brown.edu or visit <http://astro.physics.brown.edu>. Brown University is an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply.

No. 13278

Faculty Position in Astrobiology/Astronomy

ARIZONA STATE UNIVERSITY DEPARTMENT OF PHYSICS & ASTRONOMY

P.O. Box 871504

Tempe, AZ 85287-1504

Tel: 480-965-4702

FAX: 480-965-8093

Email Submission Address: Joelina.Peck@asu.edu

Email Inquiries: Joelina.Peck@asu.edu

URL: <http://phy.asu.edu>

Attention: Jeff Hester, c/o Ms. Joelina Peck, Search Coordinator

The Department of Physics and Astronomy at Arizona State University seeks to fill a tenure-track faculty position in the astronomical aspects of Astrobiology. The appointment will be at the assistant professor level, with a preferred starting date of 16 August 2003. Areas of specialization might include observational or theoretical aspects of star-formation, circumstellar disks, planet formation, early solar system processes, or related fields.

The successful candidate will be expected to lead an active research program, as well as develop strong interdisciplinary ties with ASU's Astrobiology initiative. The candidate must have a Ph.D. by the time of the appointment, and relevant research experience. Teaching in the Department's extensive undergraduate and graduate programs is an important component of the evaluation of faculty.

The initial closing date is 3 March 2003. If necessary, applications will be reviewed each two weeks thereafter until the position is filled. A complete application consists of a letter of application describing research and teaching experience and interests, a CV, and three letters of reference. Please arrange to have letters sent directly to ASU, and include the names of references in the application. Materials must be sent to Jeff Hester, c/o Ms. Joelina Peck, Search Coordinator, at the above address. Both application letters and reference letters are preferred via edmail to Joelina.Peck@asu.edu. AA/EOE.

No. 13283

Assistant Scientist

NATIONAL RADIO ASTRONOMY OBSERVATORY

520 Edgemont Road

Charlottesville, VA 22903

Attention: Dr. K. Y. Lo, Director

The National Radio Astronomy Observatory invites applications for an Assistant Scientist to work in Green Bank, West Virginia, within the AIPS++ Project. This position requires a Ph.D. in astronomy, astrophysics, physics or a related field, demonstrated research ability and strong skills in scientific computing. The AIPS++ project is an international collaboration by a consortium of radio observatories, managed by the NRAO, with the goal of developing a software package for the processing of radio astronomical data from a wide range of instruments. The successful candidate will be expected to maintain a program of independent scientific research. The initial appointment is for three years with the possibility of future extensions and an eventual permanent appointment. In exceptional cases a more senior initial appointment may be considered.

Information about the NRAO, and AIPS++ is available at <http://www.nrao.edu>.

The successful candidate will develop software applications within AIPS++, with responsibilities in new code development, code maintenance and user support. Experience in radio astronomical data reduction algorithms and techniques is important for this position. Proficiency in C++ and prior experience in team software development and user support would be advantageous.

Applications should be sent to Dr. K.Y. Lo, Director, at the above address and should include: curriculum vitae, a letter with a description of research interests, and arrange for three letters of reference. Applications received before 1 April 2003 will receive full consideration.

No. 13287

Postdoctoral Research Associate, X-ray Studies of AGN

UNIVERSITY OF MARYLAND

Department of Astronomy

Space Sciences Building

College Park, MD 20742

Email Inquiries: wilson@astro.umd.edu

Attention: Dr. Andrew Wilson

Applications are invited for a postdoctoral position involving analysis of X-ray observations of active galactic nuclei (AGN), especially Low Luminosity AGN, with the Chandra and XMM Observatories. The successful applicant will investigate X-ray emission from both compact and spatially extended structures in AGN. Related studies at other wavelengths (especially VLBI radio astronomy) may be involved. Candidates would ideally have expertise in some of the following areas: theory and modelling of the X-ray emission from thermal gases, both photo- and collisionally-ionized; observational X-ray astronomy; active galactic nuclei; and CCD image processing.

The University of Maryland is close to many major institutes in the Baltimore-Washington area with astronomical departments or programs, including the Space Telescope Science Institute, Johns Hopkins University, NASA Goddard Space Flight Center, Naval Research Laboratory, and the U.S. Naval Observatory. The National Radio Astronomy Observatory and University of Virginia, in Charlottesville, VA, are about 2 hours drive away. Excellent possibilities exist for interaction with the many astronomers working in extragalactic astronomy, including the X-ray astronomy group at the nearby Goddard Space Flight Center.

This research associateship will be for one year initially and is renewable annually for two more years. Applicants must have a Ph. D. degree in astronomy or physics and should mail a curriculum vitae, a description of their research plans, and should arrange for three letters of recommendation to be sent. Applications received before 31 March 2003 will be assured of full consideration. EOE/AEE.

No. 13291

Assistant Scientist

NATIONAL RADIO ASTRONOMY OBSERVATORY

520 Edgemont Road

Charlottesville, VA 22903

Attention: Dr. K. Y. Lo, Director

The National Radio Astronomy Observatory invites applications for an Assistant Scientist to work in Socorro, New Mexico, in the Data Management Division to develop radio-astronomical imaging software for the Atacama Large Millimeter Array (ALMA). The software is to be written in the AIPS++ package. This position requires a Ph.D. in astronomy, astrophysics, physics or a related field,

demonstrated research ability and strong skills in scientific computing. The successful candidate will be expected to maintain a program of independent scientific research. The initial appointment is for three years with the possibility of future extensions and an eventual permanent appointment. In exceptional cases a more senior initial appointment may be considered.

Information about the NRAO, ALMA, and AIPS++ is available at <http://www.nrao.edu>.

The successful candidate will participate in the design and coding of software for automated pipeline reduction of observations from ALMA. Experience in software development, preferably with object oriented methods and C++ is essential. Experience with radio astronomy is desirable as well as previous experience of working with a large software project team.

Applications should be sent to Dr. K.Y. Lo, Director, at the above address and should include: curriculum vitae, a letter with a description of research interests, and arrange for three letters of reference. Applications received before 1 April 2003 will receive full consideration.

No. 13293

Postdoctoral Research Fellow in Infrared Astronomy

UNIVERSITY OF FLORIDA

Department of Astronomy

P.O. Box 112055

Gainesville, FL 32611-2055

Tel: 352-392-2052 ext. 260

Email Inquiries: eikenberry@astro.ufl.edu

Attention: Dr. Stephen S. Eikenberry

Applications are invited for a postdoctoral research position in the infrared astronomy group of the Department of Astronomy at the University of Florida. The primary focus of the successful applicant's activities will be on development of the Canarias Infrared Camera Experiment (CIRCE) - a near-infrared camera for the Gran Telescopio Canarias (GTC) in the Canary Islands, Spain. The University is a partner in the 10.4-meter GTC, which is expected to begin science operations in 2004. CIRCE is a fully-funded visitor instrument for GTC, and is scheduled for completion near the beginning of GTC science team on the design, fabrication, integration, testing, and commissioning of CRICE. He or she will also participate as a science team member in acquisition of science observations as part of payback time to the instrument development team. Candidates must possess a Ph.D. or equivalent in Astrophysics, or a closely related field, and must have Spanish citizenship. Interested in infrared instrument development is necessary, but previous experience is not required. Appointment will be for three years, beginning as early as 1 August 2003. Applicants should send a CV, statement of research interests, and have three letters of reference sent to Dr. Stephen S. Eikenberry at the above address. Deadline for receipt of applications is 1 June 2003. AAE/EOE.

New Jobs This Month

No. 13295

Head of Radio Astronomy, Senior Research Associate

NATIONAL ASTRONOMY AND IONOSPHERE CENTER

Cornell University

528 Space Sciences Bldg

Ithaca, NY 14853-6801

Tel: 607-255-3735

FAX: 607-255-8803

Email Submission Address: campbell@astro.cornell.edu

URL: www.naic.edu

Attention: Dr. Donald B. Campbell, Acting Director

The National Astronomy and Ionosphere Center (NAIC) has an opening for the Head of the Radio Astronomy research program at the Arecibo Observatory in Puerto Rico; the appointment will be made at the level of Senior Research Associate for a period of 5 years, with renewal based on appropriate review. NAIC is an NSF-funded National Center for research in radio and radar astronomy, and in atmospheric science, accepting observing proposals from scientists worldwide. The Arecibo 305-m telescope has recently been upgraded with a Gregorian reflector system and new instrumentation that permits observations within a frequency range spanning 300 MHz to 10 GHz. This upgrade has resulted in significant improvements in available bandwidths, system noise and gain.

