



January 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

Seattle, Washington Job Center

The next Job Center will be held during the 201th Meeting of the American Astronomical Society at the Washington State Convention and Trade Center, 800 Convention Place, Seattle, Washington 98101.

Job Hunting, An Introduction (AAS Career Workshop)

Sunday, 5 January, 9:00am-12:00pm and 1:00-4:00pm

The AAS is again sponsoring a career workshop for Astronomers seeking employment. The workshop will cover preparation for and current trends in the current job market. Today, astronomers have more opportunities available and placement skills and career information are essential to compete strongly in the market. This workshop will offer advice on resources for jobs in astronomy statistics of employment and education, networking strategies, resume writing tips, and information on how to prepare for an interview. A diverse range of career paths will be presented.

The first session will be on job-search skills, market trends, and resources. After a lunch break, the second session will be for those who would like to stay and receive personalized information on individual resumes, job search problems, and interview questions and practice.

This workshop will be presented by Jennifer Giesler, an expert on careers for scientists and former director of the career services division of the American Geophysical Union. The cost of the workshop is \$15.00 which includes a packet of resource materials supporting the workshop presentation. Please send your request for attendance by 18 December 2002 to the Executive Office along with a check, payable to the AAS, for the fee. Credit cards will not be accepted. Preference will be given to AAS members in the event of a large number of registrants.

For further information, contact the AAS Executive Office, 202-328-2010 ext. 101, dawn@aas.org

Employers:

If you are an employer who plans to conduct interviews at the upcoming meeting, please let us know. Send your name, institution and position for which you will be interviewing to jobs@aas.org.

Job Seekers:

If you are planning to attend the Job Center, the deadline for receipt of resumes is 21 December 2000. If you miss the deadline please bring three copies of your resume and a completed cover sheet with you to the Job Center. The resume coversheet is available online at <http://www.aas.org/forms/resume.pdf> or in the paper November and December *Job Registers*. We will also fax the cover sheet upon request.

The following employess have notified the Executive Office that they will be available for interviews.

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Steve B. Howell	UNIVERSITY OF CALIFORNIA AT RIVERSIDE	<u>No. 12839</u>
Professor Don Lamb	THE UNIVERSITY OF CHICAGO	<u>No. 12901</u>
Robert Nemiroff	MICHIGAN TECHNOLOGICAL UNIVERSITY	<u>No. 12995</u>
Grant Hill	W.M. KECK OBSERVATORY	Support Astronomer, Associate Director for Observing Support, Instrument Program
Dr. J. R. Dire	U.S. COAST GUARD ACADEMY	2 Faculty Positions
Dr. Lucy Fortson	ADLER PLANETERIUM AND ASTRONOMY MUSEUM	Job <u>No. 13069</u>
Gareth Wynn-Williams	UNIVERSITY OF HAWAII	Jobs <u>No. 12982</u> and <u>No. 12983</u>
Shobita Satyapal	GEORGE MASON UNIVERSITY	Job <u>No. 13100</u>
Henry Kobulnicky	UNIVERSITY OF WYOMING	Postdoctoral Position
Andrew Baker	MPE GARCHING	Jobs <u>No. 13000</u> , <u>No. 13057</u> , and <u>No. 13058</u>
Dr. S. B. Howell	UNIVERSITY OF CALIFORNIA, RIVERSIDE	Job <u>No. 13138</u>
Ms. Connie Dawson	NATIONAL RESEARCH COUNCIL	Job <u>No. 13143</u>
Joel Bregman	UNIVERSITY OF MICHIGAN	Job <u>No. 13108</u>
Dr. Patrick Slane	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	Job <u>No. 13218</u>
Professor Kris Davidson	UNIVERSITY OF MINNESOTA	Job <u>No. 13988</u>
Dr. Paul Pluchinsky	SMITHSONIAN ASTROPHYSICAL OBSERVATORY	Job <u>No. 13187</u>
Dr. Arlo Landolt	UNIVERSITY OF LOUISIANA AT BATON ROUGE	Job <u>No. 13051</u>
Henry A. Kobulnicky	UNIVERSITY OF WYOMING	Job <u>No. 13201</u>

Editorial - January 2003

AAS Employment Committee

The AAS Employment Committee would like to mention that a special column on non-traditional careers was published in the June AAS Newsletter. This article, by Mike Kaplan of Boeing-SVS, is part of an ongoing series of articles by astronomers describing how they got where they are today, and

offering career advice. The committee is actively seeking contributions to this series, and article suggestions can be sent to the committee chair, Andrea Schweitzer [schweitzer@frii.com].

The Committee would also like to thank Boeing-SVS for sponsoring the Graduate Student reception at the June AAS meeting in Albuquerque. More than 50 graduate students participated in this networking event, which all employers (and especially advertisers in the Job Register) are encouraged to attend. Ball Aerospace will be sponsoring the event at the January meeting in Seattle and the AAS is always seeking additional sponsors for this growing event.

Also planned for the Seattle AAS meeting: an employment session with a panel discussion on non-traditional careers for astronomers.

Andrea Schweitzer, Employment Committee Chair
and
Kevin Marvel, Deputy Executive Officer

[AAS Career Services Listing](#)

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 January - Deadline for the February *Job Register*

15 February - Deadline for the March *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. 12660

Postdoctoral Positions in Radio Astronomy

NAVAL RESEARCH LABORATORY

4555 Overlook Ave., S.W.

Remote Sensing Division, Code 7213

Washington, DC 20375-5351

Tel: 202-767-0668

FAX: 202-404-8894

Email Submission Address:

Email Inquiries: kassim@rsd.nrl.navy.mil

Attention: Dr. Namir Kassim

The Remote Sensing Division of the Naval Research Laboratory (NRL) is seeking postdoctoral applications from those with an interest in radio astronomy. The successful candidate will be expected to carry out innovative research programs in any area of astrophysics where existing or planned low-frequency radio observations (e.g., with VLA, VLBA, Arecibo, GMRT, GBT) may contribute. These might include, but are not limited to radio galaxies and clusters, supernova remnants and pulsars, studies of propagation effects, or the solar system (e.g., Jupiter or the Sun).

NRL radio astronomers carry out a wide range of observational programs at the VLA, VLBA, and Arecibo Observatory, with a primary focus on the 74 and 330 MHz VLA and 330 MHz VLBA systems. The NRL-NRAO 74 MHz VLA system, with its 35 km baselines, is the highest angular resolution, highest sensitivity, low-frequency radio interferometer in operation today. (Examples of current scientific programs.) Observational programs, such as a proposed 74 MHz all sky survey or ongoing 74 and 330 MHz Galactic center observing programs are pursued both for their science and also to address challenges for future low-frequency interferometers. Inspired by the capability of the NRL-NRAO 74 MHz system, NRL radio astronomers, together with scientists at a growing international consortium including the Netherlands Foundation for Research in Astronomy and Massachusetts Institute of Technology are planning to build the Low Frequency Array (LOFAR). The scientific possibilities of this instrument, which will open a new window on the spectrum, are in virtually all areas of astrophysics. Thus, low-frequency observational programs are carried out both for their scientific interest as well as to provide important lessons for LOFAR calibration, imaging strategy, and array configuration design.

Postdoctoral applications should be pursued through the National Research Council (NRC). NRL-NRC

Associateships are awarded to persons who have held their doctorate for less than five years at the time the award is offered. Awards are for two years, with a possible third year extension. Applicants will need to submit an original research proposal to be approved by the NRL-NRC advisor for subsequent evaluation by an external review panel chosen by the NRC. Deadlines for submission to the NRC are 2002 January 15, April 15, and August 15. The current award stipend is \$55,120 per year. US citizenship or permanent residency is required. Application materials can be obtained from the website <http://www.national-academies.org/rap>. For further information contact Dr. Namir Kassim at the above address; see also the NRL SNe/SNR/LFRA site. EOE/AAE.

No. 12955

Tenure Track Faculty Position in Astronomy/Astrophysics

UNIVERSITY OF NOTRE DAME

225 NSH

Notre Dame, IN 46556

Tel: 574-631-6387

FAX: 574-631-5952

Email Submission Address:

Email Inquiries: gmathews@nd.edu

Attention: Faculty Search, Department of Physics

The Department of Physics at the University of Notre Dame anticipates making a faculty appointment in astrophysics/astronomy. The emphasis of this search is for an observational astronomer at the Assistant Professor level, but all levels of career and interests will be considered. The University of Notre Dame currently has active research programs in many areas of observational and theoretical astrophysics. These include cosmological parameter studies, dark-matter searches, supernovae, star and planet formation, computational astrophysics, cosmic-ray research, nuclear astrophysics and numerical relativity. Interested candidates should submit a curriculum vita, a list of publications, and a brief statement of research interests. Applicants should also arrange to have three letters of recommendation sent as soon as possible to the above address.

No. 13004

Senior Research Assoc., Research Assoc., or Postdoc

NAIC ARECIBO OBSERVATORY/CORNELL UNIVERSITY

Cornell University

502 Space Sciences Bldg

Ithaca, NY 14853-6801

Tel: 607-255-3735

FAX: 607-255-8803

Email Submission Address: jtm14@cornell.edu

URL: <http://www.naic.edu/>

Attention: The Director

The National Astronomy and Ionosphere Center (NAIC) has an opening for a staff Senior Research Associate, Research Associate or Postdoctoral Research Associate in radio astronomy at the Arecibo

Observatory, Puerto Rico. The facility 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 reflecting telescope has recently been upgraded with a Gregorian reflector system and instrumentation which 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 successful candidate will have the opportunity to capitalize on these improved capabilities and to contribute to further instrumental developments.

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.

All applicants whose research interests include any field of radio astronomy that can be exploited with the Arecibo telescope will be considered for the position. We particularly encourage applications from individuals with observational interests in such areas as pulsars, HI and OH in our galaxy and external galaxies, molecular lines, and high sensitivity VLBI. A 7-element multibeam system at 21 cm is expected to be operational in late 2004 for pulsar searches, HI surveys, etc. All Arecibo scientific staff are expected to have broad interest. Travel for use of other telescopes and to conferences is encouraged. Besides conducting an independent research program, Observatory staff scientists are expected to advise visiting scientists in all aspects of their observations, and to help define and implement improvements in equipment, observing procedures and data reduction.

A PhD in astronomy or a related field is required. The level of appointment will depend upon the qualifications and experience of the applicant. Postdoctoral appointments are made for a period of two or three years. Senior Research Associates and Research Associates are appointed for longer periods, with renewal based on periodic reviews. The successful candidate will be an employee of Cornell University, and hence eligible for all University benefits. Salary and benefits are competitive, attractive, and include educational and relocation allowances. Details will depend upon the candidate's qualifications and experience. Evaluation of applications will begin 2 January 2003, although applications received later than this may be considered. Please send a complete resumé of academic, professional and personal data, a research plan, and names and contact information of at least three references, to the Director at the above address. EOE/AE. For further information about NAIC/Arecibo Observatory, see <http://www.naic.edu/>.

No. 13007

Postdoctoral Opportunity - Astrophysics and Planetary Sciences

LAWRENCE LIVERMORE NATIONAL LABORATORY

L-473

P. O. Box 808

Livermore, CA 94551-0808

Email Submission Address: igppapsah@llnl.gov

Email Inquiries: sydnor1@llnl.gov

URL: <http://www.llnl.gov/urp/IGPP/>

Attention: Sandy Sydnor

The Institute of Geophysics and Planetary Physics (IGPP) at Lawrence Livermore National Laboratory (LLNL) has several postdoctoral positions available in its Astrophysics and Planetary Sciences Center starting in the fall of 2003. Successful candidates will conduct research in one or more of the following areas:

Laboratory studies of interplanetary dust particles collected in the stratosphere, returned samples from the STARDUST comet mission, observations of dust in space.

Theoretical and computational studies of stellar structure, starburst superwinds, jets.

Laser laboratory experiments simulating astrophysical plasmas in jets and outflows.

Wide-field, time-domain surveys and survey data mining.

Gamma-ray observations with the High Energy Focusing Telescope.

Postdoctoral fellows will have access to LLNL's excellent computer facilities, advanced instrumentation and experimental facilities, and the University of California Observatories, including Keck Observatory (in collaboration with IGPP staff members or UC faculty), and the LLNL developed Adaptive Optics and Laser Guide Star systems.

The appointments are for one year, extendible to three years pending funding availability. Salary and benefits are competitive and some travel support will be made available. Resumes submission deadline 1 February 2003. For consideration, reference AIAHB12PT and email resume to igppapsah@llnl.gov including a description of past/current research, curriculum vitae and bibliography. Mail three letters of recommendation to Sandy Sydnor, at the above address. For further information, please contact Sandy Sydnor (sydnor1@llnl.gov) or visit <http://www.llnl.gov/urp/IGPP/>. We are proud to be an equal opportunity employer with a commitment to workforce diversity.

www.llnl.gov/jobs.

No. 13009

Postdoctoral Research Associates in Computational Astrophysics

OAK RIDGE NATIONAL LABORATORY

Bldg. 6010, MS 6354

P.O. Box 2008

Oak Ridge, TN 37831-6354

Tel: 865-574-6113

FAX: 865-576-8746

Email Submission Address: mezzacappaa@ornl.gov

Email Inquiries: mezzacappaa@ornl.gov

URL: <http://www.phy.ornl.gov/tsi/>

Attention: Anthony Mezzacappa, Dr.

Applications are invited for one or more postdoctoral research associates in computational astrophysics at the Oak Ridge National Laboratory and the University of Tennessee. ORNL is the lead institution in a

DoE-funded, multi-institution, national collaboration to study core collapse supernovae and their phenomenology. Successful candidates will work as part of this collaboration, although independent research is encouraged. We especially invite applications from individuals with expertise in radiation transport, radiation hydrodynamics, hydrodynamics, or magnetohydrodynamics.

The Oak Ridge National Laboratory Physics Division and the Department of Physics and Astronomy at the University of Tennessee have active research programs in computational and experimental astrophysics focused on the study of supernovae, novae, and X-ray bursters. The Oak Ridge National Laboratory offers an environment that strongly encourages and supports large-scale interdisciplinary computational science research and through its Center for Computational Sciences provides significant computing resources.

By 31 January 2003, applicants should send a curriculum vitae with publications list and a statement of research experience and interests, and have three letters of recommendation sent, to Dr. Anthony Mezzacappa at the above address.

Electronic applications will be accepted.

The University of Tennessee is an AA/EO employer.

No. 13036

**Joint Postdoctoral Position in Astronomy/Astrophysics at the Shanghai Observatory
and at the Max-Planck-Institut fuer Astrophysik**

MAX-PLANCK-INSTITUT FUER ASTROPHYSIK

Karl-Schwarzschild-Str. 1

85748 Garching b. Muenchen

Germany

Tel: +49-89-30000-2201

FAX: +49-89-30000-2899

Email Submission Address:

Attention: Appointments Committee

In addition to the announcement of the postdoctoral appointments at the Max-Planck-Institut fuer Astrophysik (see job advertisement No. 13037), the MPA and its partner group at Shanghai Observatory in Shanghai are currently seeking to fill a joint postdoc position in cosmology intended for an active young researcher, who is expected to spend 6 months per year in Shanghai, and 6 months per year at MPA. The salary in Shanghai will be about 9000 RMB (1100 Euro; 5 times of the average salary in Shanghai) and a subsidized apartment (rent 450 RMB/month). The salary at MPA is the usual amount for postdoctoral positions (figures are given in job advertisement No. 13037). This postdoctoral appointment is awarded for 2 years initially. The partner group at SHAO of the MPA has been set up since May 2000 under an agreement between the Chinese Academy of Sciences (CAS) and the Max-Planck-Society. The group leader Yipeng Jing has succeeded in establishing an active group of young researchers. Currently the group has 11 members: 3 postdocs, 3 PhD students, and 4 master students, and it is still in expansion as a priority project of CAS. Fields of interest are numerical simulations and analytical models for the distribution, evolution and formation of galaxies, as well as gravitational lensing. The successful applicant is expected to work with the members of the partner group (including supervising the PhD students) and with MPA scientists. Shanghai Observatory is located in a modern

office building, close to the center of Shanghai, one of the most rapidly evolving and active cities in Asia. The group has very good computer facilities, ample research funds, and an active visitor programme.

Interested scientists are invited to apply to (including three recommendation letters)

The Appointments Committee
Max-Planck-Institut fuer Astrophysik
Karl-Schwarzschild-Str. 1
85748 Garching
Germany.

Deadline is January 3, 2003. Later applications will be considered until the post is filled.

Candidates for a regular MPA appointment may also be considered for this appointment if they indicate their interest in the application.

No. 13037

Postdoctoral Appointments in Astronomy/Astrophysics

MAX-PLANCK-INSTITUT FUER ASTROPHYSIK

Karl-Schwarzschild-Str. 1

85748 Garching b. Muenchen

Germany

Tel: +49-89-30000-2201

FAX: +49-89-30000-2899

Email Inquiries: car@mpa-garching.mpg.de

Attention: Appointments Committee

The MPA is the major German institution dedicated to theoretical astrophysics. It is situated 10 kilometers north of Munich on a campus shared with the MPI for Extraterrestrial Physics, the headquarters of the European Southern Observatory, the MPI for Plasma Physics, the MPI for Quantum Optics, the Technical University of Munich and several other research institutes. The MPA has 16 staff members (14 permanent) who work with 30 post-doctoral researchers and 35 PhD students; it also runs a vigorous visitor programme. MPA is one of the founding institutes of the International Max-Planck-Research School on Astrophysics at the University of Munich. Our institute is housed in an attractive, specially designed building with excellent library and computer facilities including supercomputing at the neighboring MPP Computer Centre. Current areas of interest include stellar atmospheres, the structure and evolution of single and multiple stars, accretion theory, supernovae, star formation, high

Gross annual pre-tax salaries (including the Institute's contribution to health insurance and children allowance) are in the range 39,500 - 56,700 Euro, depending on age and family status.

Interested scientists are invited to apply to The Appointments Committee at the above address.

Candidates should send a full curriculum vitae, a publication list and a summary of current research interests to this address by 3 January 2003. They should also arrange for three reference letters to arrive by the same date. Late applications will be considered until all posts are filled.

The MPA is an equal opportunity employer and particularly welcomes applications from women and minorities.

No. 13038

Faculty Position

MICHIGAN STATE UNIVERSITY

Michigan State University

E. Lansing, MI 48824

Tel: 517-355-9200

FAX: 517-353-4500

Email Submission Address: bauer@pa.msu.edu

Email Inquiries: beers@pa.msu.edu

URL: <http://www.pa.msu.edu/>

Attention: Wolfgang Bauer, Chairman

The Department of Physics and Astronomy invites applications for a tenure-stream appointment from candidates with interests broadly consistent with the area of theoretical nuclear astrophysics. Examples of areas of research that would be appropriate include simulations of nucleosynthesis sites in supernovae explosions, models for the chemical evolution of the Galaxy, and studies of the s(low) and r(apid) neutron-capture processes. This opening is for a joint appointment with the astronomy group and with the National Superconducting Cyclotron Laboratory (NSCL), located on the MSU campus. The MSU astronomy group has access to the soon-to-be-operational SOAR 4.2m telescope, located in Chile, of which MSU is a partner. The NSCL operates a new accelerator facility for fast radioactive beams, and has an active program in experimental nuclear astrophysics. MSU is a member of the Joint Institute for Nuclear Astrophysics (JINA), an NSF-funded collaboration between MSU, Notre Dame, and the University of Chicago, with the mission of exploring the fundamental issues of importance to nuclear astrophysics.

Members of the Physics and Astronomy department and the NSCL are at the forefront of progress in understanding the processes involved with the formation of the elements in the early epochs of the Galaxy, and with the development of new theoretical and experimental approaches aimed at understanding the fundamental nuclear physics, as well as the astrophysical environments, that are most pertinent to the problem. The ideal candidate would possess skills that enhance both of these efforts. Although preference will be given to junior-level applicants, applications from qualified candidates at all levels will be given careful consideration. Applicants should send a cover letter, resume, and publication list, and arrange for letters of recommendation to be sent from three individuals to Prof. Wolfgang Bauer, Chairman, at the above address. We plan to review applications beginning 15 January 2003, and will continue to do so until the position is filled. Michigan State University is an equal opportunity

employer, and welcomes nominations of women and minorities.

No. 13044

Support Astronomer

**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: <http://www.keckobservatory.org/>

Attention: Attn: Support Astronomer

The W. M. Keck Observatory (WMKO), which operates the world's two largest optical/infrared telescopes on the summit of Mauna Kea, seeks a Support Astronomer. This is a regular position with a competitive, comprehensive benefits package including relocation assistance and private school (K-12) tuition support for dependent children.