The Arecibo Observatory is located in the karst hills of the beautiful Caribbean island of Puerto Rico. A stimulating research environment is provided by approximately 20 resident staff scientists, postdoctoral fellows and graduate students, as well as over 200 visiting scientists per year. In addition, physics and engineering faculty and students of the University of Puerto Rico have a cooperative research and educational association with the Observatory. NAIC and the Arecibo Observatory are operated by Cornell University under a cooperative agreement with the National Science Foundation.

The Head of Radio Astronomy is responsible for promoting observing capabilities, supervising the Arecibo staff radio astronomers, supporting and encouraging the scientific staff in their personal research, monitoring the performance of the telescope and its instrumentation to maintain data reliability (e.g. telescope pointing and calibration), and arranging for the provision of assistance to visiting astronomers, as needed, to help them realize their research goals. In consultation with the NAIC staff astronomers and the community of users, the Head of Radio Astronomy will develop programs for instrument development, software, and user services.

Importantly, the Head of Radio Astronomy is expected to use the Arecibo research facilities in his or her own research endeavors and, for that reason, we particularly encourage applications from individuals with observational interests in such areas as pulsars, HI and OH in our galaxy and external galaxies, molecular probes of star formation, and high sensitivity VLBI. A 7-element multibeam system at 21 cm is scheduled for initial observations in late 2004 that will provide additional research opportunities.

A PhD in astronomy or a related field is required. The successful candidate will be an employee of Cornell University, and hence eligible for all applicable University/Observatory benefits. Salary and benefits are attractive and include a relocation allowance. Details will depend upon the candidate's qualifications and experience. Evaluation of applications will begin 1 April 2003, although applications received later than this will be considered. Please send a complete resume of academic, professional and personal data, a research plan, and names and contact information of at least three references, to The Director, National Astronomy and Ionosphere Center, at the above address. EOE/AEE. For further information about NAIC/Arecibo Observatory, see <http://www.naic.edu>.

No. 13296

Interferometer Postdoctoral Position

CALIFORNIA ASSO. FOR RESEARCH IN ASTRONOMY(W.M. KECK OBSERVATORY)

65-1120 Mamalahoa Hwy.

Kamuela, HI 96743

FAX: 808-885-4464

Email Submission Address: employment@keck.hawaii.edu

Email Inquiries: employment@keck.hawaii.edu

URL: www.keckobservatory.org

Attention: Attn: Interferometer Postdoc,

The WMKO, which operates the world's two largest optical/infrared telescopes, seeks an Interferometer Postdoc to work at its headquarters in Waimea on the Big Island of Hawaii and on the summit of Mauna Kea. This is a two to three year position with relocation assistance and a complete and competitive benefits package.

The successful candidate will be a member of a team developing and ultimately operating the Keck Interferometer. This project is funded by NASA and is being built as a collaboration between WMKO and the Jet Propulsion Lab. The Interferometer currently combines the light from the two Keck telescopes; four 1.8-m telescopes are proposed to be added. The Keck Interferometer is part of the NASA Origins program and as such the goals are primarily the detection of planets and providing information for future space-based interferometers. Specific science goals include: exozodiacal dust detection by nulling the light from the two Kecks, differential phase with the Kecks to detect hot Jupiters, astrometry with the 1.8-m telescopes to detect Uranus mass planets, and imaging with all six telescopes. Further information can be found at http://planetquest.jpl.nasa.gov/Keck/keck_index.html.

The postdoc will be expected to play some specific roles in supporting the Keck Interferometer development and operation. These roles will depend on the background and interests of the successful candidate. The successful candidate will be expected to participate on the internal science team whose role is to demonstrate and optimize the science capability of the Interferometer. Research time, at the 50% level, will be provided. This research should benefit the Keck Interferometer development and/or other interferometry-related projects of interest to Keck's future, such as the OHANA project to interferometrically combine the near-IR light from multiple telescopes on Mauna Kea using optical fibers.

The requirements for this position include: A PhD level degree in astronomy, optics, physics, or engineering.

Desirable qualifications include: Previous Interferometer experience is highly desirable, especially experience in publishing science results from an interferometer.

Employment is conditional on successful completion of drug tests and high altitude physical. Fax (808) 885-4464 or mail resumes, references, and salary history to Interferometer Postdoc, at the above address. EEO/M/F/D/V.

No. 13297

Postdoctoral Position in Cosmology
CALTECH/JET PROPULSION LABORATORY
4800 Oak Grove Drive
Mail Stop 169-327
Pasadena, CA 91109
Tel: 818-354-5307
FAX: 818-354-8895
Email Submission Address: charles.lawrence@jpl.nasa.gov
Email Inquiries: charles.lawrence@jpl.nasa.gov

Attention: Charles R. Lawrence

The California Institute of Technology (Caltech) at the Jet Propulsion Laboratory (JPL) is inviting applications for a postdoctoral research position in cosmology with Planck, a joint NASA/European Space Agency mission to measure the Cosmic Microwave Background (CMB). Opportunities include working closely with groups at JPL and on the Caltech campus in developing data analysis techniques for use with future data from Planck, data simulation, and analysis of data from current and future ground and balloon-borne CMB experiments. Extensive understanding and experience with CMB data analysis of large data sets are highly desirable. Applicants should have a recent PhD in physics, astronomy, or a closely related field. The appointment is contingent upon evidence of completion of Ph.D. The annual starting salary for a recent doctorate is approximately \$48,500 and can vary according to the applicant's qualifications. Postdoctoral scholar positions are awarded initially for a 1-year period, and may be renewed in 1-year increments for a maximum of two additional years. Interested individuals should send a CV, bibliography, statement of career interests, and list of three references (and contacts) to Dr. Charles Lawrence at the above address by 15 April 2003. Caltech and JPL are Equal Opportunity/Affirmative Action employers. Women, minorities, veterans, and disabled persons are encouraged to apply.

No. 13298
Postdoctoral Position at the Center for Space research of MIT
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
URL: web.mit.edu/hr

Attention: Reference Job No. MIT-00000093

Postdoctoral Position at the Center for Space Research of MIT

The MIT Center for Space Research has an opening for a postdoctoral research associate in the group of Professor Walter Lewin to actively participate in data reduction (image analysis and spectroscopy) using Chandra, XMM and HST data. The candidate should have a strong background in observational astronomy with a proven ability to conduct independent research. A Ph.D. in astronomy or physics is required. The appointment will be for two years, renewable for one to two additional years based on satisfactory performance. Applicants should send a curriculum vitae, bibliography, and statement of research interests; and arrange to have three letters of recommendation sent. The application deadline is 15 May 2003.

Interested candidates may apply online at: web.mit.edu/hr/. Please reference Job No. MIT-00000093.

EOE.

No. 13299

Interdisciplinary Computational Scientist or Engineer

UNIVERSITY OF CALIFORNIA, DAVIS

One Shields Avenue

Center for Computational Science and Engineering; c/o Physics Department

Davis, CA 95616

Tel: 530-754-4405

FAX: 530-754-4885

Email Inquiries: csesearch@ucdavis.edu

URL: <http://naniloa.ucdavis.edu/CSE/>

Attention: Linda Potoski, Center Manager

The Center for Computational Science and Engineering at the University of California, Davis invites applications from outstanding candidates for the first of several faculty positions. The unifying theme for the Center is the study of complex systems through numerical simulation, the development of new computational methodologies and algorithms, data mining, and visualization. Preference will be given to candidates at the rank of Professor, although qualified candidates at all levels are encouraged to apply.

Duties include graduate and undergraduate teaching, in addition to a vigorous research program. For additional details please refer to the web site <http://naniloa.ucdavis.edu/CSE/>. The position will remain open until filled, but to assure full consideration, complete application materials must be received by 15 April 2003. UC Davis is an affirmative action/equal opportunity employer.

No. 13300

3 Research Associates in Infrared Astronomy and Data Processing

UNIVERSITY OF SUSSEX & UNIVERSITY OF KENT

Astronomy Centre, CPES

University of Sussex

Brighton, East Sussex BN1 9QJ

UK

Tel: +44 1273 678852

FAX: +44 1273 677196

Email Submission Address: S.Oliver@Sussex.ac.uk/G.J.White@ukc.ac.uk

Email Inquiries: S.Oliver@Sussex.ac.uk/G.J.White@ukc.ac.uk

URL: <http://astronomy.sussex.ac.uk/>

Attention: Seb Oliver, Dr.

Research and Analogous Faculty Grade 1A

The University of Sussex and the University of Kent invite applications for three Postdoctoral Research Associates in Infrared Astronomy and Data Processing, available from April 2003, to develop and exploit far-infrared surveys.

The first post will be to work at Sussex on the scientific exploitation of infrared extragalactic surveys. The successful candidate will explore galaxy bias and evolution by studying the clustering of galaxies detected in the largest SIRTf (launch April 2003) legacy programme, the SIRTf Wide-area Infrared Survey (SWIRE, see <http://www.ipac.caltech.edu/SWIRE/>).

The second and third posts (fixed-term for 29 and 36 months) will be to work on the ASTRO-F mission (launch February 2004, see <http://astro.ic.ac.uk/~cpp/astrof/>) - the first all-sky far-infrared survey since IRAS. One post will be to work at Sussex developing source extraction software, a key element in the production of the all-sky catalogue (expected to contain 10^7 galaxies), the other at Kent developing deglitching and destripping software and producing the ASTRO-F all-sky atlas.

A Ph.D. in Physics, Astronomy, or a related discipline is required, ideally with experience of astronomical survey science, and/or writing astronomical software.

Enquiries should be addressed to Dr. Seb Oliver (S.Oliver@Sussex.ac.uk <http://astronomy.sussex.ac.uk/>) and/or Prof. Glenn White (G.J.White@ukc.ac.uk, <http://www.ukc.ac.uk/physical-sciences/space>).

All applicants will be considered for all posts.

Salary in the range: £18,265 to £27,339 per annum.

Closing date: 31 March 2003

Candidates should send/email a letter of application, CV, and a statement of research interests and skills they could bring to the projects directly to the addresses above along with references from two referees.

No. 13301

Postdoctoral and Ph.D. Positions in Infrared Astronomy
MAX-PLANCK INSTITUTE FOR RADIO ASTRONOMY
Auf dem Huegel 69
Bonn, 53121
Germany
Tel: +49-228-525-243
FAX: +49-228-525-437
Email Submission Address: weigelt@mpifr-bonn.mpg.de
URL: <http://www.mpifr-bonn.mpg.de/div/ir-int>

Attention: Gerd Weigelt, Prof.

Applications are invited for postdoctoral and Ph.D. positions in the Infrared Interferometry Group of the Max Planck Institute for Radio Astronomy in Bonn (see <http://www.mpifr-bonn.mpg.de/div/ir-interferometry/>). Preference will be given to applicants with experience in one of the following areas: star formation, active galactic nuclei, radiative transfer modeling, or infrared long-baseline interferometry.

The successful applicants will be expected to participate in interferometric observations and their interpretation. The positions offer excellent opportunities for high-resolution studies using the VLT

Interferometer (in particular, its AMBER phase closure instrument) and speckle interferometry. Our group is a member of the international AMBER consortium. As we built the AMBER detector, we own a large amount of Guaranteed Observing Time.

The appointments are initially for one year and are renewable for up to six years. Applicants should submit a curriculum vitae, list of publications, and brief description of research interests, and arrange for two letters of recommendation to be sent to Gerd Weigelt at the MPI for Radio Astronomy (email address: weigelt@mpifr-bonn.mpg.de). Review of applications will begin on 15 April 2003 and continue until the positions are filled. The Max Planck Society is an equal opportunity employer.

No. 13302

Postdoctoral Research Fellow in Galaxy Evolution Studies

UNIVERSITY OF NOTTINGHAM

School of Physics and Astronomy

University Park

Nottingham, NG7 2RD

United Kingdom

Tel: +44-115-9516230

FAX: +44-115-9515180

Email Submission Address: Melanie.Stretton@Nottingham.ac.uk

Email Inquiries: Alfonso.Aragon@Nottingham.ac.uk

URL: www.nottingham.ac.uk/physics/research

Attention: Melanie Stretton, Mrs.

Applications are invited for a PPARC-funded post to work on studies of galaxy evolution in clusters at low, intermediate and high redshift. In particular, the work will involve the exploitation of spectroscopic observations obtained with 8m-class telescopes (VLT and Subaru), together with ground-based and HST imaging. The successful candidate will work in close collaboration with Alfonso Aragon-Salamanca and Michael Merrifield, and will be encouraged to take a leading role in the exploitation of the available dataset, as well as planning, carrying out and exploiting new observations with national and international facilities such as GEMINI, ESO and La Palma observatory.

The Astronomy Group at the University of Nottingham has developed a major research programme, both observational and theoretical, investigating the formation and evolution of galaxies and large-scale structure. The group currently has 25 researchers, and the successful candidate will be expected to establish new collaborations within the Nottingham Astronomy Group and more broadly.

Candidates should have, or be about to complete, a PhD in Astronomy or a related subject. Salary will be within the range £18265-£27339 per annum, depending on qualifications and experience. This post is available from 1 September 2003 and will be offered on a fixed-term contract for a period of three years.

Candidates should send, preferably by Email, a letter of application and a detailed CV, including a brief description of research interests, a list of publications and the name and addresses of two referees to Mrs. Melanie Stretton at the above address. Closing date: 15 April 2003.

No. 13303

Postdoctoral Research Position in Observational Astronomy

ASTRONOMICAL INSTITUTE, BASEL UNIVERSITY

Venusstrasse 7

University of Basel

Basel, CH-4102

Switzerland

Tel: +49-6221-528-225

FAX: +49-6221-528-246

Email Submission Address: grebel@mpia.de

Email Inquiries: grebel@mpia.de

URL: <http://www.mpia.de/~grebel/jobs.html>

Attention: Eva K. Grebel, Prof.

The Astronomical Institute of Basel University (www.astro.unibas.ch) invites applications for a postdoctoral research position with Prof. Eva K. Grebel to work on projects in one or several of the following areas: Galactic structure, stellar populations, chemical abundances and evolution, or the overall evolution of low-redshift galaxies. A publication record in one of the above areas and overlap with the research interests of other faculty members will be an asset.

The appointment is for two years (contingent on grant renewal) with a possible extension based on performance and availability of funding. The starting date is negotiable but no earlier than 1 October 2003. The salary will be approximately CHF 60,000 - 65,000 (ca. USD 43,000 - 47,000) depending on research experience.

Basel is an international city in the German-speaking part of Switzerland, bordering both France and Germany, and is within easy reach of most European centers. The successful applicant will have access to ESO and ESA observatories. Funds will be available for travel.

Applicants should send a CV, a brief description of research experience, a statement of research interests, and a bibliography, and arrange for three letters of reference to be sent to E. K. Grebel, MPI for Astronomy, Konigstuhl 17, D-69117 Heidelberg, Germany (current address). E-mail submissions (ASCII or postscript) are welcome. There are no constraints on nationality, but applicants should be younger than 33 years. Applications received by 15 April 2003 will receive full consideration. The search will remain open until the position is closed or filled. AAE/EOE.

No. 13304

Head, Department of Physics & Astronomy

UNIVERSITY OF BRITISH COLUMBIA

Faculty of Science

1505 - 6270 University Boulevard

Vancouver, BC V6T 1Z4

Canada

Tel: 604-822-4213

FAX: 604-822-0677

Email Submission Address: scidean@interchange.ubc.ca

Email Inquiries: scidean@interchange.ubc.ca

URL: <http://www.physics.ubc.ca>

Attention: Dr. Lorne Whitehead, Dean pro tem

The Faculty of Science at the University of British Columbia is seeking applications for the position of Head of the Department of Physics & Astronomy. The Department, which currently consists of 55 professors, 17 adjunct professors, 2 instructors, 110 graduate students and 29 support staff, is committed to excellence in research and education. Research activities span a very broad spectrum, with strong concentrations in Astronomy and Astrophysics, Gravity and Cosmology, Experimental and Theoretical Condensed Matter, Biophysics and Medical Physics, Experimental and Theoretical Particle Physics. Outstanding local research facilities include the Advanced Materials and Process Engineering Laboratory and TRIUMF, augmented by strong connections to national and international facilities such as the Canada-France-Hawaii telescope, Sudbury Neutrino Observatory, Stanford Linear Accelerator and CERN. Further information about the department can be found at <http://www.physics.ubc.ca>.