Seven facility instruments are in regular use at WMKO, including two Cassegrain imaging spectrographs, Nasmyth high resolution optical and infrared spectrographs, a near-infrared camera, a mid-infrared imaging spectrograph, and a high spatial resolution near-infrared camera dedicated for use with the facility adaptive optics system. In addition, a wide-field optical survey imaging spectrograph is nearing completion, and two more state-of-the-art instruments are in various stages of design and proposal. The Support Astronomers are responsible for maintenance, calibration, and improvement of the instruments; support of visiting astronomers using the instruments; and coordination with instrument building teams during development and commissioning of future instruments. The Support Astronomers work primarily at WMKO headquarters in Waimea, with occasional work at the Mauna Kea summit as required.

Required minimum qualifications are an M.S. degree in astronomy or physics and at least three years of experience with astronomical instrumentation at a major research observatory. A Ph.D. degree is highly desirable, and some allowance may be given against the required three years' experience for candidates holding a Ph.D. at the time of appointment. Familiarity with all aspects of modern astronomical instruments, observing techniques, and data reduction are all extremely relevant. Candidates must be capable of working effectively with visiting observers and coordinating multi-disciplinary instrument commissioning and maintenance teams.

Salary is dependent upon qualifications and experience. A fraction of the incumbent's time may be designated for personal research. In particular, the Support Astronomers are encouraged to take part in a regular program of collaborative research projects with the Observatory Director and each other, making use of the unique facilities available at WMKO.

Employment is conditional on successful completion of drug tests and a high altitude physical. Mail or fax resumes, references, and salary history to Support Astronomer, at the above address. Additional information about WMKO may be found on our web site at <http://www.keckobservatory.org/>.
EEO/M/F/D/V.

No. 13047
Postdoctoral Position in Radio Astronomy
UNIVERSITY OF MARYLAND
Department of Astronomy
College Park, MD 20742
Tel: 301-405-2134
FAX: 301-314-9067
Email Inquiries: vogel@astro.umd.edu
URL: <http://bima.astro.umd.edu/>

Attention: Dr. Stuart Vogel

The Laboratory for Millimeter-wave Astronomy (LMA) in the Department of Astronomy at the University of Maryland seeks applications for a postdoctoral fellowship position. This is a position for an observational or theoretical astronomer whose interests complement research being done with the BIMA array. The BIMA array is a millimeter-wave interferometer located at Hat Creek in northern California and is operated in collaboration with Berkeley and Illinois. The array operates with 10 antennas at resolutions as high as 0.2 arcseconds (at 230 GHz). Research interests within the LMA include solar astronomy, planetary astronomy, star formation, interstellar medium, galactic structure, extragalactic studies, and mm/submm instrumentation. It is expected that the BIMA array will merge with the Owens Valley Radio Observatory (OVRO) millimeter array and relocate to a higher elevation site in eastern California; the merged array, called the Combined Array for Research in Millimeter-wave Astronomy (CARMA), will be an order of magnitude more sensitive than the present BIMA array.

The position is available beginning in mid-2003 for a period of two years, with renewal for a third year possible. The successful applicant must have completed the requirements for the Ph.D. degree prior to arrival. Applicants should send a curriculum vitae, list of publications, and statement of research interests. Three letters of recommendation should be requested by the applicant and sent directly to the above address. Applications must be complete by 15 January 2003 to receive full consideration. Minorities and women are particularly encouraged to apply.

No. 13097
NRL-NRC Postdoctoral Associate
NAVAL RESEARCH LABORATORY
Remote Sensing Division
Code 7213
Washington, DC 20375-5320
Tel: 202-767-0292
FAX: 202-404-8894
Email Inquiries: Kurt.Weiler@nrl.navy.mil
Email Submission Address: <http://rsd-www.nrl.navy.mil/7214/weiler/>

Attention: Dr. Kurt W. Weiler

The Radio, Infrared, and Optical Sensors (RIOS) Branch of the NRL's Remote Sensing Division invites applications for an NRL National Research Council Associateship to begin in Fall 2003 in the area of

supernova and gamma-ray burster research. The current program is very active in the observing and interpretation of the radio emissions from GRBs, supernova and supernova remnants, with related studies at IR, optical, x-ray, and other wavelengths. The program goals are to increase existing sample sizes and better define SN/SNR statistical and physical properties and study their relationship to GRBs. This includes frequent new observations at multiple wavelengths, related modeling, and extension of existing data analysis and mapping software. In addition to the continuing observational program, initiatives for new instrumental capability for radio observations at low frequencies are being actively pursued. A successful candidate will have the opportunity to become involved in these programs in addition to carrying out independent research in related areas. For further information visit <http://rsd-www.nrl.navy.mil/7214/weiler/> and linked sites.

Associateships are awarded to persons who have held their doctoral for less than five years at the time the award is offered. Applications must be submit an original research proposal to be approved by the NRL-NRC advisor for subsequent evaluation by an external review panel chosen by the NRC. The deadline for submission is 15 January 2003. US citizenship or a permanent residence visum is required.

Positions are generally for two years with a current annual stipend of \$55,120. For further information contact Dr. Kurt Weiler at the contact information listed above.

No. 13101
Postdoctoral Reseacher (Astronomer/Astrophysicist)
SOUTHWEST RESEARCH INSTITUTE
6220 Culebra Road
San Antonio, Texas 78228-5166
FAX: 210-522-3990
URL: <http://www.swri.org/>

Attention: Human Resources Department

The Division of Space Science and Engineering at SwRI® has an opening for a Post-Doctoral Researcher in our Department of Space Studies in Boulder, CO (<http://www.boulder.swri.edu/>) to provide scientific support for UV spectroscopy investigations on flight missions using the HST/ Cosmic Origins Spectrograph, the Rosetta/ALICE comet orbiting UV spectrometer, and the Mars Express/SPICAM UV spectrometer. This position will involve scientific support for instrument commanding and science observation planning; data reduction and analysis (concentrating primarily on studies of the Martian atmosphere, cometary comae, and the atmospheres of Pluto, Triton, and other targets using HST); and publishing and reporting results. Requires a PhD in astronomy/astrophysics, planetary sciences, or atmospheric spectroscopy, experience with planetary UV or HST UV instruments ,and knowledge of planetary atmospheres. Experience with IDL is highly desirable.

See <http://www.swri.org/5news/person/joblist/astro.htm> for further details and to submit your resume.

No. 13102
Postdoctoral Reseacher (Instrument Scientist)
SOUTHWEST RESEARCH INSTITUTE
6220 Culebra Road
San Antonio, Texas 78228-5166
FAX: 210-522-3990

URL: <http://www.swri.org/>

Attention: Human Resources Department

The Division of Space Science and Engineering at SwRI® has an opening for a scientist on R&D projects involving UV/Visible/IR optics and sensor systems for astronomical space- and ground-based planetary and solar instrumentation projects. Current projects include the BDPR sounding rocket, the UV spectrometers on the New Horizons Pluto-Kuiper Belt and Rosetta comet orbiter missions. The position requires a PhD in Physics, Applied Physics, Astronomy, or a related field. Applicant should have experience in design and development of vacuum ultraviolet optical and detector instrumentation for sounding rocket or space missions, and have published results. The position involves developing optical design concepts and detailed optical designs for lab prototype, sounding rocket, and space flight payloads with emphasis in extreme and far ultraviolet imaging and spectroscopy; writing scientific and instrumentation papers; writing proposals for future remote sensing instruments; and working in laboratory and cleanroom environments assembling, testing, and calibrating UV/VIS/IR instruments. Will develop and write optical/calibration test plans and procedures, and instrument operations planning. Must be skilled in the analysis of remote sensing imaging and spectroscopy data sets (IDL, IRAF, etc.), and experienced with optical ray tracing with existing software packages (ASAP, Code V, ZEAX, IRT, and laboratory techniques. See <http://www.swri.org/5news/person/joblist/astro.htm> for further details and to submit your resume.

No. 13104

Postdoctoral Researcher

CALIFORNIA INSTITUTE OF TECHNOLOGY

MS 100-22

770 So. Wilson Avenue

Pasadena, CA 91125

Attention: Mary Ellen Barba

Applications are invited for a postdoctoral researcher at the SIRTf Science Center to work on the Great Observatories Origins Deep Survey (GOODS). GOODS will carry out the deepest surveys planned for SIRTf from 3.6 to 24 microns, toward the Hubble Deep Field (North) and the Chandra Deep Field (South). SIRTf is scheduled to launch in January 2003, and GOODS observations are expected to begin in May of 2003. Our group at JPL and SSC presently consists of William Reach, Peter Eisenhardt, Ranga-Ram Chary, and Daniel Stern, and works closely with the GOODS Principal Investigator, Mark Dickinson, and his team at STScI. The primary scientific objectives of GOODS are to study the evolving stellar content of galaxies at high redshift, their stellar masses, and the energetic output from star formation and AGN. For more details on the project, see our public website, <http://www.stsci.edu/science/goods/>

The position is for a period of 2 years, and applicants able to begin by June 2003 will be given preference. Applicants should send their CV and publication list by February 1 to the address above, and include a cover letter (written to Eisenhardt and Reach) stating research interests and why you are the right person for our job. Please have 1 (or more) letters of recommendation sent to the same address, and include contact information for a total of at least 3 people as references. Caltech is an Affirmative Action/Equal Opportunity Employer. Women, Minorities, Veterans, and Disabled Persons are encouraged to apply.

No. 13105
Chair of Astronomy
UNIVERSITY OF DURHAM
Personnel Department
Old Shire Hall
Durham, DH1 3LE
England

Attention: Director of Personnel (Please quote reference "CHAIR OF ASTRONOMY" on all correspondence)

Durham University hosts a world-renowned centre of excellence in astronomical research, with thriving groups in observations, theory (including computational cosmology) and astronomical instrumentation. The Chair of Astronomy was established in 1985 to mark the 150th anniversary of the foundation of Durham University. Applicants should have an internationally recognized record of excellence in research in any area of Astronomy and be able to exercise academic leadership. The successful candidate will be eligible to become head of a group which currently comprises 85 members actively involved in astronomical research, including 15 teaching staff.

The salary is negotiable within the Professorial range. The starting date will be by arrangement with the Chairman of the Physics Department. Applications, including the names of 5 referees, should be sent to the Personnel Department at the above address by 15 March 2003. For Further Particulars and informal enquiries please contact Professors Michael Pennington (m.r.pennington@durham.ac.uk) or Carlos Frenk (c.s.frenk@durham.ac.uk).

No. 13106
Postdoctoral Position in Observational Star Formation
THE UNIVERSITY OF FLORIDA
211 Bryant Space Science Center
P.O. Box 112055
Gainesville, FL 32611-2055
Tel: 352-392-2052 (ext 214)
FAX: 352-392-5089
Email Submission Address: lada@astro.ufl.edu
Email Inquiries: lada@astro.ufl.edu
URL: <http://www.flamingos.astro.ufl.edu/>

Attention: Professor Elizabeth Lada

The Department of Astronomy at the University of Florida, Gainesville invites applications for a postdoctoral position in observational studies of star formation. The successful applicant will work closely with a team of astronomers at UF, CFA and ESO. The Postdoc's primary responsibility will be to oversee a deep wide field near-IR spectroscopic and imaging survey of nearby molecular clouds using the newly commissioned FLAMINGOS wide field near-IR imager and multi-object spectrometer. A key goal of this survey is to study the distribution of star formation within molecular clouds, the origin of the initial mass function and the evolution of circumstellar material. We have been granted 190 nights on

the Kitt Peak 4-m and 2.1-m telescopes to complete this program. Additionally, we expect time with FLAMINGOS on the 6.5-m MMT.

Applicants should have a recent Ph.D. and should preferably have experience with and interest in star formation, reduction of near-IR imaging and multi-object spectroscopic data. The position could begin immediately and is funded for at least two years and up to four years. For further information contact Elizabeth Lada at the above address. Applicants should submit a curriculum vita, bibliography and a statement of research interests, and should arrange for three letters of reference to be sent to the above address. Review of applications will begin immediately and will continue until 15 January 2003 or until the position is filled.

No. 13107

Postdoctoral Position in Observational Cosmology

THE UNIVERSITY OF FLORIDA

211 Bryant Space Science Center

P.O. Box 112055

Gainesville, FL 32611-2055

Tel: 352-392-2052 ext 242

FAX: 352-392-5089

Email Submission Address: elston@astro.ufl.edu

Email Inquiries: elston@astro.ufl.edu

URL: <http://www.flamingos.astro.ufl.edu/>

Attention: Richard ElstonProf

The Department of Astronomy at the University of Florida, Gainesville invites applications for a postdoctoral position in observational studies of the evolution of galaxies and large-scale structure. The successful applicant will work closely with a team of astronomers at UF, JPL and LLNL. The Postdoc's primary responsibility will be to oversee a deep, extremely wide field near-IR survey using the newly commissioned FLAMINGOS wide field near-IR imager and multi-object spectrometer. A key goal of this survey is to study large-scale structure, galaxy clustering and galaxy evolution as a function of environment at redshifts between 1 and 2. This program has been allocated NOAO survey time.

Applicants should have a recent Ph.D. and should preferably have experience with and interest in the evolution of large-scale structure, reduction of near-IR imaging and multi-object spectroscopic data. The position will begin as soon as possible and is funded for up to three years. For further information contact Richard Elston at the above address. Applicants should submit a curriculum vita, bibliography and a statement of research interests, and should arrange for three letters of reference to be sent to the above address. Review of applications will begin on 15 January 2003 and will continue until the position is filled.

No. 13108

Postdoctoral Research Fellow

UNIVERSITY OF MICHIGAN

500 Church Street

830 Dennison

Ann Arbor, MI 48109

Tel: 734 764-3440

FAX: 734-763-6317

Email Submission Address: thorsons@umich.edu

Email Inquiries: rab@astro.lsa.umich.edu; jbregman@umich.edu;

monnier@umich.edu; dor@astro.lsa.umich.edu

URL: <http://www.astro.lsa.umich.edu/>

Attention: Shanna Thorson, Academic Secretary

The Department of Astronomy seeks postdoctoral fellows in a variety of fields. We are interested in people who work on one or more of the following areas: STIS spectroscopy of the cosmic stellar background (R. Bernstein), infrared interferometry (observing and/or instrumentation) and image deconvolution techniques (including aperture synthesis imaging) (J. Monnier), X-ray or UV observations of galaxies and clusters (J. Bregman) and theory or observations of supermassive black holes in galaxies (D. Richstone).

Initial appointments are for two years with a possible extension for a third year. The successful applicant will have access to the Magellan 6.5m telescopes in Chile, the MDM 1.3 m and the 2.4 m telescopes on Kitt Peak and the departmental computer network for research activities. Teaching opportunities are also available.

Applicants should provide a vita, bibliography and a statement of research interests and send at least three letters of recommendation. Applications received prior to 20 January 2003 will receive first consideration.

The University of Michigan is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

No. 13109

Junior Scientific Researcher (Star Formation) - ID# -22572

RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII

2530 Dole St.

Sakamaki D-100

Honolulu, HI 96822

Tel: 808-956-3100

FAX: 808-956-5022

Email Submission Address: rcuhrapply@rcuh.com

Email Inquiries: jpw@ifa.hawaii.edu

Attention: Director of Human Resources

The University of Hawaii Institute for Astronomy invites applications for a 2-year postdoctoral position in Honolulu, Hawaii. The position may be extended to a third year dependent on funding. The successful applicant will collaborate and work with Dr. Jonathan Williams on mid-infrared to millimeter wavelength observations of young stellar clusters and will be encouraged to pursue collaborative research on related topics with other members of the Center for Star and Planet Formation. Postdocs have access to all telescopes at Mauna Kea Observatories. Applicants should have a Ph.D. in Astronomy

or Physics, observational skills at millimeter and/or mid-infrared wavelengths and must be able to work at 14,000 ft.

For more information contact Dr. Jonathan Williams at jpw@ifa.hawaii.edu or (808) 956-8355. Closing date: 31 January 2003. Monthly salary: \$4231.00. EOE/AA Employer.

TO APPLY: Send resume with cover letter (note ID# 22572), bibliography, description of research interests, a copy of degree/transcripts/certificate used to qualify for the position and the names and contact information of 3 supervisory references via: 1) email: rcuhrapply@rcuh.com, 2) fax: (808) 956-5022, or 3) mail: Dir. of Human Resources, at above address. This is a RCUH Non-Civil Service position & continued employment is dependent upon program/operational needs, satisfactory work performance & available funding.

No. 13111

**Assistant professor in theoretical physics
UNIVERSITY OF CALIFORNIA, SAN DIEGO**

9500 Gilman Drive

La Jolla, CA 92093-0354

Tel: 858-534-7142

FAX: 858-534-7419

Email Submission Address:

Email Inquiries:

URL: <http://physics.ucsd.edu/>

Attention: Faculty Search Committee - Theoretical Physics, Department of Physics AAS0354

Search will include, but is not limited to, areas of theoretical physics currently represented in the department: astrophysics, biophysics, condensed matter, high energy, plasma and nonlinear physics.

The Department of Physics (<http://physics.ucsd.edu/>) at the University of California, San Diego (UCSD) invites applications for an assistant professorship in theoretical physics, starting 1 July 2003. Suitable candidates for a higher rank position may be considered. The search will include, but is not limited to, areas of theoretical physics currently represented in the department: astrophysics, biophysics, condensed matter, high energy, plasma and nonlinear physics.

Applicants should have a Ph.D. in physics or related subjects and an outstanding record of research accomplishment. Applicants should have ability and strong interest in undergraduate and graduate instruction. The appointee is expected to establish a research program and to participate in the educational programs and other activities of the Department.

An application consisting of a curriculum vitae, list of publications, summary of research interests, a future research plan, and the names of at least three references (with phone, fax and e-mail address) should be sent by mail only (no emails will be considered) to Faculty Search Committee - Theoretical Physics, at the above address. Review of applications will begin on 3 February 2003, and continue until the position is filled.

UCSD is an equal opportunity/affirmative action employer with a strong institutional commitment to excellence through diversity.

No. 13112

Postdoctoral Research Fellow in Astrophysics

UNIVERSITE LAVAL

Departement de physique, de genie physique et d'optique

Groupe de recherche en astrophysique

Quebec , Quebec G1K 7P4

Canada

Tel: 418-656-2131 ext. 3612

FAX: 418-656-2040

Email Submission Address: carobert@phy.ulaval.ca

Email Inquiries: carobert@phy.ulaval.ca

Attention: Carmelle Robert, Dr.

Applications are invited for a postdoctoral position in the Groupe de Recherche en Astrophysique at Université Laval. The main interests of the group include the structure and evolution of galaxies, starbursts, stellar populations, stellar formation and the structure and evolution of the ISM (e.g. using the Canadian Galactic Plane Survey), massive stars and their impact on the ISM, energetic phenomena, and astronomical instrumentation. Access is provided to the well equipped 1.6m optical telescope of the Observatoire du mont Mégantic. Candidates will also have access to all Canadian national facilities. More information can be found at <http://andromede.phy.ulaval.ca/> .

The initial appointment will be for one year, beginning in spring 2003, renewable for at least another year. Candidates must possess a PhD or equivalent in astrophysics, or a closely related field. Applicants are expected to be able to communicate and work with other scientists, and to prepare material for publication and presentation at meetings.

Interested applicants should submit a CV, statement of research interest, publication list, copy of their three most significant papers, and give the name and address (including email) of three references. Applications should be received by 30 January 2003. For further information, please contact carobert@phy.ulaval.ca.

No. 13115

Astrophysicist (Archive Scientist)

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

60 Garden St.

MS-17

Cambridge, MA 02138

FAX: 617-495-7263

Email Submission Address: saoresumes@cfa.harvard.edu

URL: <http://cfa-www.harvard.edu/sao-home.html>

Attention: Recruiter #229

The Chandra X-ray Center (CXC) supports ground and flight calibration of the Chandra telescope and science instruments, generates the observing program, supports proposal preparation, develops user materials to support Chandra GOs and archive users, receives, processes, distributes, and archives the Chandra data, and conducts an educational and outreach program.

The CXC seeks a qualified archive scientist to contribute to the overall data design (data and metadata) of the Chandra Data Archive, the data and application interface to the Chandra user community, the integration of the analysis environment with search and retrieval functions, including both the Chandra Data Archive and external astrophysical data repositories, the definition of Level 3 data products, and aggregate analysis. As a member of the Chandra Data Archive Operations Group, under the direction of the Lead Archive Astrophysicist, this Archive Astrophysicist will share responsibility for science input and coordination in the areas of data distribution and archive operations, and provide science leadership to the appropriate data system development and operations teams. The scientist is also expected to carry out research projects in astrophysics.

To qualify, candidates must possess, at a minimum, a Master's or equivalent degree in astronomy, physics, astrophysics, or a related field, or comparable experience. Candidates must also possess knowledge of current x-ray astronomy observation and data analysis techniques, research experience in observational astronomy with special emphasis on space astronomy, experience in the field of data management, databases, archival research and modern x-ray data analysis software development, familiarity with modern computer techniques, including large computer systems, mini-computers and workstations, familiarity with data format standards and conventions, particularly FITS, and the ability to communicate and work with scientists and others in a software development group.