The position is available beginning 1 July 2003 but a later start date is negotiable. The University of British Columbia hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply; however, Canadians and permanent residents will be given priority. Applications should include a curriculum vitae, publication list and the names and addresses (including e-mail addresses when possible) of at least three references.

No. 13305

Observatory Specialist

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Earth, Atmospheric, & Planetary Sciences

77 Massachusetts Ave., Rm. 54-926

Cambridge, MA 02139

Tel: 617-253-5184

FAX: 617-253-8298

Email Submission Address: mjr@mit.edu

Attention: Michael Richard, Personnel Administrator

The George R. Wallace Jr., Astrophysical Observatory (WAO) at the Massachusetts Institute of Technology seeks to fill the position of Observatory Specialist. WAO is a teaching and research observatory located in Westford, Massachusetts (fifty-five minutes from campus). Observing facilities consist of 24-, 16-, and several 14-inch telescopes, each equipped with CCD camera systems and dedicated control computers. Primary responsibilities are to maintain and upgrade telescopes and instruments, and participate in observing programs. Minimum requirements equivalent to a B.S. in astronomy or physics, plus previous experience in the operation of astronomical equipment are expected. Applicants should have strong technical, mechanical, troubleshooting, and engineering skills, with some hands-on experience in the operation of telescopes and CCD cameras. Computer literacy is mandatory (including a working familiarity with MacOS) and an electronics background is desirable. Applicants should possess good communication skills, and be able and willing to work effectively with students and observatory staff. When applying send resume (including contact information for 3 references) to Michael Richard, at the above address. Applications will be reviewed beginning 15 March 2003 and continue until the position is filled. The start date should be some time in July 2003, and the starting salary will depend on experience. MIT is an Equal Opportunity/Affirmative Action Employer. MIT is a non-smoking environment.

No. 13306
Associate Professorship in Astrophysics
ASTROPHYSICAL INSTITUTE, UNIVERSITY JENA
Max-Wien-Platz 1
Jena, D-07743
Germany
Tel: +49-3641-947003
FAX: +49-3641-947002
Email Submission Address: dekanat@paf.uni-jena.de
Email Inquiries: rne@astro.uni-jena.de
URL: www.astro.uni-jena.de

Attention: Prof. Wipf, Dekan

The astrophysical institute of the faculty for physics and astronomy of the Friedrich-Schiller-University Jena is looking for a tenured associate professor (C3) in astrophysics. We are searching for an internationally recognized scientist working in the area of theory of star and planet formation. A research group working on the observations of exo-planets and other sub-stellar objects, mostly in the infrared, is being established at the institute.

Responsibilities include teaching astronomy as part of the physics curriculum as well as physics and astronomy for high school teachers. Good command of the german language would be a plus.

Questions should be directed to Ralph Neuhäuser rne@astro.uni-jena.de, director of the institute as of 1 February 2003.

Requirements for the position are a Ph.D., a habilitation (or a similar scientific qualification), and a proven ability to teach.

The Friedrich-Schiller-University Jena is an equal-opportunity employer trying to increase the number of women in teaching and science.

Physically challenged applicants will be selected if equally qualified.

Applications with CV, list of publications and talks, a report on previous scientific achievements as well as a statement of research plans should be sent by 20 March 2003 to Friedrich-Schiller, Universität Jena, Physikalisch-Astronomische, Fakultät-Dekan Max-Wien-Platz 1 07743 Jena, Germany.

No. 13307
Postdoctoral Fellowship in Computational Astrophysics of Star Formation
UNIVERSITY OF CALIFORNIA, BERKELEY, DEPARTMENT OF ASTRONOMY
601 Campbell Hall
Berkeley, California 94720
Tel: 925-422-3548
Email Inquiries: rklein@astron.berkeley.edu

Attention: Richard I. Klein, Professor of Astronomy

Postdoctoral Fellowship in Computational Astrophysics of Star Formation UC Berkeley Dept. of Astronomy

Applications are invited for a postdoctoral fellowship in computational astrophysics of star formation at the UC Berkeley Department of Astronomy beginning on or before 1 September 2003 for an initial period of two years. The position will be offered in conjunction with the NASA Astrophysical Theory Program. Depending upon the availability of funding, a third year may be possible. The successful candidate will hold a PhD in astronomy, astrophysics or physics and have experience in computational astrophysical fluid dynamics, preferably including MHD. Salary will be commensurate with experience.

The postdoctoral fellow will conduct code development and research in low-mass and high-mass star formation using state-of-the-art adaptive mesh refinement (AMR) MHD codes with Profs. Richard I. Klein and Christopher F. McKee. Access to substantial computing resources at national supercomputer centers supporting this research will be made available. The University of California Berkeley is committed to Employment Equity and encourages applications from all qualified candidates.

Applicants should send a curriculum vitae, bibliography, and a statement of their research interests, and arrange for three letters of recommendation to be sent by 31 March 2003 to Prof. Richard I. Klein at the above address.

Closing Date: 31 March 2003.

No. 13308

**Postdoctoral Fellowship - Dark Cloud/Star Formation
SMITHSONIAN ASTROPHYSICAL OBSERVATORY**

60 Garden St. M/S 72

Cambridge, MA 02138

Tel: 617-495-7017

FAX: 617-496-7507

Email Submission Address: clada@cfa.harvard.edu

Email Inquiries: clada@cfa.harvard.edu

Attention: Dr. Charles J. Lada, Senior Astrophysicist

A postdoctoral position is available at the Smithsonian Astrophysical Observatory of the Harvard-Smithsonian Center for Astrophysics for a recipient of the Ph.D. degree to work with Dr. Charles J. Lada on an innovative observational program of dark cloud/star formation research. The successful applicant is expected to take a leading role in a major observational study designed to investigate the structure, chemistry and physical conditions in dark clouds using infrared extinction measurements in conjunction with submillimeter/millimeter-wave line and continuum observations. The successful applicant will work with astronomers at the CfA, ESO and the University of Florida to conduct the necessary observations and perform the reduction and analysis of the data.

Applicants should have experience with infrared or optical imaging and/or millimeter/submillimeter-line or continuum observations and analysis. Knowledge of IRAF or IDL is highly desirable. Applicants should also have a record of publication and achievements which have contributed to our knowledge of molecular clouds, star formation or related fields. The position is for two years with an extension for a

third year possible depending on the availability of funds. The stipend is \$44,000 and can start in fall 2003. Applicants should submit a curriculum vitae, bibliography and a statement of research interests and should arrange for three letters of reference to be sent to Dr. Charles J. Lada at the above address. Review of applications will begin on 1 April 2003 and continue until the position is filled.

No. 13309

Assistant or Associate Professor Engineering / Adaptive Optics

UNIVERSITY OF CALIFORNIA SANTA CRUZ

1156 High Street

Santa Cruz, CA 95060

Email Submission Address: recruit@soe.ucsc.edu

Email Inquiries: recruit@soe.ucsc.edu

URL: <http://www.cse.ucsc.edu/jobs/faculty/ee/>

Attention: Electrical Engineering Search Committee, Baskin School of Engineering

University Of California, Santa Cruz Electrical Engineering Faculty Position Available

The EE Department of the University of California, Santa Cruz (UCSC) invites applications for a tenured or tenure-track position. Applications at the Assistant or Associate Professor level will be considered. We particularly welcome outstanding applicants with research interests that are synergistic with those of UCSC's Center for Adaptive Optics. For example: real-time signal processing, optical MEMS, detectors, and other relevant devices, control theory and applications, or other fields applicable to adaptive optics. The successful candidate will build a significant research relationship between the School of Engineering (<http://www.soe.ucsc.edu>) and the Center for Adaptive Optics (<http://cfao.ucolick.org>). The successful candidate has the opportunity to become involved in testing new adaptive optics concepts at the Keck and Lick Observatories. Application information: the Assistant Professor level: a Ph.D. or equivalent in electrical engineering or a relevant related field (Ph.D. by 1 July 2003 preferred, must be conferred within one year of appointment); demonstrated potential for excellence in research; a strong commitment to graduate and undergraduate teaching. For the Associate Professor level: a Ph.D. or equivalent in electrical engineering or a related field; and an outstanding record as a researcher and educator.