To view the complete vacancy announcement for this position, please go to: <http://cfa-www.harvard.edu/cfa/hr/postings/22-73.htm>.

Interested candidates should forward resume or CV, bibliography, and the name, address, phone number, and e-mail address for three professional references to the above address.

We are committed to diversity in our workplace. AAE/EOE.

No. 13117
Multiple Post Doctoral Positions in Cosmology
UNIVERSITY OF ILLINOIS
1002 W. Green
Urbana, IL 61801
Tel: 217-244-6099
FAX: 217-244-7638
Email Submission Address: rb@astro.uiuc.edu
Email Inquiries: rb@astro.uiuc.edu
URL: <http://www.astro.uiuc.edu/~rb/>

Attention: Robert J. Brunner, Assistant Professor

We are pleased to announce the availability of up to three postdoctoral positions in Cosmology at the University of Illinois. Illinois has a strong and growing Cosmology group, currently with six faculty

members (the total Astronomy faculty consists of 27 members). We are seeking strong candidates from all areas of astrophysics, but especially those with strong backgrounds and interest in observational cosmology, quasars, clusters of galaxies, data-mining, and computational grids. The successful applicants will work in collaboration with Professor Robert Brunner and the members of the National

1002 West Green Street
Urbana, IL 61801
Tel: 217-244-1187
FAX: 217-244-7638
Email Submission Address:
Email Inquiries: pmricker@uiuc.edu
URL:

Attention: Paul Ricker, Assistant Professor

Applications are invited for a postdoctoral research position in the Astronomy Department, beginning no later than August 2003. The successful applicant will work with Prof. Paul Ricker and members of the cosmology group on problems related to the evolution of galaxies, clusters of galaxies, and large-scale structure. Experience in numerical simulation (computational fluid dynamics or N-body simulation) is highly desirable. Applicants must have received their Ph. D. by the proposed start date. Stipend is competitive. Applicants should submit a curriculum vitae, list of publications, and brief description of research interests, and arrange for three supporting letters to be sent to Prof. Ricker at the above address. Applications should be completed by 15 January 2003 to assure full consideration. Women and minorities are strongly encouraged to apply. AAE/EOE.

No. 13124
Assistant Professor of Theoretical Cosmology
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
Department of Physics and Astronomy
Phillips Hall, CB 3255
Chapel Hill, NC 27599-3255
USA
Tel: 919-962-2078
FAX: 919-962-0480
Email Inquiries: yjng@physics.unc.edu
URL: <http://www.physics.unc.edu/>

Attention: Professor Y. Jack Ng, Professor of Physics and Astronomy

The Department of Physics and Astronomy at the University of North Carolina at Chapel Hill plans to fill four positions in theoretical physics at the interface of subatomic physics, astrophysics, and cosmology in the next few years. These will complement existing strength in theoretical particle physics and string theory, gravitational physics, nuclear physics, and observational astrophysics. Presently we invite applications for a tenure-track position, at the assistant professor level, in the broad field of theoretical cosmology, including (but not restricted to) dark matter, dark energy, string cosmology, large scale structure, and astro-particle physics. Our new colleague will be expected to play a major role in future faculty recruitments when positions become available. Applicants should submit a resume and description of research plans, and arrange to have at least four letters of reference sent to Prof. Jack Ng, Search Committee, at the above address. Review of applications will begin 15 January 2003 and continue until the position is filled. The University of North Carolina is an equal-opportunity employer.

No. 13126
Postdoctoral Research Position - Massive Stars
GEORGIA STATE UNIVERSITY
Dept. of Physics and Astronomy
University Plaza
Atlanta, Georgia 30303
Tel: 404-651-1366
FAX: 404-651-1389
Email Inquiries: gies@chara.gsu.edu

Attention: Douglas R. Gies, Professor

Applications are invited for a postdoctoral research position in the Center for High Angular Resolution Astronomy (CHARA) and Department of Physics and Astronomy at Georgia State University. The successful applicant will work with Dr. Douglas Gies and collaborators on observational and computational studies of massive stars. Current projects include spectroscopic studies of massive binaries, Be stars, and X-ray binaries, plus interferometric observations of binaries and rapidly rotating stars. Observational and/or computational experience in these areas would be useful. Research facilities include two 0.4-m and one 1.0-m equivalent aperture telescopes at the University's Hard Labor Creek Observatory located 50 miles east of Atlanta. CHARA operates the CHARA Array, an optical/IR interferometer consisting of six 1.0-m telescopes, located at Mount Wilson, California. The initial appointment is for one year, renewable to a total of three years. Curriculum vitae, a bibliography, a one-page summary of research interests, and names of three references (plus contact information) should be sent to Prof. Gies at the above address. The deadline for receipt of these materials is 31 January 2003. AAE/EEO.

No. 13127
UK Gemini Support Scientist
UNIVERSITY OF OXFORD
Astrophysics
Denys Wilkinson Building
Keble Road
Oxford, OX1 3RH
UK
Tel: +44-1865-273302
FAX: +44-1865-273390

Attention: Mrs. S. Blackshaw, Administrative Secretary

We expect to fill a 3-year fixed-term position as UK Gemini Support Scientist to support UK exploitation of the Gemini 8-m Telescopes. The post is available immediately and runs in the first instance to September 2006, with the possibility of renewal. The successful applicant will be based in the Astrophysics group of the Physics Department at Oxford University, where they will work as part of the UK Gemini Support Group.

This post is specifically aimed at supporting the exploitation of the Adaptive Optics (AO) modes of the

telescopes. A good knowledge of observing techniques, astronomical instrumentation and data reduction procedures and packages is required so that expertise in Gemini instruments and operations can rapidly be gained. The initial complement of Gemini instruments includes near- and mid-IR imagers and spectrometers, adaptive optics, optical spectrographs and polarimetry. Experience with these types of instrument would be valuable. Previous experience in the use of AO systems and the use of AO data would be particularly relevant. Duties will include supporting the community through the telescope time allocation process, observation preparation and post observational support.

The successful applicant will have 30% of their time for research and will be expected to conduct research programmes that include exploitation of Gemini. Candidates should have a Ph.D. or equivalent qualification in astronomy or other relevant discipline. The job entails regular visits to the telescope sites in Hawaii and Chile and other international travel.

The starting salary is from £19,279 - £27,339 pounds pa depending on skills and experience. Applicants should send a statement of research interests, curriculum vitae, list of publications, and the names and addresses of three referees by the closing date of 31 January 2003. In addition candidates should arrange for letters from the referees to be sent to the address above by the closing date. Further particulars are available from this address or by email to sec@astro.ox.ac.uk. Initial enquiries about this post can be made to Dr. Isobel Hook, imh@astro.ox.ac.uk.

While preference will be given to applications that arrive by the closing date, we will also consider late applications which arrive prior to the final short-listing of candidates. Applications and all other correspondence should quote reference DB02009 and be directed to Mrs. S. Blackshaw, Administrative Secretary, at the above address. Applications will be acknowledged but not reference letters.

URLs: <http://www-astro.physics.ox.ac.uk/> <http://gemini.physics.ox.ac.uk/>The University is an Equal Opportunity Employer.

No. 13128

Tenure-Track (possibly TENURED) staff position in extragalactic astrophysics or cosmology

MAX-PLANCK-INSTITUT FUER ASTROPHYSIK

Karl-Schwarzschild-Str. 1

85748 Garching

Germany

Tel: +49-89-30000-2201

FAX: +49-89-30000-2899

Email Inquiries: swhite@mpa-garching.mpg.de

Attention: Appointments Committee

The Max Planck Institute for Astrophysics (MPA) seeks candidates for a staff position in extragalactic astrophysics or cosmology.

The MPA is an independent institute within the Max-Planck-Society and carries out a broad programme of theory and data analysis covering much of astrophysics. It has a particularly strong tradition in numerical astrophysics. Areas of concentration in extragalactic astrophysics include: galactic dynamics; galaxy formation and evolution; galaxy clusters; large-scale structure; gravitational lensing; the

intergalactic medium; microwave background studies; AGN formation and evolution; physical cosmology. These are supported by active participation in ESA's Planck mission, in the Sloan Digital Sky Survey, in the ESO Distant Cluster Survey and in a number of European research networks. Further information about MPA and its research programmes can be found at <http://www.mpa-garching.mpg.de/>.

Long-term staff at MPA are expected to carry out independent research programmes which complement and interact with those of other institute scientists. Typically they work with a number of the institute's postdocs and graduate students. Collaboration with other institute staff in all areas is strongly encouraged. The present post will be filled at tenure-track or, for an exceptional candidate, at tenured level.

Applicants should provide a CV, a publication list, and a one-page research plan and send it to The Appointments Committee at the above address.

They should also ask three referees to send letters to the same address. The deadline is 15 February 2003 but applications will be accepted until the post is filled.

The MPA encourages applications from women, minorities and disabled persons.

No. 13133
Postdoctoral Position/Astronomy
NEW MEXICO STATE UNIVERSITY
MSC 4500 - Dept of Astronomy
Box 30001
Las Cruces, NM 88003
Tel: 505-646-4438
FAX: 505-646-1602
Email Submission Address: cbeer@nmsu.edu
Email Inquiries: rwalterb@nmsu.edu

Attention: Cheryl Beer, Office Manager

The Department of Astronomy at NMSU expects to hire a postdoctoral astronomer in connection with research based on the Sloan Digital Sky Survey. The position will initially be for one year, but continuation beyond that is likely, subject to funding and satisfactory performance.

NMSU is a partner in the ARC 3.5-m telescope at Apache Point Observatory and a participant in the Sloan Digital Sky Survey. Current areas of research include planetary astronomy, close binary star systems and accretion disks, stellar populations, interstellar medium, galaxy evolution and cosmology (<http://ganymede.nmsu.edu/dept/index.html>). Candidates should clearly describe in their application their research experience and their plans for research with the SDSS database. Postdocs will have access to the ARC 3.5-m and NMSU 1-m telescopes at APO, and can apply for grant proposals as PI's. Some research funds will be available. We are especially interested in individuals who will vigorously interact with our students, faculty, and colleagues at Los Alamos National Laboratory involved in the SDSS project.

The position can start as early as May 2003, but a somewhat later appointment date is acceptable.

Applicants should submit a vitae, bibliography, and a description of their research goals, and secure three letters of reference to be sent to the above address. The position will remain open until filled, with review of applications to start on 15 January. Women, minorities, veterans, and disabled persons are encouraged to apply. Offer of employment contingent upon verification of individual's eligibility for employment in the United States. AAE/EOE.

No. 13134

Postdoctoral research position in astrophysics.

KAPTEYN ASTRONOMICAL INSTITUTE

Landleven 12

Groningen, NL-9747 AD

the Netherlands

Tel: 31-50-3634075

FAX: 31-50-3636100

Email Submission Address: vdkruit@astro.rug.nl

Email Inquiries: vdkruit@astro.rug.nl

URL: <http://www.astro.rug.nl/>

Attention: Dr. P.C. van der Kruit, Professor

The appointment will be for a period of two years with the possibility of extension to a third year. The candidate should have a Ph.D. in astronomy or astrophysics.

Current research interests of the Kapteyn Astronomical Institute are structure, evolution, dynamics and formation of galaxies, large-scale structure, gravitational lensing and the physics of the interstellar medium.

Facilities available include the optical telescopes at La Palma and the ESO facilities at La Silla and Paranal, including the VLT and VLTI, the (sub-)mm JCMT at Mauna Kea, the Westerbork Synthesis Radiotelescope, the European VLBI Network, the ISO data archive, etc. Computing facilities for data analysis and theoretical research are supported on a local and national level.

Applications, together with a curriculum vitae, a list of publications and a statement of intended future research should be sent before 1 February 2003 to Prof. Dr. P.C. van der Kruit, director Kapteyn Astronomical Institute, at the above address. Letters of reference by three persons should be sent directly the same address. Further information can be obtained at the same address (or phone +31-50-3634073, E-mail: vdkruit@astro.rug.nl; see also <http://www.astro.rug.nl/>).

No. 13137

ACS Postdoctoral Fellowship - High Redshift Galaxies

UNIVERSITY OF CALIFORNIA, SANTA CRUZ - UCO/LICK OBSERVATORY

UCO/Lick Observatory, ISB 267

1156 High Street

Santa Cruz, CA 95064

Tel: 831-459-2843

FAX: 831-459-5265

Email Inquiries: gdi@ucolick.org

Attention: Garth Illingworth, Professor

Applications are invited for a postdoctoral position with the Hubble Space Telescope's (HST) Advanced Camera for Surveys (ACS) project at the University of California, Santa Cruz with Garth Illingworth, deputy-PI of the ACS. New PhDs and postdoctoral fellows are encouraged to apply; salary and position will be commensurate with the level of experience.

The ACS is a very powerful imaging camera, particularly for studies of distant galaxies where its improved resolution, larger area, high throughput and filter range make it 10-20X better than WFPC2. The ACS science team has a broad program on the characterization of the optical, radio, and infrared evolution of galaxies and clusters of galaxies at redshifts z between 0.2 and 6. The successful applicant will be based in Santa Cruz, and be expected to lead a program in this area, collaborating with the (international) ACS team (see <http://adcam.pha.jhu.edu/>).

Qualified applicants should have research expertise in an area mentioned above. Experience with astronomical software and other programming language

11 faculty and 11 graduate students who are also members of the Physics Department, and 5 other faculty affiliated with the Departments of Chemistry and Electrical and Computer Engineering. Appointees will be entitled to office and laboratory space in our modern building, and they will be entitled to apply to use the facilities of the Lick and W.M. Keck Observatories. CASS members are active in many areas of astronomy, astrophysics and space science, including theory, numerical simulations, observations and the development of instruments for space and ground based telescopes. We are especially interested in X-ray and gamma ray instruments, and the California Extremely Large Telescope (CELT). Applications, consisting of a curriculum vita, list of publications, summary of research that would be pursued at UCSD and funding sources, and the names, addresses and email addresses of at least three people who could write letters of recommendation should be sent to Cheryl Matson at the above address, by 31 January 2003. UCSD is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to excellence through diversity.

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: <http://www.aas.org/JobRegister/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. 13144

Pan-Starrs Project Manager – ID# 22547

RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII

2530 Dole St.

Sakamaki D-100

Honolulu, HI 96822

Tel: 808-956-3100

FAX: 808-956-5022

Email Submission Address: rcuhrapply@rcuh.com

Attention: Director of Human Resources

The University of Hawaii Institute for Astronomy (IFA) invites applications for a full-time Project Manager position in Honolulu, Hawaii. Manage development of Pan-STARRS survey telescope system. Help plan and implement development of Pan-STARRS system. Oversees preparation of system design and program plan and establish program goals and time-lines, and monitor program budget and schedule performance. Coordinate and manage efforts of associate contractors (SAIC, MHPCC, and LL) and IfA direct sub-contractors. Responsible for punctual reporting to funding agency. Provide overall direction of project staff and coordinate site preparation. The successful candidate should have Master's degree in Business Administration, Optical Engineering, Electrical/Electronics Engineering, Mechanical Engineering, Physics or other equivalent clearly relevant combination of education and work experience. Proven experience in having managed large technical projects or having served as project engineer in such projects. 5-7 years progressively responsible project management experience. Understanding of practices and principles of project management practice. Ability to define, plan, organize and manage complex projects, knowledge of principles and practices of accounting and familiarity with federal contracting requirements. Ability to plan and supervise work of technical professionals. Ability to read and understand civil, mechanical, and electronic engineering plans and drawings. Applicants selected will be subject to Government security investigation and must meet eligibility requirements for access to classified information. Able to work at 14,000 ft.

For more information contact Dr. Nick Kaiser at (808) 956-6898. Closing: 15 January 2003. Salary: Commensurate with qualifications. EOE/AA Employer.

TO APPLY: Send resume w/ cover letter (note ID#22547) & referral source, salary history, names & phone #s of 3 Supervisory references, copy of degree/transcripts/ certificate used to qualify for position via: 1) email: rcuhrapply@rcuh.com, 2) fax: (808) 956-5022, or 3) mail: Dir. of Human Resources, at

above address. This is a RCUH Non-Civil Service position & continued employment is dependent upon program/operational needs, satisfactory work performance & available funding.

No. 13152

Assistant Scientist, ALMA

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 with the ALMA Project. This position requires a Ph.D. in astronomy, astrophysics, physics, or a related field, demonstrated research ability along with postdoctoral experience in radio-astronomical interferometry, preferably in the millimeter and/or sub-millimeter domain. The successful candidate will be expected to spend approximately half their time maintaining a vigorous program of independent research. The initial appointment is for three years with the possibility of future extensions and a permanent appointment. In exceptional cases a more senior initial appointment may be considered.

The selected candidate will participate in modifying and clarifying the scientific requirements for ALMA software development. This will include, serving as a technical resource to the software developers, performing science studies to establish the feasibility of particular methods to be implemented, and testing existing or newly developed software and more generally in the commissioning of software on site. No technical expertise in software development is needed for this position, but experience in using astronomical software and interest in having the most efficient science software is essential. The scientist will have a unique opportunity to be among the first to gain experience with such a unique and promising instrument as ALMA.

This position is located at our Socorro, New Mexico site and will require significant travel, including to the ALMA site in Chile and exposure to altitudes exceeding 16,000 feet.

Applicants should send a curriculum vitae, a description of research interests, and three letters of reference to Dr. K.Y. Lo, Director, at the above address. The deadline for application and letters of reference is 31 January 2003.

No. 13154

Postdoctoral Research Associate

STATE UNIVERSITY OF NEW YORK, STONY BROOK

Department of Physics and Astronomy

Stony Brook, NY 11794-3800

Email Inquiries: lattimer@astro.sunysb.edu

Attention: Professor J. M. Lattimer

One or more Postdoctoral Research Associate positions are available to join a research program studying supernova, gamma-ray bursters, and neutron stars from theoretical and computational perspectives. Current projects include investigations fo the equation of state of dense matter (including strange dark

matter), modeling hydrodynamics and transport in supernovae, gamma-ray bursters and proto-neutron stars, and modeling neutron star atmospheres with intense magnetic fields. Minimum requirements are a Ph.D. in Astronomy, Astrophysics, Physics or some field of Computational Sciences. Experience in nuclear or neutrino atmospheres, and/or computational astrophysics is required. Contact Professor J. M. Lattimer at the above address. AAE/EOE.

No. 13158

Assistant Professorship in Astronomical Instruments

UNIVERSITY OF CALIFORNIA, SAN DIEGO

9500 Gilman Drive

La Jolla, CA 92093-0354

Tel: 858-534-3460

FAX: 858-534-7419

URL: <http://physics.ucsd.edu/>

Attention: Faculty Search Committee, Astronomical Instruments, Department of Physics AAS0354

The Department of Physics (<http://physics.ucsd.edu/>) at the University of California, San Diego (UCSD) invites applications for an assistant professorship in Astronomical Instruments, starting 1 July 2003. Suitable candidates for a higher rank position may be considered. The search will include, but is not limited to, design, construction, and use of ground and space-based telescopes, instruments and detectors.

Applicants should have a Ph.D. in physics, astronomy, or related subjects and an outstanding record of research accomplishment. Applicants should have ability and strong interest in undergraduate and graduate instruction. The appointee is expected to establish a research program and to participate in the educational programs and other activities of the Department. Astronomy at UCSD is supported by the Center for Astrophysics and Space Sciences (CASS), which comprises 23 PhD level research scientists, 4 postdoctoral scientists, 11 faculty and 11 graduate students who are also members of the Physics Department, and 5 other faculty affiliated with the Departments of Chemistry and Electrical and Computer Engineering. Appointees will be entitled to office and laboratory space in our modern building, and they will be entitled to apply to use the facilities of the Lick and W.M. Keck Observatories. CASS members are active in many areas of astronomy, astrophysics and space science, including theory, numerical simulations, observations and the development of instruments for space and ground based telescopes. We are especially interested in X-ray and gamma ray instruments, and the California Extremely Large Telescope (CELT).

An application consisting of a curriculum vitae, list of publications, summary of research interests, a future research plan, and the names of at least three references (with phone, fax and e-mail address) should be sent by mail only (no emails will be considered) to Faculty Search Committee -Astronomical Instruments, at the above address. Review of applications will begin on 3 February 2003, and continue until the position is filled.

UCSD is an equal opportunity/affirmative action employer with a strong institutional commitment to excellence through diversity.

No. 13159

Postdoctoral Position in Theoretical Astrophysics

CfA
60 Garden St.
MS-51
Cambridge, MA 02138
Tel: 617-495-7091
FAX: 617-495-7093

Attention: R. Di Stefano

Applications are invited for a postdoctoral position in theoretical astrophysics. We encourage applications from researchers with interest and experience in the following research areas: binary evolution, accretion disks, the influence of binaries on their environments, and the interface between predictions and observations across wavebands, particularly at X-ray wavelengths.

The appointment is expected to be for two years, with a possibility of a third year.

Applicants should send a CV, list of publications, a brief statement of research interests, and arrange for a minimum of three letters of recommendation to be received by 15 January 2003. Applications will be considered until the position is filled.

No. 13163
Postdoctoral Associate in High-resolution X-ray Astrophysics
MIT CENTER FOR SPACE RESEARCH
Room NE80-6025
70 Vassar St.
Cambridge, MA 02139
Tel: 617-253-7244
FAX: 617-253-8084
Email Inquiries: dd@space.mit.edu
URL: <http://space.mit.edu/>

Attention: Daniel Dewey, Research Scientist

The MIT Center for Space Research (CSR) has a Postdoctoral Associate position beginning September 2003 in the High Energy Transmission Grating (HETG) group led by Prof. Claude Canizares. Members of the HETG group regularly collaborate with staff of the MIT Chandra X-ray Observatory Center (CXC/MIT) and the Advanced CCD Imaging Spectrometer (ACIS) group at the CSR.

The HETG group's X-ray astrophysics activities currently cover a broad range of objects including hot and cool stars, X-ray binaries, supernova remnants, AGN and jets, and interstellar and intergalactic material. This object diversity is united by the threads of high-resolution spectroscopy with the HETG and X-ray plasma diagnostics.

The primary responsibility is to contribute to a subset of the group's efforts by carrying out forefront research using and/or related to the HETG and high-resolution spectroscopy. For example, the candidate may become involved in data analysis and scientific understanding of one or more of our HETGS

guaranteed time observations (GTO) in the above areas.

The candidate should have strengths in some one or more of the following: experience with X-ray astronomical data analysis methods and analysis packages (ISIS, CIAO, XSPEC), fluency in a scientific programming language (IDL, C, etc.), an understanding of astronomical high-resolution spectroscopy (X-ray, optical, UV), and/or familiarity with plasma emission and absorption physics in the X-ray. The position requires a Ph.D. in Astronomy, Physics, or closely related field.

Qualified applicants should send their resumes and arrange for three letters of reference to be sent to Dr. Daniel Dewey at the above address. Applications will be reviewed beginning 2 January 2003 and will be accepted through 15 January 2003. AAE/EOE.

No. 13164

**Postdoctoral Research in Extragalactic Infrared Astronomy with SIRTf
JET PROPULSION LABORATORY/CALIFORNIA INSTITUTE OF
TECHNOLOGY**

MS 169-327

4800 Oak Grove Drive

Pasadena, CA 91109

Tel: 818-354-4211

FAX: 818-354-1004

Email Submission Address:

Email Inquiries: peisenhardt@sirtfweb.jpl.nasa.gov

URL: <http://www.national-academies.org/rap>

Attention: Dr. Peter Eisenhardt, Principal Scientist

A National Research Council Postdoctoral Research Associate position is available for work with Dr. Peter Eisenhardt at JPL. Dr. Eisenhardt leads a Space Infrared Telescope Facility (SIRTf) guaranteed time program with the Infrared Array Camera (IRAC) to carry out a 10 square degree survey in the NOAO Deep Wide Field Survey region in Bootes with 90 seconds exposure per position (the shallow survey). Complementary data from X-ray to radio frequencies is in hand or planned. Dr. Eisenhardt is also closely involved with IRAC surveys with depths of 3 hours (the IRAC deep survey), and up to 100 hours (the GOODS Legacy program). The shallow survey will reach 5 sigma sensitivities of 10 to 40 microJy from 3.6 to 8 microns, sufficient to detect evolving L* elliptical galaxies to $z \sim 2$, while GOODS expects to detect L* galaxies to $z \sim 5$. Data for these programs will begin being taken in the spring of 2003. A primary objective for the shallow survey is to identify $z > 1$ galaxy clusters using IRAC and NOAO photometry, and the evolution and mass assembly of field galaxies in general is a goal of all the surveys. Applicants should submit a research proposal on a topic of his/her choice within these areas for approval by Dr. Eisenhardt prior to sending the complete application to the NRC, and must have received their Ph.D. when they begin the appointment. JPL has a share of Palomar 200 inch time. The postmark deadline for NRC applications is February 1.

No. 13168

Tenure Track Staff Scientist in Infrared Astronomy

MAX-PLANCK-INSTITUT FUER EXTRATERRESTRISCHE PHYSIK

Giessenbachstrasse

Postfach 1312
Garching, D-85741
Germany
Tel: +49-89-30000-3280
FAX: +49-89-30000-3601
Email Submission Address: genzel@mpe.mpg.de
Email Inquiries: genzel@mpe.mpg.de
URL: http://www.mpw.mpg.de/www_ir/ir_home.php

Attention: Reinhard Genzel, Director

The Max-Planck Institut fuer extraterrestrische Physik (MPE) in Garching near Munich invites applications for

a tenure track, staff research scientist position

in observational infrared astronomy with a starting date in summer/fall 2003. Candidates should have a strong research background in observational extragalactic astronomy. Applicants with backgrounds in infrared/submillimeter techniques, infrared instrumentation and/or project development are particularly welcome.

In addition to carrying out a strong independent astronomical research program, the appointed scientist will take a leading role in the development of the institute's instrumentation and observation program for the 2x8.4m Large Binocular Telescope (LBT). Scientists who are interested in participating in the IR group's key research programs in galactic nuclei, massive black holes, and high redshift galaxy evolution and dynamics will be given preference. These key programs are being carried out with guaranteed observing time on the VLT and LBT with the NAOS/CONICA, SINFONI, and LUCIFER instruments.

The position is for an initial period of three years, with a likely extension to five years. Tenure is possible thereafter but in exceptional cases could be considered earlier. The starting annual salary is based on the standard German BAT scale for civil servants and depends on experience, age and family situation. Applicants should have a Ph.D. in astronomy, physics or a related field and several years postdoctoral experience. For further information about the group see http://www.mpe.mpg.de/www_ir/ir_home.php

To apply, please send a letter of application, a brief description of research interests, a curriculum vitae including bibliography and at least three letters of reference by 1 February 2003 to Dr. Reinhard Genzel at the above address. The MPE strongly encourages applications from women, minorities and disabled persons.

No. 13170
Postdoctoral Fellowship - SIRTf and Star Formation
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
60 Garden Street, MS 42
Cambridge, MA 02138
Email Submission Address: pmyers@cfa.harvard.edu
URL: <http://peggysue.as.utexas.edu/SIRTf/>

Attention: Dr. Philip C. Myers, Senior Astrophysicist

A postdoctoral fellowship is available at the Smithsonian Astrophysical Observatory (SAO) of the Harvard-Smithsonian Center for Astrophysics, as part of the NASA Space Infrared Telescope Facility (SIRTF) Legacy program "From Molecular Cores to Planet Forming Disks" (<http://peggysue.as.utexas.edu/SIRTF/>). This fellowship will involve preparing for SIRTF observations of nearby star-forming clouds; processing, evaluating, and improving the quality of SIRTF data from the IRAC camera; and carrying out related scientific research. The fellowship will last for two years, depending on availability of funding. The stipend will be \$44,000 per year plus full health insurance. The incumbent would work closely with members of the IRAC camera team at SAO (<http://www-cfa.harvard.edu/cfa/oir/Research/irac/firstpage.html>) and the CfA star formation group (<http://cfa-www.harvard.edu/sfgroup/>). The position can start in summer 2003. The supervisor will be Dr. Phil Myers of SAO. The PI of the Legacy program is Dr. Neal Evans of the University of Texas, Austin.

Candidates should have experience with reduction of imaging data from ground-based and/or space-based observations at infrared, submillimeter, or millimeter wavelengths, should have experience in developing and implementing data reduction software, and should have a record of scientific research in the area of imaging of star-forming regions. Preference will be given to applicants with infrared imaging experience. Applicants should submit vita and bibliography and a statement of research interests and plans to Dr. Myers by 31 January 2003, and should arrange for three letters of recommendation to be sent by the same deadline. The Smithsonian Astrophysical Observatory is an AA/EEO employ(aveleng(ator).5(s) -1

No. 13175
Astronomy Faculty Position
RUTGERS UNIVERSITY
Department of Physics and Astronomy
136 Frelinghuysen Road
Piscataway, NJ 08854-8019
Tel: 732-445-2501
FAX: 732-445-4343
Email Inquiries: leath@physics.rutgers.edu
URL: <http://www.physics.rutgers.edu/ast>

Attention: Prof. Paul Leath, Chair

The Department of Physics and Astronomy at Rutgers University is soliciting applications for a tenure-track astronomy faculty position. We are primarily seeking a junior-level appointment, but exceptionally

applications for a postdoctoral position in X-ray Astronomy. The Section carries out investigations in X-ray timing, data analysis, detector development, and theoretical aspects of accretion processes. Particular interests are QPOs in black hole candidates, X-ray pulsar timing, AXPs, and timing studies of various neutron star LMXBs.

We are the PI institution for the USA X-ray timing experiment which carried out a broad program of investigations of X-ray binaries including black hole transients, LMXBs, X-ray pulsars, CVs and AGN. There are numerous investigations to be carried out on the 1.5 years of data collected on about 60 sources. Opportunities will also exist to work on solid state detector development for a next generation X-ray timing mission as well as to propose for observations with RXTE, Chandra, or XMM/Newton.

Applications should be made through the NRC Research Associates Program. NRC Research Associates design a research proposal as part of the application and have a great deal of freedom to pursue topics that interest them during their stay. Associateships are awarded to persons who have held their doctorate for less than five years at the time the award is offered. The next deadline for submission is 1 February 2003. US citizenship or a permanent resident status is required. Positions are generally for two years with a current annual stipend of \$55,120.

For additional information contact Paul Ray (Paul.Ray@nrl.navy.mil).

No. 13177

Staff Astronomer - James Clerk Maxwell Telescope (Hilo, Hawaii)

NATIONAL RESEARCH COUNCIL, CANADA

Herzberg Institute of Astrophysics

5071 W. Saanich Road

Victoria, BC V9E 2E7

Canada

FAX: 250-363-8766

Email Submission Address: marquerite.chartrand@nrc.ca

Email Inquiries: lorne@avery@nrc.ca

URL: <http://www.hia.nrc.ca/>

Attention: Maggie Chartrand, Human Resources Systems Coordinator (Please quote competition #40-02-14)

This is a term appointment for three (3) years from the date of reporting.

The National Research Council Canada's (NRC) Herzberg Institute of Astrophysics (HIA) is seeking applications for a Staff Astronomer at the James Clerk Maxwell Telescope (JCMT) in Hawaii from those with an interest in sub-millimetre astronomy. The successful candidate will be expected to carry out innovative research programs in any area of astrophysics where existing or planned instrumentation at the JCMT may contribute. The Staff Astronomer will also be expected to support operations at the JCMT. With a diameter of 15-m and situated near the 4000-m summit of Mauna Kea, the JCMT is the premier submillimetre telescope in the world. Current instrumentation includes sensitive bolometer arrays (SCUBA), heterodyne receivers operating in transmission bands from 210 to 710 GHz, and polarimetry capabilities. Within the timescale of this position, both a heterodyne array (HARP), and the JCMT-SMA link are planned to become available. Canada has a 25% share in the JCMT, along with the UK and Netherlands. As part of Canada's contribution to the operations of the JCMT, HIA employs two

staff astronomers at the Joint Astronomy Centre (JAC) in Hilo, which operates the telescope. This competition is intended to fill one of these two positions. A competitive pay and benefits package, as well as foreign service assistance, is offered for this position. For full details about this exciting career opportunity and application instructions, please visit our website at: <http://www.hia.nrc.ca/>. Applications must be received before 20 January 2003. Please note: Preference will be given to Canadian Citizens and Permanent Residents of Canada. NRC is an equal opportunity employer.

No. 13181
Project Manager-Michelson Science Center
CALIFORNIA INSTITUTE OF TECHNOLOGY
MS 220-6
770 So. Wilson Avenue
Pasadena, CA 91125

Attention: Mary Ellen Barba

Will manage the definition, development, and operation of the science operations systems at the Michelson Science Center (MSC) at the California Institute of Technology (Caltech) in support of and as part of the NASA Navigator Program managed by the Jet Propulsion Laboratory (JPL). The successful candidate will report to the MSC Director/Deputy, and will be accountable for implementation and operation of the MSC. Duties for the position include: developing requirements for the MSC core activities and its mission-specific elements; developing implementation plans and resource requirements, and negotiating these with the Navigator Program; building and managing a development and operations team; and interfacing and coordinating with the Navigator Program projects, Caltech, and the Infrared Processing and Analysis Center (IPAC). This position requires a Bachelor's degree in Astronomy, Physics, Engineering or related discipline, and a minimum of 10 yrs. of experience in managing technical software enterprises or equivalent. Must have demonstrated ability to work with a diverse group of engineers, scientists and administrative staff. Candidates with experience in science operations and data processing and in support of space projects will be given preference. Please submit a letter of application, a resume, and the names and contact information of three references. This position will remain open until filled. Caltech is an Affirmative Action/Equal Opportunity Employer. Women, Minorities, Veterans, and Disabled Persons are encouraged to apply.

No. 13183
Postdoctoral Appointment
CALIFORNIA INSTITUTE OF TECHNOLOGY
Owens Valley Radio Observatory
MS 105-24
Pasadena, CA 91125
Tel: 626-395-4973
FAX: 626-568-9352

Attention: Nick Scoville

We invite applications for one appointment of Postdoctoral Scholar or Senior Postdoctoral Scholar with the millimeter-wave array project at the Owens Valley Radio Observatory. Appointment is contingent upon evidence of completion of a Ph.D. The appointment will be for one year, with likely renewal up to

three years.

The array of six telescopes, each of 10.4 m diameter is used primarily for aperture synthesis mapping of molecular lines and dust continuum emission at wavelengths observable in the 1.3 and 3 mm atmospheric windows. Baseline to 400 m provides sub-arcsecond (0.5") spatial resolution. Typical large-scale observational programs include studies of nearby regions of star formation and mapping of the molecular gas in external galaxies. We seek candidates with ambitious observational programs for the array and/or those wishing to work on technical aspects of millimeter-wave interferometry.

Applications (including a brief statement of research interests, curriculum vitae, and three letters of reference) should reach Caltech before 31 January 2003, but later applications will be considered.

Women, minorities, veterans and disabled persons are encouraged to apply. AAE/EOE.

New Jobs This Month

No. 13184

Postdoctoral Position in the Field of Extrasolar Planets

MAX-PLANCK INSTITUTE FUR ASTRONOMIE

Konigsstuhl 17

Heidelberg, D-69117

Germany

Attention: Mrs. Maria Janssen-Bennynck

The MPIA department "Star and Planet Formation" (Head: Thomas Henning) invites applications for a qualified candidate in the field of planet searches with astrometric or transit methods. We expect that the successful candidate actively develops an own program for exoplanet detections. The position is initially for 2 years and can be extended up to 5 years. The MPIA is preparing to use VLTI as an astrometric facility and considers joining a transit network.

The MPIA coordinates the European Network "Extrasolar Planets" and is actively involved in the definition of a Planet Finder for the VLT. In addition, we have an active AO group and an interferometry group which is involved in the use of the AO system NACO at the VLT and the VLT Interferometer, respectively.

The MPIA operates the Calar Alto Observatory (<http://www.mpia.de/Public/CAHA/index.html>) with its 2.2m and 3.5m telescopes, which have a broad suite of optical and infrared instruments. The MPIA is heading a number of cutting-edge instrument developments for the VLT and LBT telescopes that will be ready for scientific use in the next years. The institute also operates the ISOPHOT Data Center in Heidelberg, is a partner in the LBT Project, and is one of the two German partner institutes in the Sloan Digital Sky Survey. In addition to its general computing facilities, the MPIA offers special computers for theoretical research including an ORIGIN 2000 system and a cluster of special hardware devices (GRAPE) connected to local PC clusters. It has access to a parallel CRAY T3E-600 and a vector NEC SX-4B supercomputer at the MPP Computing Center near Munich.

The position is available on the German BAT scale (BAT IIA). The successful candidate is expected to carry out observational research programs and will have full access to both the MPIA's computing

facilities and to the observational facilities at the Calar Alto Observatory; further, she/he will have full access to ESO's VLT and La Silla facilities. Candidates may be asked to devote a modest fraction of their time to functional duties.

Applicants should have a PhD in astronomy, physics, or related field by the start of the appointment. The position may commence as early as possible. The application should describe research experience and interests, and should include a complete curriculum vitae and bibliography. Three letters of recommendation should be sent directly to the address below. Application materials should be sent no later than 7 February 2003. Questions regarding the research opportunities at the MPIA can be directed to Prof. Dr. Thomas Henning (henning@mpia.de).

The Max Planck Society is an equal opportunity employer and particularly encourages applications from women and disabled persons. Further information can be found on the Website: <http://www.mpia.de>.

No. 13185

Postdoctoral Scholar

**CALIFORNIA INSTITUTE OF TECHNOLOGY/JET PROPULSION
LABORATORY**

4800 Oak Grove Drive

MS 171-113

Pasadena, CA 91109

FAX: 818-393-4357

Email Submission Address: gene.serabyn@jpl.nasa.gov

Email Inquiries: gene.serabyn@jpl.nasa.gov

Attention: Dr. Gene Serabyn

Caltech Postdoctoral Scholar Positions at the Jet Propulsion Laboratory (JPL)

The California Institute of Technology, Postdoctoral Scholars Program at JPL invites applications for a postdoctoral research position in infrared astrophysics. The research will involve observations and instrumentation which advance NASA's Origins program. Observations and instrumentation development which would further progress toward the goals of NASA's planned Terrestrial Planet Finder and JWST missions are envisioned. The work would involve observations with ground-based or space-based infrared telescopes and interferometers, and/or work in the area of high-contrast imaging approaches, such as nulling interferometry and coronagraphy. A Ph.D. in physics, astronomy or related fields is required. A strong background in infrared observing and/or instrumentation is highly desirable.

The position is open in the fall of 2003 and appointment is contingent upon completion of Ph.D. Starting date is flexible, but preferably no later than 1 Oct 2003. The annual starting salary for a recent Ph.D. is approximately \$US 48,500 and can vary somewhat according to the applicant's qualifications. Positions are awarded initially for a 1-year period. Appointments may be renewed in 1-year increments for a maximum of 2 additional years.

Applicants should submit a CV and the names of three references to Dr. Gene Serabyn at the above address.

Caltech and JPL are equal opportunity/affirmative action employers. Women, minorities, veterans and

disabled persons are encouraged to apply.

No. 13186
Planetary Science Faculty and PDRAs
UNIVERSITY OF BERN
Sidlerstraße 5
Bern, 3012
Switzerland

Attention: Prof. Nicolas Thomas, c/o S. Wirth

The Dept. of Mass Spectrometry and Space Research of the Physikalisches Institut at the University of Bern, Switzerland has vacancies for an Oberassistent (from Sept. 2003), two post-doctoral research assistants (from April and Sept. 2003), and up to 3 PhD studentships. Initially, the focus of the group will be the investigation of the Martian surface using data acquired by the Beagle 2 lander for Mars Express, the Mars Exploration Rovers, the HiRISE experiment on the Mars Reconnaissance Orbiter and OSIRIS onboard Rosetta. The Oberassistent would be expected to carry out some independent research within the fields mentioned and to take up some teaching duties in the faculty. Appointment to the permanent staff (after an appropriate period) is foreseen. Progression via habilitation is possible. The PDRA positions are normally available only to persons under the age of 35 (ideally less than 33), are non-permanent and restricted to a maximum of six years. Salary is according to qualifications and conditions stipulated by the University of Bern. Further details of the research program can be found at <http://www.phim.unibe.ch>. For informal contacts: thomas@linmpi.mpg.de Applications (including letter of application, the post for which you wish to be considered, curriculum vitae, and the names of 3 referees) should be sent to: Prof. Nicolas Thomas, c/o S. Wirth, at the above address by 25 February 2003.

No. 13187
Data Specialist
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
60 Garden St.
MS-17
Cambridge, MA 02138
Tel: 617-495-7371
FAX: 617-495-7263
Email Submission Address: saoresumes@cfa.harvard.edu
URL: <http://cfa-www.harvard.edu>

Attention: Recruiter #229

We have an opportunity for entry- to mid-level Data Specialist in the Smithsonian Astrophysical Observatory's Chandra X-ray Observatory Science Center (CXC) in Cambridge, Massachusetts.

The Data Specialist will provide support of astrophysical research on data obtained by NASA's Chandra. Launched in 1999, Chandra is a large, orbiting x-ray telescope, which searches the universe for x-rays from high-energy sources such as black holes, quasars, and supernova remnants. The CXC supports ground and flight calibration of the Chandra telescope and science instruments, generates the observing

program, supports proposal preparation, and receives, processes and distributes the Chandra data.