Submit materials to:

Electrical Engineering Search Committee
Baskin School of Engineering, 1156 High Street
University of California
Santa Cruz, CA 95064

Please refer to provision #432 in all correspondence.

Applicants should ensure that three confidential letters of recommendation are sent under separate cover. Contact information for the references should be included with the applicant's submitted material. Letter writers must read UCSC's confidentiality statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>. Screening will begin with applications received by 28 February 2003, and continue until the position is filled during the 02-03 academic year. Applications may be submitted electronically to recruit@soe.ucsc.edu. For more information send email to recruit@soe.ucsc.edu or visit <http://www.soe.ucsc.edu/jobs/>. UCSC is an EEO/AA/IRCA Employer.

No. 13310
Associate Research Astronomer
UNIVERSITY OF CALIFORNIA, SANTA CRUZ
1156 High Street
University of California, Santa Cruz
Santa Cruz, CA 95064
Tel: 831.459.2991
FAX: 831.459.5244

Attention: Associate Research Astronomer, c/o UCO/Lick Observatory (Please refer to provision # T03-26 in your reply)

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

L I C K O B S E R V A T O R Y Associate Research Astronomer

The University of California Observatories/Lick Observatory invites applications for a non- ladder-rank academic position in the UCO/Lick Observatory. The appointment will be initially for two years beginning 1 July 2003, with the likelihood of renewal contingent on availability of funding. The appointee will be expected to carry out a high-quality research program in astronomy and/or instrumentation and to work closely with faculty and technical staff. The appointee will be under the general direction of the UCO/Lick Observatory Director, with responsibility for developing and enhancing the instrumentation and operation of telescopes at the Lick and Keck Observatories. The appointee will be expected to work on advanced instrumentation, both new and existing, with specific concentration on all aspects of multi- object spectroscopy including multi-slit mask designing, quick-look data reduction procedures, and complete data reduction and archiving packages. In addition, the appointee will be expected to work on a number of factors that influence image motion and size, including guiding algorithms and atmospheric dispersion compensation. Reappointment and advancement in the Research Series appointments requires a record of quality original research, either individually or as part of a team. Major technical areas of responsibility include multi-object spectrographs and their optics, acquisition and handling of large spectroscopic data sets, and increasing efficiency and effectiveness of observational procedures.

RANK: Associate Research Astronomer I

SALARY: \$66,500

MINIMUM QUALIFICATIONS: PhD with a record of scholarly achievement. Candidates must have knowledge and advanced skills in computer programming, data reduction, advanced optical instrumentation, especially multi-object spectrographs, and optical design procedures. Observational experience with high-quality, advanced instruments is also a requirement.

POSITION AVAILABLE: 1 July 2003 (start date negotiable).

APPLY TO: Applicants should send a vita and the names of at least three professional referees (include postal and email addresses and phone number) who have been asked by the applicant to submit letters of recommendation to:

Associate Research Astronomer
c/o UCO/Lick Administration, Office of the Director
University of California
Santa Cruz, CA 95064
Please refer to provision # T03-26 in your reply.

CLOSING DATE: All materials must be received no later than 1 April 2003. The University of California is an equal opportunity and affirmative action employer.

No. 13311

Postdoctoral position, galactic or extragalactic astrophysics

INSTITUTO DE ASTRONOMIA, UNAM

PO Box 439027

San Ysidro, CA 92143

Tel: +52-646-1744580 (ext.226)

FAX: +52-646-174607

Email Inquiries: mt@astrosen.unam.mx

URL: <http://www.astrosen.unam.mx>

Attention: Dr. Mauricio Tapia

POSTDOCTORAL POSITION AT UNAM IN ENSENADA, MEXICO. The Instituto de Astronomia of the Universidad Nacional Autonoma de Mexico (UNAM) invites applications for a post-doctoral research position at its research campus in Ensenada, Baja California, Mexico. The appointment is for one year with a possible extension for a second. The starting date is expected to be in Summer 2003. The successful candidate will work in any of the following areas: stellar formation, stellar structure and evolution, physics of the interstellar medium, galactic dynamics and extragalactic astrophysics. Both theoreticians and observers will be considered. She or he will be expected to spend most of the time active in research and will be welcome to participate in the graduate teaching program of the Institute. Apart from a set of workstations, on-site computing resources include a SGI Origin2000 and a 32-Pentium cluster. The Instituto de Astronomia runs the Observatorio Astronomico Nacional at San Pedro Martir, Mexico, which houses 2.1m, 1.5m and 0.84m telescopes equipped with modern instrumentation for optical and near- and mid-infrared imaging and spectroscopy. By the beginning of the appointment, applicants should have a PhD in astronomy or related fields. Knowledge of the English and/or Spanish language is required. Salary and benefits are compatible with international standards. Applicants should send to the address below curriculum vitae, list of publications and a brief statement of research interests by 1 April 2003 and also arrange for two letters of recommendation to be sent to the same address. e-mail for enquiries: mt@astrosen.unam.mx. Mailing addresses: Dr. Mauricio at the above address.

No. 13312

Junior Faculty Position

HARVARD UNIVERSITY

Physics Department

Cambridge, MA 02138

Attention: Astrophysics Faculty Search Committee, c/o Carol Davis

The Astronomy and Physics Departments at Harvard University invites applications for a faculty position in experimental astrophysics. We seek outstanding applicants for a junior faculty position, either at the rank of assistant or associate professor. Exceptional candidates may be considered for a tenured, senior faculty position. Successful candidates for this position should have demonstrated the potential to lead a first-rate research program in a sub-field of astrophysics such as dark matter searches, low and high energy astrophysical neutrinos and cosmic rays, gravitational waves, and cosmic microwave background measurements, although we are not exclusively focused on these areas. Candidates should have a strong commitment to undergraduate and graduate teaching.

The appointment will be based in the Physics Department but also joint with the Astronomy Department. We especially welcome applications from female and minority candidates. Please send applications including curriculum vitae, a statement of short and long-term research goals, selected publications and names, addresses and telephone numbers of three people who will write references to the Astrophysics Faculty Search Committee, c/o Carol Davis, Physics Department, Harvard University, Cambridge, MA 02138 . For more information, see <http://cfa-www.harvard.edu/hco/astro/home.html> and <http://www.physics.harvard.edu/> Applications received by 2 April 2003, will be considered at priority for a position to start in September, 2003, although applications will be received until the position is filled. Harvard University is an Equal Opportunity/Affirmative Action Employer.

No. 13313

Research Assistant/Fellow in computational astrophysics

UNIVERSITY OF SOUTHAMPTON

Highfield

Southampton, SO17 1BJ

Tel: +44-23-8059-2750

FAX: +44-23-8059-5595

Email Inquiries: crk@astro.soton.ac.uk

URL: www.astro.soton.ac.uk

Attention: Personnel Department (F),

Applications are invited for a PPARC-funded Research Assistant/Fellow in the Department of Physics & Astronomy at the University of Southampton. You will work on analytical studies and computer simulations of the hot gas in clusters of galaxies, in particular on the interaction of this gas with outflows from AGN in cluster galaxies. Within the 5* Department of Physics & Astronomy, you will be part of the theoretical astrophysics group, which is leading worldwide efforts in this research area. Excellent computing facilities (including a 312 processor Beowulf cluster) are available for the project within the University and we expect you to actively contribute to our efforts in securing computing resources on national facilities such as UKAFF.

You will have (or should be about to obtain) a PhD in Astronomy or Computer Science. A background in computational astrophysics and/or fluid dynamics as well as in extragalactic astronomy is desirable but not essential. The post is available from October 2003 for up to 3 years. Starting salary will be £20,311 per annum on Research Grade 1B/A.

For information on astronomical research at Southampton University, visit www.astro.soton.ac.uk. For informal enquiries about the position, contact Dr Christian Kaiser at crk@astro.soton.ac.uk.