Duties may include specifying, testing, writing, modifying, debugging, and/or documenting software for data analysis, instrument operations, proposal planning, mission planning, simulations and modeling, running software and analyzing data output, developing and analyzing algorithms; developing and maintaining databases; drafting and maintaining materials for web sites; and providing support to users via personal interaction and e-mail.

To qualify, candidates should possess, at a minimum, a Bachelor's degree (or comparable experience) with a major in astronomy, physics, computer science or a related field, which included computer-related course work. Experience in computer operations and/or software development, ideally in a UNIX environment, is required. Knowledge of astronomy, physics, C/C++, data analysis, PERL, and/or HTML is a plus. A combination of experience and education will be considered.

To view the complete vacancy announcement for this position, please go to: <http://cfa-www.harvard.edu/cfa/hr/postings/23-10.htm>.

We offer a competitive salary, a comprehensive benefits package, and a stimulating environment. Interested candidates should forward their resume or CV to the above address.

We are an equal employment opportunity employer, committed to diversity in our workplace. AAE/EOE.

No. 13188

Director's Research Fellow

ANGLO-AUSTRALIAN OBSERVATORY

PO Box 296

Epping

NSW 1710

Australia

Tel: +61 2 93724863

FAX: +61 2 93724860

Email Submission Address: gcs@aoepp.aao.gov.au

Email Inquiries: director@aoepp.aao.gov.au

URL: <http://www.aao.gov.au/local/www/jobs>

Attention: Greta Simms, Personnel Officer

AAO DIRECTOR'S RESEARCH FELLOW

The Anglo-Australian Observatory (AAO) wishes to appoint a highly motivated Director's Research Fellow. The position will be based at the Epping Laboratory, in Sydney, about 25km from the centre of Sydney. The Epping campus is also home of the Australia Telescope National Facility. Candidates must have a strong background in astronomy, astrophysics or a related branch of experimental physics.

The appointment will be for a period of three years, subject to a six month probationary period. The salary will be in the range \$A57,824 to \$A62,516 pa plus employer superannuation contributions and removal expenses. Applications should include a curriculum vitae, list of publications, a statement of

proposed research programs and the names and addresses (including e-mail and phone) of three referees familiar with the applicant's work. The applicant must arrange for references to be sent before the closing date, which is 15 February 2003.

Further information about the position and the full text of the advertisement can be obtained from <http://www.aao.gov.au/local/www/jobs> Questions about the position should be addressed to Brian Boyle, Director, Phone +61 2 9372 4811: Fax +61 2 9372 4880 or e-mail: director@aoepp.aao.gov.au.

No. 13189

Astronomer - Program Director
NATIONAL SCIENCE FOUNDATION
4201 Wilson Blvd
Suite 315
Arlington, VA 22230
FAX: 703-292-9279
URL: www.nsf.gov/oirm/hrm/jobs

Attention: Jacqueline S. Jackson, Human Resource Specialist

NSF's Division of Astronomical Sciences is seeking qualified applicants for the position of Program Director, Education and Special Programs (ESP). The position will be filled on a 1- or 2-year visiting scientist, temporary, or Intergovernmental Personnel Act (IPA) basis to commence in the fall of 2003. The salary range, which includes locality pay adjustment, is from \$78,265 to \$121,967 per annum. Applicants must have a Ph.D. or equivalent experience in Astronomy or a related field of science plus 6 or more years of successful research experience beyond the Ph.D. Applicants must submit a resume or other application form of choice along with up to three letters of recommendation. Applications must specify the job title for which you are applying, and they should include the following information: country of citizenship; information about education, including major and type and year of degree(s); complete information about experiences related to this job, including job titles, duties and accomplishments, employer's name and phone number, starting and ending dates; and salary to: National Science Foundation, Executive Visiting Personnel Branch 4201 Wilson Blvd. Suite 315, Arlington, VA 22230, Attn: Jacqueline S. Jackson. For more information see the full description at <http://www.nsf.gov/oirm/hrm/jobs>. When applying, applicants should refer to vacancy announcement number E20030019-Rotator. For more information, contact Dr. Eileen Friel, Executive Officer, 703-292-4895. Hearing impaired individuals should call 703-292-8044. NSF is committed to employing a highly qualified staff that reflects the diversity of our Nation.

No. 13190

Assistant Professor Physics or Astronomy
EAST TENNESSEE STATE UNIVERSITY
Dept. of Physics & Astronomy
BOX 70652
Johnson City, TN 37614
Tel: 423-439-4231
FAX: 423-439-6905
Email Inquiries: closed@etsu.edu
URL: <http://www.etsu.edu/physics>

Attention: Search Committee Chair

The Department of Physics and Astronomy invites applications for a tenure-track Assistant Professorship to begin in August 2003. We are seeking candidates with postdoc experience who will complement our current faculty. A successful candidate must demonstrate an ability to attract external funding. Candidates must be committed to high quality teaching at all undergraduate levels and demonstrate how they can involve undergraduates in their research efforts. Applicants should submit a letter of application addressing their teaching experience and proposed research program and a vita, including the names of at least three scientists familiar with the applicants work. This material should be sent to Search Committee Chair, at the above address by 30 January 2003. ETSU is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and minorities.

No. 13191

Postdoc in gravitational wave astrophysics

PENN STATE CENTER FOR GRAVITATIONAL WAVE PHYSICS

104 Davey Laboratory

University Park, PA 16802

Tel: 814-865-5203

FAX: 814-863-9608

Email Submission Address: cmh32@PSU.Edu

Email Inquiries: LSFinn@PSU.Edu

URL: <http://gravity.psu.edu>

Attention: Camma Homan, Administrative Aide

The National Science Foundation Physics Frontier Center for Gravitational Wave Physics expects to make one or more appointments in the area of the astrophysics of gravitational wave sources. Specific areas of interest include, but are not limited to, astrophysical modeling of sources and their populations (e.g. black holes and formation of black holes and black hole binaries, dynamics of binaries and clusters, supermassive black hole binaries, evolution of dense stellar systems, etc) and interpretation of electromagnetic or other signals coincident with GW emission (gamma ray bursts, supernovae, tidal disruption events, exotic physics).

The core, resident faculty of the Center are Abhay Ashtekar, Sam Finn, Pablo Laguna, Peter Meszaros, Steinn Sigurdsson and Alex Wolszczan, who lead research programs in the critical areas involved. Other frequently visiting non-resident faculty members include W. Anderson, P. Brady, M. Choptuik, M. Diaz, E. Flanagan, G. Gonzalez, R. Price, J. Pullin, J. Romano, R. Stebbins, K. Strain, and J. Tohline. The Center has a major international visitor program and host frequent workshops focused on critical problems in this field. Other leading related research programs at Penn State include the theory of

g

**NETHERLANDS FOUNDATION FOR RESEARCH IN ASTRONOMY (ASTRON),
JOINT INSTITUTE FOR VLBI IN EUROPE (JIVE)**

Oude Hooegeveensedijk 4

Dwingeloo, 7991 PD

The Netherlands

Tel: +31 521 595223

FAX: +31 521 597332

Email Submission Address: csonka@astron.nl

Email Inquiries: csonka@astron.nl

URL: www.astron.nl or www.jive.nl

Attention: N. Csonka, Mrs

The Netherlands Foundation for Research in Astronomy (ASTRON) and the Joint Institute for VLBI in Europe (JIVE) announce the availability of a limited (up to 6) number of grants for their 2003 Summer Research Program. The program enables astronomy students (graduate or advanced undergraduate) to spend the summer (10 to 12 weeks) at the Dwingeloo Observatory, conducting astronomical research under the supervision of ASTRON and JIVE staff members. Possible topics of study include radio galaxies and quasars, aspects of observational cosmology, continuum and line emission/absorption from normal and starburst galaxies, faint radio sources, pulsars, molecular clouds and the interstellar medium. The actual project the successful candidate will work on will be defined after arrangement with the local supervisor.

ASTRON operates the 2.7 km Westerbork Synthesis Radio Telescope (WSRT) used largely for precision mapping at wavelengths from 3.6 to 92 cm. JIVE operates the European VLBI Network's 16-station MkIV VLBI Data Processor. For more information see our web sites at www.astron.nl and www.jive.nl.

The research grants will provide successful candidates with accommodation at the Observatory, a modest stipend for up to three months, and full travel reimbursement. We expect most participants to begin in early June 2003. If this is not possible please indicate why.

Please send or fax to the address given above (attn. Ms Nanuschka Csonka) the completed application form, which can be obtained from <http://www.astron.nl/wsrt/summer.html>, together with a statement of your scientific interests and the names and addresses of two persons that will provide letters of reference. Applicants should arrange for these letters of reference to be sent directly to the same address. Completed applications AND references should be received by 15 February 2003. If required, printed copies of the application form can be requested by sending email to csonka@astron.nl.

No. 13193

Astronomy Instructor

MIRACOSTA COMMUNITY COLLEGE

Tel: 1-888-201-8480, ext. 6868

Email Inquiries: jobs@miracosta.edu

URL: www.miracosta.edu/info/admin/HR/jobs

Attention: Human Resources

Astronomy Instructor: MiraCosta Community College in coastal San Diego County, California, invites applications for tenure-track position beginning August 2003. Responsibilities will include teaching general education introductory astronomy lecture courses, and development and teaching of an introductory astronomy lab. Closing date 1/31/03. For application, job announcement, and salary information, visit website www.miracosta.edu/info/admin/HR/jobs. Or call job line 760-795-6868 or toll free 1-888-201-8480, ext. 6868. Or leave request by e-mail jobs@miracosta.edu EOE.

No. 13194
Perren Professor of Astronomy
UNIVERSITY COLLEGE LONDON
Gower Street
London WC1E 6BT
United Kingdom

Attention: Provost c/o Mr. T. Perry, Director of Academic Services

Applications are invited for the Perren Chair of Astronomy, based in UCL's Department of Physics and Astronomy. The Department conducts wide-ranging programmes of research in theoretical and observational astronomy, astrophysics, atmospheric physics, detectors and astronomical instrumentation development. The department also has major research groups in Atomic, Molecular, Optical & Positron Physics, Condensed Matter & Materials Physics, Elementary Particle Physics, and Image Processing. Many of these groups have strong links.

Applicants will have made significant contributions at the forefront of international research in astrophysics and have a clear potential for further achievements. The successful candidate will be expected to lead a major research group and to undertake normal undergraduate teaching duties and supervise postgraduate students.

The Department is particularly keen to significantly enhance its programmes in extragalactic astrophysics, in order to exploit the new generation of ground- and space-based facilities. Applications from candidates with strong observational or theoretical interests in this area are particularly encouraged, but applications are also invited from candidates in closely related areas of astrophysics. Salary is by negotiation.

Informal enquiries and further particulars about the post may be obtained from Prof. B. R. Martin, Head of Department of Physics and Astronomy, at the above address. Applications, including a full curriculum vitae (10 copies for UK candidates, one copy for overseas), details of three referees (at least one of whom should be from outside the UK) and current salary, should be addressed to the Provost and sent to Mr. T. Perry, Director of Academic Services, at the above address.

The closing date for receipt of applications is 31 January 2003.

No. 13195
Postdoctoral Fellow in Computational MHD
INSTITUTE FOR COMPUTATIONAL ASTROPHYSICS
Department of Astronomy and Physics

Saint Mary's University
Halifax, Nova Scotia B3H 3C3
CANADA
Tel: 902-420-5830
FAX: 902-496 8218
Email Submission Address: dclarke@ap.stmarys.ca
Email Inquiries: dclarke@ap.stmarys.ca
URL: <http://www.ap.stmarys.ca>

Attention: Dr. David Clarke, Acting Director, ICA

Applications are solicited for a postdoctoral position in the newly formed Institute for Computational Astrophysics (ICA). Subject to NSERC funding, the appointment is initially for two years, renewable for a third. The successful candidate will hold a PhD in astronomy, astrophysics, or physics, have experience in computational astrophysical fluid dynamics, and spend at least half of their time working on code development (AZEUS) and on problems related to accretion/ejection and gravitational collapse. Teaching opportunities for additional remuneration are also available.

The Department of Astronomy and Physics currently has eleven full-time faculty members (with five in the ICA including two Canada Research Chairs) and operates a ten-processor Sun Enterprise 4500. Access to other facilities in Canada can be made available via C3.ca if needed. As a new institute, the ICA will be acquiring new platforms such as a Beowulf cluster, and is participating in a regional supercomputing initiative (AC3.ca). Current areas of interest in the ICA include stellar structure, evolution, pulsation, and hydrodynamics; MHD outflows and collapse; non-LTE stellar atmospheres; and planetary formation and dynamics. A common theme for all areas is multi-dimensional numerical simulations.

Applicants should submit a curriculum vitae, list of publications, statement of research interests, and have three letters of reference sent to the above address by 14 March 2003. For more information, contact dclarke@ap.stmarys.ca or visit www.ap.stmarys.ca. While this advertisement is directed in the first instance to Canadian citizens and permanent residents, all qualified candidates are strongly encouraged to apply. Saint Mary's University is committed to the principles of employment equity.

No. 13196
Postdoctoral Fellow (up to 5 years)
INSTITUTE FOR COMPUTATIONAL ASTROPHYSICS
Department of Astronomy and Physics
Saint Mary's University
Halifax, Nova Scotia B3H 3C3
CANADA
Tel: 902-420-5830
FAX: 902-496 8218
Email Submission Address: rdeupree@ap.stmarys.ca
Email Inquiries: rdeupree@ap.stmarys.ca
URL: <http://www.ap.stmarys.ca>

Attention: Professor Robert Deupree, Director Designate, ICA

Applications are solicited for a postdoctoral position in the newly formed Institute for Computational Astrophysics (ICA). The appointment is initially for two years and renewable for up to five. The successful candidate will hold a PhD in astronomy, astrophysics, or physics, and will be free to pursue his or her own research agenda in any area of computational astrophysics. Teaching opportunities for additional remuneration are also available.

The ICA has five full-time faculty members including two Canada Research Chairs (CRCs) and was formed by the University Senate as a focus for some of its CRC allocation and to fill a niche in the Canadian astrophysical community. Current areas of ICA research and interests include stellar structure, evolution, pulsation, and hydrodynamics; MHD outflows and collapse; non-LTE stellar atmospheres; and planetary formation and dynamics. A common theme for all areas is multi-dimensional numerical simulations.

The Department of Astronomy and Physics (with eleven full-time faculty members) operates a ten-processor Sun Enterprise 4500. Access to other facilities in Canada can be made available via C3.ca if needed. As a new institute, the ICA will be acquiring new platforms such as a Beowulf cluster, and is participating in a regional supercomputing initiative (AC3.CA).

Applicants should submit a curriculum vitae, list of publications, statement of research interests, and have three letters of reference sent to the above address by 14 March 2003. The starting date is at the discretion of the candidate and the ICA, and could be as early as June, 2003. For more information, contact rdeupree@ap.stmarys.ca or visit www.ap.stmarys.ca. While this advertisement is directed in the first instance to Canadian citizens and permanent residents, all qualified candidates are strongly encouraged to apply. Saint Mary's University is committed to the principles of employment equity.

No. 13197

Assistant Research Physicist

UNIVERSITY OF CALIFORNIA, BERKELEY

1 Grizzley Peak Blvd.

Berkeley, CA 94720-7450

Tel: 510-642-1528

FAX: 510-643-7629

Email Submission Address: judy@ssl.berkeley.edu

Email Inquiries: westphal@ssl.berkeley.edu

Attention: Judy Jones, Personnel Manager

Applications are invited for an Assistant Research Physicist position at the Space Sciences Laboratory at the University of California at Berkeley. We are looking for a highly-qualified researcher to work with us on our development of highly robust techniques for location, extraction and handling of extraterrestrial particles captured in aerogel collectors. We are employing automated mining methods using robotically-controlled micromanipulators, MEMS microtweezers for extraction, and several novel techniques for storage of extracted particles, including storage in etched nuclear tracks. The successful candidate will have a Ph.D. in Physics with extensive computer experience, preferably but not necessarily with robotics applications, extensive experience in the handling and analysis of small particles and experience in extraction of small particles from aerogel collectors. Depending on availability of funds, the successful candidate may also participate in the development of flight-qualified calorimetric aerogel, which could be used to passively identify extraterrestrial particles in a collector in

low-earth orbit. Appointment will be for three years, contingent upon available funds. UC is an Equal Opportunity/Affirmative Action Employer.

No. 13198

Columbia University Science Fellows in Astronomy

COLUMBIA UNIVERSITY

Dept of Astronomy, Mail Code 5246

550 W 120th Street

New York, NY 10027

Tel: 212-854-2150

FAX: 212-854-8121

Email Submission Address:

Email Inquiries: djh@astro.columbia.edu

URL: <http://www.astro.columbia.edu>

Attention: Prof David Helfand, Chair, Dept of Astronomy

Columbia University announces the creation of the Columbia Science Fellows Program. We seek young scientists at the postdoctoral level intending to pursue active research programs in the physical or life sciences who are also interested in interdisciplinary science teaching for undergraduates. A description of the program along with application instructions can be found at <http://www.ccnmtl.columbia.edu/projects/frontiers/fellows.html> The application deadline is 31 January 2003. Columbia University is an equal opportunity/affirmative action employer, women and minorities are encouraged to apply.

No. 13199

Senior Fellow in Astrophysics

UNIVERSITY OF CALIFORNIA, BERKELEY

Department of Physics

557 Birge Hall

Berkeley, California 94720-7300

Attention: Charles Townes, Professor

Applications are invited for the position of Senior Fellow at the Space Sciences Laboratory (SSL) with emphasis on stellar interferometry and stellar behavior. The position involves participation in the Infrared Spatial Interferometry (ISI) group directed by Professor Charles Townes, which has built and operates a mid-infrared interferometric system of three movable telescopes on the Mt. Wilson Observatory. The Fellow should be capable in both experimental work and theoretical analysis. SSL Senior Fellows have full Principal Investigator status and are expected to independently pursue additional sources of support with the goal of building a research group, as well as to participate in the supervision of graduate students. Funds are available for interferometric work and salary support. The level of appointment could be Assistant, Associate, or Full Research Scientists, depending on qualifications and background.

Please send Curriculum Vitae, list of publications, statement of research interests and project experience,

and three letters of reference to Professor Charles Townes at the above address by 15 February 2003. The University of California is an Equal Opportunity Employer. Women and minorities are particularly encouraged to apply. AAE/EOE.

No. 13200

**Senior Fellow in Experimental Astrophysics
UNIVERSITY OF CALIFORNIA, BERKELEY
Department of Physics
366 Le Conte Hall
Berkeley, California 94720
Email Submission Address: genzel@socrates.berkeley.edu**

Attention: Dr. Reinhard Genzel

The Space Sciences laboratory (SSL) and the Physics Department of UC Berkeley invite applications for a SSL Senior Fellow, as part of an International Program in Astrophysics between UC Berkeley and the Max-Planck-Institute fuer extraterrestrische Physik, Garching, Germany (MPE). SSL Senior Fellows have full P.I.-status and are expected to independently pursue additional sources of support with the goal of building a research group, as well as to participate in the supervision of graduate students. She/he will co-lead and coordinate the Berkeley program in experimental infrared/submillimeter astrophysics, in addition to her/his own independent research. Present projects include a large far-IR imaging spectrometer for SOFIA (FIFI-LS), a far-infrared detector laboratory, and developments of near-infrared instruments for Keck and LBT. She/he is expected to work closely with scientists from both Berkeley and MPE.

The position is initially for a period of three years, with a possibility of renewal. The appointment will be at the level of Assistant or Associate Research Physicist, depending on qualification and background. Applicants should have a Ph.D. in astronomy, physics or a related field and should have a strong background in infrared experimental astrophysics. Candidates with an established track record in extragalactic astronomy, and infrared/submillimeter instrumentation development and project leadership will be given preference.

To apply please send curriculum vitae, bibliography, statement of research interests and project experience, and three letters of reference to Dr. Reinhard Genzel at the Department of Physics, 366 Le Conte Hall, UC Berkeley, Berkeley, CA 94720 (email: genzel@socrates.berkeley.edu) by February 15, 2003 to receive full consideration. The University of California is an Equal Opportunity Employer. Women and minorities are particularly encouraged to apply. AAE/EOE.

No. 13201

**Postdoctoral Position in Galaxy Evolution with Teaching Options
UNIVERSITY OF WYOMING
16th & Gibbon
PO Box 3905
Laramie, WY 82071
Tel: 307-766-2982
Email Submission Address: chipk@uwoyo.edu**

URL: physics.uwyo.edu

Attention: Chip Kobulnicky, Professor

The University of Wyoming invites applications for a postdoctoral position in the Department of Physics & Astronomy to work with Prof. Chip Kobulnicky on space-based observational or theoretical issues relating to galaxy evolution, galaxy winds, and the chemical evolution of galaxies. Applicants should have completed a Ph.D. in astronomy or astrophysics and be ready to start no later than fall 2003. Experience working with Chandra, FUSE, or HST data is desirable. Salary is competitive and personal research is encouraged. Applicants interested in building teaching experience may elect to teach one physics or astronomy course each year. Resources include abundant access to Wyoming's 2.3 m telescope with 20' imager and integral-field fiber spectrograph, and a young energetic group of 4 newly-hired extragalactic astronomers. Applicants should send a CV, a summary of research and teaching accomplishments and interests, along with three letters of recommendation to Prof. Chip Kobulnicky at the above address. Call or email for additional details. Applications completed by 1 February 2003 will receive full consideration. AAE/EEO

No. 13202

Postdoctoral Position in Extragalactic Astronomy

UNIVERSITY OF WYOMING

PO Box 3905

Laramie, WY 82071

Tel: 307-766-6101

FAX: 307-766-2652

Email Submission Address:

Email Inquiries: mbrother@uwyo.edu

URL: physics.uwyo.edu

Attention: Dr. Mike Brotherton, Professor

The Department of Physics and Astronomy at the University of Wyoming invites applications for a postdoctoral researcher to work with Prof. Mike Brotherton on active galactic nuclei. The successful applicant will participate in obtaining and analyzing space-based observations relating to intrinsic X-ray and ultraviolet absorption associated with AGNs, quasar host galaxies, and issues of mutual quasar/galaxy evolution. There will be time available for independent research. Applicants should have completed a Ph.D. in astronomy or physics and be ready to start no later than the fall of 2003, although an earlier start date is possible. Experience working with Chandra, XMM, FUSE, or HST data is desirable. Salary is competitive. Some time will be available for personal research. Applicants interested in building teaching experience may elect to teach one physics or astronomy course each year. Available resources include Wyoming's 2.3 m WIRO telescope with wide-field imager and integral-field fiber spectrograph, and an energetic group of four recently hired extragalactic astronomers. The initial appointment is for one year, renewable for up to three years depending on performance and continued funding. Applicants should send a CV, a brief summary of research accomplishments and interests, along with three letters of recommendation addressed to Prof. Mike Brotherton at the above address. Applications received by 1 February 2003 will receive full consideration. Please note in your cover letter if you plan to attend the AAS meeting in Seattle. AAE/EOE.

No. 13203

Research Engineering/Scientist Associate V - Job # 02-10-16-03-4207

UNIVERSITY OF TEXAS AT AUSTIN - MCDONALD OBSERVATORY

HC75 - Box 1337 - MCD

Fort Davis, Texas 79734-5020

Tel: 915-426-3664

FAX: 915-426-3641

**Email Submission Address: mta@astro.as.utexas.edu Hobby-Eberly Telescope Facility
Manager - McDonald Observatory**

Attention: HET Facility Manager

Hobby-Eberly Telescope Facility Manager - McDonald Observatory Research Engineering / Scientist Associate V

Applications are invited for the position of Hobby-Eberly Telescope (HET) Facility Manager (Research Engineering / Scientist Associate V). The HET is an innovative 9.2m telescope, located in the scenic Davis Mountains of west Texas.

The HET Facility Manager supervises a staff of talented engineers and technicians, is responsible for the facility's operations and maintenance, and functions as an advocate for engineering and scientific excellence. Required qualifications include a Master's degree in Engineering, Physics, Astronomy or a related field; six years experience in engineering technical management; three years personnel supervision experience; and strong interpersonal skills. Preferred qualifications include a Ph.D. in engineering or a related field; five years experience with the design, engineering and operation of astronomical telescopes and instrumentation; and five years supervisory experience. This position requires residence in the Observatory's on-site, 33 home residential community.

HET is operated by the McDonald Observatory on behalf of a five university international consortium. The Facility Manager will be employed by the University of Texas at Austin, which offers an excellent benefits package. Applicants should submit a resume, a cover letter relating their education and experience to the needs of this position, and the names of three individuals familiar from whom letters of reference can be requested, to HET Facility Manager at the above address.

Additional information about the HET may be found on the web at:

<http://hyperion.as.utexas.edu/mcdonald/mcdonald.html> The University of Texas in an EO/AA employer.

No. 13204

Postdoctoral position on Supernovae

INAF OSSERVATORIO DI PADOVA

Vicolo dell'Osservatorio 5

Padova, 35122

Italy

Tel: +39-049-8293439

FAX: +39-049-8759840

Email Submission Address: turatto@pd.astro.it

Email Inquiries: turatto@pd.astro.it

URL: <http://www.pd.astro.it/public/competition.htm>

Attention: Dr. Massimo Turatto

A postdoc position, funded by the Osservatorio Astronomico of Padova, is open for application. The funding is 100% for 3 years.

The candidate will be involved in the ongoing observational projects of our Group and will have access to the facilities of ESO-Paranal and La Silla, TNG (La Palma) and Asiago (Italy). In particular he is expected to collaborate in the management, observation, reduction and analysis of the data collected within an European collaboration on SNe. The main goal of this research work is to reach a better understanding of both the explosive nucleosynthesis and the physical properties of the progenitors, as well as to study how supernovae can be used as cosmological probes. Part of his time will be devoted to the definition and implementation of an archive of the material of this collaboration. Observational and data reduction experience and a good physics background are important. Computational skills will be positively considered. The applicant must have a PhD in physics, astronomy, or a closely related field.

The successful applicant will be part of the Padova node of a Research Training Network of the European Community for studies of Supernovae (RTN2-2001-00037). According to EU conditions, the successful applicant must be national of a Member State of the Community or of an Associated State or residing in the Community for at least 5 years prior of his/her appointment. Moreover, he/she must not be Italian citizen and cannot have carried out his normal activity in Italy for more than 12 of the 24 months prior to his/her appointment. The net emolument of the Student will be of the order of 2300-2400 euro/month.

The application should include:

- 1) curriculum vitae,
- 2) extract of undergraduate and graduate studies including grades,
- 3) a copy of the PhD thesis,
- 4) three recommendation letters,
- 5) possible description of own research and research interests
- 6) other relevant material for our selection process.

The deadline for application is 28 February 2003. The successful applicant is expected to start ASAP.

No. 13205

Assistant Professor, Experimental Nuclear Physics

UNIVERSITY OF TENNESSEE

401 Nielsen Physics Building

Knoxville, TN 37996-1200

Tel: 865-974-7802

FAX: 865-974-7843

Email Submission Address: cbingham@utk.edu

Email Inquiries: cbingham@utk.edu

Attention: Professor Carrol Bingham

The Department of Physics and Astronomy at the University of Tennessee invites applications for a tenure-track position at the rank of Assistant Professor within the field of Experimental Nuclear Physics. Exceptional candidates at the Associate Professor level will also be considered. While we particularly encourage candidates with research interests at the future Rare Isotope Accelerator, we will also accept applications from individuals with a background, or interest, in other areas of experimental nuclear physics; especially Relativistic Heavy Ion Physics or Fundamental Physics with Neutron Beams.

The successful candidate is expected to have a strong research record, an outstanding promise for future research accomplishments, a willingness to interact with other on-going research programs within the Department, and a strong commitment to undergraduate and graduate education. Candidates must have a Ph.D. in Nuclear Physics or a closely related field and suitable postdoctoral or faculty experience. Applicants should send a CV, a letter describing future research interests and a list of at least three referees to Professor Carrol Bingham, at the above address. Review of applications will begin on 15 January 2003 and will continue until the position is filled. The University of Tennessee is an Equal Opportunity/Affirmative Action Title VI/Title IX/Section 504/ADA Employer and Educator.

No. 13206

Postdoctoral Position in Interstellar/Intergalactic Medium Studies

UNIVERSITY OF MASSACHUSETTS

619 E Lederle Graduate Research Tower

710 N. Pleasant Street

Amherst, MA 01003

Tel: 413-545-0789

FAX: 413-545-4223

Email Submission Address: keyword@astro.umass.edu

URL: www.astro.umass.edu

Attention: Barbara Keyworth, Departmental Assistant

Applications are invited for an observational postdoctoral research position in the Astronomy Department at the University of Massachusetts to work in the field of galaxy formation and evolution with Prof. Todd Tripp. Emphasis will be placed on observations of interstellar and intergalactic gas and their roles in the evolution of galaxies and large scale structures. Expertise in ISM/IGM physics, high-resolution spectroscopy, absorption lines in the spectra of QSOs and hot stars, and reduction and analysis of spectroscopic and imaging data are highly desired. The successful applicant will be expected to make use of high-resolution spectra that we are obtaining with the Hubble Space Telescope and the Far Ultraviolet Spectroscopic Explorer. The position will be available beginning September 2003, and is initially for two years, with the possibility of renewal for a third year. Candidates must hold a PhD in Astronomy, Physics, or a related field. Salary will be commensurate with experience. Applicants should submit a curriculum vitae, list of publications, and brief description of research interests, and arrange for three letters of recommendation to be sent to:

Postdoctoral Position in Interstellar/Intergalactic Medium Studies

c/o Barbara Keyworth, Departmental Assistant

University of Massachusetts

619 E Lederle Graduate Research Tower

710 N. Pleasant Street

Amherst, MA 01003

Evaluation of applications will begin on 15 February 2003. Further information on the Department of Astronomy at University of Massachusetts can also be found on the web at <http://www.astro.umass.edu>.

The University of Massachusetts is an equal opportunity/affirmative action employer. Women and members of minority groups are encouraged to apply.

No. 13207

Postdoc Position in Solar Physics

ASTROPHYSIKALISCHES INSTITUT POTSDAM (GERMANY)

Telegrafenberg A27

Potsdam, D-14473

Germany

Tel: +49-331-288-2300

FAX: +49-331-288-2310

Email Submission Address: jstaude@aip.de, balthasar@aip.de

Email Inquiries: jstaude@aip.de

URL: <http://aipsoe.aip.de>

Attention: Juergen Staude or Horst Balthasar, Prof., Dr.

The solar physics division of the Astrophysical Institute Potsdam offers a postdoctoral position for a period of 2.5 years. This position is funded by the European Union within the project 'European Solar Magnetism Network' (ESMN).

The successful candidate will participate in spectropolarimetric observations and their interpretation. The special task will be the development and improvement of inversion techniques for chromospheric lines. Experience in NLTE-calculations of line profiles would be of advantage.

Salary depends on age and family state following the German scale BATIIa-O. Application rules required by the EU are to be kept strictly, for details see: <http://www.cordis.lu/improving/networks/faq.htm#q5>

Applications including a CV, a brief statement of research experience, list of publications and names of three referees should be sent before 28 February 2003 (preferred electronically) to Prof. J. Staude or Dr. H. Balthasar at the above address or hbalthasar@aip.de, +49-331-288-2306

No. 13208

SIRTF Infrared Astronomy Postdoctoral Appointment

UNIVERSITY OF ROCHESTER

Bausch and Lomb Bldg. Rm. 422

Dept. of Physics and Astronomy

Rochester, NY 14627

Email Inquiries: jlipher@astro.pas.rochester.edu

Attention: Judith L. Pipher, Professor

The Near Infrared Astronomy Group of the University of Rochester has an immediate need to fill a postdoctoral position. This position would involve support of both IRAC and IRS GTO observations, as well as associated ground-based observing. This is a one year position, with renewal likely (pending continued funding). The successful applicant will work on GTO programs, ERO programs and IOC programs with which the faculty members are associated, including the study of young embedded clusters, disks around young stars, reflection nebulae, gamma ray bursters, as well as other programs.

Send a curriculum vitae and a short description of research interests and capabilities, as well as the names of three possible references to either Judith L. Pipher or William J. Forrest. Women and minorities are encouraged to apply: The University of Rochester is an Affirmative Action/Equal Opportunity Employer.

Prof. Judith L. Pipher, (585)275-4402
e-mail: jlpipher@astro.pas.rochester.edu

Prof. William J. Forrest, (585)275-4343
e-mail: forrest@astro.pas.rochester.edu

No. 13209
Postdoctoral Research Associate
UNIVERSITY OF CALIFORNIA, BERKELEY
Department of Astronomy
601 Campbell Hall
Berkeley, CA 94720-3411

Attention: Professor Alex Filippenko

Pending grant approval, we expect to make a postdoctoral research appointment in the field of supernova studies, directed by Prof. Alex Filippenko. The successful candidate will help (1) obtain long-term optical light curves of supernovae from diverse data sets; (2) analyze ground-based optical spectra of supernovae; (3) analyze HST data on supernovae; (4) conduct a study of high-redshift supernovae as cosmological distance indicators; (5) conduct a search for supernovae using an automated 0.8-m CCD imaging telescope at Lick Observatory; and (6) study the environments of supernovae, using both ground-based and HST data. In addition, the successful candidate will participate in writing proposals and papers, developing data analysis software, and assisting graduate and undergraduate students in the research group.

Minimum qualifications include a Ph.D. in astronomy or physics, and experience with astronomical observations and data reduction on Sun Unix workstations. Knowledge of current supernova-related problems and a demonstrated competence in their solution are highly desired additional qualifications. Work will commence on 1 July 2003, or as soon thereafter as possible. The appointment may start on an earlier date, if mutually convenient.

The initial appointment is for one year, with renewal expected if progress is satisfactory and funds continue to be available. The starting salary will be commensurate with experience, and competitive with other postdoctoral positions.

Please mail a resume, list of publications, and copies of two recent publications (preprints or reprints) so that they arrive by 14 February 2003 to Prof. Alex Filippenko, at the above address. Applicants should

also list the names, phone numbers, and e-mail addresses of three people who could provide reference letters upon request. Immigration status of non-citizens should be stated in the resume. The University of California is an Equal Opportunity/Affirmative Action Employer.

No. 13210

Postdoctoral Positions in High Energy Astrophysics

UNIVERSITY OF MASSACHUSETTS

619 E Lederle Graduate Research Tower

710 N. Pleasant Street

Amherst, MA 01003

Tel: 413-545-0789

FAX: 413-545-4223

Email Submission Address: keywordh@astro.umass.edu

URL: www.astro.umass.edu

Attention: Daniel Wang c/o Barbara Keyworth

Applicants are invited for one or more postdoctoral research positions in the UMASS high energy astrophysics group led by Daniel Wang. The successful applicants will be involved in the planning and implementation of observing programs, the analysis and interpretation of data from HST, Chandra, and XMM-Newton as well as other space and ground-based observatories, and the publication of scientific results. A PhD is required, and strong background in both theory and data analysis of diffuse X-ray emission would be a significant advantage. The salary will be commensurate with qualifications and experience. The position is for two years initially with the possibility of renewal for a third year. To apply, please submit a resume consisting of CV and a statement of research interests and arrange for three letters of recommendation to be sent to :

Postdoctoral Research Positions in High Energy Astrophysics

Daniel Way, c/o Barbara Keyworth

University of Massachusetts

619 E Lederle Graduate Research Tower

710 N. Pleasant Street

Amherst, MA 01003

Review of applications will begin 15 February 2003 and will continue until the positions are filled. Start dates are negotiable.

Women and members of minority groups are encouraged to apply. AAE/EOE

No. 13211

NOAO Gemini Science Center (NGSC) Postdoctoral Fellow

NATIONAL OPTICAL ASTRONOMY OBSERVATORY

P.O. Box 26732

Tucson, AZ 85726-6732

Attention: Human Resources Manager

The National Optical Astronomy Observatory (NOAO) invites applications for the NOAO Gemini

Science Center (NGSC) Postdoctoral Fellow. The position will have a term of 3 years and will be located either at NOAO headquarters in Tucson, Arizona, or at NOAO-South in La Serena, Chile.

We invite applications from observational astronomers interested in developing their careers in a dynamic research environment with staff working on a wide range of topics including observational cosmology, stellar populations, star formation and evolution, development of adaptive optics, and optical and infrared instrumentation. The successful candidate is expected to spend two thirds of his/her time pursuing an ambitious research program, utilizing the Gemini telescopes for innovative science. In addition to his or her own research, the successful candidate is expected to spend the remaining one third of the time on aspects of the US Gemini program, including user and operations support, instrument development, and queue or service observing. The instruments that will become available at Gemini during 2003 include two mid-IR camera/spectrographs (T-ReCS and Michelle), an optical multi-object spectrograph and imager (GMOS South), and an infrared spectrograph (GNIRS); USGP also operates Phoenix (a high resolution 1-5 micron spectrograph) on behalf of the Gemini partnership. See <http://www.us-gemini.noao.edu/sciops/instruments/instrumentIndex.html> for a more complete description of the Gemini observing capabilities.

The successful candidate will work primarily in Tucson, Arizona or La Serena, Chile. The Gemini South Observatory and NOAO-South share an operation base run by AURA in La Serena. The city of La Serena is a major seaside tourist destination in South America, with a climate very similar to San Diego, California. NOAO staff members receive excellent benefits; a position at NOAO-South also features an overseas allowance, an educational stipend for dependent children, international health care benefits, and annual travel to the point of hire for staff and family.

Applicants should submit to the HR Manager a vita, a publication list, a statement of current research experience, a description of the research to be performed during the NGSC fellowship, and a preferred NOAO site. In addition, please arrange for three letters of recommendation to be sent to Human Resources Manager at the above address.

The position is open until filled. However, applicants are encouraged to submit materials before 1 February 2003. For questions about this position, please contact Dr. Taft Armandroff, Director of NGSC (armand@noao.edu). NOAO is an equal opportunity/affirmative action employer.

No. 13212

Postdoctoral Research Associate in Extragalactic Astronomy

UNIVERSITY OF MINNESOTA

The Observatories

Madingley Road

Cambridge, CB3 0HA

United Kingdom

Tel: 44-1223-765848

FAX: 44-1223-339910

Email Submission Address: skillman@astro.umn.edu

Email Inquiries: skillman@astro.umn.edu

Attention: Evan D. Skillman, Professor

A post-doctoral research associate position in astrophysics is available at the University of Minnesota, to

work with Evan Skillman on space-based observations relevant to the understanding of the evolution of dwarf galaxies. Work with additional supporting observations from ground-based facilities will also be supported. The applicant should have a Ph.D. in Astrophysics, Astronomy, or Physics. Preference will be given to applicants with a publication record in stellar populations or interstellar medium studies. The position will begin in the Fall of 2003. Applicants should send a CV, a brief summary of research experience and interests, a bibliography, and the names of two or more references to Prof. Skillman, who is on sabbatical leave at the Institute of Astronomy, Cambridge University, Madingley Road, Cambridge, CB3 0HA, UK. Consideration of applications will begin on 15 February 2003 and continue until the position is filled. E-mail inquiries: skillman@astro.umn.edu. The University of Minnesota is an affirmative action/equal opportunity employer.

No. 13213

Detector Scientist

BOSTON UNIVERSITY

725 COMMONWEALTH AVE

RM 506

BOSTON , MA 02215

Tel: 617-353-5990

FAX: 617-353-6463

Email Submission Address: SUPC@BU.EDU

Email Inquiries: SUPC@BU.EDU

Attention: SUPRIYA CHAKRABARTI, DIRECTOR

The Center for Space Physics, Boston University is seeking a Detector Scientist to join the SPIDR satellite team (www.bu.edu/spidr), a NASA Small Explorer mission to detect the "Cosmic Web" which is due to be launched in 2005. The successful candidate will play a crucial role in the manufacture, test, calibration and flight verification of the detector systems for the SPIDR satellite program.

The applicant must have a Ph.D. in physics, astronomy, applied physics, or related field and will have practical experience working with detector systems, including assembly and test activities. Familiarity with clean room procedures, vacuum systems, low-noise electronics, data acquisition systems, and computer programming is desirable.

The position is available from January 2003. Written applications including a CV, list of publications and statement of research interests, and the names of three referees should be sent the above address.

No. 13214

Instrument Scientist

BOSTON UNIVERSITY

725 COMMONWEALTH AVE

RM 506

BOSTON , MA 02215

Tel: 617-353-5990

FAX: 617-353-6463

Email Submission Address: SUPC@BU.EDU

Email Inquiries: SUPC@BU.EDU

Attention: SUPRIYA CHAKRABARTI, DIRECTOR

The Center for Space Physics, Boston University is seeking an Instrument Scientist to be responsible for the assembly, test and calibration of UV spectrographs for the SPIDR satellite(www.bu.edu/spidr), a NASA Small Explorer mission to detect the "Cosmic Web" which is due to be launched in 2005. The successful candidate will play a crucial role in the manufacture, test, calibration and flight verification of the imaging spectrographs used in the SPIDR satellite.

The applicant must have a Ph.D. in physics, astronomy, applied physics, or related field and will have practical experience working with optical instruments, including assembly, test and calibration activities. Familiarity with UV optics, spectrometers, clean room procedures, and computer programming is desirable.

The position is available from January 2003. Written applications including a CV, list of publications and statement of research interests, and the names of three referees should be sent to the above address.