Application forms and further particulars m

Email Submission Address: linfante@astro.puc.cl

Email Inquiries: postdoc@astro.puc.cl

Attention: Leopoldo Infante, Director Department of Astronomy and Astrophysics

The Department of Astronomy and Astrophysics of Pontificia Universidad Catolica, located in Santiago, Chile, invites applications for postdoctoral research positions in the areas of interest of its faculty members.

These include observational and theoretical cosmology, groupings of galaxies on all scales from pairs to superclusters, galaxy formation and evolution, Galactic structure, microlensing, stellar populations and evolution, neutron stars, and supernovae.

We are currently seeking to fill up to two postdoctoral positions intended for promising young scientists who completed their PhD within the last five years. They are awarded initially for one year which can be renewed, depending on funding, for up to another two. The funding is from an ESO-Chile joint astronomy committee grant and provide salary and research funds to work at the Department of Astronomy and Astrophysics.

During this period, fellows may apply for the 10% Chilean time share at all the telescopes located in the country, including the VLTs, Gemini, and Magellan, all progressively coming into operation, in addition to the other telescopes at La Silla, CTIO, and Las Campanas observatories.

Information about the Department is available at {<http://www.astro.puc.cl>}.

Applicants should send, before 1 May 2003, and preferably by e-mail, their CV, publication list, statement of research interests, and arrange for three letters of recommendation to be sent to Professor Leopoldo Infante, at the above address.

No. 13316

Service Observer

CANADA-FRANCE-HAWAII TELESCOPE

65-1238 Mamalahoa Hwy

Kamuela, Hawaii 96743

Tel: 808-885-7944

FAX: 808-885-7288

Email Inquiries: martin@cfht.hawaii.edu

URL: <http://www.cfht.hawaii.edu/>

Attention: Service Observer

Description: The Canada-France-Hawaii Telescope is seeking a Service Observer for its Queued Service Observations (QSO) mode with MegaPrime, the new wide-field prime focus camera. The instrument is constituted of 40 CCDs offering a 1 degree² field-of-view and is operated in the QSO mode for about 180-200 nights/year. In such an approach, the local CFHT staff performs programs during sky conditions required to meet the science goals defined by the investigators. The Service Observer selects, executes and evaluates the observations under the supervision of the Queue Coordinator.

Professional Qualifications: A B.S. degree in astronomy (or related science) is required. Good knowledge of observational techniques used in optical-infrared astronomy is mandatory.

General Qualifications: The individual selected will undergo a physical examination to determine aptitude to carry out duties at the observatory's altitude of 4200 meters. He/she must be able and willing to work irregular and night hours and must be able to drive a 4-wheel-drive vehicle. Documentation to verify eligibility for employment in the United States will have to be furnished at the start of work.

Term: Temporary employment term not to exceed two years. Approximate starting date is 1 June 2003. Salary will be dependent upon experience and qualifications. This is a supernumerary position not subject to CFHT personnel policy for regular staff.

Applications will be received until 31 March 2003. They must include a resume, a brief description of experience with astronomical observations, and the names of three professional references.

No. 13317

St Andrews Fellowship in Astronomy

UNIVERSITY OF ST ANDREWS

College Gate

North Street

St Andrews, Fife, Scotland KY16 9AJ

United Kingdom

Tel: 44-1334-462571

FAX: 44-1334-462570

Email Inquiries: kdh1@st-and.ac.uk

URL: <http://star-www.st-and.ac.uk/astronomy/Welcome.html>

Attention: Human Resources

Salary: £18,265 - £27,339 pa pro rata.

A St Andrews Fellowship in Astronomy is available from 1st September 2003. This fellowship is to encourage expertise in astronomy research and teaching and is funded initially for three years, with a possible extension for a further two years. The position includes a half-time teaching load, allowing for a generous allocation of research time. You will be expected to undertake a world-class research program complementary to our current research areas. The research interests of the Astronomy group include the search for extra-solar planets, star and planet formation, magnetic activity of young stars, accretion in interacting binary stars, high energy astrophysics, galactic dynamics and active galaxies.

You must have a PhD, postdoctoral experience and the proven ability to pursue independent research as evidenced by a strong record of publications.

Please quote ref: SK128/9463/03

Closing Date: 1 April 2003

Application packs from Human Resources, University of St Andrews, College Gate, North Street, St Andrews, Fife KY16 9AJ, (tel: 01334 462571, by fax 01334 462570 or by e-mail Jobline@st-andrews.ac.uk). We regret applications cannot be made by e-mail.

The University operates Equal Opportunities and No Smoking Policies.

No. 13318

Project Manager

NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY

801 Leroy Place

Human Resources, Wells Hall

Socorro, New Mexico 87801

Tel: 505- 835-5370

FAX: 505-835-5337

Email Submission Address: egreene@admin.nmt.edu

Attention: Estella M. Greene, Asst. Director of Human Resources

PROJECT MANAGER

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY, MAGDALENA RIDGE OBSERVATORY. New Mexico Tech seeks applicants for the position of Project Manager for the design and construction of the Magdalena Ridge Observatory Interferometer. The interferometer will consist of an array of 10 telescopes sited at 10,000 ft altitude and is designed to make images of astronomical objects with unprecedented detail. The Project Management Team consisting of the Project Manager and the Project Scientist will be responsible for all aspects of the leadership of the interferometer project, and will receive technical support from a small Integrated Product Team of engineers and scientists. The Project Manager will be responsible for the day-to-day management of the project, will set project milestones, monitor project progress and spend, and adjust resource allocations to complete the project on time and within budget.

A Bachelors degree in the physical sciences or engineering is required, together with an established record of success in managing substantial scientific projects. Familiarity with modern management tools and practices required. Experience of management of large projects required. An advanced degree in science, engineering or management, experience in astronomical projects or optical interferometry, and familiarity with Government "Earned Value Management" systems would all be advantageous. The Project Manager must be able to regularly visit the high altitude construction site. This is a multi-year position that will require relocation to New Mexico. For inquiries on MRO project contact David Buscher at 505 835-6964. Application material, resume, transcripts, and names, addresses, e-mail, and phone contacts, should be submitted to Human Resources at the above address. For information about New Mexico Tech, visit our web page <http://www.nmt.edu/>. E-mail applications NOT accepted. AEOE

No. 13319

Astrophysicist / Programmer Analyst

L-3 COMMUNICATIONS EER SYSTEMS, INC.

1801 McCormick Dr. Suite 170

Largo, MD 20774

Tel: 301-883-0013 (102)

FAX: 301-883-8380

Email Submission Address: larry.klein@l-3com.com

Email Inquiries: jamee.serago@l-3com.com

Attention: Larry Klein, Dr.

We are seeking a recent masters or PhD in high-energy astrophysics with a strong background in C++ and object-oriented software design and development. The position requires software development for a science support center for a future space mission. The mission will produce data in the high energy regime. The ideal candidate will have experience in either user interface and/or database design and implementation. Experience using Beowulf clusters will be an advantage. The candidate should be familiar with a variety of software technologies and tools preferably including XML, CVS and ROOT.

No. 13320

**System Support Associate
GEMINI OBSERVATORY**

670 N. A'ohoku Place

Hilo, HI 96721

FAX: 808-935-9802

Email Submission Address: gemini-jobs@gemini.edu

Attention: Human Resources Department/SSA

Opportunity for qualified applicants for the position of System Support Associate for our Gemini North Facility. The System Support Associate will assist staff scientists and engineers by operating the telescope, instruments and computer systems during day-time and night-time engineering and science use at the summit. Sea level support responsibilities may include data archiving and distribution, data quality assessment, instrument support, observing preparation, and user interface software development. Must possess good communication skills and knowledge of software and hardware systems. Previous experience in ground-based telescope operation strongly advantageous. Must possess working knowledge of astronomical instruments and optical and/or infrared observing techniques. Masters in Astronomy or Physics desirable. BS in science, engineering, astronomy, or computer science and relevant experience as minimum requirements. Knowledge of UNIX, TCL, C, Java and Perl a plus. Requires a valid driver's license, clean driving record and the ability to drive a 4-WD vehicles. Must be safety conscious, willing to participate in safety training and assume safety responsibilities at night at the summit.