No. 13215
Canada Research Chair in Star Formation
UNIVERSITY OF WESTERN ONTARIO
Department of Physics and Astronomy
1151 Richmond Street
London, Ontario N6A 3K7
Canada
Tel: 519-661-2111 Ext. 86441
FAX: 519-661-2033
Email Submission Address: cottam@uwo.ca
Email Inquiries: njwilson@uwo.ca

Attention: Professor Michael G. Cottam, Chair

The Department of Physics & Astronomy announces a search for a Tier II (Junior) Canada Research Chair at the Assistant or Associate Professor probationary (tenure-track) level in observational star formation. All CRC appointments are subject to approval by the CRC with an anticipated starting date of 1 January 2004 or thereafter.

The Canada Research Chair (CRC) program has been established by the Government of Canada to enable Canadian universities to foster world-class research excellence (see <http://www.chairs.gc.ca>).

The successful candidate will have an outstanding record of accomplishments in star formation research, demonstrate potential for leadership in the use of the current and upcoming generation of world-class observatories, and be expected to develop a vigorous research program involving the training of graduate students. Teaching at both the undergraduate and graduate levels will also be expected. CRC positions are open to candidates of any nationality.

The Department of Physics & Astronomy has major research groups in astronomy, atomic and molecular physics, condensed matter physics, and space and atmospheric physics. For more information, see <http://www.physics.uwo.ca> and <http://www.astro.uwo.ca>.

We will begin considering applications and letters of recommendation on April 30, 2003. The search will continue until the position is filled. Candidates should submit a curriculum vitae, list of publications, and research plan, and arrange for at least three letters of reference to be sent to the above address.

The University of Western Ontario is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people and persons with disabilities.

No. 13216

Temporary Faculty Position in Astrophysics

SWARTHMORE COLLEGE

Swarthmore College

500 College Ave.

Swarthmore, PA 19081

Tel: 610-328-8257

FAX: 610-328-7895

Email Submission Address:

Email Inquiries: abug1@swarthmore.edu

URL: <http://physics.swarthmore.edu>

Attention: Amy Bug, Chair

The Department of Physics & Astronomy at Swarthmore College (<http://physics.swarthmore.edu>) invites applications for a temporary leave replacement position in Astronomy at the Assistant Professor level starting in September 2003. The initial appointment will be for one year, with the possibility of renewal for a second year. The successful candidate must have a strong interest in undergraduate teaching at a four-year liberal arts college and be excited by the opportunity to participate in a growing astronomy/astrophysics program. The primary teaching duties will include classes ranging from introductory astronomy for non-majors (up to 30 students) with labs to advanced seminars on specific topics for upper level students. The deadline for receipt of applications is March 1, 2003. On-campus interviews, which will include both teaching a class and presenting a research colloquium, will take place subsequently. Applicants should submit an application consisting of (1) a curriculum vitae, (2) a statement describing teaching experience and approach to teaching at a four-year liberal arts college, and (3) a description of the research program the applicant has pursued and might continue at Swarthmore. In addition, applicants should ensure that at least three letters of recommendation are received before the deadline. Applications and letters of recommendation should be sent to Associate Professor Amy Bug, Chair, Department of Physics & Astronomy, Swarthmore College, Swarthmore, PA 19081. Swarthmore College is an Equal Opportunity Employer. Women and minority candidates are strongly encouraged to apply.

No. 13217

Postdoctoral Position in Radio Astronomy

MAX-PLANCK-INSTITUT FÜR RADIOASTRONOMIE

Auf dem Huegel 69

53121 Bonn

Germany

Tel: 49-228-525-297

FAX: 49-228-525-435

Email Submission Address: kmenten@mpifr-bonn.mpg.de

Email Inquiries: kmenten@mpifr-bonn.mpg.de

URL: www.mpifr

X-ray observations with the Chandra and XMM observatories as well as incorporation of multiwavelength data including radio and optical observations where appropriate.

Candidates must possess a Ph.D. or equivalent in astronomy, physics, or a closely related field; experience in observational research related to SNR and/or neutron star physics; and experience in the analysis and modeling of data from X-ray missions. To carry out the required research tasks successfully, candidates must have familiarity with modern computer techniques as well as demonstrated ability to communicate and work with other scientists and to prepare material for publications, proposals, and presentations at meetings.

The appointment will be for two years, beginning after February 2003, at an annual stipend of about \$45,500. Extension to a third year will be subject to performance and availability of funds.

Interested applicants should send a curriculum vita and bibliography, a brief statement of research interests, and the names of three references to the above address no later than 31 January 2003. For further information, please contact Dr. Patrick Slane (slane@cfa.harvard.edu) and see our group research page at http://hea-www.harvard.edu/~psr_snr. AAE/EOE.

No. 13219

TenureTrack Position in High Energy Astrophysics

**ASTRONOMICAL INSTITUTE 'ANTON PANNEKOEK', FACULTY OF SCIENCE,
UNIVERSITY OF AMSTERDAM**

Kruislaan 403

Amsterdam, 1098 SJ

The Netherlands

Tel: +31-20-5257487

FAX: +31-20-5257484

Email Submission Address: lide@science.uva.nl

Email Inquiries: michiel@science.uva.nl or rwijers@science.uva.nl

URL: <http://www.astro.uva.nl>

Attention: Ms. L. Stolte

Requirements for this position are a PhD, an outstanding research record in observational high-energy astrophysics and teaching abilities. The candidate is expected to develop an internationally competitive research program based on space- and ground-based instrumentation (e.g., XMM/Chandra/RXTE/VLT/WSRT) embodying their own primary research interests yet with strong links to other HEAp research at the Institute, and will participate in teaching and administration.

High-energy astrophysics research in Amsterdam focuses on compact objects, in particular X-ray binaries, radio pulsars and gamma-ray bursts. Other research areas include star formation and astrochemistry. The institute participates in NOVA, a national school of excellence. There is competitive access to outstanding observing and computational facilities as well as funding. The institute has a dozen staff, about 20 PhD students and 10 postdocs and is characterized by an open, interactive and cooperative spirit.

This "universitair docent" (assistant professor) appointment is tenure-track, with a tenure decision after two years. Gross monthly salary is up to Euro 3885,- (plus benefits) depending on age and experience.

Applications are considered until at least 1 February 2003. Include a CV, a statement of research interests, a bibliography and the names of three references. The candidate should speak and write Dutch or learn this within several years. Women are encouraged to apply to this position.

No. 13220

Postgraduate Researcher in Very-High-Energy Gamma-Ray Astrophysics

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

1156 High Street

Santa Cruz, CA 95064

Tel: 831-459-3032

FAX: 831-459-5777

Email Submission Address: daw@scipp.ucsc.edu

Email Inquiries: daw@scipp.ucsc.edu

URL: <http://scipp.ucsc.edu/info/employment/milagro.pdf>

Attention: David A. Williams, Prof.

The Santa Cruz Institute for Particle Physics (SCIPP) invites applications for a Postgraduate Research Physicist in the field of very-high-energy gamma-ray astrophysics.

SCIPP is a leading group in the Milagro experiment, a wide-aperture water Cherenkov detector designed to survey and study transients in the high-energy gamma-ray sky. The successful candidate will be expected to become actively involved in the data analysis and ongoing operations of Milagro, as well as possibly participating in development for future projects.

Details are posted on the website.

No. 13221

Theory Staff Position (C3 Tenure-Track/Tenured)

MAX-PLANCK-INSTITUTE FOR ASTRONOMY

Koenigstuhl 17

Heidelberg, 69117

Germany

Tel: +49-6221-528-210

FAX: +49-6221-528-339

Email Submission Inquiries: rix@mpia.de

Attention: Personnel Department

The Max Planck Institute for Astronomy (MPIA) seeks outstanding candidates for a C3 staff position to lead a theoretical group in the research area of galaxies and cosmology.

The MPIA carries out a broad range of astrophysical research through observations, theory and instrumentation developments. Overall research foci at the MPIA are "Star and Planet Formation" and "Galaxies and Cosmology". In the area of galaxies and cosmology, the research currently encompasses stellar populations, Galactic structure, galaxy structure and dynamics, active galactic nuclei, galaxy

formation and evolution, cosmological surveys. These activities are supported by high-performance computing facilities, presently including two Beowulf PC clusters and four workstations with GRAPE5/6 boards. The MPIA is an active participant in the Sloan Digital Sky Survey, and has privileged access to Calar Alto, VLT and to the future LBT Observatory. The MPIA is actively involved in a number of future space missions, such as Herschel and NGST. Currently, theoretical work in this area revolves around N-body and hydrodynamical simulations of galaxy and halo formation, on galaxy interactions, as well as semi-analytic modelling (<http://www.mpia-hd.mpg.de/THEORY/index.html>).

The successful applicant is expected to lead a group of postdocs and graduate students, carrying out independent research programmes in the broad area of "galaxies and cosmology". Collaboration with other scientists at the MPIA is strongly encouraged. Substantive resources will be available to the successful applicant to maintain a lively visitor program, to organize workshops and to ensure computational competitiveness. The present C3 position will likely be filled as tenure-track, with a promotion to tenure foreseen after 3-5 years. An offer with tenure will be considered for exceptional senior candidates. Applicants should provide a CV, a publication list, a brief description of the current work and an outline of planned research at the MPIA. This should be sent to the Personnel Department at the above address, with reference 14-02. For general information, see http://www.mpia-hd.mpg.de/Public/index_en.html.

Applicants should also ask three referees to send letters to the same address. The deadline is 15 March 2003 but applications will be accepted until the post is filled.

Handicapped applicants will be given preference in case of equal qualifications. The Max Planck Society as the employer aims at increasing the number of female scientists in fields where underrepresented. Therefore, women are particularly encouraged to apply.

No. 13222

Postdoctoral Position in Experimental Cosmology

COLUMBIA UNIVERSITY

550 W. 120th St.

1027 Pupin, Mail Code 5247

New York, NY 10027

Tel: 212-854-4987

FAX: 212-854-8121

Email Submission Address: amber@calvin.phys.columbia.edu

Email Inquiries: amber@calvin.phys.columbia.edu

URL: <http://calvin.phys.columbia.edu/>

Attention: Amber Miller, Assistant Professor

Applications are invited for a postdoctoral position at Columbia University. The successful candidate will work with Professor Amber Miller's experimental cosmology group. Potential projects include the integration and deployment of the Sunyaev-Zel'dovich Array (SZA) and the design, construction, and deployment of the Atacama Cosmology Telescope (ACT). Science goals of these projects include measurement of primary and secondary CMB anisotropy on arcminute scales and the Sunyaev-Zel'dovich effect in clusters of galaxies.

Applicants should have experience in experimental astrophysics and a research interest in cosmology.

Needs of this project include cryogenic receiver technology, optical and electrical design, microwave engineering, and computer programming. Preference will be given to candidates with related experience.

Applicants should send a CV, a description of research interests, and three letters of recommendation to the above address. For full consideration, all materials should arrive by 15 February and applicants should be able to start by the end of summer 2003. Columbia University is an equal opportunity/affirmative action employer, women and minorities are encouraged to apply.

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. 13224

NASA Kepler Program Software Development Manager

NASA AMES RESEARCH CENTER/ ORBITAL SCIENCES CORP

M/S 244-30

Moffett Field, CA 94035

Tel: 650-604-2784

FAX: 650-964-8600

Email Submission Address: mparker@mail.arc.nasa.gov

URL: <http://www.kepler.arc.nasa.gov/>

Attention: Matt Parker, Orbital Project Manager

Position: The Kepler Project, a NASA Discovery Class Mission to find Earth sized planets around other stars, is looking for a Software Development Manager / Software System Engineer to lead the software development of the Kepler Science Operations Center located at NASA Ames Research Center. The Science Operations Center will perform the pipeline data processing and analysis on a terabyte of data obtained during the four-year Kepler mission, as well as support mission operations and the scientific interpretation of all Kepler discoveries.

Roles & Responsibilities: The incumbent shall provide hands on leadership for a group of 5 software engineers. The incumbent will report to the SOC Director while working with a broad range of project engineering and science personnel to coordinate and execute software development activities while providing work direction to engineers and scientists developing the SOC software.

Responsibilities will include data system architecture, software requirements definition, project planning, scheduling, budgeting, and the supervision of development through the entire development and operations life-cycle.

Technical Knowledge Requirements: Extensive knowledge of software development processes, software metrics, development tools, and methodologies (structured development, object oriented analysis and design, web based systems, data warehousing concepts and techniques, etc) is required.

Experience needed:

3+ years spent managing software development personnel.

Solid leadership skills and the ability to motivate a team. BS/BA 12.9815(/)-0.5(ip)/qaasing coeSso11.5mput(e)5.5(years tcaa devapmien ande exparnca

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E67.8mS- Inq2.981.9(ir)-7.2rir3179(h2.981.9epse(a)14742rch@2.956.9e11-(6dud)14742tr.ph2.981.9y

vitae, statement of research interests and plans, and arrange for four letters of reference to be sent to Prof. Heidi Schellman, Chair, Search Committee, at the above address. Applications should be received by 3 February 2003 to receive full consideration. Members of minority groups and women are especially encouraged to apply. AA/EOE.

No. 13226

Two Instructors of Astronomy
BOWLING GREEN STATE UNIVERSITY
104 Overman Hall
Dept. of Physics & Astronomy
Bowling Green, OH 43403
Tel: 419-372-7244
FAX: 419-372-9938
Email Inquiries: laird@tycho.bgsu.edu
URL: <http://physics.bgsu.edu>

Attention: John B. Laird, Chair

Applications are invited for two astronomy instructor positions beginning in August 2003. These are full-time positions teaching undergraduate astronomy and possibly physics courses during the academic year, with additional teaching available during the summer if desired. The initial appointments are for one year, but one will be a continuing position and the other has the potential to continue. A Ph.D. in astronomy or physics is strongly preferred, but an exceptional candidate with an M.S. will be considered. The successful candidates will be expected to contribute to the overall teaching mission of the Department. They will also be encouraged to be involved in research, either independently or as part of an existing Department program. Applicants should send curriculum vitae and a description of experience and teaching goals and philosophy, and should arrange to have three original letters of recommendation submitted directly on their behalf to: John B. Laird, Chair, at the above address. Completed applications received by 28 February 2003 will receive full consideration. BGSU is an Affirmative Action/Equal Employment employer and encourages applications from women, minorities, veterans and individuals with disabilities.

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/ccc/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. 13228

**Postdoctoral Position in Circumstellar Matter
SPACE TELESCOPE SCIENCE INSTITUTE**

3700 San Martin Dr.

Baltimore, MD 21218

Tel: 410-338-5013

Email Submission Address: mccarty@stsci.edu

Email Inquiries: meixner@stsci.edu

URL: <http://www.stsci.edu/>

Attention: Dr. Margaret Meixner

Applications are invited for a postdoctoral research position at the Space Telescope Science Institute starting as early as summer 2003. The successful applicant will work with Dr. Margaret Meixner and collaborators on studies of circumstellar matter found around main sequence stars, pre-main sequence stars and evolved stars. This research will involve observations with HST, SIRTf, and ground based facilities. Independent research in related areas will be supported and encouraged. Research experience in the areas of planet formation, star formation, evolved stars, dust or radiative transfer is desirable. A PhD in astronomy or astrophysics is required.

The position is for two years, with a possible renewal for a third year. STScI, located on Johns Hopkins University Campus in Baltimore, Maryland, offers an excellent benefit package, competitive salaries, and a stimulating work environment. The minimum salary is \$41,900; however, STScI's pay is commensurate to the year of Ph.D.

Applicants should send a cover letter with position applying for, curriculum vitae, list of publications, and a brief statement of research interests, accomplishments, and relevant technical expertise to the address above or email to meixner@stsci.edu, please cc: mccarty@stsci.edu. They should also arrange for three letters of recommendation to be sent directly to the same address. Completed applications received by 15 March 2003 are assured of full consideration. EOE/AA/M/F/D/V

No. 13229

**Pre- and Postdoctoral Research Positions, Extragalactic Astrophysics
LANDESSTERNWARTE HEIDELBERG, EC NETWORK ENIGMA**

Koenigstuhl 12

Heidelberg, 69117

Germany

Tel: +49-6221-509202

FAX: +49-6221-509212

Email Submission Address: swagner@lsw.uni-heidelberg.de

Email Inquiries: swagner@lsw.uni-heidelberg.de

URL: <http://www.lsw.uni-heidelberg.de/>

Attention: Stefan Wagner, Prof.

Three pre- and seven postdoctoral positions are available within the newly established European Research Training Network on Quasar Variability (ENIGMA). The eight European research institutions

Landessternwarte Heidelberg, Germany, Stefan Wagner, swagner@lsw.uni-heidelberg.de
Max-Planck-Institut fuer Radioastronomie, Germany, Arno Witzel, awitzel@mpifr-bonn.mpg.de
Tuorla Observatory, Finland, Leo Takalo, takalo@astro.utu.fi
Metsahovi Radio Observatory, Finland, Merja Tornikoski, Merja.Tornikoski@Hut.fi
Osservatorio Astronomico di Torino, Italy, Claudia Raiteri, raiteri@to.astro.it
Osservatorio Astronomico di Brera, Italy, Gabriele Ghisellini, gabriele@merate.mi.astro.it Cork Institute
of Technology, Ireland, Niall Smith, nsmith@cit.ie
and University of Athens, Greece, Kanaris Tsinganos, tsingan@phys.uoa.gr
have established a network to carry out research in hardware and software development towards high-precision photometry, multifrequency observing programs on Quasars, and theoretical studies of particle acceleration, radiation mechanisms, and jet physics in Blazars. The researchers will work in this interactive network, they will have access to unique observational facilities and will profit from a strong training program involving hardware-related aspects, observational strategies in all waveband regimes, and theoretical research. Further information on the research and training program is given on www.lsw.uni-heidelberg.de/projects/enigma.html. Questions should be directed to the network coordinator, Stefan Wagner,

The ten positions will become available between March and September 2003. They are available for up to three years. Competitive salaries will be paid, differing according to local regulations. Additional support will be available for extended visits to other partner institutions within the network, meetings and conferences. European Community rules for recruitment of young researchers apply (see www.lsw.uni-heidelberg.de/projects/enigma.html)

Applications should include a curriculum vitae, a publication list, a summary of current research interests as well as a list of topics of interest or institutes which they would prefer to join. Two letters of reference should also be arranged for. The review of applications will start in the end of February 2003, and will continue until all positions are filled.

No. 13230

Joint Postdoctoral Position in Galaxy Formation and Cosmology

UNIVERSITY OF KENTUCKY/HEBREW UNIVERSITY, JERUSALEM

Email Submission Address: hoffman@huji.ac.il, shlosman@pa.uky.edu

Attention: Drs. Yehuda Hoffman and Issac Shlosman

Applications are invited for a joint postdoctoral position at Racah Institute. Successful applicant will work with Profs. Yehuda Hoffman (Jerusalem) and Isaac Shlosman (Lexington) on various issues related to galaxy formation and evolution. Experience with N-body codes, hydrocodes and SPH code is desirable. Applicants should submit a curriculum vitae, list of publications, brief description of research interests, and arrange for three supporting letters to be sent to Prof. Hoffman at the above address or by e-mail. Position is for one year and renewable up to three years, subject to availability of funds. The position can start at any time between 1 January and 1 July 2003. AA/EOE.

No. 13231

Faculty Position in Theoretical Astro-Particle Physics/Cosmology

UNIVERSITY OF MINNESOTA

116 Church St. SE

Minneapolis, MN 55455

Email Inquiries: olive@umn.edu

Attention: Professor Allen Goldman, Head, School of Physics and Astronomy

The School of Physics and Astronomy at the University of Minnesota invites applications for a faculty position in the area of theoretical astro-particle physics and cosmology. The appointment will be at the tenure-track level. The successful applicant will be required to have at least two years of post Ph.D. research experience in the field, have demonstrated the ability to conduct a vigorous and significant research program, and have the ability to effectively teach Physics at both the graduate and undergraduate levels. This is a growing research area in School at the University of Minnesota. The starting date for these positions would be Fall Semester, 2003 (late August). Applications consisting of a curriculum vita, list of publications, summary of research interests, and at least three references should be sent to: Professor Allen Goldman, at the above address. The closing date for applications is 31 January 2003. The University of Minnesota is an equal opportunity educator and employer.

No. 13232

Software Engineer – ID# 22641

RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII

2530 Dole St.

Sakamaki D-100

Honolulu, HI 96822

Tel: 808-956-3100

FAX: 808-956-5022

Email Submission Address: rcuhrapply@rcuh.com

Attention: Director of Human Resources

The National Astronomical Observatory of Japan in Hilo, Hawaii is seeking 3 Full-Time Software

Engineers. Salary: Commensurate with qualifications. Closing Date: February 14, 2003.