The GEMINI OBSERVATORY is a partnership of seven nations: the USA, UK, Canada, Australia, Argentina, Brazil, and Chile, building and operating state-of-the-art, ground-based 8-m infrared telescopes in Hawaii and Chile. For more information about Gemini, visit our Web site: www.gemini.edu.

Applicants should send a resume with a statement relating education and experience to the needs of this position, and the names of two individuals familiar with the applicant's credentials from whom letters of reference can be requested, to the address above.

No. 13321

Full-time Temporary Faculty Position

KUTZTOWN UNIVERSITY

Department of Physical Sciences

P.O. Box 730

Kutztown, PA 19530

Attention: Chairperson of the Temporary Physics/Astronomy Search Committee,

Kutztown University of Pennsylvania is interested in hiring employees who have extensive experience with diverse populations. The following positions are available.

The Department of Physical Sciences invites applications for a one-year, full-time, temporary faculty position in Physics/Astronomy beginning August 2003. A Master's degree, or higher, in Physics is required, with three years, or equivalent, prior experience teaching introductory or intermediate courses at the college or university level, along with a commitment to undergraduate teaching. Primary responsibilities will include courses in physics and introductory astronomy. The teaching load consists of twelve contact hours per week for each semester. A successful interview and demonstration of teaching ability are required. Submit a hard copy letter of application, curriculum vita, undergraduate and graduate transcripts, a brief statement of teaching philosophy, and three current letters of reference to the Chairperson of the Temporary Physics/Astronomy Search Committee at the above address. Review of applicants begins 3 February and will continue until the position is filled.

For full descriptions, criteria and complete listing of vacancies, please call 610-683-4000 or visit our website at www.kutztown.edu/employment. Kutztown University is an AA/EOE member of the PA State System of Higher Education and actively solicits applications from women and minorities.

No. 13322

JCMT Telescope System Specialist(s) I - ID23089

RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII

Joint Astronomy Centre

2530 Dole Street

Sakamaki Hall D-100

Honolulu, HI 96822

URL: www.rcuh.com

Attention: Director of Human Resources

JCMT TELESCOPE SYSTEM SPECIALIST(S) I - ID#23089 . Joint Astronomy Centre. One or two regular, Full-Time, RCUH Non-Civil Service position(s) located in Hilo, Hawaii. Continuation of employment is dependent upon program/operational needs, satisfactory work performance, and availability of funds. Salary: Starting salary will depend on educational background and experience. Duties: As member of a team, operates the James Clerk Maxwell Telescope (JCMT), related computers, instruments and sub-systems located atop 'Mauna Kea' on the Big Island of Hawaii. Assists & advises international visiting scientists with their observations, performs some daily maintenance tasks, and occasionally assists engineers and technicians. Works independently at the remote site with responsibility/authority for the safety of personnel and for the observatory while on site. The JCMT occupies a leading position in submillimetre astronomy, producing the most sensitive submillimetre imaging in the world; this position will be maintained through the JCMT's strong future instrumentation program. Minimum Qualifications: Bachelor's degree from an accredited college or university in natural science, computer science, physics, astronomy, engineering or closely related field, or three years relevant experience working at an observatory or similar scientific facility. No previous experience

required. (Advancement to Level II requires at least 1 year of experience operating the JCMT telescope and demonstrated ability to perform all job functions.) Good interpersonal skills. Good working knowledge of computers and good problem-solving skills. Valid driver's license and the ability to drive a standard transmission 4-wheel drive vehicle. Must possess the American Red Cross Certificate in First Aid/CPR (or be able to obtain the certificate following the training provided). Ability to work at 14,000 feet elevation for 12-hour shifts for periods of 5 - 6 days. Must pass a high altitude physical examination. Desirable Qualifications: Technical background and experience in the operation of scientific facilities. Familiarity with the principles of astronomy and electronics. Inquiries: Remo Tilanus (808) 969-6517; e-mail: r.tilanus@jach.hawaii.edu. Details regarding these positions and how to apply can be found at: <http://www.jach.hawaii.edu/jobs> Application Requirements: Send cover letter (note ID#23089) and referral source with narrative on your qualifications for the position, resume with salary history, the names, phone numbers, and addresses of three supervisory references, and copy(ies) of degree(s)/transcripts/certificate(s) used to qualify for position via: 1) email: rcuhrapply@rcuh.com as a word, Excel or PDF document 2) fax: (808) 956-5022 or 3) mail: Director of Human Resources, Research Corporation of the University of Hawaii, 2530 Dole Street, Sakamaki Hall D-100, Honolulu, HI 96822. See www.rcuh.com.

No. 13323

Lead Designer (SO2489), ALMA

THE NATIONAL RADIO ASTRONOMY OBSERVATORY (NRAO)

P.O. Box O

Socorro, NM 87801

Attention: NRAO-HR

The National Radio Astronomy Observatory (NRAO) seeks a Lead Designer for the Atacama Large Millimeter Array's (ALMA) control software group. The control software will coordinate all hardware so that observations can be made with this telescope.

Summary: The Lead Designer will be responsible for developing and maintaining the high-level control system design, coordinated with the development of other ALMA software subsystems and is expected to participate in all aspects of the software lifecycle. Occasional travel to development sites will be necessary; during later stages of the project, extensive travel to Chile, including the high site at 5000m, will be necessary.

Qualifications: BSCS (or related field) and a minimum of five years experience in a similar position, required. Extensive experience with object-oriented analysis, design and programming in either C++ or Java is essential. Demonstrated experience with design leadership and implementation of a significant system or subsystem preferably implemented by a multi-person team is also essential.

For additional information about this opportunity, visit http://www.nrao.edu/administration/personnel_office/careers.shtml#so2489. Apply to NRAO-HR, at the above address. Application materials received by 30 March 2003 will receive full consideration. Applicants may obtain further information about the NRAO and the ALMA project as well as information about other opportunities Observatory wide from our web site (<http://www.nrao.edu/>).

The National Radio Astronomy Observatory is operated by Associated Universities, Inc., (AUI) under a cooperative agreement with the National Science Foundation. The NRAO is an equal opportunity employer (M/F/H/V).

No. 13324
Director, Cerro Tololo Inter-American Observatory
NATIONAL OPTICAL ASTRONOMY OBSERVATORY
P.O. Box 26732
Tucson, AZ 85726-6732
Email Submission Address: hrnoao@noao.edu

Attention: NOAO Human Resources Manager

The National Optical Astronomy Observatory (NOAO) seeks an astronomer with accomplishments in research and research leadership to head the Cerro Tololo Inter-American Observatory (CTIO).

The U.S. national observatory's research facilities in Chile include CTIO, which operates the Blanco 4 meter telescope, the SOAR 4.2 meter telescope, and a number of smaller telescopes, and Gemini South, an 8 meter telescope, operated by the International Gemini Observatory. Logistical support for these facilities is provided by AURA Observatories Support Services (AOSS). The Head of AURA Observatories in Chile is Dr. Malcolm Smith. The scientific mission of CTIO is the responsibility of the Director, CTIO.

The Director, CTIO is based in La Serena, Chile. The working language is English. Staff members have excellent benefits and living conditions, an overseas allowance, an educational stipend for dependent children, international health care benefits, and annual travel to the point of hire. Bilingual education for children is available at the International School of La Serena, which was co-founded and is supported by AURA. The city of La Serena is a major seaside tourist destination in South America, with a climate similar to San Diego, California.

The successful candidate will hold a Ph.D. in Astronomy, Astrophysics or a related field; will be creative and experienced in providing scientific and engineering support, teamwork and leadership to peers, as well as mentorship to more junior colleagues; and will be involved with research at the frontier of astronomy. He/she will have a record of accomplishment in providing user support for a major research facility, interfacing when needed with the community and specific projects, and will have the ability to lead sixty engineers, technicians, and scientists located in La Serena, Chile. Experience in the development of innovative instrument concepts, and delivery of optical and/or infrared instruments to a project is desirable. It is expected the candidate should be able to continue to carry out a program of research in astronomy.

NOAO's long-range plan, including that for CTIO, is on the web at www.noao.edu/dir/lrplan. The focus is on implementing the recent decadal survey, on large telescopes of the present and the future, and on the U.S. observing system as a whole. A number of NOAO's programs are integrated north/south, and the Director, CTIO facilitates the interfaces in Chile.