Software Engineers will design and develop software for observational instruments processes. The successful candidates must have a Bachelor's Degree in Computer Science, Astronomy or related science/engineering fields. Minimum five years experience in the analysis, design and production of Unix systems and applications software for the control of astronomical or other scientific instrumentation and processes. Proficiency in C/C++ Unix systems and application programming, and the design and implementation of concurrent systems for distributed control. Ability to analyse, define, design, implement, test, evaluate and maintain complex software systems. Knowledge in maintaining Unix computer systems. Must have a valid driver's license and the ability to drive 4 wheel drive vehicles. Excellent English communication skills and the ability to communicate effectively with others. Able to work efficiently at high altitude (Mauna Kea: 14,000 feet). Must pass a physical examination to work safely at Mauna Kea.

Interested parties are encouraged to call Kazuhiro Sekiguchi at (808) 934-5905.

TO APPLY: Send resume w/ cover letter (note ID#) & referral source, salary history, names & phone #s of 3 Supervisory references, copy of degree/transcripts/ certificate used to qualify for position via: 1) email: rcuhrapply@rcuh.com, 2) fax: (808) 956-5022, or 3) mail: Dir. of Human Resources, at above address. This is a RCUH Non-Civil Service position & continued employment is dependent upon program/operational needs, satisfactory work performance & available funding. EEO/AA Employer.

No. 13233

Astronomy or Physics Education

CALIFORNIA STATE UNIVERSITY LOS ANGELES

Department of Physics and Astronomy

5151 State University Drive

Los Angeles, CA 90032-8206

Tel: 323-343-2100

FAX: 323-343-2497

Email Submission Address: wtaylor@calstatela.edu

Email Inquiries: wtaylor@calstatela.edu

URL: <http://www.calstatela.edu/faculty/>

Attention: William Taylor, Chair

The Physics and Astronomy Department invites applications for a tenure track Astronomy or Physics Education position at the Assistant Professor level starting Fall 2003. Duties will include teaching undergraduate astronomy or physics courses, and development of a research program involving undergraduate and graduate (Masters level) students. Start-up funds are available. The successful candidate will be expected to seek external funding for astronomy and physics education research. A Ph.D. in astronomy or physics is required, post-doctoral experience in astronomy or physics is desirable. The application package should include a letter of application, curriculum vita, statement of research plan and teaching philosophy. Applicants should arrange to have three letters of recommendations sent separately to William Taylor, Chair, at wtaylor@calstatela.edu or at the above address. Review of applications will begin 2 January 2003 and continue until the position is filled.

Employment contingent upon proof of eligibility to work in the United States. CSLA is an Equal

Opportunity/Title IX/ADA Employer. Qualified women and minorities are encouraged to apply.

No. 13234

Post-Doctoral Position in Astronomy/Astrophysics

CEA, SACLAY, SERVICE D'ASTROPHYSIQUE

Orme des Merisiers

Gif-sur-Yvette, 91191

France

Tel: 33-1-69-08-92-76

FAX: 33-1-69-08-65-77

Attention: Suzanne Madden

The CEA, Saclay Astrophysics Department is inviting applications for at least one post-doctoral research associate (perhaps 2) to begin in the fall of 2003. The Astrophysics Department (Service d'Astrophysique) in Saclay, located 15 km south-west of Paris near several other astronomy centers, is a major space astrophysics laboratory and is also involved in ground-based instrumentation. The department is engaged in research projects which include extragalactic astrophysics, cosmology, solar/stellar physics, star formation and high energy astrophysics. Research activities are primarily in support of our contributions to space projects such as SOHO, CASSINI, XMM, INTEGRAL, GLAST, HERSCHEL, PLANCK, and JWST and also in the numerical and theoretical modelling of the corresponding astrophysical phenomena. The department is also involved in ground-based projects such as MEGACAM on the CFHT and VISIR on the VLT. Interested applicants with science contributions in these areas are invited to apply.

The duration of this post doc is two years. There is no restriction on nationality. Interested applicants, please send a cv, bibliography, description of research interests and arrange to have 3 letters of recommendations sent to the above address by 21 February 2003.

No. 13235

Postdoctoral Scholar

CALIFORNIA INSTITUTE OF TECHNOLOGY

Infrared Astrophysics

MS-314-6

Pasadena, CA 91125

Attention: Dr. George Helou

Applications are invited for a Caltech Postdoctoral Scholar position in infrared astrophysics to work with George Helou and Lee Armus primarily on analysis and interpretation of Space Infrared Telescope Facility (SIRTF) data. The successful candidate will participate in the SIRTF Legacy science project "SIRTF Nearby Galaxy Survey (SINGS)", and will have access to excellent research facilities and support. The SINGS project focuses on the interstellar medium and star formation in well resolved galaxies, and the implications for their global properties and evolution. See <http://sings.stsci.edu/> for more detail.

Candidates should have obtained, by the starting date, a Ph.D. in astronomy, physics or equivalent, in an

area relevant to the SINGS science themes. Experience with infrared or extragalactic astronomy is highly desirable. The successful candidate is expected to participate in the reduction and analysis of SIRTf and ancillary ground and space-based data related to the SINGS project.

The appointment is for one year renewable, and could start as early as April 2003. To apply, please send resume, bibliography, and statement of research to the above address by 1 March 2003, and have three letters of reference forwarded to the same address. Caltech is an Affirmative Action/Equal Opportunity Employer. Women, Minorities, Veterans, and Disabled Persons are encouraged to apply.

No. 13236

Postdoctoral Position in Stellar High Energy Astronomy
THE UNIVERSITIES SPACE RESEARCH ASSOCIATION
7501 Forbes Blvd.
Suite 206
Seabrook, MD 20706-2253

Attention: David V. Holdridge (Please reference Code S-HEA Post)

The Universities Space Research Association (USRA), in conjunction with the NASA/Goddard Space Flight Center's Laboratory for High Energy Astrophysics (LHEA), seeks a postdoctoral research scientist to work on-site at GSFC on analysis of X-ray observations of the star Eta Carinae during and through the star's X-ray eclipse. These observations are a key part of a larger observing campaign, throughout 2003 and into 2004. See http://lheawww.gsfc.nasa.gov/users/corcoran/eta_car/2003.5/ for more information.

The successful candidate will work with Dr. Michael Corcoran on analyzing data from a set of CHANDRA High Energy Transmission Grating observations of Eta Carinae scheduled for this eclipse period. The candidate will also be involved in the interpretation of these CHANDRA data in context of other observations in X-ray and other wavelengths. Pursuit of individual research in related areas is encouraged.

Requirements: a Ph.D. in astronomy, physics, or related disciplines, and experience with analysis and interpretation of x-ray spectral data. Experience in relevant analysis software packages (CIAO, SAS, IDL) is highly desirable. The appointment is for one-year, renewable contingent upon funding availability.

USRA is a non-profit university consortium, chartered to broaden opportunities for collaboration between university and government space research communities. EOE. Applications received by 10 February 2003 receive full consideration. Apply on-line at: <http://phoenix.seabrook.usra.edu/cps/resume/> and/or mail letter describing research interests, complete CV, publication list, and contacts (include e-mail addresses) for at least three references.

No. 13237

Postdoctoral Position in Observational Astrophysics
LOS ALAMOS NATIONAL LABORATORY
NIS-2, MS-D436
Los Alamos, New Mexico 87544
Tel: 505-665-9542

FAX: 505-665-4414

Email Submission Address: vestrand@lanl.gov

Email Inquiries: vestrand@lanl.gov

Attention: Dr. Tom Vestrand

The Space and Remote Sensing Sciences Group at the Los Alamos National Laboratory (LANL) is seeking candidates for a Postdoctoral fellowship appointment to work on the XMM-Newton team and/or Rapid Telescopes for Optical Response (RAPTOR) team. As a member of our XMM-Newton team the candidate can work on a broad range of problems in high-energy astrophysics. The primary goal of the RAPTOR project is wide-field stereoscopic monitoring of optical sky for astrophysical transients, planetary transients, and interesting variations in known sources. The successful candidate will have the opportunity to participate in all facets of the projects including instrumentation and software development, observing, and analysis of the observations.

Applicants should hold a Ph.D. in astronomy or physics that was completed within the last 5 years. Experience with astronomical instrumentation and software development is desirable. The ideal candidate would also have experience with large datasets and a solid publication record. The position is a two-year appointment, which is renewable for a third year. The starting salary is at least \$59.3K annually and is supplemented by a generous, comprehensive, benefits package. Interested applicants should submit a statement of their research interests, a curriculum vita, and three letters of recommendation to Dr. Tom Vestrand at the above address. Applications received before 15 February 2003 will be assured of full consideration.

Affirmative Action/Equal Opportunity Employer. Individuals with disabilities needing reasonable accommodation should call (505) 667-8622. Los Alamos National Laboratory is operated by the University of California for the US Department of Energy.

No. 13238

One year renewable visiting appointment in Astronomy

FRANKLIN AND MARSHALL COLLEGE

P.O. Box 3003

Lancaster, PA 17604-3003

Tel: 717-291-4136

FAX: 717-358-4474

Email Submission Address: dana.backman@fandm.edu

Email Inquiries: dana.backman@fandm.edu

URL: <http://www.fandm.edu/Departments/Physics>

program of interdisciplinary introductory courses.

Deadline for application is 3 March 2003. A complete application will include a curriculum vitae, statement of teaching philosophy, and copies of both graduate and undergraduate transcripts. Reference letters (at least 3) should be sent directly to Dr. Dana Backman, Chair, at the above address.

F&M is a selective private liberal arts college with 1,850 students located in Lancaster, Pennsylvania, a small city of 50,000 about 1-1/2 hours from Baltimore and Philadelphia. Information about our astronomy and physics staff and facilities can be found at: <http://www.fandm.edu/Departments/Physics/Physics.html>. Franklin & Marshall is committed to cultural pluralism through the hiring of women and minorities and encourages all interested persons to apply. EOE/AA.

No. 13239

Physicist Postdoctoral Fellow

LAWRENCE BERKELEY NATIONAL LABORATORY

One Cyclotron Road, Mailstop 50A-4037

Berkeley , CA 94720

Email Submission Address: gensciemployment@lbl.gov

Email Inquiries: gensciemployment@lbl.gov

URL: <http://www-physics.lbl.gov/>

Attention: Madelyn Bello, Sr. Human Resources Generalist

Postdoctoral Positions in Supernova Cosmology Program

The Supernova Cosmology research group of Berkeley Lab has multiple Postdoctoral positions available. These are two-year term positions with the possibility of renewal. This is an exciting opportunity for a wide range of investigations concerning cosmological parameters, the acceleration of the universe, and the

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. 13241

Physicist Scientist/Engineer

BERKELEY LAB

One Cyclotron Road, Mailstop 50A-4037

Berkeley, CA 94720

Email Submission Address: gensciemployment@lbl.gov

Email Inquiries: gensciemployment@lbl.gov

URL: <http://www-physics.lbl.gov/>

Attention: Madelyn Bello, Senior Human Resources Generalist

The Supernova Cosmology research group of Berkeley Lab has multiple Postdoctoral positions available. These are two-year term positions with the possibility of renewal. This is an exciting opportunity for a wide range of investigations concerning cosmological parameters, the acceleration of the universe, and the "dark energy" explanations for the acceleration.

Projects include high-redshift supernova studies of the cosmological parameters, intensive discovery and follow-up of low-redshift supernovae to understand these cosmological tools, and the development, design, and instrument-prototype construction of a dedicated space-based telescope facility. Candidates should have interest and abilities in any of the following: observation and analysis related to cosmology or supernovae, astronomical instrumentation (ground- and space-based), and/or novel real-time data analysis techniques for large-dataset projects.

Requires a Ph.D. or equivalent experience in astronomy and/or physics. Applications, including CV, list of publications, description of research interests and skills, and three letters of recommendation should be sent to:

Berkeley Lab Search Committee

c/o Ms. Madelyn Bello

Lawrence Berkeley National Laboratory

One Cyclotron Road, Mailstop 50A-4037

Berkeley, CA 94720

<http://supernova.lbl.gov> and <http://snap.lbl.gov>

or e-mail to gensciemployment@lbl.gov (inquiries should also be forwarded to this e-mail address).

Applicants can contact ALSpadafora@lbl.gov to arrange a preliminary interview at the January 2003 AAS meeting in Seattle. Please cite job number PH/015554/WAAS. Applications will be considered beginning by 1 February 2003.

Berkeley Lab is an AA/EEO employer.

No. 13242
Instrumentation Scientist
UNIVERSITY OF FLORIDA
Department of Astronomy
P.O. Box 112055
Gainesville, FL 32611-2055
Tel: 352-392-2052 ext. 265
FAX: 352-392-5089

Attention: Dr. Charles Telesco

Applications are invited for the position of Instrumentation Scientist (IS) in the Department of Astronomy at the University of Florida. A highly active program of IR instrument development for large telescopes is supported by a quality engineering staff. Department is currently building IR spectrometers and cameras for Gemini and the Gran Telescopio Canarias (GTC). The University is a partner in the 10.4-meter GTC, located in the Canary Islands, Spain, and expected to begin operations in 2004. Initially, IS will play key role in CarariCam, CTC's multi-mode mid-IR camera to be completed in 2003. IS will be part of CanariCam science and engineering team working on all aspects of project, including fabrication, integration, testing, commissioning, and documentation, and will participate in acquisition of payback science observations. IS will have ongoing participation in other instrument projects, such as FLAMINGOS-2 for Gemini North. 20% of the IS time is available for independent research. Candidates must have a Ph.D. in Astrophysics or closely related field. Experience as an observer is essential, and familiarity with instrument development an advantage. Initial appointment will be for four years, but longer-term employment is possible. Application deadline is 15 February 2003. Interested applicants should send CV, statement of research interests, and have three letters of reference sent to Dr. Charles Telesco at the above address. For further information, contact Dr. Charles Telesco. AA/EEOE.

No. 13243
One-Year, Full-Time, Temporary, Faculty Position in Astronomy
KUTZTOWN UNIVERSITY OF PENNSYLVANIA
Department of Physical Science
P.O. Box 730
Kutztown, PA 19530

Attention: Chairperson of the Temporary Astronomy Search Committee

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

The Department of Physical Sciences invites applications for a one-year, full-time, temporary, faculty position in Astronomy beginning August 2003. A Master's degree, or higher, in Astronomy is required,

with three years, or equivalent, prior experience teaching introductory or intermediate astronomy at the college level. A commitment to undergraduate teaching is expected. Teaching responsibilities will include both lecture and laboratory sections of astronomy along with planetarium presentations to visiting groups. The planetarium at Kutztown University is a Spitz A3-P with a 100-seat theater. Some prior experience with a planetarium is desirable. The teaching load consists of twelve contact hours per week for each semester. A successful interview and a 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 at the above address. Review of applicants begins 3 February 2003, and will continue until the position is filled.

For full description, 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. 13244

Postdoctoral Research Associate, Computational Solar Physics

THE CATHOLIC UNIVERSITY OF AMERICA

620 Michigan Ave Ne

Dept. of Physics, 200 Hannan Hall

Washington, DC 20064

Tel: 301-286-9913

FAX: 301-286-1617

Email Submission Address: Leon.Ofman@gsfc.nasa.gov

URL: <http://iacs.cua.edu>

Attention: Leon Ofman

A postdoctoral position is available immediately to work on computational problems in solar coronal physics in support of space based observations by the SOHO and TRACE satellites, and the future NASA STEREO mission. The work involves multidimensional MHD modeling of CME's, and the solar wind. The work is in close collaboration with scientist at NASA Goddard Space Flight Center in Greenbelt, Maryland (job location).

The initial appointment will be for a period of one year, starting immediately, with possible renewal for an additional year. Selection will be made as soon as a suitable candidate is found. Interested applicants should send by email a resume, a brief statement of research interests, a list of publications, and the names of at least three references to the above address. CUA is an Affirmative Action/Equal Opportunity Employer.

No. 13245

Multi-beam System Project Manager

NATIONAL ASTRONOMY AND IONOSPHERE CENTER

Cornell University

Space Sciences Bldg.

Ithaca, NY 14853-6801

Tel: 607-255-3735

FAX: 607-255-8803

Email Submission Address: jtm14@cornell.edu
Email Inquiries: campbell@astro.cornell.edu
URL: www.naic.edu/%7Eastro/astronomy.htm

Attention: Director

The National Astronomy and Ionosphere Center (NAIC) has openings for scientific staff positions in radio astronomy at the Arecibo Observatory in Puerto Rico at the level of Senior Research Associate, Research Associate or Postdoctoral Research Associate. 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 instrumentation which 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 successful candidate will have the opportunity to capitalize on these improved capabilities and to contribute to further instrumental developments.

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.

All applicants whose research interests include any field of radio astronomy that can be exploited with the Arecibo telescope will be considered for the position. We particularly encourage applications from individuals with observational interests in such areas as pulsars, HI and OH in our galaxy and external galaxies, molecular lines, and high sensitivity VLBI. A 7-element multibeam system at 21 cm is expected to be operational in late 2004 for pulsar searches, HI surveys, etc. All Arecibo scientific staff are expected to have broad interest. Travel for use of other telescopes and to conferences is encouraged. Besides conducting an independent research program, Observatory staff scientists are expected to advise visiting scientists in all aspects of their observations, and to help define and implement improvements in equipment, observing procedures and data reduction.

A PhD in astronomy or a related field is required. The level of appointment will depend upon the qualifications and experience of the applicant. Postdoctoral appointments are made for a period of two or three years. Senior Research Associates and Research Associates are appointed for longer periods, with renewal based on periodic reviews. The successful candidate will be an employee of Cornell University, and hence eligible for all applicable University/Observatory benefits. Salary and benefits are competitive, attractive, and include a relocation allowance. Details will depend upon the candidate's qualifications and experience. Evaluation of applications will begin 25 January 2003, although applications received later than this may be considered. Please send a complete resumé of academic, professional and personal data, a research plan, and names and contact information of at least three references, to the Director at the above address. EOE/AAE. For further information about NAIC/Arecibo Observatory, see <http://www.naic.edu/>.

No. 13246

Postdoctoral Positions

INTERNATIONAL SCHOOL FOR ADVANCED STUDIES, TRIESTE

Via Beirut 2-4

Trieste, 34014

Email Submission Address: bencina@sissa.it

Attention: Dr. L. Bencina

The Astrophysics Sector of SISSA (the International School for Advanced Studies, Trieste, Italy) announces two post-doctoral positions which it hopes to fill commencing autumn 2003 (A third postdoctoral position may also be opened if the requested funds become available.). The appointment is for one year, renewable to a second year on the basis of satisfactory performance.

The current work of the group is centred on: early-universe cosmology, cosmic microwave background, dark matter and energy, formation of large-scale structure, galaxy formation and evolution, galactic structure, active galaxies, infra-red and X-ray astronomy, gamma-ray bursts, accretion onto compact objects, numerical relativity and sources of gravitational waves. A large part of this work is theory-based although connections with observation are kept firmly in mind (together with the Observatory of Trieste, the group is responsible of the Data Processing Centre of the Low Frequency Instrument of the PLANCK mission).

We are seeking applications from candidates who would reinforce this research effort. No teaching duties are associated with these postdoctoral positions. Applications (including a curriculum vitae, list of publications, description of current and proposed research and the names of at least two referees) should be sent so as to arrive at SISSA before 31 January 2003.

The referees should be asked to send their letters of recommendation to arrive by the same date.

For further information, visit the website <http://www.sissa.it/ap/> or e-mail Dr. L. Bencina. .

No. 13247

IT Specialist (Data Processing Specialist)

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

60 Garden St.

MS-17

Cambridge, MA 02138

Tel: 617-495-7371

FAX: 617-495-7263

Email Submission Address: saoresumes@cfa.harvard.edu

URL: <http://cfa-www.harvard.edu/sao-home.html>

Attention: Kim Pulnik

We have an opportunity for an entry-level to mid-level IT/Data Processing Specialist in our High Energy Astrophysics Division. This position will provide data processing support to the Chandra X-ray Center, which is developing a data system to receive and archive data from the Chandra X-ray Observatory.

Duties may include activities such as running software to process scientific data downlinked from Chandra, distributing data to Chanrda users, maintaining careful quality control of the pipeline

processing activities, developing computer scripts and procedures to automate and document data processing activities, drafting and maintaining materials for web sites, and supporting computer programmers and scientists in solving data-related problems.

To qualify, candidates are to be detail-oriented and possess basic computer skills in UNIX, troubleshooting ability, and the ability to work accurately with data such as numbers, codes, and/or symbols. A basic knowledge of astronomy and enthusiasm for the topic are required. Computer related experience, which provides a basic knowledge of data processing functions, is highly desired. Knowledge of Perl, databases, data analysis software, and/or HTML is a plus.

We offer a competitive salary, a comprehensive benefits package, and a stimulating environment. To view our complete vacancy announcement for this position, please go to: <http://cfa-www.harvard.edu/cfa/hr/postings/23-12.htm>.

Interested candidates should forward resume to the mailing or e-mail address above. We are an equal employment opportunity employer, committed to diversity in our workplace.

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.