The position reports to the NOAO Director, and the Director, CTIO is an Associate Director of NOAO. The Director, CTIO is responsible, with the other directors, for developing NOAO's strategic plan in concert with the Observatory Council and NOAO's advisory committees.

NOAO offers an excellent benefit package, competitive salary commensurate with experience, and an extremely attractive work environment. Applicants should submit to the HR Manager a vita, a publication list, a statement of recent research experience, a statement of relevant management and service experience, a description of future plans, along with the names of three references to NOAO Human Resources Manager, at the above address. Please reference job # 600 with all application

materials. We will begin reviewing applications on 1 July 2003, but we will continue to accept applications until the position is filled. Application materials may be submitted electronically to hrnao@noao.edu. NOAO is an affirmative action and equal opportunity employer.

No. 13325

Research Appointment in X-Ray Astronomy

UNIVERSITY OF CAMBRIDGE

Institute of Astronomy

Madingley Road

Cambridge, CB3 0HA

United Kingdom

Email Submission Address: jm@ast.cam.ac.uk

Attention: Mrs. J. Moss

The Institute of Astronomy has a vacancy for a PPARC-funded postdoctoral researcher to join Professor Fabian's X-ray research group studying active galaxies, clusters of galaxies, Galactic Black Holes, using data from Chandra, XMM-Newton, RXTE and other satellites. For further information see www-xray.ast.cam.ac.uk.

The position is available from July 2003 for 2 years in the first instance. The salary scale is £18,265 to £27,339 plus USS benefits. Applications including a cv, list of publications and statement of research interests should be sent to Mrs J. Moss, at the above address by 31 March 2003. Applicants should arrange for three referees to write to Professor Fabian by the same date.

No. 13326

Instrument Scientist

THE UNIVERSITY OF ARIZONA

Steward Observatory/CAAO

933 N. Cherry Ave.

Tucson, Arizona 85721

Tel: 520-626-4323

FAX: 520-621-9843

Email Submission Address: phinz@as.arizona.edu

URL: www.as.arizona.edu

Attention: Dr. Phil Hinz, Assistant Professor of Astronomy

The Center for Astronomical Adaptive Optics (CAAO) invites applicants for an Instrument Scientist to support operations of the MMT adaptive optics system and instruments. CAAO is completing the commissioning of a unique adaptive optics system for the 6.5 m MMT telescope. Wavefront correction is made with a deformable secondary mirror, yielding a very smooth point-spread function with high photon efficiency and minimal emissivity (6%) in the thermal infrared. Instruments have been built for diffraction limited imaging and spectroscopy from 1-5 microns, and for imaging and nulling interferometry in the thermal infrared.

The successful applicant will be responsible for operation and maintenance of the AO system and scientific instruments, as well as supporting the astronomical observations. The position requires the ability to work successfully within a group and provides the opportunity to take on a leadership role. Up to 25% effort may be devoted to independent research, which is expected to be related to the use of the AO system. The position will be for an initial period of two years, with the possibility of leading to a permanent position depending upon funding. Salary will be dependent upon experience.

Minimum qualifications are a Masters degree in astronomy, physics, or a closely related field and five or more years adaptive optics or astronomical instrumentation experience OR a PhD with 2 or more years experience with optics or astronomical instrumentation.

To apply, please submit Curriculum Vitae, a letter describing relevant experience and professional goals, and the contact information of three senior colleagues willing to provide letters of reference to Dr. Phil Hinz, at the above address. Review of materials will begin 15 April 2003, and will continue until the position is filled. The University of Arizona is an EEO/AA Employer-M/W/D/V.

No. 13327

**Assist/Assoc Professor in Earth & Space Science Education
YORK COLLEGE, CITY UNIVERSITY OF NEW YORK**

94-20 Guy R. Brewer Blvd.

Jamaica, NY 11451

Tel: 718-262-2999

FAX: 718-262-2717

Email Submission Address: aroyc@cunyvm.cuny.edu

Email Inquiries: paglione@york.cuny.edu

URL: <http://www.york.cuny.edu/~hmr/pvns/FY1630.htm>

Attention: Mrs. Anne Marone Balkcon, Faculty and Staff Relations – 2H05

The Departments of Teacher Education and Natural Sciences seek applications for a science educator. The successful candidate will primarily teach and advise undergraduate science and teacher education students. The successful candidate is expected to:

- * develop and teach Earth and Space Science to undergraduates;
- * develop and teach science education curriculum and methods courses to elementary and secondary teacher education candidates;
- * develop the secondary education science program in the Department of Teacher Education;
- * supervise science education teacher candidates;
- * assist in the development of a teaching/learning Earth and Space Science center;
- * participate in grant writing to develop and extend professional development activities and outreach programs that include such agencies as NSF and NASA.

Appointment will be made in either the Natural Sciences or Teacher Education Department depending upon expertise and experience.

Minimum qualifications: earned doctorate in science education and a strong background in earth and space sciences, or Ph.D. in Earth and Space Sciences, Geology, Astronomy or related field, and a strong background in science education; demonstrated success in scholarly research; teaching experience at

college level; and a background in outreach to urban K-12 school teachers and children required. Experience teaching science at the elementary or secondary level is desirable.

Salary, commensurate with rank, salary history and experience: Assistant Professor: \$35,031 - \$61,111
Associate Professor: \$45,651 - \$73,028

Please send cover letter with CV and the names, addresses and telephone numbers of three (3) references. Search will continue until the position is filled.

No. 13328

**Deputy Directory, NOAO Gemini Science Center
NATIONAL OPTICAL ASTRONOMY OBSERVATORY
P.O. Box 26732
Tucson, AZ 85726-6732
Email Inquiries: hrnoao@noao.edu
FAX: 520-318-8494**

Attention: Human Resources Manager

The National Optical Astronomy Observatory (NOAO) invites applications for the Deputy Director of the NOAO Gemini Science Center (NGSC). The position will be located at NOAO-South in La Serena, Chile. The NOAO Gemini Science Center is responsible for the support of the two Gemini 8-M telescopes within the US community. NGSC activities include support of US Gemini users and proposers, US proposal evaluation, user education, Gemini instrument development, and selected operations support. NGSC staff members are based at NOAO Headquarters in Tucson, Arizona and at NOAO-South in La Serena, Chile. A more detailed description of NGSC activities is available in the NOAO Long Range Plan (<http://www.noao.edu/dir/lrplan/> see Section 3.1, pp. 9-13).

We invite applications from observational astronomers with management and leadership experience, and with scientific interests that are aligned with the Gemini telescopes and instruments. The incumbent is expected to lead the NGSC activities at NOAO-South and undertake a research program utilizing the Gemini telescopes. The Deputy Director will have leadership responsibilities in selected areas of US Gemini user support and operations support. Experience in user support, 8-M-class telescopes, queue or service observing, and astronomical community outreach is relevant to this position. The Deputy Director of NGSC reports to the NGSC Director.

The successful candidate will work primarily in La Serena, Chile. The working language is English. Staff members have excellent benefits and living conditions, an overseas allowance, an educational stipend for dependent children, international health care benefits, and annual travel to the point of hire. Bilingual education for children is available at the International School of La Serena, which was co-founded and is supported by AURA. The city of La Serena is a major seaside tourist destination in South America, with a climate very similar to San Diego, California.

Applicants should submit to the HR Manager a vita, a publication list, a statement of recent research experience, a statement of relevant management and service experience, and a description of future research plans. In addition, please arrange for your references to send three letters of recommendation. Applicants are encouraged to submit materials before 15 April 2003, however we will continue to accept applications until the position is filled. Please reference position #595 with submitted materials. For questions about this position, please contact Dr. Taft Armandroff, Director of NGSC.

Send materials to the Human Resources Manager at the above address.

NOAO is an affirmative action and equal employment opportunity employer.

No. 13329

Visiting Assistant Professor of Physics and Astronomy

INDIANA UNIVERSITY SOUTH BEND

1700 Mishawaka Ave

South Bend, IN 46634-7111

Tel: 574-237-4467

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Email Submission Address: jhinnefe@iusb.edu

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URL: