



January 2004

## JOB REGISTER

**American Astronomical Society**

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2000 Florida Ave., NW, Suite 400, Washington, DC 20009, USA  
202-328-2010 \* FAX 202-234-2560 \* [aas@aas.org](mailto:aas@aas.org)

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### Editorial

#### Payment Changes

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 Your advertisement will not be published until payment is received by the AAS.

#### Job Register Change

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

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

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

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

Kevin B. Marvel  
Deputy Executive Officer

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[AAS Career Services Listing](#)

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## **Publication Policy for the AAS *Job Register***

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### **Deadlines for submission**

Job announcements may be submitted at any time and should be submitted well before the deadline so that any errors or difficulties can be resolved efficiently.

Job announcements must be received and paid for by the 15th of each month for publication in the subsequent issue of the *Job Register*.

**If payment is not received, then the announcement will not run in the next month's issue, but in the subsequent month's issue.** We recommend that submission and payment be made well in advance of the monthly deadline.

### ***Examples***

Submit and pay by 15 October - Announcement will appear in the November *Job Register*

Submit and pay by 19 October - Announcement will appear in the December *Job Register*

Submit by 15 October, but pay after that date but before December 1- Announcement will appear in the December *Job Register*.

### **Rate Sheet**

There is a publication charge of \$114 per job announcement, per issue.

If payment is made by credit card, a discount of \$5 is applied for each month of publication.

An additional \$0.25 will be charged to each word over the 250 word limit.

Employers must indicate 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 be sure to include expiration date.

Checks should be made payable to American Astronomical Society and sent to:

American Astronomical Society  
Attention Job Register Payment  
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.

In *very rare* circumstances a discount may be available for institutions from developing countries. In all cases, a formal petition for a reduced fee must be sent by email or FAX to the Deputy Executive Officer, [Dr. Kevin B. Marvel](#) requesting a discount and justifying the request.

In no case will the discount exceed a 50% reduction in the publishing fee or will discounts be available for more than one announcement per year.

### **Announcement Requirements**

The word count limit per listing is 250 words. For longer ads, a \$0.25 per word charge will be applied.

Jobs will not be published without the following:

- (1) Indication that the vacancy is *bona fide* and that 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 provide URLs to relevant web sites with their job announcements or additional information (e.g. department homepage).

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**

All jobs should be submitted using the [Web Submission Form](#) or, if necessary, send your advertisement by electronic mail to [jobs@aaas.org](mailto:jobs@aaas.org). If electronic mail is not available, job announcements, with payment 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://members.aas.org/JobReg/Jobregister.cfm>.

## 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@aas.org](mailto:address@aas.org).

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## 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. 20267

**Tenure-Track position in extragalactic astrophysics or cosmology**

**MAX-PLANCK-INSTITUT FOR ASTROPHYSICS**

**Karl-Schwarzschild-Strasse 1**

**Garching, b. Muenchen 85741**

**Germany**

**Tel: ++49/89/300002201**

**FAX: ++49/89/300002235**

**URL1: <http://www.mpa-garching.mpg.de>**

**Email Submission Address: [car@mpa-garching.mpg.de](mailto:car@mpa-garching.mpg.de)**

**Email Inquiries: [car@mpa-garching.mpg.de](mailto:car@mpa-garching.mpg.de)**

*Attention: The Appointments Committee*

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TENURE--TRACK position in extragalactic astrophysics or cosmology at the Max-Planck-Institut for Astrophysics

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: galaxy structure; 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. They should also ask 3 referees to send letters. The deadline is 15 February 2004, but applications will be accepted until the post is filled. Please send applications to: The Appointments Committee, Max--Planck--Institut fuer Astrophysik Karl--Schwarzschild--Str. 1, 85748 Garching bei Muenchen. The MPA encourages applications from women, minorities and disabled persons.

**No. 20366**

**Research Associate to Assistant Astronomer for SIRTf LEGACY**

**THE UNIVERSITY OF ARIZONA**

**Steward Observatory**

**933 N. Cherry Ave.**

**Tucson, AZ 85721**

**USA**

**Tel: (520) 621-2727**

**FAX: (520) 621-9555**

**URL1: <http://www.as.arizona.edu/telescopes/telescopes.html>**

**URL2: <http://feps.as.arizona.edu>**

**Email Submission Address: [dwilson@as.arizona.edu](mailto:dwilson@as.arizona.edu)**

***Attention: Debra Wilson, Program Manager***

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The SIRTf Legacy Science Program "Formation and Evolution of Planetary Systems" seeks applicants for a post-doctoral fellow interested in the evolution of circumstellar gas and dust surrounding Sun-like stars. The successful candidate will collaborate with the PI (Michael Meyer) and Co-I's Joan Najita (NOAO) and David Hollenbach (NASA-Ames) in: 1) the analysis of high resolution IRS spectra obtained with SIRTf of stars known to harbor circumstellar disks; and 2) comparison of these results to theoretical models of disk chemistry and ancillary ground-based sub-millimeter and infrared data. A Ph.D. in astronomy, physics, planetary science or related field is required. Experience in infrared space astronomy, molecular spectroscopy, data reduction/software development and/or comparison of detailed theoretical models to observational data is highly desirable. Successful candidates will have full access to the facilities of Steward Observatory including the 6.5m MMT and Magellan telescopes, the 2.3m Kitt Peak Bok telescope, the Heinrich-Hertz Sub-millimeter Telescope and starting in 2004 the Large Binocular Telescope on Mt. Graham( <http://www.as.arizona.edu/telescopes/telescopes.html> ). For more information, please visit the group WWW site at: <http://feps.as.arizona.edu> .

The position will be at the Research Associate or at the Assistant Astronomer level at Steward Observatory, at salaries from \$ 38,000 to \$47,000 depending on qualifications and experience. This position is initially for two years with the possibility for extension. The start date is expected to be September 1, 2004 although other start dates can be accommodated. Review of materials will begin December 1, 2003 and will continue until the position is filled. Please send a curriculum vitae, statement of experience and research interests, and the names and contact information for three references to Ms. Debra Wilson at the above address or apply via email to: [dwilson@as.arizona.edu](mailto:dwilson@as.arizona.edu) .

The University of Arizona is an EEO/AA Employer-M/W/D/V.

**No. 20360**  
**Solar Physics**  
**MICHIGAN STATE UNIVERSITY**  
**3266 Biomedical Physical Sciences**  
**East Lansing, MI 48824**  
**USA**  
**Tel: 517-355-9200x2413**  
**FAX: 517-355-6661**  
**Email Submission Address: [stein@pa.msu.edu](mailto:stein@pa.msu.edu)**  
**Email Inquiries: [stein@pa.msu.edu](mailto:stein@pa.msu.edu)**

*Attention: Robert Stein, Professor*

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Postdoctoral Position Solar Physics

Michigan State University, Physics-Astronomy Department, East Lansing, MI 48824 Attention: Robert Stein [stein@pa.msu.edu](mailto:stein@pa.msu.edu) 517-355-9200x2413

The Physics Astronomy Department of Michigan State University has a post-doctoral position available in solar physics. This person will work with Dr. Robert Stein to simulate solar magneto-convection and the propagation of waves in the solar atmosphere, to analyze the results of these simulations and to compare them with solar observations. The position is for 2 years with the possibility of a third, starting asap. First priority will be given to applications received by January 1, 2004.

Applicants should send a vita, bibliography with relevant preprints, and a description of research experience and interests to Reobert Stein at the above address and also arrange for three letters of recommendation to be sent to the same address.

MSU is an affirmative action/equal opportunity institution. Women and minorities are encouraged to apply.

**No. 20290**  
**Research Fellows in Astronomy and Astrophysics**  
**ACADEMIA SINICA INSTITUTE OF ASTRONOMY AND ASTROPHYSICS (ASIAA)**  
**P. O. Box 23-141**  
**Taipei, Taiwan 106**  
**ROC**  
**Tel: 886-2-33652200**  
**FAX: 886-2-23677849**  
**URL1: <http://www.asiaa.sinica.edu.tw>**  
**Email Submission Address: [asiaa@asiaa.sinica.edu.tw](mailto:asiaa@asiaa.sinica.edu.tw)**  
**Email Inquiries: [asiaa@asiaa.sinica.edu.tw](mailto:asiaa@asiaa.sinica.edu.tw)**

*Attention: Dr. Sun Kwok, Director*

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The Academia Sinica Institute of Astronomy and Astrophysics (ASIAA, <http://www.asiaa.sinica.edu.tw>) has openings for one or more research fellows. Depending on experience, these positions can be occupied at the levels of assistant, associate, or full fellows. Candidates with Ph.D. degrees and

postdoctoral experience in theoretical, observational, or instrumental astronomy are invited to apply for these positions.

ASIAA is an institute of Academia Sinica, the national research organization in Taiwan. The institute has a staff of approximately 100, and has operations in both Taipei and Hawaii. Present research at the ASIAA includes the Solar System, Stellar Evolution, Star Formation, Interstellar Chemistry, Galactic Dynamics, Active Galaxies, and Cosmology. We are partners in the SubMillimeter Array (SMA) project on Mauna Kea, and are developing an Array for Microwave Background Anisotropy (AMiBA) in Mauna Loa. ASIAA also participates in the CFHT Wide Field Infrared Camera development in exchange for observing time on the telescope. A 3-telescope system is being built in Lulin Mountain in Taiwan to conduct an occultation survey in search for Kuiper Belt objects. An increasing level of theoretical and computational astrophysics is being pursued through the establishment of Theoretical Institute for Advanced Research in Astrophysics (TIARA) in collaboration with TsingHua University.

We seek scientists to augment both the Institute's science and engineering efforts, in particular: (1) infrared and millimeter-wave astronomers interested in molecule and grain chemistry in the interstellar medium; (2) astronomers with experience in radio interferometry to participate in ongoing tests/software development and scientific observations with the SMA; (3) observational cosmologists interested in CMB anisotropy/polarization and the Sunyaev-Zeldovich effect to participate in the construction and scientific observations with AMiBA; (4) optical astronomers to participate in the search for Kuiper Belt Objects; (5) instrument scientists to participate in the development of receivers and detectors; and (6) scientists with backgrounds in astronomy or planetary sciences to pursue topics in theoretical astrophysics, computational fluid dynamics, and magnetohydrodynamics.

Applicants should submit a curriculum vitae, a brief summary of research and future research plans or instrumentation experience, and arrange three letters of recommendation to: Dr. Sun Kwok, director, ASIAA, PO Box 23-141, Taipei 106, Taiwan; Fax: 886-2-2367 7849; Email: [asiaa@asiaa.sinica.edu.tw](mailto:asiaa@asiaa.sinica.edu.tw). The closing date for applications is January 31, 2004.

**No. 20263**

**Observational Astronomer, ladder-rank faculty position**

**UNIVERSITY OF CALIFORNIA, SANTA CRUZ**

**1156 High Street**

**UCSC**

**Santa Cruz, CA 95064**

**USA**

**Tel: 831.459.2991**

**FAX: 831.459.5244**

**URL1: <http://www.ucolick.org/general/employment/faculty.html>**

**(listing of position)**

**Email Submission Address: [jacky@ucolick.org](mailto:jacky@ucolick.org)**

**Email Inquiries: [director@ucolick.org](mailto:director@ucolick.org)**

***Attention: Joseph Miller, Director***

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UNIVERSITY OF CALIFORNIA, SANTA CRUZ

L I C K O B S E R V A T O R Y O b s e r v a t i o n a l A s t r o n o m e r

The University of California Observatories/Lick Observatory and the Department of Astronomy and Astrophysics, University of California, Santa Cruz, invite applications for a ladder-rank position in the UCO/Lick Observatory, 80% (research and service), and in the Department of Astronomy and Astrophysics, 20% (teaching). Contingent on the availability of funding, the appointment will be filled at the level of Assistant Astronomer/Assistant Professor, tenure-track, with a starting date of July 1, 2004. The appointee will be expected to develop a first-class research program in infrared or optical astronomy using the observational facilities at the Lick Observatory and at the Keck Observatory. The campus is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research and/or service.

RANK: Assistant Astronomer/Assistant Professor

SALARY: \$53,900-\$59,900, 11-month basis

MINIMUM QUALIFICATIONS: PhD or equivalent in astronomy or a closely-related area. Applicants must have shown a strong and energetic commitment to infrared or optical observational astronomy and a publication record that reflects those interests. Applicants must also have the knowledge and ability to teach graduate and undergraduate courses and to direct student research. Candidates with a demonstrated ability to develop infrared or optical instrumentation including adaptive optics are especially encouraged to apply.

POSITION AVAILABLE: July 1, 2004

APPLY TO: Applicants should send a vita and the names of at least three professional referees who have been asked by the applicant to submit letters of recommendation or appraisal directly to the search committee (all letters will be treated as confidential, please direct your referees to UCSC's confidentiality statement at <http://www2.ucsc.edu/ahr/confstm.htm>) to:

Dr. Joseph S. Miller Director, UCO/Lick Observatory University of California Santa Cruz, CA 95064  
Please refer to provision # 322-04 in your reply.

CLOSING DATE: All materials, including reference letters solicited by the applicant, must be received no later than January 15, 2004. For more information about this position, see website: <http://www.ucolick.org/general/employment/faculty.html>

UCSC IS AN AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER  
WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY

Inquiries regarding the University's equal employment opportunity policies may be directed to: Equal Employment Opportunity/Affirmative Action Office at, University of California, Santa Cruz, CA 95064; (831) 459-2686.

**No. 20432**

**Summer Faculty (teaching/mentoring gifted young scientists)**

**THE SUMMER SCIENCE PROGRAM**

**Indiana Univ. Astronomy Dept**

**Swain West 319**

**Bloomington, IN 94035**

**USA**

**Tel: (812) 855-2400**

URL1: <http://www.summerscience.org>

(*Summer Science Program website*)

URL2: <http://www.summerscience.org/jobs>

(*job descriptions*)

Email Submission Address: [tomsc@astro.indiana.edu](mailto:tomsc@astro.indiana.edu)

Email Inquiries: [tomsc@astro.indiana.edu](mailto:tomsc@astro.indiana.edu)

*Attention: Dr. Thomas Steiman-Cameron, Trustee, SSP Trustee*

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The Summer Science Program (SSP) seeks candidates to fill one open (summer) position on the senior faculty. SSP is an intensive, six-week residential enrichment program for 36 academically gifted high school students, mostly rising seniors, from around the world. There are two campuses: in Ojai, California and Socorro, New Mexico.

Working in teams of three, students determine an asteroid's orbit using their own photographic and CCD observations, measurements, and software. See [www.summerscience.org](http://www.summerscience.org) for more information.

The SSP curriculum includes lectures in general physics, mathematics (introductory calculus), and astronomy (particularly orbital mechanics). Two senior faculty at each campus divide this course load according to respective interests. Four teaching assistants (usually SSP alumni in graduate school) and a residential counselor complete the faculty at each site. The curriculum also includes field trips and guest speakers.

Qualified candidates will have a strong interest in education and demonstrated teaching ability. A PhD in a physical science, and experience teaching high school students, are preferred. Enthusiasm and energy are required.

The residential employment period is for approximately seven weeks, beginning in June, on-site in either Ojai or Socorro. These positions are for one summer, but with the possibility of continuing annual renewal.

Interested individuals should send a curriculum vitae, a statement of teaching philosophy, and the names and contact information for three references.

**No. 20342**

**W. J. McDonald Postdoctoral Fellowship**

**THE UNIVERSITY OF TEXAS AT AUSTIN**

**2511 Speedway, RLM 15.306**

**1 University Station, C1402**

**Austin, TX 78712**

**USA**

**Tel: 512-471-3303**

**FAX: 512-471-1635**

URL1: <http://www.as.utexas.edu>

(*Department Web Page*)

Email Inquiries: [mhamby@astro.as.utexas.edu](mailto:mhamby@astro.as.utexas.edu)

*Attention: Dr. David Lambert, Director*

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The University of Texas McDonald Observatory announces competition for the W. J. McDonald Postdoctoral Fellow. By offering this Fellowship, McDonald Observatory is supporting a new initiative in Theoretical Cosmology. This new initiative will be led by Dr's. Eiichiro Komatsu, Paul Shapiro, and Steven Weinberg. The successful applicant is expected to have a background in areas related to theoretical cosmology. This Fellowship is generally restricted to new Ph.D. graduates without previous postdoctoral experience.

The Fellowship includes a competitive salary and benefits package and funding for research expenses including travel and computational activities. Initial appointment will be for one year beginning September 2004, with renewal for a second and third year following satisfactory research performance. Candidates are expected to hold a Ph.D. upon arrival and to reside in Austin. Applicants should submit a rÈsumÈ, a summary of past research accomplishments, future plans in theoretical cosmology to be conducted at UT Austin during the Fellowship, and letters of recommendation from at least three scientists familiar with the applicant's research by 15 January 2004. EOE/AEE.

**No. 20354**

**Arctic Region Supercomputing Center Chief Scientist**

**UNIVERSITY OF ALASKA FAIRBANKS**

**910 Yukon Drive**

**PO Box 756020-6020**

**Fairbanks, Alaska 99775-6020**

**USA**

**Tel: 907-474-1550**

**FAX: 907-474-5494**

**URL1: [http://www.uaf.edu/uafhr/Emp\\_Opp.html](http://www.uaf.edu/uafhr/Emp_Opp.html)**

**URL2: <http://http://www.arsc.edu/misc/jobs.html>**

**Email Submission Address: [babcock@arsc.edu](mailto:babcock@arsc.edu)**

**Email Inquiries: [williams@arsc.edu](mailto:williams@arsc.edu)**

***Attention: Pat Babcock, Administrative Assistant***

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The Arctic Region Supercomputing Center (ARSC, [www.arsc.edu](http://www.arsc.edu)) invites applications and nominations for a dynamic scientist and leader to serve as ARSC's Chief Scientist. ARSC is located at the University of Alaska Fairbanks (UAF), along with several other internationally known research institutes including the International Arctic Research Center, the Geophysical Institute, and the Center for Nano Sensor Technology. The arrival of a 5-teraflop IBM system and a 1.6-teraflop Cray X1 during 2003 will keep ARSC at the forefront of university-based supercomputing centers. Recent and planned hires are increasing the number of computational scientists on campus in the areas of remote sensing, climate modeling, geophysics, planetary science, ocean modeling and bioinformatics.

The Chief Scientist will report directly to the ARSC Director and will be considered for a joint appointment with a department or institute at UAF. He or she will be expected to lead his or her own research group that will serve as a model for signature science that incorporates high performance computing, communication, mass storage systems and visualization. Applicants who will promote the use of the Data TeraGrid are particularly encouraged. The chief scientist's research group will serve to catalyze computational science activities at the center, working to connect efforts at the center, campus and the remote user community.

The qualifications for the position include a Ph.D. degree or equivalent in an appropriate discipline.

Preference will be given to those with an international reputation in computational science and a distinguished record of group and scientific community leadership. Strong consideration will also be given to candidates that show potential for this stature at an early career stage.

The mission of ARSC is to support high performance computational research in science and engineering with an emphasis on high latitudes and the Arctic. ARSC provides high performance computational, visualization, networking and data storage resources for researchers within UA, other academic and scientific institutions, the Department of Defense, and government agencies. Researchers at UA make significant contributions to science on state, national and international levels using ARSC resources and talent. The center supports a dynamic visualization group with faculty in art and computer science who work closely with ARSC staff to utilize the center's immersive visualization systems. ARSC's Access Grid Node is used to facilitate remote collaborations and training. For further information about the position, contact ARSC's Director, Frank Williams, [williams@arsc.edu](mailto:williams@arsc.edu) ). A complete job description can be downloaded from our web site at [http://www.uaf.edu/uafhr/Emp\\_Opp.html](http://www.uaf.edu/uafhr/Emp_Opp.html)

**No. 20357**

**Glaxo Wellcome Endowed Professorship in Radio/Optical Astronomy**

**UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE**

**Department of Physics, CPO# 2430**

**One University Heights**

**Asheville, North Carolina 28804**

**United States**

**Tel: 828-251-6269**

**FAX: 828-251-6397**

**URL1: <http://unca.edu>**

*(UNC Asheville website)*

**URL2: <http://phys.unca.edu>**

*(UNC Asheville Physics Department website)*

***Attention: Dr. Randy A. Booker, Chair and Professor***

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The Department of Physics at the University of North Carolina at Asheville (UNCA), North Carolina's public liberal arts university, invites applications for the Glaxo Wellcome Professorship in Astronomy, a newly created endowed chair. This tenure-track appointment at the Professor rank would begin with the Fall 2004 Term.

The individual appointed to the Glaxo Wellcome Professorship should hold a PhD in Radio or Optical Astronomy and be prepared to take the lead in fostering astronomical research among students and faculty across disciplinary borders. The ability to conduct research with the Pisgah Astronomical Research Institute (PARI) located nearby will be crucial for the applicant. Responsibilities will include assisting in the development and enhancement of PARI as a UNC/UNCA Research Center. Evidence of commitment to undergraduate education and research is essential, as is a proven record of securing external funding. Duties include teaching six hours per semester (lower and upper division Physics and Astronomy courses), faculty development activities, and some public responsibilities. Salary is competitive and funds are available to support scholarly research. The endowed chair appointment is for five years, with a renewal process for a second five years.

Letters of application should include a curriculum vitae; a list of references; a statement addressing the candidate's research interests and the role of scholarship in a liberal arts education; plus a statement concerning the candidate's philosophy of undergraduate teaching and learning, especially the

contribution he or she could make as Glaxo Wellcome Professor to an undergraduate, liberal arts university such as UNCA.

**No. 20499**

**Postdoctoral Positions in Gravitational Lensing**

**UNIVERSITY OF CALIFORNIA, DAVIS**

**One Shields Avenue**

**Davis, CA 95616**

**Tel: 530-752-4086**

**FAX: 530-752-4717**

**URL1: <http://www.physics.ucdavis.edu/Cosmology>**

**(UCD Cosmology Group)**

**Email Submission Address: [mattheis@physics.ucdavis.edu](mailto:mattheis@physics.ucdavis.edu)**

**Email Inquiries: [tyson@physics.ucdavis.edu](mailto:tyson@physics.ucdavis.edu)**

***Attention: Jenni Mattheis (Observational Cosmology Postdoc Search)***

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The University of California, Davis cosmology group invites applications for two postdoctoral research positions in observational cosmology beginning in Fall 2004. One position is with the Deep Lens Survey, a deep multiwavelength optical survey focused on weak gravitational lensing. The successful candidate will work with Prof. Tony Tyson and Dr. David Wittman, and will publish research based on the DLS data as well as work closely with the data to ensure quality. For this position, significant experience with ground-based imaging is required. Prior experience in gravitational lensing is a plus, but not required.

The second position will be split between the DLS and space-based lensing projects, specifically a lensing study of the HST Ultra Deep Field. Experience with HST/ACS data, gravitational lensing and photometric redshifts are pluses.

Both positions require the technical ability to implement new ideas (programming, scripting) as well as the ability to generate new ideas. See <http://dls.bell-labs.com/jobs.html> and the above department website for more information on scientific and technical aspects, and on the larger environment of the cosmology group.

The appointments will be for two years, with renewal for a third year possible. A generous annual research budget will be available, along with access to first-class observing and computing facilities. Applicants should send a CV, a statement of research interests, and arrange for three letters of recommendation to be sent to Ms. Jennifer Mattheis at the address above. For full consideration, completed applications must be received by January 15, 2004. Applications received by December 30 may result in an interview at the Atlanta AAS. AAE/EOE

**No. 20434**

**Radio Astronomer**

**NAVAL RESEARCH LABORATORY**

**2001 Wisconsin Ave., NW**

**GR 322A**

**Washington, DC 20007**

**USA**

**Tel: 202-334-2760**

**FAX: 202-334-2759**

**URL1:** <http://rsd-www.nrl.navy.mil/7213/weiler/>

**Email Inquiries:** [Namir.Kassim@nrl.navy.mil](mailto:Namir.Kassim@nrl.navy.mil), [rap@nas.edu](mailto:rap@nas.edu)

***Attention: Research Associateship Programs***

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### Postdoctoral Positions in Radio Astronomy

NAVAL RESEARCH LABORATORY Remote Sensing Division, Code 7213 4555 Overlook Ave. SW  
Washington, DC 20375-5351 Tel. 202-767-0668 FAX: 202-404-8894  
<mailto:Namir.Kassim@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 (1) Radio astronomy hardware development, such as antenna and receiver design and development, digital signal processing, or radio frequency interference (RFI) mitigation techniques; or (2) Any area of astrophysics where existing or planned low-frequency radio observations (e.g., with VLA, VLBA, Arecibo, GMRT, GBT) may contribute, such as high-redshift radio galaxies, clusters of galaxies, supernova remnants and pulsars, studies of propagation effects, searches for extrasolar planets, 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. With it, NRL scientists are beginning a sky survey of the northern hemisphere, the VLA Low-Frequency Sky Survey (VLSS). Inspired by the capabilities of the 74 MHz system, NRL radio astronomers, together with scientists at an international consortium consisting of the Netherlands Foundation for Research in Astronomy (ASTRON) and Massachusetts Institute of Technology (MIT) are planning to build the Low Frequency Array (LOFAR). NRL radio astronomers are involved in designing and developing two prototype LOFAR "stations" or phased banks of dipoles to be deployed in the 2004--2005 time frame. Observational programs, such as a 74 MHz sky survey or ongoing 74 and 330 MHz Galactic center observations, are pursued both for their intrinsic astronomical interest as well as to help guide LOFAR calibration and imaging strategy and array configuration design. LOFAR will open a new window on the spectrum, with scientific applications in virtually all areas of astrophysics.

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 third year extension if warranted. 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. Each year, deadlines for submission to the NRC are February 1, May 1, and August 1. The current award stipend is \$55,120 per year. US citizenship or permanent residency is required. Application materials can be obtained online at [www.national-academies.org/rap](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: <http://rsd-www.nrl.navy.mil/7213/weiler/>.

**No. 20421**

**Postdoctoral Associate in High-resolution X-ray Astrophysics**

**MIT CENTER FOR SPACE RESEARCH**

**Room NE80-6025**

**70 Vassar St.**

Cambridge, MA 02139  
USA  
Tel: 617-253-7244  
FAX: 617-253-8084  
URL1: <http://space.mit.edu>  
Email Inquiries: [dd@space.mit.edu](mailto:dd@space.mit.edu)

*Attention: Daniel Dewey, Research Scientist*

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The MIT Center for Space Research (CSR) has a Postdoctoral Associate position beginning September 2004 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 a statement of research interests, and arrange for three letters of reference to be sent to Dr. Daniel Dewey at the above address. Applications will be reviewed beginning 5 January 2004 and will be accepted through 16 January 2004. AAE/EOE.

**No. 20438**  
**Postdoctoral Fellow in Theoretical Cosmology**  
**THE UNIVERSITY OF TEXAS AT AUSTIN**  
**The University of Texas at Austin**  
**1 University Station, 2511 Speedway, C1400**  
**Austin, TX 78712**  
**USA**  
**Tel: 512-471-9422**  
**FAX: 512-471-6016**  
**URL1: <http://www.as.utexas.edu>**  
**Email Inquiries: [shapiro@astro.as.utexas.edu](mailto:shapiro@astro.as.utexas.edu)**

*Attention: Prof. Paul Shapiro*

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Applications are invited for a postdoctoral fellowship in theoretical cosmology. A background in cosmology and related areas would be useful, including galaxy and large-scale structure formation, cosmic reionization, high-redshift star formation, CMB, gas and gravitational dynamics, radiative processes, and numerical simulation. This position will be for up to three years, subject to the availability of funding. The University of Texas is expanding its research program in cosmology, with a new, joint Astronomy/Physics initiative. In support of this new initiative, the McDonald Observatory will also devote the next W. J. McDonald Postdoctoral Fellowship to this field, in a separately advertised search. Applicants will automatically be considered for both positions. Candidates should submit a curriculum vitae, a summary of past research accomplishments and current research interests and plans, and arrange for at least three letters of reference to be sent by January 15, 2004. Women and minorities are encouraged to apply. EOE/AAE

**No. 20467**

**Chair, Department of Physics**

**UNIVERSITY OF TEXAS AT ARLINGTON**

**Box 19059**

**Arlington, TX 76019**

**United States**

**Tel: 817-272-2266**

**FAX: 817-272-3637**

**URL1: <http://www.uta.edu/physics/chairsearch/>**

**Email Submission Address: [jackymack@uta.edu](mailto:jackymack@uta.edu)**

**Email Inquiries: [jackymack@uta.edu](mailto:jackymack@uta.edu)**

***Attention: Margaret Jackymack***

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Physics Department Chair

Applications and nominations are invited for the Chair of Physics, a tenured full Professor position at the University of Texas at Arlington. A Ph.D. is required. The target starting date is September 1, 2004, pending final budgetary approval. The department currently has 16 tenured and tenure track faculty members, 14 postdoctoral fellows, and 8 staff members. It offers B.S., B.A., M.S. and Ph.D. degrees in Physics, and other inter-disciplinary degrees. UTA is the second largest unit in the UT system with 25,000 students. Its location in the heart of the Dallas-Fort Worth metropolitan area provides excellent opportunities for collaboration with high-technology industries and neighboring universities. Research groups include experimental and theoretical condensed matter physics, experimental particle physics, and theoretical astrophysics. The University is launching major new initiatives in nanomaterials, biotechnology and grid computing. A new 120,000 sq ft Physics and Chemistry building is under construction. The Physics department has a modern machine shop and excellent computational facilities. Further information on research activities and additional information about this position may be found at <http://www.uta.edu/physics/chairsearch/>.

Applicants must demonstrate a strong record of funded research, and well-established credentials in teaching, research and leadership. The successful applicant will be expected to maintain an active research program. A commitment to quality teaching is required. General administrative experience is preferred. This position is considered to be security sensitive. Review of applications will begin January 15, 2004, and will continue until the position is filled. Candidates should forward a letter of application, curriculum vitae, bibliography, statement of research and teaching plans, evidence of leadership abilities, and the names of at least four references to: The University of Texas at Arlington, Department of Physics, Dr. Danny Dyer, Chair of the Search Committee, Box 19059, Arlington, Texas 76019. The

University of Texas at Arlington is an Equal Employment Opportunity and Affirmative Action Employer.

**No. 20433**

**Supernova/Gamma Ray Burster Research**

**NAVAL RESEARCH LABORATORY**

**2001 Wisconsin Ave., NW**

**GR 322A**

**Washington, DC 20007**

**USA**

**Tel: 202-334-2760**

**FAX: 202-334-2759**

**URL1: <http://rsd-www.nrl.navy.mil/7213/weiler>**

**Email Inquiries: [Kurt.Weiler@nrl.navy.mil](mailto:Kurt.Weiler@nrl.navy.mil), [rap@nas.edu](mailto:rap@nas.edu)**

***Attention: Research Associateship Programs***

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NRL-NRC Postdoctoral Associate NAVAL RESEARCH LABORATORY Remote Sensing Division  
Code 7213 Washington, DC 20375-5320 Tel: 202-767-0292 E-mail: Kurt.Weiler@nrl.navy.mil

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 2004 in the area of supernova and gamma-ray burster research. The current program is very active in the observing and interpretation of the radio emission from GRBs, supernovae and supernova remnants, with related studies at IR, optical, x-ray, and other wavelengths. The program goals are to increase existing sample sizes and to 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/7213/weiler/> and linked sites.

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 third year extension if warranted. 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. Each year, deadlines for submission to the NRC are February 1, May 1, and August 1. The current award stipend is \$55,120 per year. US citizenship or permanent residency is required. Application materials can be obtained online at [www.national-academies.org/rap](http://www.national-academies.org/rap). For further information contact Dr. Kurt W. Weiler at the contact information listed above. EOE/AEE.

**No. 20392**

**Faculty Position in Astrophysics**

**LEIDEN OBSERVATORY**

**Niels Bohrweg 2**

**The Netherlands**

**Tel: 011-31-71-5275833**  
**FAX: 011-31-71-5275819**  
**URL1: <http://www.strw.leidenuniv.nl>**  
**Email Submission Address: [jobs@strw.leidenuniv.nl](mailto:jobs@strw.leidenuniv.nl)**  
**Email Inquiries: [dezeeuw@strw.leidenuniv.nl](mailto:dezeeuw@strw.leidenuniv.nl)**

*Attention: Professor P. T. De Zeeuw, Scientific Director*

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Leiden Observatory invites applications for a faculty position in astrophysics. Candidates should have a proven track record of independent research and excellent didactic qualities.

Leiden astronomers carry out observational, interpretative and theoretical research in the fields of cosmology, formation and dynamics of galaxies and clusters, galactic structure, molecular astrophysics, star- and planet formation, and astrobiology. Staff members have access to a wide variety of telescopes on the ground and in space. Leiden Observatory is a member of the Netherlands (top-)Research School for Astronomy (NOVA), the national association of university astronomy departments.

The position is tenure-track and open to scientists of all nationalities. Appointment at a more senior level is possible for exceptionally qualified candidates. Applicants should send a curriculum vitae, a publication list, and a statement of past and future research to Professor de Zeeuw, and arrange for three letters of reference to be sent separately. Review of applications will start January 20, 2004.

**No. 20468**  
**FUSE Research Position**  
**THE JOHNS HOPKINS UNIVERSITY**  
**3400 N. Charles Street**  
**Bloomberg 151**  
**Baltimore, MD 21218**  
**USA**  
**Tel: 410-516-2372**  
**FAX: 410-516-5494**  
**URL1: <http://fuse.pha.jhu.edu>**  
*(Far Ultraviolet Spectroscopic Explorer)*  
**Email Submission Address: [lfowler@pha.jhu.edu](mailto:lfowler@pha.jhu.edu)**  
**Email Inquiries: [lfowler@pha.jhu.edu](mailto:lfowler@pha.jhu.edu)**

*Attention: Lauren Fowler, Administrator*

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The Far Ultraviolet Spectroscopic Explorer (FUSE) group at the Johns Hopkins University is seeking an astronomer interested in analyzing and interpreting scientific data from the FUSE satellite. FUSE is a high resolution ultraviolet spectrograph designed to study the interstellar and intergalactic medium, active galactic nuclei, and stellar and solar system phenomena. The reach of the telescope and data quality are unprecedented in this spectral region. Applicants should have a Ph.D. in astronomy or physics and have demonstrated scientific accomplishments. Previous experience in observational studies of the interstellar medium and astronomical spectroscopy is highly desirable. Applicants will be considered primarily at the Post Doctoral Associate level. Appointment at other levels, (Assistant Research Scientist and Associate Research Scientist) is possible, depending on background and experience. The appointee will have access to the Apache Point Observatory and the Sloan Digital Sky Survey. Further information on the FUSE Project may be obtained at <http://fuse.pha.jhu.edu> . Applicants

should send a resume and the names of three references to Ms. Lauren Fowler, at the above address as soon as possible. Review of applications will begin 1 February 2004 and will continue until the position is filled. The Johns Hopkins University encourages applications from women and minority candidates. AAE/EOE

**No. 20408**

**Tenure-track Assistant Professor of Astronomy**

**SAN JOSE STATE UNIVERSITY**

**One Washington Square**

**San Jose, CA 95192-0106**

**USA**

**Tel: 408-924-5265**

**FAX: 408-924-2917**

**Email Submission Address: [mkaufman@email.sjsu.edu](mailto:mkaufman@email.sjsu.edu)**

*Attention: Chair, Astronomy Search Committee*

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Applications are invited for a tenure-track assistant professor position in Astronomy. Candidates should have a Ph.D. in Astronomy or Astrophysics and experience teaching undergraduate courses in Astronomy. Expertise in observational astronomy is preferred. The principal teaching responsibility is in General Education and upper division astronomy courses, but participation in undergraduate physics lectures and labs is anticipated. Scholarship in astronomy, including research, publication and external funding, is also expected. Salary range is commensurate with qualifications and experience. Candidates should submit letter of application, CV, statements of teaching/research interests, and names of three people who can specifically address the candidate's expertise in teaching and potential for research in a non-majors, non-graduate program, to: Chair, Astronomy Search Committee, Department of Physics, San Jose State University, One Washington Square, San Jose, CA 95192-0106. All application materials must be received by February 1, 2004. Please reference JRN#011256 in all correspondence. San Jose State University is an Equal Opportunity/Affirmative Action employer committed to the core values of inclusion, civility, and respect for each individual. Reasonable accommodations are made for applicants with disabilities who self-disclose.

**No. 20391**

**Faculty Position in Radio Astronomy, Active Galaxies, or Cosmology**

**LEIDEN OBSERVATORY**

**Niels Bohrweg 2**

**The Netherlands**

**Tel: 011-31-71-5275833**

**FAX: 011-31-71-5275819**

**URL1: <http://strw.leidenuniv.nl>**

**Email Submission Address: [jobs@strw.leidenuniv.nl](mailto:jobs@strw.leidenuniv.nl)**

**Email Inquiries: [miley@strw.leidenuniv.nl](mailto:miley@strw.leidenuniv.nl), [dezeeuw@strw.leidenuniv.nl](mailto:dezeeuw@strw.leidenuniv.nl)**

*Attention: Professor P. T. De Zeeuw, Scientific Director*

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Leiden Observatory invites applications for a tenure-track faculty position in the areas of radio astronomy, active galaxies or cosmology. The nature of quasars and radio galaxies, their use in cosmology and (proto) clusters and galaxies in the early Universe are of particular interest. The position is open to instrumentalists, observers and theorists, of any nationality.

The department is involved in the development of a next-generation radio telescope, the Low Frequency Array (LOFAR), in collaboration with ASTRON (Dwingeloo). The successful candidate will have an opportunity of actively participating in this project.

Leiden Observatory has a broad-based program in astrophysics, with observational, interpretative and theoretical research in cosmology, distant galaxies and clusters, galactic structure, molecular astrophysics and star- and planet formation. It is a member of the Netherlands (top-) Research School for Astronomy (NOVA), a national association of university astronomy departments. Leiden staff has access to a wide variety of telescopes on the ground and in space.

Candidates should have a proven record of independent research and excellent didactic qualities. Appointment at a senior level is possible for exceptionally qualified candidates. Applications, with a curriculum vitae, list of publications and a statement of past and future research plans should be sent to Professor P. T. De Zeeuw, Scientific Director, Sterrewacht Leiden, Postbox 9502, 2300 RA Leiden, The Netherlands. Three letters of reference should be sent separately. For additional information please contact Professor Miley, Chairman of the Search Committee, ( [miley@strw.leidenuniv.nl](mailto:miley@strw.leidenuniv.nl) ) or Professor De Zeeuw ( [dezeeuw@strw.leidenuniv.nl](mailto:dezeeuw@strw.leidenuniv.nl) ). Review of applications will start on 20 January 2004.

**No. 20404**

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

**MAX PLANCK INSTITUT FUER ASTROPHYSIK**

**Karl Schwarzschild Str. 1**

**Garching bei Muenchen, Bavaria 85748**

**Germany**

**Tel: +49 89 30000 2201**

**FAX: +49 89 30000 2899**

**URL1: <http://www.mpa-garching.mpg.de>**

**Email Inquiries: [car@mpa-garching.mpg.de](mailto:car@mpa-garching.mpg.de)**

***Attention: Appointments Committee***

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In addition to the announcement of the postdoctoral appointments at the Max Planck Institut fuer Astrophysik (see AAS AD #20266), 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 given in AAS Ad #20266). 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 15 members: 4 postdocs, 4 PhD students and 6 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 candidate is expected to work with the members of the partner group (including supervising 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 (including three recommendation letters) to

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

Deadline is January 7, 2004. Later application 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. 20365**

**Research Associate to Assistant Astronomer**

**THE UNIVERSITY OF ARIZONA**

**Steward Observatory**

**933 N. Cherry Ave.**

**Tucson, AZ 85721**

**USA**

**Tel: (520) 621-2727**

**FAX: (520) 621-9555**

**URL1: <http://gould.as.arizona.edu/~mmeyer/origins>**

**URL2: <http://ircamera.as.arizona.edu/nircam/>**

**Email Submission Address: [dwilson@as.arizona.edu](mailto:dwilson@as.arizona.edu)**

***Attention: Debra Wilson, Program Manager***

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The Star and Planet Formation Research Group/NIRCam project at Steward Observatory, the University of Arizona seeks applicants for a post-doctoral fellow interested in the origin of the stellar initial mass function. The successful candidate will collaborate with the PI (Michael Meyer) and Co-I's Don McCarthy and Marcia Rieke in: 1) the conduct of ground-- and space--based observations of the distribution of stellar (and sub-stellar) masses in extreme star-forming environments; and 2) the design, construction, and characterization of novel infrared instrumentation required to make these observations. A Ph.D. in astronomy, physics, or related field is required. Experience with adaptive optics, infrared instrumentation, near-IR spectroscopy, and/or statistical comparison of numerical models to observational data is highly desirable. Candidates with an interest in education and public outreach will receive special consideration. Successful candidates will have full access to the facilities of Steward Observatory including the 6.5m MMT and Magellan telescopes, the 2.3m Kitt Peak Bok telescope, the Heinrich-Hertz Sub-millimeter Telescope and starting in 2004 the Large Binocular Telescope on Mt. Graham. For more information, please visit the group WWW site at: <http://gould.as.arizona.edu/~mmeyer/origins> or <http://ircamera.as.arizona.edu/nircam/>

The position will be at the Research Associate or at the Assistant Astronomer level at Steward Observatory, at salaries from \$ 38,000 to \$47,000 depending on qualifications and experience. This position is initially for two years with the possibility for extension. The start date is expected to be September 1, 2004 although other start dates can be accommodated. Review of materials will begin December 1, 2003 and will continue until the position is filled. Please send a curriculum vitae, statement of experience and research interests, and the names & contact information for three references to Debra Wilson at the above address or apply via email to: [dwilson@as.arizona.edu](mailto:dwilson@as.arizona.edu) . The University of Arizona is an EEO/AA Employer-M/W/D/V.

**No. 20367**

**Research Associate to Assistant Astronomer for Astrobiology**

**THE UNIVERSITY OF ARIZONA**

**Steward Observatory**

933 N. Cherry Ave.  
Tucson, AZ 85721  
USA  
Tel: (520) 621-6524  
FAX: (520) 621-7852  
URL1: <http://www.as.arizona.edu/telescopes/telescopes.html>  
URL2: <http://www.astrophysics.arizona.edu/>  
URL3: <http://caao.as.arizona.edu/laplace>  
Email Submission Address: [aspitz@as.arizona.edu](mailto:aspitz@as.arizona.edu)

*Attention: Anna Spitz, Special Assistant*

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The University of Arizona/NOAO Laplace Center node of NASA's Astrobiology Institute seeks applicants for a post-doctoral fellow interested in the comparison of planetary systems around Sun-like stars to our own solar system. The successful candidate will collaborate with Co-I's Michael Meyer, Phil Hinz, and Renu Malhotra in: 1) AO/nulling and infrared spectroscopic observations of planets and debris disks surrounding Sun-like stars; 2) dynamical modeling of dust disks in the presence of planets; and 3) comparison of observational and theoretical evidence for planetary systems around other stars to scenarios for the evolution of our own solar system. A Ph.D. in astronomy, physics, planetary science, or related field is required. Experience in high resolution imaging, infrared spectroscopy, dynamical modeling, and/or studies of solar system evolution is highly desirable. Successful candidates will have full access to the facilities of Steward Observatory including the 6.5m MMT and Magellan telescopes, the 2.3m Kitt Peak Bok telescope, the Heinrich-Hertz Sub-millimeter Telescope and starting in 2004 the Large Binocular Telescope on Mt. Graham ( <http://www.as.arizona.edu/telescopes/telescopes.html> ), well as affiliation with the Theoretical Astrophysics Program at the University of Arizona ( <http://www.astrophysics.arizona.edu/> ). For more information, please visit the group WWW site at: <http://caao.as.arizona.edu/laplace> . The position will be at the Research Associate or at the Assistant Astronomer level at Steward Observatory, at salaries from \$ 38,000 to \$47,000 depending on qualifications and experience. This position is initially for two years with the possibility for extension. The start date is expected to be September 1, 2004 although other start dates can be accommodated. Review of materials will begin December 1, 2003 and will continue until the position is filled. Please send a curriculum vitae, statement of experience and research interests, and the names and contact information for three references to Dr. Anna Spitz at the address below or apply via email to: [aspitz@as.arizona.edu](mailto:aspitz@as.arizona.edu) . The University of Arizona is an EEO/AA Employer-M/W/D/V.

**No. 20429**  
**Postdoctoral Associates in Galactic or Extragalactic Astrophysics**  
**ASTROPHYSIKALISCHES INSTITUT POTSDAM**  
**Extragalaktische Astrophysik und Kosmologie**  
**An der Sternwarte 16**  
**Potsdam, - 14482**  
**Deutschland**  
**Tel: + 49 331 74 99 381**  
**FAX: + 49 331 74 99 267**  
**URL1: <http://www.aip.de>**  
**Email Submission Address: [msteinmetz@aip.de](mailto:msteinmetz@aip.de)**  
**Email Inquiries: [msteinmetz@aip.de](mailto:msteinmetz@aip.de)**

*Attention: Matthias Steinmetz, Prof. Dr.*

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The Astrophysikalisches Institut Potsdam (AIP) is offering several postdoctoral positions in galactic or extragalactic astronomy intended for highly motivated young scientists who are excited by the opportunity to carry out an independent research program. In particular we are interested in candidates who strengthen our programs in computational astrophysics and/or who participate in our efforts performing the RAdial Velocity Experiment RAVE, a survey to measure radial velocities and abundances of 50 Million stars in the Galaxy. The initial appointment will be made for 2-3 years, depending on experience, with yearly extensions possible to a maximum of 5 years.

The AIP is located in Potsdam/Babelsberg, at the southwestern border to Berlin. About 70 scientists work on a variety of astrophysical topics. The AIP is partner of the LBT project and has access to the ESO VLT. It is involved in the XMM survey science center and leads the survey RAVE. It features excellent computer facilities and has access to supercomputers. Potsdam further hosts the Albert-Einstein Institut for Gravitational Physics, the Astronomy department of Potsdam University and several other research institutions.

Applications should be sent with the usual materials, including curriculum vita and a brief statement of research interests to the address above by January 15th 2004. Applicants should arrange for three letters of recommendation to be sent by the same date. Later applications will be considered until all posts are filled. The AIP is an equal opportunity employer and particularly encourages applications from women.

**No. 20427**

**Tenure Track Astronomer-NOAO Gemini Science Center**

**NOAO**

**950 North Cherry Ave**

**Tucson, AZ 85719**

**USA**

**Tel:**

**FAX: 520-318-8560**

**Email Submission Address: [hrnoao@noao.edu](mailto:hrnoao@noao.edu)**

**Email Inquiries: [hrnoao@noao.edu](mailto:hrnoao@noao.edu)**

***Attention: Human Resources Manager***

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Job Title: Tenure Track Astronomer

Location: Tucson, Arizona

The National Optical Astronomy Observatory (NOAO) invites applications for the position of tenure-track astronomer. The successful candidate will be expected to pursue a vigorous research program in observational astronomy as well as to actively participate in the NOAO Gemini Science Center. The position will be located at NOAO's facilities in Tucson, Arizona.

The NOAO Gemini Science Center (NGSC) supports the U.S. astronomical community in its use of the twin Gemini 8-m telescopes. Specifically, NGSC is engaged in fostering and communicating with U.S. users and potential users of Gemini; provides support to U.S. Gemini proposers, instrument builders, and users; organizes U.S. opinion on Gemini matters; provides selected operations support to Gemini; and assists in defining future directions for Gemini.

An excellent opportunity exists for candidates to use their scientific interests and experience to assist the U.S. community in exploiting the cutting-edge facilities of the Gemini Observatory. Interested applicants are invited to contact any member of the Search Committee (Chair is Dr. Taft Armandroff, NGSC Director; see NOAO Employment Opportunities Web site for full committee membership) with questions about this position or to discuss how their research interests may overlap with potential NGSC activities.

The successful candidate will reside in the active research environment of NOAO's Tucson Headquarters, which is located on the University of Arizona Campus, and there are opportunities to conduct research at Gemini's two locations in Hawaii and Chile.

Applicants should submit a curriculum vitae and a statement of current research interests. We would also be interested in a description of how the applicant would contribute to the NOAO Gemini Science Center. Applicants should also arrange for three professional references to supply letters of recommendation to be sent directly to the address below by the due date. Applications received prior to January 15, 2004 are assured of full consideration.

NOAO fosters a diverse research environment, including attention to the needs of dual-career couples within the field of Astronomy. Women and candidates from underrepresented minorities are particularly encouraged to apply.

Send materials to:

Email: [hrnoao@noao.edu](mailto:hrnoao@noao.edu)

Human Resources Manager

National Optical Astronomy Observatory

Attn: NGSC Tenure Track Astronomer

P.O. Box 26732

Tucson, Arizona 85726-6732

FAX: 520-318-8560

**No. 20435**

**Postdoctoral Researcher**

**ARIZONA STATE UNIVERSITY**

**Physics and Astronomy**

**PO Box 871504**

**Tempe, AZ 85287**

**USA**

**Tel: 480-965-2552**

**FAX: 480-965-7954**

**URL1: <http://phy.asu.edu/>**

**(ASU Physics and Astronomy)**

**Email Submission Address: [jon.morse@asu.edu](mailto:jon.morse@asu.edu)**

**Email Inquiries: [jon.morse@asu.edu](mailto:jon.morse@asu.edu)**

*Attention: Jon Morse, Asc Professor*

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Applications are invited for 1 or 2 postdoctoral researchers in the areas of stellar or ISM astrophysics in the Department of Physics & Astronomy at Arizona State University in Tempe, AZ. The successful applicant(s) will work with Prof. Jon Morse in one or more of the following areas: characterizing and modeling the stars in the field to be monitored by the Kepler mission, including calculating a grid of model atmospheres and synthetic spectra to be used as templates for determining kinematics, abundances, surface gravities, and rotational velocities, and analysis of spectroscopic data in collaboration with Dave Latham, Bob Kurucz (CfA), Bruce Carney (UNC), and John Laird (BGSU); analysis of Hubble Space Telescope, FUSE, and ground-based imaging and spectroscopic data of young supernova remnants, including Cas A and other oxygen-rich SNRs, in collaboration with Rob Fesen (Dartmouth) and Bill Blair (JHU); analysis of HST and ground-based imaging and spectroscopic data of the supermassive star Eta Carinae in collaboration with Nathan Smith (CU).

The successful applicant(s) will also have the opportunity to pursue independent research of her/his own choosing. Access to the 6.5-m MMT and Magellan telescopes, the 90-in Steward Observatory telescope on Kitt Peak, and other facilities is available.

Candidates must have a PhD in astronomy, astrophysics, or related field by the time of appointment. Experience in one or more of the following is desired: characterizing/modeling stars in the field to be monitored by the Kepler mission, analysis of spectroscopic data, and/or analysis of ground-based imaging and spectroscopic data of young supernova remnants. Send a CV, statement of research interests, list of publications, and name and contact information, including email address of three references to Jon Morse. Hard copy submissions to the address above or a single PDF file containing the required information can be emailed to [Jon.Morse@asu.edu](mailto:Jon.Morse@asu.edu). Deadline is 1/15/04; if not filled, every two weeks thereafter until search closed. The position(s) are for one year, renewable up to three years, pending availability of funding. A start date of August 2004 or sooner is preferred. AA/EOE

**No. 20487**

**Assistant Professor - Computational Astrophysics**

**CASE WESTERN RESERVE UNIVERSITY**

**Department of Astronomy**

**10900 Euclid Avenue**

**Cleveland, OH 44106-7215**

**USA**

**Tel: 216 368 3728**

**FAX: 216 368 5406**

**URL1: <http://burro.astr.cwru.edu/dept>**

**(Department Main Link)**

**Email Submission Address: [luck@fafnir.astr.cwru.edu](mailto:luck@fafnir.astr.cwru.edu)**

**Email Inquiries: [luck@fafnir.astr.cwru.edu](mailto:luck@fafnir.astr.cwru.edu)**

*Attention: R. Earle Luck, Chairman*

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The Department of Astronomy at Case Western Reserve University is seeking to fill a tenure-track position in astrophysics, at the level of Assistant Professor. We are particularly interested in candidates who are active in the fields of computational astrophysics and/or observational data mining, and whose research interests include the formation and evolution of galaxies, a major focus of current Case Astronomy department research. Department members also study the structure and dynamics of the

Milky Way and other galaxies, chemical abundances and evolution, and telescope and instrument design. Research facilities include the recently refurbished Burrell Schmidt telescope at Kitt Peak and a 56-CPU Beowulf supercomputing cluster. Particle astrophysics and cosmology is also a research focus in the Case Department of Physics.

Case is committed to undergraduate education, and we are seeking candidates who will share that commitment. Applicants should provide a curriculum vita, a statement of research interests and plans, and a statement of teaching experience, aspirations, and goals. Please have three letters of recommendation sent directly to the address above. Applications are due no later than January 15, 2004. Case Western Reserve University is an equal opportunity/affirmative action employer. We are extremely interested in women and minority applicants.

**No. 20500**

**Postdoctoral Researcher - Cosmology & Galaxy Formation**

**SWINBURNE UNIVERSITY CENTRE FOR ASTROPHYSICS & SUPERCOMPUTING**

**Centre for Astrophysics & Supercomputing**

**Mail #31, P.O. Box 218**

**Hawthorn, Victoria 3122**

**Australia**

**Tel: +61-3-9214 8036**

**FAX: +61-3-9214 8797**

**URL1: <http://astronomy.swin.edu.au>**

**Email Submission Address: [bgibson@swin.edu.au](mailto:bgibson@swin.edu.au)**

**Email Inquiries: [bgibson@swin.edu.au](mailto:bgibson@swin.edu.au)**

*Attention: Brad Gibson, Professor*

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The Centre for Astrophysics & Supercomputing at Swinburne University invites applications for a Postdoctoral Research Fellow in Cosmology & Galaxy Formation to join Brad Gibson and the Cosmology & Galaxy Formation Group (Gibson, Daisuke Kawata, Alexander Knebe, a soon to be appointed postdoc, and 6 PhD students). Expertise in generating and using N-body code suitable for cosmology and galaxy formation simulations is a necessity, as is experience in optimising and parallelising codes for Beowulf-style PC clusters. The successful applicant will join a vibrant, rapidly growing Australian research institute, and will have unlimited access to one of the world's most powerful supercomputers dedicated exclusively to astrophysics (in excess of 1 Tflop with 20 TBytes of disk space). It is anticipated that the successful applicant will carry a light teaching load, involving the instruction of one unit per semester of our online astronomy program. Interested candidates should send a CV, brief statement describing their research interests, and relevant contact information for three referees, to Brad Gibson. EMail submissions are strongly encouraged. This appointment is initially for two years, with a possible extension to three-to-five years, and would ideally commence prior to 1 June 2004 (but is subject to negotiation). Applications received before 15 January 2004 will receive full consideration.

**No. 20482**

**Tenure-Track Research Position**

**LOWELL OBSERVATORY**

**1400 W Mars Hill Road**

**Flagstaff, AZ 86001**

**USA**

**Tel: 928-774-3358**

**URL1:** <http://www.lowell.edu/hr>

**URL2:**

**URL3:**

**Email Inquiries:** [humanresources@lowell.edu](mailto:humanresources@lowell.edu)

*Attention: Human Resources*

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Lowell Observatory invites applications for a tenure-track research position in astronomy, astrophysics, or planetary science. We seek an individual with a demonstrated record of research accomplishment using ground-based and/or space-based facilities. A Ph.D. in astronomy, planetary science, or a closely related field is required. Preference will be given to candidates whose research interests complement current areas of research at Lowell (<http://www.lowell.edu/Lowell.rtf>) and who can make use of our existing and planned observational facilities. The Observatory maintains a dark observing site on Anderson Mesa, with 1.8-m, 1.1-m, and 0.8-m telescopes equipped with optical and IR imagers and spectrographs. Lowell is a partner in the Navy Prototype Optical Interferometer and has begun work on the 4.3-m Discovery Channel Telescope (<http://www.lowell.edu>). While we envision making this appointment at the Assistant Astronomer level, applications from more senior candidates will be considered.

Please send a curriculum vitae with biography, letter of application outlining research interests and plans, and the names and addresses of three individuals who have agreed to serve as professional references. Applications should be submitted by January 31, 2004 for full consideration. Applications will not be accepted by FAX or email. Lowell Observatory is an equal opportunity employer.

**No. 20485**

**Postdoctoral Appointment -- Caltech -- COSMOS project**

**CALIFORNIA INSTITUTE OF TECHNOLOGY**

**1200 East California Blvd.**

**MS 105-24**

**Pasadena, CA 91125**

**USA**

**Tel: 626-395-4973**

**FAX: 626-568-9352**

**URL1:** <http://www.astro.caltech.edu/cosmos/>

**Email Submission Address:** [nzs@astro.caltech.edu](mailto:nzs@astro.caltech.edu)

**Email Inquiries:** [fdh@astro.caltech.edu](mailto:fdh@astro.caltech.edu)

*Attention: Nick Scoville, Professor*

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The COSMOS project is an approved Treasury program to image 2 square degrees using ACS on the Hubble Space Telescope. The project also involves extensive ancillary datasets from other space missions and ground-based telescopes. The project investigates the evolution of galaxies, dark matter and AGN -- sampling all environments of large-scale structure between redshift 0.5 and 3 (see [www.astro.caltech.edu/cosmos/](http://www.astro.caltech.edu/cosmos/)). This project is an international collaboration involving institutes in the US and in Europe. At Caltech, we expect to have 2 postdoctoral scholars working on 1) galaxy evolution and 2) weak gravitational lensing signals with this unique and comprehensive dataset. These postdoctoral fellows will be fully involved in the science investigations of the COSMOS survey. Caltech co-Is involved in this project are : N. Scoville (PI), A. Blain, R. Ellis, J-P Kneib, J. Rhodes, P. Shopbell, and K. Sheth.

Qualified applicants must have a PhD or equivalent degree by the date of appointment. Funding is initially for one year but is likely to be renewed depending on availability of further funds. Applicants should send a cover letter to the address below, and attach a curriculum vitae, a publication list and a description of research interests relevant to the COSMOS project. They should also arrange for three letters of recommendation to be sent directly to the same address. Completed applications received by January 15, 2004 are assured full consideration, but later applications will also be considered.

**No. 20484**

**Postdoctoral Position in Theoretical Cosmology**

**UNIVERSITY OF CALIFORNIA, DAVIS**

**One Shields Avenue**

**Davis, CA 95616**

**USA**

**Tel: 530 752 4086**

**FAX: 530 752 4717**

**URL1: <http://www.physics.ucdavis.edu/Cosmology>**

**Email Submission Address: [mattheis@physics.ucdavis.edu](mailto:mattheis@physics.ucdavis.edu)**

*Attention: Jenni Mattheis (Cosmology Theory Postdoc Search)*

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The University of California, Davis cosmology group invites applications for postdoctoral research positions in theoretical cosmology beginning in Fall 2004. The cosmology group consists of eight faculty members (Albrecht, Becker, Boeshaar, Fassnacht, Kaloper, Knox, Lubin and Tyson), three research scientists, at least five postdocs and over a dozen graduate students. Areas of interest include dark energy, dark matter, inflation, early universe cosmology, the evolution of large--scale structure, cosmic microwave background anisotropy, strong and weak gravitational lensing and clusters of galaxies (in SZ, X-ray, lensing and optical). For more information see the web site listed below.

The appointment will be for two years, with renewal for a third year likely, contingent upon availability of funds. An annual research budget of approximately \$6,000 will be available. Applicants should send a CV, statement of research interests, and arrange for three letters of recommendation to be sent to the address below. To ensure full consideration, completed applications must be received by January 5, 2004.

**No. 20541**

**Pulsar Astronomer**

**SWINBURNE UNIVERSITY CENTRE FOR ASTROPHYSICS AND SUPERCOMPUTING**

**Mail 31**

**PO Box 218**

**Victoria, Australia 3122**

**Australia**

**Tel: +61-3-9214 8782**

**FAX: +61-3-9214 8797**

**URL1: <http://astronomy.swin.edu.au/>**

**(Full position description)**

**Email Submission Address: [mbailes@swin.edu.au](mailto:mbailes@swin.edu.au)**

**Email Inquiries: [mbailes@swin.edu.au](mailto:mbailes@swin.edu.au)**

*Attention: Matthew Bailes, Professor*

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Applications are invited for a postdoctoral fellow to work on precision pulsar timing and related pulsar astronomy at the Swinburne Centre for Astrophysics and Supercomputing. This position is funded by the Australian Research Council and is up to five years in duration with a commencing salary of between AUD 48-54K +17% superannuation with annual increments.

A Ph D in astronomy is essential, preferably with experience in pulsar astronomy. The fellow would have access to some remarkable resources, including a Teraflop+ supercomputer, the world's largest bandwidth baseband recorder/supercomputer at the Parkes radio telescope (CPSR2), and a new system soon to be installed at the Green Bank 100m telescope. Opportunities for novel science also exist with access to Gb/s baseband recorders at other telescopes and Swinburne's software correlator.

The fellow would join a strong team, including other postdoctoral fellows and students, and collaborators Manchester (CSIRO/ATNF), Kulkarni (Caltech) and Johnston (Sydney).

Applicants should forward a curriculum vitae and publication list, a summary of relevant experience, research plan and a list of three professional referees by Jan 31 2004 and consult the full position description at <http://astronomy.swin.edu.au/>.

Swinburne's Centre for Astrophysics and Supercomputing is Australia's most rapidly growing astronomical research centre with over 35 staff and students. Situated in Hawthorn, just 10 minutes from the centre of multicultural Melbourne, it is surrounded by street cafes and restuarants. The Centre engages in a range of activities, from Internet astronomy education to the development of 3D virtual reality educational materials for public outreach.

**No. 20519**

**Postdoctoral MHD Modeler**

**MONTANA STATE UNIVERSITY**

**Tel:**

**URL1:** <http://solar.physics.montana.edu/>

**URL2:** <http://solarmuri.ssl.berkeley.edu/>

**URL3:** <http://www.montana.edu>

**Email Submission Address:** [canfield@physics.montana.edu](mailto:canfield@physics.montana.edu)

**Email Inquiries:** [canfield@physics.montana.edu](mailto:canfield@physics.montana.edu)

***Attention: Richard Canfield***

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The Solar Physics group of Montana State University (MSU) in Bozeman, MT carries out an internationally recognized program of solar research and graduate education in the spectacular environment of the Northern Rocky Mountains. We have an opening for a postdoctoral scholar or research scientist with expertise in numerical magnetohydrodynamic (MHD) modeling. This position is supported by extramurally funded research grants whose aim is to improve our ability to predict space weather from solar observations.

**REQUIRED:** Ph.D. in Physics or closely related field. Published peer-reviewed research based on numerical magnetohydrodynamic simulations.

**PREFERRED:** Experience with numerical MHD simulation of solar phenomena based on solar magnetic data.

Salary commensurate with experience and qualifications. A moving allowance will be provided. MSU provides medical benefits and retirement plans.

Send: (1) a vita, including a list of refereed publications, (2) a statement of research interests and experience, and (3) three letters of recommendation addressing the qualifications listed above to Prof. Richard Canfield, Physics Department, Montana State University, Bozeman, MT 59717-3840. Direct inquiries to Prof. Canfield at (406) 994-5581 or [canfield@physics.montana.edu](mailto:canfield@physics.montana.edu). We expect this position to be available in early 2004. Screening of applicants will begin on February 1, 2004 and continue until the position is filled.

ADA/EO/AA/Veterans Preference. Women and minorities are encouraged to apply.

**No. 20491**

**Computational Astrophysicist**

**UNIVERSITY OF COLORADO AT BOULDER**

**914 Broadway**

**51 SYS**

**Boulder, CO 80309-0051**

**USA**

**Tel: 303-492-8911**

**FAX: 303-492-0330**

**URL1: <http://casa.colorado.edu>**

*(department website)*

**Email Submission Address: [Jack.Burns@cu.edu](mailto:Jack.Burns@cu.edu)**

**Email Inquiries: [Jack.Burns@cu.edu](mailto:Jack.Burns@cu.edu)**

*Attention: Jack O. Burns*

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Applications are invited for a postdoctoral research fellowship in computational cosmology at the University of Colorado, Boulder. The successful applicant will work with a research group led by Dr. Jack Burns at Colorado and work in close collaboration with Drs. Mike Norman at the University of California, San Diego and Patrick Motl at the University of Colorado. The research effort will make use of a sophisticated, hybrid Adaptive Mesh Refinement (AMR) code that couples Eulerian hydrodynamics with an N-body code in a cosmological context. The goals of the research are to develop a more complete understanding of the fundamental physics of cores in clusters of galaxies (including the effects of radiative cooling, star formation, thermal conduction and AGN feedback) and apply the simulations to current and upcoming observational efforts in the X-ray and with the Sunyaev-Zeldovich effect. While not a prerequisite, experience with national supercomputing resources, scientific programming and the use of analysis packages such as IDL are of notable benefit.

Applicants should send a curriculum vitae, a publication list, a one or two page letter outlining relevant interests and experience, and arrange to have three letters of recommendation sent directly to the above address. Applications should be received by 1 March 2004 for full consideration. Women and minorities are encouraged to apply. The University of Colorado at Boulder is committed to diversity and equality in education and employment.

**No. 20501**

**Postdoctoral Researcher - Galaxy Evolution**

**SWINBURNE UNIVERSITY CENTRE FOR ASTROPHYSICS & SUPERCOMPUTING**

**Centre for Astrophysics & Supercomputing**

**Mail #31, P.O. Box 218**  
**Hawthorn, Victoria 3122**  
**Australia**  
**Tel: +61-3-9214 8036**  
**FAX: +61-3-9214 8797**  
**URL1: <http://astronomy.swin.edu.au>**  
**Email Submission Address: [bgibson@swin.edu.au](mailto:bgibson@swin.edu.au)**  
**Email Inquiries: [bgibson@swin.edu.au](mailto:bgibson@swin.edu.au)**

*Attention: Brad Gibson, Professor*

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The Centre for Astrophysics & Supercomputing at Swinburne University invites applications for a Postdoctoral Research Fellow in Galaxy Formation & Evolution to join Brad Gibson and the Cosmology & Galaxy Formation Group (Gibson, Daisuke Kawata, Alexander Knebe, a postdoc to be appointed in late 2003, and 6-7 PhD students). The successful applicant will work closely with both Gibson and Prof Ken Freeman (ANU), conducting research in the field of theoretical galaxy formation and evolution. Demonstrable skills in the development and use of either (a) N-body, adaptive mesh refinement, or chemodynamical codes, or (b) Galactic chemical evolution codes, are desired. Candidates with related analytical and/or semi-analytical backgrounds in simulating the formation and evolution of galaxies will receive full consideration though. Opportunities will exist to participate directly in the RAdial Velocity Experiment (RAVE) for suitably interested and qualified applicants. The successful applicant will join a vibrant, rapidly growing Australian research institute (in one of the world's great cities - Melbourne), and will have unlimited access to one of the world's most powerful supercomputers dedicated exclusively to astrophysics (in excess of 1 Tflop with 20 TBytes of disk space). Interested candidates should send a CV, brief statement describing their research interests, and relevant contact information for three referees, to Brad Gibson. EMail submissions are strongly encouraged. This three-year appointment can commence at any time prior to 1 October 2004. Applications received before 15 February 2004 will receive full consideration.

**No. 20495**  
**POSTDOCTORAL RESEARCHER IN EXTRAGALACTIC ASTRONOMY**  
**UNIVERSITY OF CALIFORNIA, IRVINE**  
**Astronomy Department, 105-24**  
**Pasadena, CA 91125**  
**USA**  
**Tel:**  
**Email Inquiries: [barth@astro.caltech.edu](mailto:barth@astro.caltech.edu)**

*Attention: Dr. Aaron Barth*

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#### POSTDOCTORAL SCHOLAR, EXTRAGALACTIC ASTRONOMY

Applications are invited for a postdoctoral scholar at the University of California, Irvine. The postdoctoral scholar will work with Prof. Aaron Barth on observational studies of supermassive black holes in active galaxies, black hole demographics, and related topics, using data from the Keck Observatory, the Hubble Space Telescope, and other facilities. Applicants should have a Ph.D. in astronomy or physics prior to beginning the appointment. Previous experience in optical and/or near-infrared observing and data analysis is highly desirable.

The appointment will begin in the fall of 2004. The initial appointment will be for two years, with a third year contingent on successful performance and availability of funding. Candidates should submit a curriculum vitae, publication list, and a short (1-2 page) statement of research interests, and have three letters of recommendation submitted on their behalf. Applications and letters should be sent to Dr. Aaron Barth, Astronomy Department, 105-24 Caltech, Pasadena, CA 91125. (The applications should not be sent directly to UC Irvine.) For full consideration, applications should be received by 15 January 2004, although applications will be reviewed until the position is filled.

The University of California, Irvine is an equal opportunity employer committed to excellence through diversity.

**No. 20483**

**Postdoctoral Appointment - Caltech - Millimeter-wave array project at the Owens Valley Radio Observatory**

**CALIFORNIA INSTITUTE OF TECHNOLOGY**

**1200 East California Blvd., MS 105-24**

**Owens Valley Radio Observatory**

**Pasadena, CA 91125**

**USA**

**Tel: 626-395-4935**

**FAX: 626-568-9352**

**URL1: <http://astro.caltech.edu>**

**Email Submission Address: [afs@astro.caltech.edu](mailto:afs@astro.caltech.edu)**

**Email Inquiries: [fdh@astro.caltech.edu](mailto:fdh@astro.caltech.edu)**

*Attention: Anneila Sargent, Professor*

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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 2004, but later applications will be considered.

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

**No. 20522**

**Astrophysicist - experimentalist/instrumentalist (preferred)**

**OBERLIN COLLEGE**

**Dept. of Physics & Astronomy**

**110 No. Professor St.**

Oberlin, OH 44074  
USA  
Tel: 440-775-8333  
FAX: 440-775-6379  
URL1: <http://www.oberlin.edu/HR>  
(*Human Resources - job announcement*)  
URL2: <http://www.oberlin.edu/physics>  
(*Physics & Astronomy Dept. webpage*)  
URL3:

*Attention: John Scofield, Chair*

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Oberlin College, Department of Physics and Astronomy seeks an Astrophysicist for tenure-track Assistant Professor appointment beginning Fall 2004. In addition to teaching courses in both physics and astronomy, the incumbent will establish an active research program involving students; laboratory space and start-up funds will be provided. Entire description: see HR link. Requirements: Ph.D. (in hand or by Fall 2004), strong background in both physics and astrophysics. We are particularly interested in applicants with significant instrumentation or other experimental background. Send cover letter, CV, statement of teaching philosophy, plan of research involving undergraduate students, undergraduate and graduate academic transcripts, and arrange for three letters of reference to be sent directly to: John Scofield, Chair, Department of Physics and Astronomy, Oberlin College, Oberlin, OH 44074, by 2/1/04. Late applications may be accepted until position filled. AA/EOE. Electronic submissions NOT ACCEPTED.

Oberlin College is the undergraduate origin of more Ph.D.s than any other liberal arts college. The Physics and Astronomy department, consisting of five physicists and one astrophysicist, graduates roughly 10 majors a year, with most involved in faculty research projects. This position will expand the faculty by one. Support staff includes an electronics specialist, a machinist, and a computing specialist. The department facilities have been newly renovated as part of a \$65 million science center project, completed last year. Oberlin strongly supports faculty/student research. Additional information about the department and job opening can be found on our website.

**No. 20511**  
**Postdoctoral Fellowship - Computational Astrophysics**  
**MAX-PLANCK-INSTITUT FUER ASTRONOMIE**  
**Koenigstuhl 17**  
**Heidelberg, Germany D - 69117**  
**Germany**  
**Tel: 0049 6221 528 283**  
**FAX: 0049 6221 528 373**  
**URL1: <http://www.mpia.de>**  
(*General information*)  
**URL2: [http://www.mpia-hd.mpg.de/Public/index\\_en.html](http://www.mpia-hd.mpg.de/Public/index_en.html)**  
(*General information*)  
**URL3: [http://www.mpia.de/PSF/PSFpages/theory\\_main.php](http://www.mpia.de/PSF/PSFpages/theory_main.php)**  
(*Information Theory Group*)  
**Email Submission Address: [klahr@mpia.de](mailto:klahr@mpia.de)**  
**Email Inquiries: [klahr@mpia.de](mailto:klahr@mpia.de)**

*Attention: Personnel Department (14-03)*

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A Postdoctoral research fellowship beginning as early as Apr. 1st, 2004 is being offered at the Max-Planck-Institute for Astronomy. The Fellow is expected to carry out original research in theoretical/computational astrophysics as member of the "Theory of Planet and Star Formation" group. A Ph.D. in any field of theoretical astrophysics is required.

The successful applicant is expected to work on the hydrodynamical modelling of astrophysical objects, with a focus on protoplanetary accretion disks and their interaction with radiation and magnetic fields. These activities are supported by high-performance computing facilities, presently including two Beowulf PC clusters and four workstations with GRAPE5/6 boards. The MPIA has access to two computing centers with several parallel systems: at the IPP Computing Center Garching: a 4.0 TFlop/s IBM pSeries "Regatta" system and a vector NEC SX-5/3C supercomputer at the GWDG (society for scientific computing) in Göttingen: a 422 GigaFlop/s Regatta System and a 55 node linux cluster (2 x 3 GHz XEON each) Applicants should provide a CV, a publication list, a brief description of the current work and an out-line of planned research at the MPIA. Applicants should also ask three referees to send letters to the same address. The Max Planck Gesellschaft is an equal opportunity employer; in particular, disabled persons are encouraged to apply. The Max Planck Society as the employer aims at increasing the number of female staff members in fields where underrepresented. Therefore, women are particularly encouraged to apply. The deadline is January 31st 2004 but applications will be accepted until the post is filled.

**No. 20513**

**Postdoctoral Research Associate Astronomer**

**PISGAH ASTRONOMICAL RESEARCH INSTITUTE**

**1 PARI Drive**

**Rosman, NC 28772**

**USA**

**Tel: 828-966-4207**

**FAX: 828-862-5877**

**URL1: <http://www.pari.edu>**

**(PARI Home Page)**

**Email Submission Address: [dcline@pari.edu](mailto:dcline@pari.edu)**

**Email Inquiries: [dcline@pari.edu](mailto:dcline@pari.edu)**

***Attention: Don Cline, President***

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The Pisgah Astronomical Research Institute invites applications for a position of astronomer with observational and instrument development skills in radio and optical astronomy. Candidates with an interest in education and public outreach will receive special consideration. The successful applicant will also be given the opportunity to serve as an Adjunct Professor in the Department of Physics at the University of North Carolina-Asheville.

The PARI Radio and Optical Observatories are used for education and for research that includes Gamma-Ray Bursts, Pulsars, Targets-of-Opportunity, and long-term surveys. More details are available at <http://www.pari.edu>. The successful applicant will have full access to the PARI Radio and Optical Observatories and facilities and be expected to develop and teach K-12 education and public outreach programs, conduct research related to research interests at PARI, be willing to develop and submit grant proposals supporting research and education, and help in the development of optical and radio instrumentation.

A Ph.D. in astronomy or physics is required. Employment is available beginning in January 2004 or at a mutually agreeable time. Applicants should send a curriculum vitae, list of publications, and a statement of research interests to the attention of Don Cline, President. Three letters of recommendation should be requested by the applicant and sent to PARI. Review of materials will begin immediately with opportunity for interviews at the 203rd AAS Meeting. Women and minorities are particularly encouraged to apply. AAE/EOE.

**No. 20505**

**Second Faculty Position in Infrared Instrumentation for Astronomy**

**UNIVERSITY OF FLORIDA**

**211 Bryant Space Science Center**

**P.O. Box 112055**

**Gainesville, FL 32611-2055**

**U.S.A.**

**Tel: 352-392-2052 X260**

**FAX: 352-392-5089**

**Email Submission Address: [eiken@astro.ufl.edu](mailto:eiken@astro.ufl.edu)**

**Email Inquiries: [eiken@astro.ufl.edu](mailto:eiken@astro.ufl.edu)**

*Attention: Stephen S. Eikenberry, Professor*

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The Department of Astronomy at the University of Florida invites applications for a tenure-track Assistant Professor, Associate Professor or Full Professor in infrared instrumentation for astronomy. Note that this position is in addition to the opening announced in AAS Job Register #20217. The successful candidate will have an established track record in instrumentation for astronomy, and is expected to play a leading role in the continued growth of the Infrared Instrumentation Laboratory at the University of Florida. The newly-renovated Laboratory includes mechanical, electronic, integration/testing and fabrication facilities and offices for our growing team of scientists, engineers, technicians and students. On-going and recently-completed projects include: T-ReCS (facility mid-IR instrument for Gemini-South), CanariCam (facility mid-IR instrument for the Gran Telescopio Canarias), FLAMINGOS-2 (facility near-IR multi-object spectrograph for Gemini), FLAMINGOS (visiting near-IR multi-object spectrograph), FISICA (monolithic image slicing integral field unit for FLAMINGOS), and CIRCE (near-infrared camera for the Gran Telescopio Canarias). The Department is also partnered with Spain and Mexico in the soon-to-be-completed Gran Telescopio Canarias 10.4-meter telescope on La Palma. Interested persons should send a CV, statement of research interests, statement of teaching experience and interests, and names and address of three references to Professor Stephen Eikenberry, Search Committee Chair, Department of Astronomy, University of Florida, Box 112055, Gainesville, FL 32611-2055, before February 1, 2004. Anyone requiring special accommodations to complete this application should contact the Search Committee Chair. The University of Florida is an equal-opportunity affirmative-action employer.

**No. 20506**

**Assistant or Associate Professor of Astronomy**

**UNIVERSITY OF FLORIDA**

**Dept. of Astronomy, Box 112055**

**211 Bryant Space Science Center**

**Gainesville, FL 32611-2055**

**U.S.A.**

**Tel: 352-392-2052 X245**

**FAX: 352-392-5089**

**Email Submission Address:** [hamann@astro.ufl.edu](mailto:hamann@astro.ufl.edu)

**Email Inquiries:** [hamann@astro.ufl.edu](mailto:hamann@astro.ufl.edu)

*Attention: Fred Hamann, Associate Professor*

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The Department of Astronomy at the University of Florida has a tenure-track opening for an Assistant or Associate Professor starting in January 2005. The position requires a commitment to undergraduate and graduate teaching, graduate student supervision, and the demonstrated ability to develop and conduct an independent program of research. Present research activities in the department include studies of solar system dynamics and dust, planet and star formation and evolution, galaxy evolution and dynamics, active galaxies, and cosmology. In addition, the department has a strong infrared instrumentation group whose current activities include the development of infrared spectrometers and cameras for Gemini North and South and the Gran Telescopio Canarias (GTC) located in the Canary Islands. The University is a newly inducted member of the Association of Universities for Research in Astronomy, a partner in the 10.4-meter GTC, and is developing a strong collaborative program with the Instituto de Astrofísica de Canarias. Interested applicants should submit a curriculum vita and a statement of past accomplishments and future plans in research, and arrange for three letters of recommendation to be sent to the address below. The applications and letters should be sent to Professor Fred Hamann, Search Committee Chair, Department of Astronomy, University of Florida, P.O. Box 112055, Gainesville, FL 32611-2055, before 31 January 2004. Anyone requiring special accommodations to complete this application should contact the Search Committee Chair. The University of Florida is an equal-opportunity affirmative action employer.

**No. 20515**

**Postdoctoral Research Position in Computational Astrophysics**

**UNIVERSITY OF MARYLAND**

**Department of Astronomy**

**College Park, MD 20742**

**USA**

**Tel: 301-405-3001**

**FAX: 301-314-9067**

**Email Submission Address:** [postdoc@astro.umd.edu](mailto:postdoc@astro.umd.edu)

**Email Inquiries:** [dcr@astro.umd.edu](mailto:dcr@astro.umd.edu)

*Attention: Comp. Astro. Post Doc Search*

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The Department of Astronomy at the University of Maryland invites applications for a postdoctoral research position in computational astrophysics. The successful applicant will work with Profs. D. C. Richardson and L. G. Mundy on problems related to the formation, settling, and survival of grains during the early evolution of protoplanetary disks, and the observables arising from these processes. Preference will be given to candidates with significant experience in scientific programming and high-performance computing.

The department has excellent computer facilities, a newly created Maryland Astronomy Center for Theory and Computation, and a strong relationship with the nearby Goddard Space Flight Center. This position is associated with a new NASA Astrobiology node which focuses on the delivery of complex organics to young and forming planetary systems.

The initial appointment will be for two years, renewable for a third year. All Ph.D. degree requirements

must be completed before commencing the appointment and candidates must be available to start by September 2004. Applicants should submit a curriculum vitae, list of publications, and brief statement of research experience and interests. Electronic submissions in PDF or Postscript format may be emailed to [postdoc@astro.umd.edu](mailto:postdoc@astro.umd.edu). Candidates should also arrange for three letters of recommendation to be sent directly to the address listed. For full consideration, all materials must be received by February 1, 2004. Questions about this appointment may be directed to Prof. Richardson at [dcr@astro.umd.edu](mailto:dcr@astro.umd.edu).

The University of Maryland is an equal opportunity, affirmative action employer. Minorities and women are encouraged to apply.

**No. 20516**

**University of Wisconsin-Madison: Astrophysics Faculty Position**

**UNIVERSITY OF WISCONSIN-MADISON**

**Chamberlin Hall**

**1150 University Avenue**

**Madison, WI 53706-1390**

**USA**

**Tel: 608-263-4691**

**FAX: 608-263-0361**

**URL1: <http://www.astro.wisc.edu/>**

**(Department of Astronomy)**

**URL2: <http://www.physics.wisc.edu/fac-recruit>**

**(Department of Physics)**

**Email Inquiries: [astrophysics@sal.wisc.edu](mailto:astrophysics@sal.wisc.edu)**

***Attention: Astrophysics Search Committee***

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The Department of Astronomy and the Department of Physics at the University of Wisconsin-Madison are accepting applications for one faculty appointment at the tenure-track or tenured level. Tenure home may reside in either department or jointly. We seek an astrophysicist working in the areas of astroparticle physics, cosmology, or high-energy astrophysics. Applications should include a bibliography, curriculum vitae, a brief summary of planned research, and letters from three individuals able to provide evaluation and reference. Candidates for a tenured position must be able to demonstrate excellence in teaching, scholarly research, and service.

Applications or inquiries should be directed to the Astrophysics Search Committee, Space Astronomy Laboratory, Chamberlin Hall, University of Wisconsin-Madison, 1150 University Avenue, Madison WI 53706-1390: e-mail [astrophysics@sal.wisc.edu](mailto:astrophysics@sal.wisc.edu)

To insure full consideration, completed applications should be received on or before 2 February 2004. Women and minorities are encouraged to apply. AA/EOC. Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality.

**No. 20512**

**Assistant Professor in all subfields of Astrophysics**

**JOHNS HOPKINS UNIVERSITY**

**3400 N. Charles St.**

**Bloomberg Center**

**Baltimore, Maryland 21218**

**United States**  
**Tel: 410-516-7346**  
**FAX: 410-516-7239**

*Attention: Pam Carmen*

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The Department of Physics and Astronomy of the Johns Hopkins University invites applications for a tenure track faculty position in astrophysics. The department will consider applicants in all subfields of astrophysics. The appointments will most likely be at the level of Assistant Professor, but more senior candidates may be considered in exceptional cases. The successful candidate will be expected to teach effectively at the undergraduate and graduate levels.

Current faculty are active in developing astronomical instrumentation (particularly for space-based platforms), observational astronomy across a wide range of wavelengths, and theory. Current research interests include planetary astrophysics, the interstellar medium, stellar populations, high-energy astrophysics, active galaxies, galaxy formation and evolution, and cosmology. Johns Hopkins is a member of the Sloan Digital Sky Survey and ARC consortia and is playing a leading role in the National Virtual Observatory. It is also the operations center for the Far Ultraviolet Spectroscopic Explorer and was the lead institution in the development of the Advanced Camera for Surveys on the Hubble Space Telescope. The department cooperates closely with the adjacent Space Telescope Science Institute.

Applicants should send a curriculum vitae, together with a bibliography and a brief description of research interests and goals, and arrange for three letters of reference to be sent by the deadline below, to

Astrophysics Search Committee c/o Ms. Pamela Carmen Department of Physics and Astronomy Johns Hopkins University 3400 N. Charles Street Baltimore, MD 21218.

To receive full consideration, application materials must be received by February 1, 2004. The Johns Hopkins University is an Equal Opportunity, Affirmative Action Employer and encourages applications from women and minority candidates.

**No. 20514**

**Allan C. Davis Postdoctoral Fellowship in Astrophysics**  
**JOHNS HOPKINS UNIVERSITY AND SPACE TELESCOPE SCIENCE INSTITUTE**  
**3400 North Charles Street**  
**Department of Physics & Astronomy**  
**Baltimore, MD 21218**  
**USA**  
**Tel: 410-516-7804**  
**FAX: 410-516-5096**  
**Email Submission Address: [bmd@pha.jhu.edu](mailto:bmd@pha.jhu.edu)**  
**Email Inquiries: [norman@stsci.edu](mailto:norman@stsci.edu)**

*Attention: Barbara Dreyfus*

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Applications are invited for the award of a prestigious specially endowed fellowship in astrophysics. The incumbent will be a member of the Johns Hopkins University, Center for Astrophysical Sciences, and the Space Telescope Science Institute. The appointment will be for two years, with extension to a

third year likely. We envisage an initial appointment on or after September 1, 2004. In addition to salary, which will be competitive with other named fellowships, the fellowship also carries research support and full benefits. Those working in any field of astrophysics are eligible. The topics of research pursued by the Davis fellow will be entirely of his or her choosing. A curriculum vitae, a statement describing past, present and intended future research and three letters of recommendation should be sent by January 15, 2004 to Ms. Barbara Dreyfus, The Johns Hopkins University, Department of Physics and Astronomy, 471 Bloomberg Center, 3400 North Charles Street, Baltimore, MD 21218. General inquiries about the fellowship maybe sent to Professor Colin Norman (Committee Chair) at [cnorman@stsci.edu](mailto:cnorman@stsci.edu). JHU encourages applications from women and minority candidates. AAE/EOE.

**No. 20508**

**Postdoctoral Researchers (2) - Extragalactic**

**SWINBURNE UNIVERSITY CENTRE FOR ASTROPHYSICS & SUPERCOMPUTING**

**Mail 31 PO Box 218**

**Swinburne University**

**Hawthorn, VIC 3122**

**Australia**

**Tel: +61 3 9214 4392**

**FAX: +61 3 9214 8797**

**URL1: <http://astronomy.swin.edu.au>**

**Email Submission Address: [dforbes@swin.edu.au](mailto:dforbes@swin.edu.au)**

**Email Inquiries: [dforbes@swin.edu.au](mailto:dforbes@swin.edu.au)**

*Attention: Duncan Forbes, Professor*

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Applications are invited for two postdoctoral positions funded in extragalactic astronomy at Swinburne University in Melbourne, Australia. Both positions are for 2 years, initially, with a possible third year subject to satisfactory performance and funding. The appointees will work on projects with Prof. Duncan Forbes, his group of postdocs and students, and external collaborators. Both will have access to an in-house 1 Tflop supercomputer. One fellow will work on extragalactic globular clusters and their relation to galaxy formation. For this position, relevant experience in spectroscopy and imaging of these systems and/or stellar population modeling is required. The other fellow will work on evolution within the galaxy group environment. Relevant expertise in any wavelength region and/or in numerical simulations will be considered. This fellow is expected to make regular visits to Sydney to collaborate with Prof. Warrick Couch at the University of New South Wales. Both projects involve close collaboration with UK- and US-based astronomers.

The fellows will join an active research group in Australia's most rapidly growing astronomy department. Swinburne astronomers regularly obtain observing time on the AAT, Gemini, HST, ATCA and Parkes telescopes. Melbourne, recently voted the most liveable city in the world, is a cosmopolitan place with many cultural and sporting events. Mountains, sea and wine growing regions are easily accessible. Applicants should send a CV, one page research summary and the names and emails of 3 potential referees to Duncan Forbes. Email submissions are encouraged. Applications received before Jan. 15th 2004 will be given full consideration.

**No. 20535**

**Astronomer/Astrophysicist**

**LOUISIANA STATE UNIVERSITY**

**Baton Rouge, LA 70803**

**USA**

**Tel:**

**URL1:** <http://www.lsu.edu/hrm>

*(Full ad/more information)*

**Attention: Dr. Arlo U. Landolt**

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POSTDOCTORAL RESEARCHER Department of Physics and Astronomy There will be a Postdoctoral Researcher position opening for a Ph.D. Astronomer/Astrophysicist beginning after July 1, 2004 subject to final funding approval, to participate in faint star photometric research, including faint broadband UBVR standard stars needed for a variety of calibration efforts. The digital processing will be done via dedicated Sun and/or PC workstations. The system available is fully compatible with national optical observatory and STScI and other image processing software; DAOPHOT, IRAF, and IDL are available.

Required Qualifications: Astronomer/Astrophysicist with a Ph.D. or equivalent degree in Astronomy, Astrophysics, or related field; extensive documented experience in image processing; firm knowledge of computer systems; knowledge of UNIX, FORTRAN and C++ programming language; some software development. The successful candidate will have opportunities for research. Responsibilities will include data acquisition, analysis, and interpretation of faint object multi-color photometry. The appointment is for one year, extendable for an additional one or two years upon satisfactory performance. Salary will be commensurate with qualifications and experience.

Applications will be accepted until February 27, 2004, or until a candidate is selected. Applicants should send their resume (including e-mail address) and three letters of reference to: Dr. Arlo U. Landolt, Department of Physics and Astronomy, Louisiana State University, Ref: Log #0519, Baton Rouge, LA 70803-4001. LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

**No. 20530**

**NRC Research Associateship in X-ray Astronomy**

**NAVAL RESEARCH LABORATORY**

**4555 Overlook Avenue, SW**

**Code 7655**

**Washington, DC 20375**

**USA**

**Tel: (202) 404-1619**

**URL1:** <http://xweb.nrl.navy.mil>

*(X-ray Group Home Page)*

**URL2:** <http://www4.nationalacademies.org/pga/rap.nsf/WebDocuments/Home+Page>

*(NRC Associateship Program Home)*

**Email Submission Address:** [Paul.Ray@nrl.navy.mil](mailto:Paul.Ray@nrl.navy.mil)

**Email Inquiries:** [Paul.Ray@nrl.navy.mil](mailto:Paul.Ray@nrl.navy.mil)

**Attention: Dr. Paul Ray, Astrophysicist**

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The X-ray/UV Astrophysics and Applications Section at the Naval Research Laboratory invites 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.

The position will allow considerable freedom to do research that meshes well with the Section's overall goals. This could include proposals for observations with RXTE, Chandra, XMM/Newton or other instruments, future mission development including next generation X-ray all-sky monitors or timing missions.

Desirable experience for the successful candidate includes: analysis of X-ray astronomy data, use of Fourier techniques, programming experience in C and perl in a Unix environment. Experience with NASA's RXTE satellite will be particularly beneficial.

Applications should be made through the NRC Research Associates Program. Associateships are awarded to persons who have held their doctoral for less than five years at the time the award is offered. Applicants must 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 February 1, 2004. US citizenship or a permanent residence visum 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](mailto:Paul.Ray@nrl.navy.mil)) or Kent Wood ([Kent.Wood@nrl.navy.mil](mailto:Kent.Wood@nrl.navy.mil)). Please contact one of us before applying to the NRC.

**No. 20540**

**Astrophysicist in Cosmology/Dark Energy  
NASA/GODDARD SPACE FLIGHT CENTER**

**Tel:**

**Email Inquiries: [Stephen.P.Maran@nasa.gov](mailto:Stephen.P.Maran@nasa.gov)**

*Attention: William Oegerle*

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The Space Sciences Directorate at NASA's Goddard Space Flight Center (GSFC) announces plans to expand its presence in the field of cosmology, with emphasis on dark energy research, by hiring up to 2-3 civil servant scientists. NASA and DoE recently announced plans for a Joint Dark Energy Mission (JDEM) to be launched in the next decade. Also, the Dark Universe Observatory (DUO; Griffiths PI) was recently selected for Phase A study as a Small Explorer. GSFC scientists play key roles in the DUO mission, and in carrying out mission concept studies with the Supernova Acceleration Probe team (Perlmutter, PI). GSFC is seeking applicants at the junior and senior level, with relevant experience in space instrumentation, theory or data analysis, at x-ray and optical/IR wavelengths. The successful applicant(s) should have a vigorous program of astronomical research, and will be expected to lead or make significant contributions to future space missions or instruments to study dark energy/matter, cosmology or the structure and evolution of the universe. GSFC has an exciting research environment, with major roles in HST, WMAP, RXTE, and planned missions Swift, Astro-E2, JWST, Con-X and LISA. GSFC also provides negotiable start-up packages. For a application instructions, please see website <http://www.nasajobs.nasa.gov/> and "search jobs" for vacancy announcement number GS04B0029 beginning December 1, 2003. Address technical inquiries to Dr. Stephen Maran, Search Chair ([Stephen.P.Maran@nasa.gov](mailto:Stephen.P.Maran@nasa.gov)). The application deadline is March 31, 2004. NASA is an AA/EEO employer.

**No. 20537**

**Lecturer (Continuing)  
UNIVERSITY OF MELBOURNE, AUSTRALIA  
Parkville, Victoria 3010  
Australia**

**Tel:**

**FAX: +61 3 8344 6080**

**URL1: <http://astro.ph.unimelb.edu.au>**

**Email Submission Address: [hr-applications@unimelb.edu.au](mailto:hr-applications@unimelb.edu.au)**

**Email Inquiries: [rwebster@physics.unimelb.edu.au](mailto:rwebster@physics.unimelb.edu.au)**

***Attention: Vice Principal (Human Resources)***

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The School of Physics at the University of Melbourne invites applications for a position of Lecturer (Level B Continuing) in Astrophysics. Applicants with a strong research program in any area of theoretical or observational Astrophysics will be considered. The School of Physics is a dynamic research and teaching department that attracts considerable research funds in a broad range of research areas. The appointee will have a PhD in Astrophysics or a related field, a high level of research achievement, show evidence of success in competitive research funding and have a commitment to undergraduate teaching and the supervision of research students. Salary: \$57,230-67,960 p.a. (Lecturer), plus 17% employer superannuation, salary packaging available, car parking on campus. The position is continuing. For information and position description, contact: Professor Rachel Webster +61 3 9344 5447, email: [r.webster@physics.unimelb.edu.au](mailto:r.webster@physics.unimelb.edu.au). Prospective applicants are invited to inspect the School of Physics home page at the address: <http://www.ph.unimelb.edu.au>. Applications should be submitted to the Vice Principal (Human Resources), The University of Melbourne, Victoria, 3010; Fax +61 3 8344 6080 or email [rwebster@physics.unimelb.edu.au](mailto:rwebster@physics.unimelb.edu.au) by February 28, 2004, quoting position number Y0013333, providing a CV, addressing the selection criteria and including names and facsimile numbers of three referees.

**No. 20527**

**Optical Astronomer in Support of Gravity Probe B Mission**

**SMITHSONIAN ASTROPHYSICAL OBSERVATORY**

**60 Garden Street**

**MS 63**

**Cambridge, MA 02138**

**USA**

**Tel: 617-495-7029**

**FAX: 617-495-7109**

**URL1: <http://cfa-www.harvard.edu>**

**(Harvard-Smithsonian Ctr for Astrophysics)**

**URL2: <http://einstein.stanford.edu/>**

**(NASA/Stanford Gravity Probe B Mission)**

**Email Submission Address: [mratner@cfa.harvard.edu](mailto:mratner@cfa.harvard.edu)**

**Email Inquiries: [mratner@cfa.harvard.edu](mailto:mratner@cfa.harvard.edu)**

***Attention: Dr. Michael Ratner, Guide Star Lead Scientist***

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The Smithsonian Astrophysical Observatory (SAO) seeks an optical astronomer to support the NASA/Stanford Gravity Probe B (GP-B) mission to test general relativity with direct sensitivity to the effect of Earth's rotation on the direction of spin axis of a freely falling gyroscope. The test must account for any errors in how the spacecraft locks onto the direction of the gyroscope's guide star, whose proper motion SAO is determining with VLBI. Errors could arise due to an unknown companion of the guide star or due to nebulosity. Pending the expected funding from NASA, SAO will support a junior or senior postdoctoral-level visiting astronomer, for up to a year, to advise and assist the mission team concerning

these errors and the analysis of CCD image data already obtained or still needed for the mission. Annual stipend will be \$44,000 or more, commensurate with experience. Requests for a shorter or less than full-time appointment can be considered, but the position is to be filled as soon as possible. An extension of term may be possible.

The appointee will work primarily at the Harvard-Smithsonian Center for Astrophysics, with guide star lead scientist Dr. Michael Ratner and SAO PI Dr. Irwin Shapiro. Duties will include reviewing existing observational data and analyses and, as needed, proposing, conducting, and analyzing new observations. Applicants should hold a Ph.D. in astronomy or a related field and have a strong background in optical/near-IR observations of stars or nebulosity. Experience with IRAF or IDL is highly desirable.

Inquiries welcome. Applicants should submit a c.v., including a summary of research experience, and contact information for three references. Applications review will begin immediately and continue until position is filled. SAO encourages applications from women and minority candidates.

**No. 20538**

**Pulsar Astronomer (Instrumentation)**

**SWINBURNE UNIVERSITY CENTRE FOR ASTROPHYSICS AND SUPERCOMPUTING**

**Mail 31**

**PO Box 218**

**Victoria, Australia 3122**

**Australia**

**Tel: +61-3-9214 8782**

**FAX: +61-3-9214 8797**

**URL1: <http://astronomy.swin.edu.au/>**

**(Full position description)**

**URL2:**

**URL3:**

**Email Submission Address: [mbailes@swin.edu.au](mailto:mbailes@swin.edu.au)**

**Email Inquiries: [mbailes@swin.edu.au](mailto:mbailes@swin.edu.au)**

***Attention: Matthew Bailes, Professor***

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Applications are invited for a postdoctoral fellow to work on digital pulsar instrumentation for high precision timing and polarimetry. This position is funded jointly by the Australia Telescope National Facility, CSIRO and Swinburne University. The fellow would be based at Swinburne University, but would be expected to work closely with staff at the ATNF to develop next-generation pulsar timing hardware and software, with the aim of achieving the highest precision timing.

Salary would commence at between AUD 48-54K +17% superannuation, with annual increments. The position is for three years.

A PhD in astronomy or related discipline is essential, and experience in pulsar timing or digital signal processing an advantage. Swinburne has developed (with Caltech) a very wide bandwidth (4x64 MHz) baseband recorder with an in-built supercomputer known as CPSR2. Extension of this system to larger bandwidths will be an immediate goal, and the fellow would help to design and implement a very wide bandwidth system for use at high frequencies. Opportunities would exist for the fellow to pursue science with these instruments and the Centre's Teraflop supercomputer.

The fellow would be working with Professor Matthew Bailes (Swinburne) and Dr Dick Manchester (ATNF,CSIRO), and collaborating with Dr Simon Johnston (Sydney) and Prof Shri Kulkarni (Caltech).

Applications should include a curriculum vitae with a full publication list, a summary of relevant experience, and the list of three professional referees. The closing date for applications is January 31, 2004. Applicants should closely consult the full position description at <http://astronomy.swin.edu.au/> and address each of the selection criteria.

**No. 20539**

**Multiple Post Doctoral positions in Cosmology at the University of Illinois**

**UNIVERSITY OF ILLINOIS**

**1002 W. Green Street**

**Urbana, IL 61801**

**United States**

**Tel: 217-244-6099**

**FAX: 217-244-7638**

**URL1: <http://www.astro.uiuc.edu>**

*(Department of Astronomy)*

**URL2: <http://www.ncsa.uiuc.edu>**

*(National Center for Supercomputing Appl.)*

**URL3: <http://lcdm.ncsa.uiuc.edu>**

*(Laboratory for Cosmological Data Mining)*

**Email Submission Address: [rb@astro.uiuc.edu](mailto:rb@astro.uiuc.edu)**

**Email Inquiries: [rb@astro.uiuc.edu](mailto:rb@astro.uiuc.edu)**

*Attention: Robert J. Brunner, Assistant Professor*

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In conjunction with the recently created Laboratory for Cosmological Data Mining (LCDM) at NCSA, we are pleased to announce the availability of several new postdoctoral positions in Cosmology at the University of Illinois, pending final budgetary approval. These positions are tentatively scheduled to start in August of 2004, although the actual date is flexible. Illinois has a strong and growing Cosmology group, with six current faculty members (the total Astronomy faculty consists of 27 professors), numerous current postdocs, and additional interested staff and faculty from the Physics department and the National Center for Supercomputing Applications.

We are seeking candidates from all areas of astrophysics, but especially those with strong backgrounds and interest in observational cosmology, quasars, large-scale structure, variability, data-mining, and computational grids. The successful applicants will work primarily in collaboration with Professor Robert Brunner and the members of the National Computational Science Alliance and NCSA on applying the latest computational technologies and techniques to the interpretation of large astronomical datasets.

Applicants should submit a curriculum vita, a publication list, a brief description of research goals, and arrange to have three letters of recommendation sent directly to Professor Brunner. To receive full consideration, application material must be received by January 23, 2004. Informal inquiries are welcome and should be directed to Professor Brunner ([rb@astro.uiuc.edu](mailto:rb@astro.uiuc.edu)).

**No. 20542**

**Science Fellow in Astronomy**

**COLUMBIA UNIVERSITY**

**Columbia Astrophysics Laboratory**  
**550 W. 120th St., MC 5233**  
**New York, NY 10027**  
**U.S.A.**  
**Tel: 212-854-2150**  
**FAX: 212-854-8121**  
**URL1: <http://www.astro.columbia.edu>**  
**Email Inquiries: [djh@astro.columbia.edu](mailto:djh@astro.columbia.edu)**

*Attention: c/o Professor David J. Helfand*

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Columbia University announces openings in its 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. Positions will be tenable for a minimum of two years, subject to annual review. Fellows will teach in the Core Curriculum course Frontiers of Science in which topics from throughout the physical and life sciences will be discussed. The Fellows will participate with the faculty in designing and leading the seminar portion of the course. The remainder of their time is to be spent pursuing research, either with an established Columbia group or independently.

A description of the program along with application instructions can be found at <http://www.ccnmtl.columbia.edu/projects/frontiers>. The application deadline is January 31, 2004. Columbia University is an equal opportunity/affirmative action employer; women and minorities are encouraged to apply.

**No. 20521**  
**Astronomer - Optical Interferometry**  
**U.S. NAVAL OBSERVATORY**  
**Flagstaff Station**  
**P.O. Box 1149**  
**Flagstaff, AZ 86002-1149**  
**USA**  
**Tel: 928-779-5132 x 263**  
**FAX: 928-774-3626**  
**URL1: <http://ftp.nofs.navy.mil/projects/npoi/>**  
**(NPOI general information)**  
**Email Submission Address: [djh@nofs.navy.mil](mailto:djh@nofs.navy.mil)**  
**Email Inquiries: [djh@nofs.navy.mil](mailto:djh@nofs.navy.mil)**

*Attention: Dr. Don Hutter, Chief, NPOI Division*

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Applications are being accepted for an astronomer position in Flagstaff, AZ working on the Navy Prototype Optical Interferometer (NPOI) project. Principle duties of this position would involve collaboration with other project members on improving astrometric and imaging algorithms and software, and work in support of an imaging survey of the bright stars using the co-phased 6-element NPOI array. Related activities might include studies of detector performance, system throughput, and system stability. There will also be opportunities for the successful candidate to pursue other research of their choosing utilizing the NPOI. Questions regarding this position may be directed to Don Hutter (928-779-5132 x 263), Ken Johnston (202-762-1513), or to the above email address. Interested parties are

encouraged to interview at the winter AAS meeting.

**No. 20547**

**Assistant Professor (Multiwavelength Astronomy)**

**LOUISIANA STATE UNIVERSITY/PHYSICS AND ASTRONOMY**

**Baton Rouge, LA 70803**

**USA**

**Tel:**

**URL1: <http://www.lsu.edu/hrm>**

**(Ad)**

***Attention: Roger R. McNeil, Chair***

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The Department of Physics and Astronomy at Louisiana State University in Baton Rouge invites applications for an anticipated tenure-track, Assistant Professorship in Multiwavelength Observational Astronomy and/or theory related to the interpretation of such observations, starting Fall, 2004. Required Qualifications: Ph.D. or equivalent degree in Physics, Astronomy, or related field; established record in observations with modern instrumentation at two or more of the following wavebands: optical-infrared, X-ray/gamma-ray, radio-mm, EUV-UV. Additional Qualification Desired: experience in both ground-based and space-based observations. Responsibilities: teaches at both the undergraduate and graduate levels in both physics and astronomy; establishes a vigorous research program. The salary will be commensurate with qualifications and experience. Application deadline is February 2, 2004 or until candidate selected. Applicants should send a vita (including e-mail address), a description of research interests and experience, and the names of at least three references to: Roger R. McNeil, Chair, Department of Physics and Astronomy, Louisiana State University, Ref: Log #0434, Baton Rouge, LA 70803-4001. LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

**No. 20528**

**Assistant Curator of Astrophysics**

**AMERICAN MUSEUM OF NATURAL HISTORY**

**Division of Physical Sciences**

**79th Street at Central Park W.**

**New York, NY 10024-5192**

**USA**

**Tel: 212-496-3443**

**FAX: 212-769-5007**

**URL1: <http://research.amnh.org/astrophysics/>**

**(Department of Astrophysics, AMNH)**

**Email Inquiries: [mordecai@amnh.org](mailto:mordecai@amnh.org)**

***Attention: Ms. Kate Hazel, Administrative Assistant***

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The Division of Physical Sciences at the American Museum of Natural History in New York City invites applications for a tenure-track Assistant Curator in astrophysics. The primary responsibility of curators at the Museum is the pursuit of original research. Service to the Museum and the scientific community is also required, which could include such things as developing content for planetarium shows and exhibits, communicating science to the media, collaboration with educators on teacher training programs, organization of conferences, or writing for the public. Current research interests in the Department of Astrophysics include planetary impacts, meteoritics, exoplanet detection and

dynamics, planet formation, both primordial and modern star formation, cosmochemistry, stellar dynamics and populations, structure and dynamics of the interstellar medium, novae and supernovae, massive stars, galaxy formation and evolution, and large scale surveys. There is also strong interaction with the petrologists, geochemists and meteoriticists in the Department of Earth & Planetary Sciences. Excellent applications from both observers and theorists in all fields of astrophysics will be considered, although some preference will be given to applicants with research interests overlapping those of the department. The Museum has substantial computing resources including a 256-processor Beowulf cluster. The Museum's library has an extensive astrophysics collection. Roughly ten postdocs and graduate students currently reside in the department on average, although that number would be expected to grow with the new appointment. We maintain close ties with Columbia University and other research institutes in the NYC area. Applications should include a curriculum vitae, list of publications, written statements on research goals, and on service interests, and letters from three references. Please submit all materials by 26 January 2004 for full consideration. AAE/EOE.

**No. 20543**

**Temporary Faculty Position in Astrophysics**

**SWARTHMORE COLLEGE**

**Physics & Astronomy Dept.**

**Swarthmore College**

**Swarthmore, PA 19081**

**USA**

**Tel: 610-328-7791**

**FAX: 610-328-7895**

**URL1: <http://physics.swarthmore.edu>**

**Email Submission Address: [pcollin1@swarthmore.edu](mailto:pcollin1@swarthmore.edu)**

**Email Inquiries: [pcollin1@swarthmore.edu](mailto:pcollin1@swarthmore.edu)**

***Attention: Peter Collings, Acting Chair***

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The Department of Physics & Astronomy at Swarthmore College (<http://physics.swarthmore.edu>) invites applications for a one year leave replacement position in Astronomy at the Assistant Professor level starting in September 2004. 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 February 1, 2004. 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 Peter J. Collings, Acting 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. 20526**

**Postdoctoral Position in Computational Astrophysics**

**DREXEL UNIVERSITY**

**Department of Physics**

**32nd & Chestnut Streets**  
**Philadelphia, PA 19104**  
**U.S.A.**  
**Tel: (215) 895-2723**  
**FAX: (215) 895-5934**  
**URL1: <http://www.physics.drexel.edu/research/astro>**  
**(Astrophysics Group home page)**  
**Email Submission Address: [steve@physics.drexel.edu](mailto:steve@physics.drexel.edu)**  
**Email Inquiries: [steve@physics.drexel.edu](mailto:steve@physics.drexel.edu)**

*Attention: Steve McMillan, Professor*

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Drexel University departments of Physics and Computer Science invite applications for a postdoctoral position in computational astrophysics, beginning in September 2004. The successful applicant will work on the development of an integrated software suite of analysis and visualization tools for use on commodity (Beowulf-class) clusters of computers. Research efforts will center on three specific areas in astrophysics: (1) particle simulations of star clusters and galaxies, (2) fluid and particle simulations of large-scale structure in the universe, and (3) analysis and mining of the Sloan Digital Sky Survey database. The work will be carried out under the supervision of Prof. S. McMillan (Physics), in collaboration with other team members. Parts of the project may be performed at the National Center for Supercomputer Applications.

Applicants should have demonstrated experience in computational techniques relevant to at least one of the areas listed above, be familiar with Linux, have strong C++ programming skills, and ideally also have experience with scripting languages such as Python, and symbolic computing environments such as Maple or Matlab. The initial appointment will be for two years, subsequently renewable for up to two more years based on performance. Applicants should send a curriculum vitae, bibliography and statement of research interests, and arrange to have three letters of recommendation sent to Prof. S. McMillan at the above address. All applications received by February 1, 2004 will be given full consideration.

Drexel University is an Affirmative Action/Equal Opportunity Employer.

## **New Jobs This Month**

**No. 20559**  
**Opto-Mechanical Engineer**  
**LOWELL OBSERVATORY**  
**1400 W. Mars Hill Road**  
**Flagstaff, AZ 86001-4499**  
**USA**  
**Tel: 928-774-3358**  
**FAX: 928/774-6296**  
**URL1: <http://www.lowell.edu/hr/jobs.html>**  
**Email Submission Address: [humanresources@lowell.edu](mailto:humanresources@lowell.edu)**  
**Email Inquiries: [humanresources@lowell.edu](mailto:humanresources@lowell.edu)**

*Attention: Human Resources, Manager*

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## LOWELL OBSERVATORY/ DISCOVERY CHANNEL TELESCOPE PROJECT

Position Title: Opto-Mechanical Engineer Organization: Lowell Observatory, 1400 W. Mars Hill Road, Flagstaff, AZ 86001-4499 Job Location: Flagstaff, AZ. The non-smoking Lowell Observatory campus is located at an elevation of 7,000 ft. /2100m. Salary: Depends on experience. Benefits: Full-time, Non-exempt, Full Benefits Position term: 5 years minimum Start Date: early 2004 Application Deadline: January 31, 2004 at 5 p.m.

Qualifications Required: Minimum of Bachelors Degree in Mechanical or Optical Engineering and 8 years of relevant experience. Experience in design, engineering, and construction of astronomical telescope facilities or analogous institutional technical facilities. Includes experience in mechanical design of large precisions structures including servo-mechanisms and precise positioning. Experience in structural dynamics, including finite element analysis. Fluency in AutoCAD design program, experience in design of structures and mechanisms. Experience with vacuum systems including optical coating a plus.

Duties: Responsible for direct management of all tasks required to design, contract, and manage contractors to design and construct a four meter telescope mount and enclosure dome subsystems. Development of specifications, requirements documents, procurement documentation. Definition of program tasks and schedules. Supervision of contractors and assistance in problem solving. Hands-on assistance during integration and debug activities at the telescope site. Design of ancillary equipment and facility assets for manufacture by local contractors in support of facility and telescope integration.

Knowledge, Skills, Abilities: Attention to detail a must, organized, ability to prioritize, work effectively under pressure, timelines, and complete tasks on schedule. Excellent interpersonal skills and ability to work effectively and professionally with departments, agencies, and personnel of diverse backgrounds during multi-faceted project. Self-motivated, able to work independently, control effectiveness of design, manufacture, and implementation of facility and ancillary buildings. Manage time to accommodate the demands of a high-pressure/volume workload characterized by numerous competing actions, projects, and issues frequently of highly complex and technically challenging natures.

To Apply: An application package & position description is available on-line at: [www.lowell.edu/hr](http://www.lowell.edu/hr) or write: Human Resources, Lowell Observatory, 1400 W. Mars Hill Rd., Flagstaff, AZ 86001-4499, e-mail: [humanresources@lowell.edu](mailto:humanresources@lowell.edu), call: 928/774-3358, or fax: 928/774-6296. Submit resume, letter of interest, three business references, salary history and the Lowell Observatory application to same. Deadline: applications must be received by 5 p.m. on January 31, 2004, to receive priority consideration.

Lowell Observatory is an equal opportunity provider and employer.

**No. 20566**

**Faculty position in Space Physics/Astronomy**

**UNIVERSITY OF BIRMINGHAM**

**Edgbaston**

**Birmingham, West Midlands B15 2TT**

**U.K.**

**Tel: +44 121 415 9000**

**URL1: <http://www.punit.bham.ac.uk/vacancies>**

**(Personnel)**

**URL2: <http://www.sr.bham.ac.uk>**

**(ASR Group)**

**Email Inquiries:** [gms@star.sr.bham.ac.uk](mailto:gms@star.sr.bham.ac.uk)

*Attention: Director of Personnel Services*

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Lecturer/Senior Lecturer in Space Physics/Astronomy

The Astrophysics and Space Research Group within the School has one of the UK's leading Space Hardware Teams. Applications are invited for a permanent faculty position, at the level of Lecturer or Senior Lecturer, according to experience. The successful candidate will have a track record of active involvement in the development of space hardware. The position provides an opportunity for the right candidate to continue the strong research programme already existing and to develop new projects. Preference will be given to candidates who work in the Solar and Heliospheric Physics areas.

The School has undergraduate space programmes in Astrophysics and Space Research, and the candidate will be expected to contribute to the teaching activities of the School at both undergraduate and graduate level.

Information on the Group's activities are available on our website: <http://www.sr.bham.ac.uk/>, and enquiries are welcomed by the Head of Group, Professor George Simnett ([gms@star.sr.bham.ac.uk](mailto:gms@star.sr.bham.ac.uk)).

Starting salary on scale 22,191 - 39,958 (in pounds sterling (GBP)) a year depending on experience and qualifications. The post is available from 1 October 2004.

Application forms (returnable by 29 February 2004) and details from Personnel Services, The University of Birmingham, Edgbaston, Birmingham, B15 2TT: tel; 0121 415 9000; web: [www.punit.bham.ac.uk/vacancies](http://www.punit.bham.ac.uk/vacancies) Please quote reference S36681.

Working towards equal opportunities

**No. 20561**

**Postdoctoral Research Associate in Computational Astrophysics**

**UNIVERSITY OF TENNESSEE/OAK RIDGE NATIONAL LABORATORY**

**Bldg. 6025, MS6354**

**P.O. Box 2008**

**Oak Ridge, TN 37831-6354**

**U.S.**

**Tel: 865-574-6113**

**FAX: 865-576-8746**

**URL1: <http://www.phy.ornl.gov/tsi/>**

**Email Submission Address: [mezzacappaa@ornl.gov](mailto:mezzacappaa@ornl.gov)**

**Email Inquiries: [mezzacappaa@ornl.gov](mailto:mezzacappaa@ornl.gov)**

*Attention: Anthony Mezzacappa, Group Leader, Theoretical Astrophysics*

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As part of the TeraScale Supernova Initiative (TSI) - a national, multi-institution, multi-disciplinary computing initiative to study core collapse supernovae - we invite applications for a postdoctoral position in computational astrophysics. TSI is funded under the Department of Energy's Scientific Discovery through Advanced Computing (SciDAC) Program. We especially encourage applications

from individuals with expertise in computational multidimensional radiation transport, hydrodynamics, or magnetohydrodynamics.

The Physics Division of the Oak Ridge National Laboratory and the Department of Physics and Astronomy at the University of Tennessee have active research programs in computational, theoretical, and experimental astrophysics focused on the study of supernovae, novae, and X-ray bursters. Both ORNL and UTK offer rich environments for multidisciplinary research, and ORNL houses significant computing resources in its Center for Computational Sciences.

Applicants should send a curriculum vitae, with a publication list, and a statement of research experience and interests, and have three letters of recommendation sent to the address above. Electronic applications are encouraged.

Applications will be considered as they are received.

The University of Tennessee is an AA/EO employer.

**No. 20562**

**Optical Astronomer/scientific programmers in support of OmegaCAM and ASTRO-WISE Wide field imaging at Kapteyn Institute  
KAPTEYN INSTITUTE, UNIVERSITY GRONINGEN**

**Tel:**

**URL1: <http://www.astro.rug.nl/~omegacam>**

*(OmegaCam homepage)*

**URL2: <http://www.astro-wise.org>**

*(Astro-Wise homepage)*

**URL3: <http://www.astro.rug.nl/~valentyn/omegacen>**

*(OmegaCEN homepage)*

**Email Submission Address: [valentyn@astro.rug.nl](mailto:valentyn@astro.rug.nl)**

**Email Inquiries: [valentyn@astro.rug.nl](mailto:valentyn@astro.rug.nl)**

*Attention: Dr E.A. Valentijn*

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OmegaCEN, the Dutch data center supporting the data reduction and analysis of optical wide field imagers, seeks optical astronomer/scientific programmers to support the commissioning of OmegaCAM at ESO's VLT Survey Telescope (mid 2005) and its advanced data reduction system being developed by OmegaCEN at the Kapteyn Institute for the ASTRO-WISE project.

The ASTRO-WISE project, led by OmegaCEN, aims to provide a European astronomical wide field imaging survey system, facilitating astronomical research, data reduction, data distribution and data mining based on the output of the new generation of wide-field sky survey cameras. The programme has ambitious goals in the areas of on-the-fly-reprocessing, parallel processing, data basing of very large data volumes, federating data volumes and distributed processing.

The main objective of the job is to help commissioning, implementing and qualifying the innovative techniques, already available in prototype form, to achieve a virtual survey system. Own research in IT and astronomical wide field imaging will be encouraged. OmegaCEN is involved in long term optical surveys, e.g. nearby supercluster surveys. Knowledge and practice of C, UNIX/LINUX operating systems, Python scripting, astronomical image processing and object oriented data basing are an

advantage. A strong team spirit is essential. The initial appointment will be fixed-term, up to 4 years. Further extension may be possible. Positions will be filled at several levels, preferably in Groningen, but Leiden is also an option; both junior and senior persons are encouraged to apply. Successful applicants will have an astronomical background and will have a strong affinity to advanced software engineering.

**No. 20557**

**Science Community Outreach Scientist**

**CALIFORNIA INSTITUTE OF TECHNOLOGY**

**770 So. Wilson Ave.**

**MS 100-22**

**Pasadena, CA 91125**

**USA**

**Tel:**

**URL1: <http://msc.caltech.edu>**

**Email Inquiries: [gerard@ipac.caltech.edu](mailto:gerard@ipac.caltech.edu)**

***Attention: Kathy Golden***

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The Michelson Science Center (MSC) announces a job opening at the MSC for Science Community Outreach Scientist.

The successful applicant will work with the existing MSC staff to carry out the MSC science community outreach program. In particular, the successful applicant will assume primary responsibility for administering selected workshops and conferences hosted by the MSC, managing the MSC's web presence, and supporting meetings representing the MSC. This position will be responsible for developing strategy for informing the community about research opportunities with MSC projects, and for working with the science community to improve services provided by the MSC. The successful applicant will also have a portion of their time available for research and will be expected to carry out an active research program.

The MSC is the science operations and analysis center for selected NASA Origins projects, including the Keck Interferometer and the Space Interferometer Mission (SIM). The MSC is the focal point for NASA's planet-finding activities that will culminate with the launch and operation of the Terrestrial Planet Finder (TPF). In the course of these responsibilities, the MSC maintains an active science community outreach program by:

Sponsoring the annual Michelson Fellowship Program;

Sponsoring workshops, conferences, and seminars promoting a broad range of disciplines relevant to Keck, SIM, and TPF;

Representing the Origins program and the MSC at scientific conferences; and

Maintaining the MSC's public web presence.

Applicants should have a Ph.D. in astronomy, physics, or closely related field by the time of appointment, with two or more years of experience in the field. Excellent written, verbal, and personal skills are essential to this position. Four years of post-degree experience, education and public outreach experience, and web content development skills are strongly desired. Demonstrated scientific expertise

with relevant technologies, such as interferometry or coronagraphy, are also strongly desired. The appointment could begin as early as Spring 2004. Applicants must submit a current CV, a list of refereed and submitted publications including titles, and a summary of their research to the address above. All applicants must request 3 letters of recommendation to be sent to the same address. The deadline for receipt of all application materials is February 1, 2004. Please let us know if you will be attending the AAS meeting in Atlanta, as we will be conducting interviews there. Contact Dr. Gerard van Belle ([gerard@ipac.caltech.edu](mailto:gerard@ipac.caltech.edu)) for more information. Caltech is an Affirmative Action/Equal Opportunity Employer. Women, Minorities, Veterans, and Disabled Persons are encouraged to apply.

**No. 20553**

**Planetary Science: Research Associate in Cassini Science and Analysis**

**LABORATORY FOR ATMOSPHERIC AND SPACE PHYSICS, UNIVERSITY OF COLORADO AT BOULDER**

**University of Colorado**

**Campus Box 392**

**Boulder, CO 80309-0392**

**USA**

**Tel: 303-492-7325**

**FAX: 303-492-6946**

**URL1: <http://lasp.colorado.edu/>**

**Email Submission Address: [esposito@lasp.colorado.edu](mailto:esposito@lasp.colorado.edu)**

**Email Inquiries: [esposito@lasp.colorado.edu](mailto:esposito@lasp.colorado.edu)**

*Attention: Dr. Larry W. Esposito, Professor*

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#### RESEARCH ASSOCIATE IN CASSINI SCIENCE AND ANALYSIS

The Laboratory for Atmospheric and Space Physics (LASP) is seeking a junior scientist to participate in continuing planning and data analysis for the Cassini Ultraviolet Imaging Spectrograph (UVIS) observations of the Saturn system. The areas of interest for this position concern the aeronomy of Saturn; Saturn's rings and their history; the origins of rings and moons; and dust in the Saturn system. Theoretical models, Cassini observation design, earth-based observations, and data analysis are among possible research activities related to preparing for and understanding the future Cassini data. A Ph.D. in planetary sciences or related field is required. The successful applicant would participate in an active group at the University of Colorado and carry out independent research in collaboration with LASP researchers A. Ian F. Stewart, Larry W. Esposito, Joshua E. Colwell, and Mihaly Horanyi. In addition to the junior scientist position, more senior scientists are encouraged to apply for a visitor appointment of 6 to 12 months with our group. Applications (including a current resume and the names and addresses of three references) should be submitted by 15 February 2004 to:

Dr. Larry W. Esposito University of Colorado at Boulder Laboratory for Atmospheric and Space Physics Campus Box 392 Boulder, CO 80309-0392 (303-492-7325)

The University of Colorado at Boulder is committed to diversity and equality in education and employment.

**No. 20580**

**Scientist - Extrasolar Planetary Research**

**NASA'S GODDARD SPACE FLIGHT CENTER**

**Tel:**

**Email Inquiries:** [Stephen.P.Maran@nasa.gov](mailto:Stephen.P.Maran@nasa.gov)

*Attention: William Oegerle*

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The Laboratory for Astronomy and Solar Physics (LASP) at NASA's Goddard Space Flight Center plans to hire one or more civil servant scientists in the field of extrasolar planetary research. GSFC is now partnering with the Jet Propulsion Laboratory to investigate technologies and concepts for the Terrestrial Planet Finder (TPF) space observatory to be launched in the next decade. Several Discovery-class extrasolar planet missions are under development by scientists in LASP, including the Fourier Kelvin Stellar Interferometer (FKSI; Danchi, PI) and the Extrasolar Planet Imaging Coronagraph (EPIC; Clampin, PI). In addition, several staff members are working on innovative optical designs for high-contrast imaging. We are seeking applicants at the junior or senior level, with relevant experience in theory, data analysis, optics and/or space instrumentation. The successful applicant(s) should be engaged in a vigorous program of astronomical research, and will be expected to lead or make significant contributions to future space missions or instruments to study extrasolar planets. LASP has an exciting research environment, with significant roles in HST, WMAP, JWST, TPF and in future Einstein Probe missions. Negotiable start-up packages are available. For application instructions, please see website <http://www.nasajobs.nasa.gov/> and "search jobs" for vacancy announcement number GS04B0061 beginning January 1, 2004. Address technical inquiries to Dr. Stephen Maran, Search Chair ([Stephen.P.Maran@nasa.gov](mailto:Stephen.P.Maran@nasa.gov)). The application deadline is March 31, 2004. NASA is an AA/EEO employer.

**No. 20567**

**Infrared Astronomer/ Head of the Infrared Instrumentation Department**

**ESO - EUROPEAN SOUTHERN OBSERVATORY**

**Karl-Schwarzschild-Str. 2**

**Germany**

**Tel: +49-89-32006589**

**FAX: +49-89-32006497**

**URL1: <http://www.eso.org/gen-fac/adm/pers/vacant/>**

**Email Submission Address: [vacancy@eso.org](mailto:vacancy@eso.org)**

**Email Inquiries: [rblock@eso.org](mailto:rblock@eso.org)**

*Attention: Mr R. Block, Head of Personnel Department*

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Applications are invited for an Infrared Astronomer/ Head of the Infrared Instrumentation Department at the ESO Headquarters in Garching, Germany. This post is open to suitably qualified men and women.

Assignment: The successful candidate will be responsible and report to the Head of the Instrumentation Division for essentially all aspects of ESO's infrared instrumentation and detector programme. In addition to the scientific and technical aspects this will make strong demands on your personal and project management as well as reporting and presentation skills. As a senior astronomer you will be a member of the ESO Astronomy Faculty and will be expected to conduct an active research programme (s).

Education, Experience and Knowledge: Ph.D in Astronomy or Physics and an outstanding record of both astronomical research and instrument development is required. Excellent communication skills and command of the English language plus proven team leadership skills are essential as well as experience of managing medium sized projects and teams.

Duty station: Garching near Munich, Germany with stays at the ESO Observatories in Chile.

Starting date: As soon as possible.

Contract and Remuneration: We offer an attractive salary (tax free), a comprehensive social security package and other allowances, if applicable. The assignment is based on an initial 3-year contract with the possibility of extension or permanence.

Application consisting of your CV (in English language) and the ESO Application Form (<http://www.eso.org/gen-fac/adm/pers/forms/> ) together with the names of four individuals willing to provide professional reference letters should be submitted by 31st January 2004.

**No. 20568**

**Science with Galactic and Extra-Galactic SIRTf surveys**

**INSTITUT D'ASTROPHYSIQUE SPATIALE, UNIVERSITE PARIS-SUD**

**Batiment 121 Universite Paris-Sud**

**PARIS**

**Tel: 33-1-69858573**

**FAX: 33-1-69858675**

**Email Submission Address: [francois.boulanger@ias.u-psud.fr](mailto:francois.boulanger@ias.u-psud.fr)**

**Email Inquiries: [francois.boulanger@ias.u-psud.fr](mailto:francois.boulanger@ias.u-psud.fr)**

*Attention: Francois Boulanger*

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Following the successful launch of the new infrared space observatory SIRTf we are opening a post-doctoral position at the Institut d'Astrophysique Spatiale in Paris.

The successful applicant will join a highly dedicated and experienced team in infrared space astronomy led by Jean-Loup Puget and Francois Boulanger. We are welcoming applications from PHD scientists interested to do research, data analysis and/or modelling, related to the SIRTf galactic and extra-galactic surveys. The successful applicant will benefit from our scientific and technical expertise gained through the analysis of ISO observations. Applications are welcome on any of the following research topics: Star Formation, ISM and Dust physics and Infrared Galaxies, in particular the analysis of the Extra-Galactic Background. Send applications before January 31st 2004, with curriculum including research interests and names of scientists that could be contacted for reference letters, to [francois.boulanger@ias.u-psud.fr](mailto:francois.boulanger@ias.u-psud.fr)

**No. 20563**

**Postdoctoral Positions in Theoretical Astrophysics**

**MACQUARIE UNIVERSITY**

**Sydney, NSW 2109**

**Australia**

**Tel: +61 2 9850 9701**

**FAX: +61 2 9850 9725**

**URL1: <http://www.physics.mq.edu.au/~wardle>**

*(Further information)*

**URL2: <http://www.astronomy.mq.edu.au>**

*(Astronomy at Macquarie)*

**URL3: <http://www.ics.mq.edu.au/jobs>**

*(Application package and information)*

Email Inquiries: [wardle@physics.mq.edu.au](mailto:wardle@physics.mq.edu.au)

*Attention: Recruitment Manager, Personnel Office*

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Applications are invited for two Research Fellow positions funded by the Australian Research Council to conduct research with Dr Mark Wardle on (i) the role of magnetic field diffusion in interstellar clouds, shock waves, gravitational collapse and protoplanetary discs; and (ii) theoretical studies of chemical signatures of massive star formation. The latter is in collaboration with an observational program directed by Michael Burton at the University of New South Wales.

The positions are available on a full-time (fixed term) basis for a period of 2 years with the possibility of further appointment subject to funding and performance. Probationary conditions may apply.

Applicants should indicate the level (A or B) at which they are applying or whether they wish to be considered for both levels. Essential Criteria at Level A: PhD (or submitted) in a relevant area; research experience in theory and/or modelling in a relevant area.

Desirable Criteria: research experience in one or more of astrophysical magnetohydrodynamics, star formation and interstellar chemistry.

Additional Essential Criteria at Level B: At least three years postdoctoral research experience or equivalent in a relevant area; ability to carry out independent research; established publication record in a relevant area.

Salary Range: Level A (Associate Lecturer) - up to A\$65,084 pa including base salary A\$40,662 to A\$54,997 pa, up to 17% employer's superannuation and annual leave loading. Appointees with a PhD will be appointed to a minimum of Point 6 on the salary scale, currently A\$51,271 pa. Level B (Lecturer) - A\$68,480 to A\$81,202 pa including base salary A\$57,886 to A\$68,616 pa, 17% employer's superannuation and annual leave loading.

Enquiries should be directed to Dr Mark Wardle (+61 2 9850 8909 or [wardle@physics.mq.edu.au](mailto:wardle@physics.mq.edu.au)).

The selection criteria must be addressed in the application. Applications, quoting reference number 19680+ and including full curriculum vitae, visa status, and the names and addresses (including postal and/or e-mail address) of three referees should be forwarded to the Recruitment Manager by 1 March 2004. Applications will not be acknowledged unless specifically requested.

**No. 20569**

**POSTDOCTORAL RESEARCH ASSOCIATE IN THEORETICAL GAMMA-RAY  
ASTROPHYSICS**

**NAVAL RESEARCH LABORATORY**

**2001 WISCONSIN AVENUE, NW**

**WASHINGTON, DC 20007**

**US**

**Tel: 202-334-2760**

**Email Inquiries: [DERMER@GAMMA.NRL.NAVY.MIL](mailto:DERMER@GAMMA.NRL.NAVY.MIL)**

*Attention: RESEARCH ASSOCIATES PROGRAMS*

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The High Energy Space Environment Branch (<http://heseweb.nrl.navy.mil/>) of the Naval Research Laboratory invites applications for a postdoctoral position in theoretical astrophysics. The research will focus on the scientific results anticipated from the Gamma-ray Large Area Space Telescope, which includes studies of gamma-ray bursts, blazars, pulsars, cosmic rays, and the unidentified EGRET gamma-ray sources. About one-half of the effort will be devoted to the development of theoretical models of high-energy sources. Associated with this effort will be a program of software development for testing theoretical models with GLAST data. The position would be administered by the National Research Council and would have a salary of \$55,000 per year. The program is open to US citizens and permanent residents at the time of the appointment who have received their PhDs within the past 5 years.

The application deadline for the February review is, February 1st. and for the June review is May 1st. A candidate will be required to write a short proposal outlining his or her research goals, which will be reviewed by an independent committee. For more information, contact Dr. Charles Dermer, Code 7653, Naval Research Laboratory, Washington, DC. 20375-5352. Phone (202) 767-2965, e-mail: [dermer@gamma.nrl.navy.mil](mailto:dermer@gamma.nrl.navy.mil). NRL is an equal opportunity employer.

**No. 20592**

**Postdoctoral Fellow**

**SPACE TELESCOPE SCIENCE INSTITUTE**

**3700 San Martin Drive**

**Baltimore, MD 21218**

**Tel:**

***Attention: Jennifer Serrano, Sr. Employment Administrator***

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Applications are invited for a postdoctoral research position at the Space Telescope Science Institute (STScI) in collaboration with Dr. Howard E. Bond. Candidates must hold a Ph.D. degree and should be observational stellar astronomers with expertise and interest in astrometry, digital imaging and photometry and/or spectroscopy, stellar and nebular astronomy, and/or the extragalactic distance scale. The successful applicant will participate in analyses of astrometric measurements, CCD data, and spectra, obtained from the ground and with the Hubble Space Telescope.

This position will be supported by STScI grants for FGS astrometry, ACS and WFPC2 imaging, and STIS spectroscopy, of Cepheid variable stars, halo subgiants, white dwarfs in binary stars, planetary nebulae and their central stars, and related objects.

The initial appointment will be for one year, starting in the summer or fall of 2004. The initial appointment and renewals for future years, up to a total of three, will depend upon performance and availability of grant funds.

STScI, located on the Johns Hopkins University Campus in Baltimore, Maryland, offers an excellent benefit package, competitive salaries, and a stimulating work environment. Applicants should send a cover letter, curriculum vitae, publication list, and a statement outlining relevant interests and experience, and arrange to have three letters of recommendation sent to the below address:

Space Telescope Science Institute ATTN: Human Resources, Req 384 3700 San Martin Drive  
Baltimore, MD 21218

Completed applications received by February 1, 2004, are assured full consideration. Women and members of minority groups are strongly encouraged to apply. EOE/AA/M/F/D/V.

**No. 20570**

**Postdoctoral Researcher (Relativistic Hydrodynamics)**

**LOUISIANA STATE UNIVERSITY**

**Department of Physics and Astronomy**

**202 Nicholson Hall**

**Baton Rouge, LA 70803**

**USA**

**Tel:**

**URL1: <http://www.lsu.edu/hrm>**

**(full ad)**

**Email Submission Address: [tohline@lsu.edu](mailto:tohline@lsu.edu)**

**Email Inquiries: [tohline@lsu.edu](mailto:tohline@lsu.edu)**

***Attention: Joel E. Tohline, Professor***

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POSTDOCTORAL RESEARCHER (Relativistic Hydrodynamics/one or more positions) Department of Physics and Astronomy LOUISIANA STATE UNIVERSITY Applications are invited for one or more Postdoctoral Researcher positions in the astrophysics group at Louisiana State University to begin in the summer or fall of 2004. The successful candidate(s) will be expected to work closely with J.E. Tohline and L. Lehner, in collaboration with E. Hirschmann (BYU) and S. Liebling (Long Island Univ.), on the development of numerical algorithms that will permit accurate simulations of hydrodynamical flows in strong gravitational fields, but may spend up to 50% of his/her time exploring other research problems that are relevant to NSF's AST, PHY, or ITR programs. We are especially interested in modeling mass-transfer, accretion flows, tidal disruption, and merger in close compact (white dwarf, neutron star and black hole) binary star systems and in active galactic nuclei. Developed relativistic hydrodynamic algorithms will include adaptive mesh refinement and load-balancing techniques for efficient execution on massively parallel computer architectures, such as LSU's 1,024-processor Beowulf-class supercomputer. LSU has active research programs in observational and theoretical astrophysics (Clayton, Frank, Landolt, Schaefer, Tohline) and in experimental and numerical relativity (Giaime, González, Lehner, Pullin, Seidel), and its campus is located only 30 miles from the NSF's LIGO-Livingston facility.

Required Qualifications: Ph.D. or equivalent degree in astronomy, physics, or a related field; Additional Qualifications Desired: experience conducting hydrodynamical simulations of astrophysical flows on parallel computing platforms. Salary is commensurate with qualifications and experience. Application deadline is February 16, 2004, or until candidate is selected. Please send CV (including e-mail address) and the names of three references to: Professor Joel E. Tohline: Electronically (preferred), [tohline@lsu.edu](mailto:tohline@lsu.edu); or via standard mail to 202 Nicholson Hall, Department of Physics and Astronomy, Louisiana State University, Ref: Log #0585, Baton Rouge, LA 70803-4001. LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

**No. 20571**

**Faculty Position in Astronomical Instrumentation**

**UNIVERSITY OF WISCONSIN-MADISON**

**5534 Sterling Hall**

**475 N. Charter Street**

**Madison, WI 53706-1582**

USA

Tel: 608-262-3071

FAX: 608-263-6386

URL1: <http://www.astro.wisc.edu>

(Department of Astronomy)

Email Inquiries: [facultysearch@astro.wisc.edu](mailto:facultysearch@astro.wisc.edu)

*Attention: Instrumentation Search Committee*

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The Department of Astronomy at the University of Wisconsin-Madison invites applications for a tenure-track Assistant or tenured Associate/Full Professor appointment in the area of Astronomical Instrumentation. Appointment to begin August, 2004. Ph.D. required prior to start of appointment. Duties include teaching, research, and professional service. Applicants for a tenured position must be able to show excellence in all three areas.

The Space Astronomy Laboratory (SAL) at the UW-Madison provides an existing infrastructure for hardware and software engineering, production and testing. SAL is capable of developing orbital and suborbital payloads, and ground-based instrumentation. The UW campus also offers engineering support through other centers. Applications are particularly encouraged from those interested in building innovative instruments for the 3.5-meter WIYN and 10.5-meter SALT telescopes, in which UW-Madison is a partner.

Applications should include a bibliography, curriculum vitae, a brief summary of planned research, and the names of at least three individuals who can provide letters of reference. Application materials should be sent to Instrumentation Search Committee, Department of Astronomy, University of Wisconsin-Madison, 5534 Sterling Hall, 475 N. Charter Street, Madison, WI 53706-1582.

The University of Wisconsin-Madison is an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply. Unless confidentiality is requested in writing, information regarding applicants must be released. Finalists cannot be guaranteed confidentiality.

**No. 20581**

**Lecturer/Director of Student Observatory**

**YALE UNIVERSITY**

**Astronomy Department**

**P.O. Box 208101**

**New Haven, CT 06520-8101**

**USA**

**Tel: 203-432-3000**

**FAX: 203-432-5048**

**URL1: <http://www.astro.yale.edu>**

**Email Submission Address: [bailyn@astro.yale.edu](mailto:bailyn@astro.yale.edu)**

**Email Inquiries: [bailyn@astro.yale.edu](mailto:bailyn@astro.yale.edu)**

*Attention: Charles Bailyn, Chairman*

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The Astronomy Department of Yale University invites applications for a position at the rank and salary of Lecturer to direct our new on-campus student observatory, and carry out undergraduate teaching. The initial appointment is for three years, starting July 1 2004, with the possibility of indefinite renewal.

Duties include maintaining and enhancing the observatory facilities, creating and sustaining a vigorous program of public outreach, and teaching 2-3 undergraduate courses per year. A personal research program compatible with the interests of the department faculty would be welcome, but is not required.

Our newly constructed student observatory is housed just off campus, and includes two domes, one containing a 12" Meade Schmidt-Cassegrain, and the other our 19th century 8" Reed refractor. Four additional 8" Meades have outdoor mounts for student use. A modest budget for enhancements and upgrades will be available.

Applicants should have a Masters degree in Astronomy; a Ph.D. is strongly preferred. Considerable experience in education and public outreach is required. Applicants should send a CV, and a statement of experience and goals in public outreach and education in astronomy to the above address, and should arrange for three letters of recommendation to be sent as well. Applications will be considered as they are received; applications received before February 1, 2004 will be given full consideration.

**No. 20572**

**FACULTY POSITIONS IN GRAVITATIONAL PHYSICS AND ASTROPHYSICS  
THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE  
80 FORT BROWN  
BROWNSVILLE, TX 78520**

**US**

**Tel: 1-800-544-8208**

**FAX: (956) 983-7476**

**URL1: <http://www.utbtsc.edu>**

**Email Submission Address: [sperez@hp.utbtsc.edu](mailto:sperez@hp.utbtsc.edu)**

***Attention: Sylvia S. Perez, Senior Human Resources Assistant***

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FACULTY POSITIONS IN GRAVITATIONAL PHYSICS AND ASTROPHYSICS CENTER FOR GRAVITATIONAL WAVE ASTRONOMY AT THE UNIVERSITY OF TEXAS AT BROWNSVILLE AND TEXAS SOUTHMOST COLLEGE. The Department of Physics and Astronomy and the Center for Gravitational Wave Astronomy invite applications for several faculty positions, tenure-track, at the Assistant Professor level. More senior appointments could be considered in exceptional cases. The center for Gravitational Wave Astronomy (<http://cgwa.phys.utb.edu>) is funded by NASA and was created to support research and education in the areas of relativistic astrophysics (especially of sources of gravitational radiation), modeling of gravitational wave sources and gravitational wave data analysis. The center program involves at this time, six faculty, four postdocs and a significant number of graduate and undergraduate students. It also supports a very active visitors program and has exceptionally good computing facilities, including the exclusive use of two Beowulf clusters. This search is targeting in particular individuals that show a great promise of research at the interface of the areas described above. The center includes faculty and scientists that are members of the LIGO Scientific collaboration and UTB is a LIGO I member of the collaboration. The center also supports very actively research related to the LISA mission and is a charter member of the GriPhyN and iVDGL projects, two large scale NSF funded projects that will form the world's first global "computational grid". Providing a Petabyte scale computational resource for major scientific experiments in physics, astronomy, biology and engineering including LIGO. Candidates must therefore be capable and committed to research relevant to the study of gravitational wave sources in the LISA band. The successful candidates will show in addition to the potential to develop a strong independent research program an interest in contributing to high quality teaching at both the undergraduate and graduate level in the department of physics and astronomy.

Requirements: PhD in Physics or a closely related field and evidence of potential to:

(i) conduct independent research in any of these areas: gravitational astrophysics, source simulations, gravitational wave data analysis, (ii) successfully teach undergraduate and graduate physics sources, (iii) supervise M.S. and Ph.D. students, and (iv) obtain extramural funding.

To be considered, the candidate must send: (1) A letter of application addressing the qualifications above, (2) A curriculum vitae, including a list of publications and funded projects, (3) A three page research plan, describing the relevance of the planned research to the Center for Gravitational Wave Astronomy, and (4) A description of teaching experience and interests, and (5) Arrange to have at least three letters of recommendation sent to:

Dr. Manuela Campanelli Chair, Search committee, Center for Gravitational Wave Astronomy, And Department of Physics and Astronomy The University of Texas at Brownsville Attn: Leslie Gomez, Secretary 80 Fort Brown, Brownsville, TX 78520

A copy of items 1 & 2 must be mailed to:

Human Resources The University of Texas at Brownsville 80 Fort Brown Brownsville, TX 78520

Screening of applicants will begin on January 15, 2004 and will continue until the position is filled.

**No. 20582**

**Assistant Professor in Astronomy**

**CORNELL UNIVERSITY**

**Space Sciences Bldg.**

**Ithaca, NY 14853**

**USA**

**Tel:**

***Attention: Prof. Don Campbell, Search Committee, Dept. of Astronomy***

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The Department of Astronomy at Cornell University has an opening for a tenure track faculty position at the level of assistant professor. Applicants must have research interests that overlap the major research areas of the Arecibo Observatory in radio or radar astronomy. However, preference will be given to individuals with demonstrated expertise in planetary radar astronomy. The National Astronomy and Ionosphere Center, which operates the Arecibo Observatory for the National Science Foundation, is headquartered at Cornell. The successful applicant will be expected to initiate and successfully pursue independent research programs and to have a strong commitment to undergraduate and graduate education. Traditional strengths of Cornell astronomy lie in planetary science, radio astronomy, optical/IR instrumentation and theoretical astrophysics. In addition to the relationship with Arecibo, faculty, staff and students have access to the Palomar telescope and the department is leading an effort to build a sub-mm telescope in northern Chile. The application should include a curriculum vita, discussion of teaching interests and a statement of research activities and future plans along with the names of at least three references.

Cornell is an Equal Opportunity Affirmative Action Employer.

**No. 20564**

**Research Associate in Massive Star Formation**  
**UNIVERSITY OF NEW SOUTH WALES**  
**School of Physics**  
**University of New South Wales**  
**Sydney, NSW 2052**  
**Australia**  
**Tel: +61-2-9385-5618**  
**FAX: +61-2-9385-6060**  
**URL1: <http://www.phys.unsw.edu.au/astro>**  
**(Department of Astrophysics at UNSW)**  
**Email Submission Address: [M.Burton@unsw.edu.au](mailto:M.Burton@unsw.edu.au)**  
**Email Inquiries: [M.Burton@unsw.edu.au](mailto:M.Burton@unsw.edu.au)**

*Attention: Michael Burton, Associate Professor*

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Applications are invited for a Research Associate position funded by the Australian Research Council, to work with A/Prof Michael Burton on the chemical signatures of massive star formation. Experience is needed in one or more of the following research areas: (i) observational mm and/or IR astronomy, (ii) star formation and (iii) the excitation of molecular clouds. Experience in modelling IR line emission and/or interstellar chemistry would be an asset. The work will involve an extensive program of observational mm-wave astronomy, as well as close collaboration with a theoretical program being undertaken at Macquarie University.

The position will initially be for one year with the possibility of renewal for upto a further two years, subject to satisfactory performance. Candidates must possess a PhD and show a demonstrated ability to pursue independent research. The salary scale range is on the UNSW Academic Salary Rates (level A).

The Department of Astrophysics at UNSW is one of Australia's leading research groups with 6 faculty, 11 postdocs and 15 graduate students. We operate the 22-m Mopra mm-wave telescope over the winter observing season, the largest such telescope in the southern hemisphere, and have Australia's major group researching in the field of star formation. The group is also playing a leading role in the development of the Antarctic Plateau for astronomy, and operates two automated observatories there. UNSW is situated close to the centre of Sydney and also to some wonderful beaches.

Applications should include a CV, a bibliography, and a statement of research interests, and arrive before March 1, 2004. Please provide the names and contact details (inc. email) for three referees, who may be asked to provide letters of recommendation.

**No. 20560**  
**Project Engineering Manager**  
**LOWELL OBSERVATORY**  
**1400 W. Mars Hill Road**  
**Flagstaff, AZ 86001-4499**  
**USA**  
**Tel: 928-774-3358**  
**FAX: 928-774-6296**  
**URL1: <http://www.lowell.edu/hr/jobs.html>**  
**Email Submission Address: [humanresources@lowell.edu](mailto:humanresources@lowell.edu)**  
**Email Inquiries: [humanresources@lowell.edu](mailto:humanresources@lowell.edu)**

***Attention: Human Resources, Manager***

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LOWELL OBSERVATORY/ DISCOVERY CHANNEL TELESCOPE PROJECT

Position Title: Project Engineering Manager Organization: Lowell Observatory, 1400 W. Mars Hill Rd., Flagstaff, AZ 86001-4499 Job Location: Flagstaff, AZ Salary: Depends on experience. Benefits: Full-time, Exempt, Full Benefits Position term: Initial period of 5 years, or the project's anticipated duration; Start date: early 2004 Application Deadline: January 31, 2004 at 5 p.m. to receive priority consideration. Position open until filled.

Qualifications Required: Minimum of Bachelors Degree in Mechanical Engineering and more than 10 years of relevant experience. Ability to design, specify, procure, and manage efforts to develop all subsystems of a large modern astronomical observatory. Prior experience in development of large astronomical telescopes, instruments, and technical facilities required. Ability to communicate effectively orally and in writing. Willingness to take on new tasks and other duties as needed.

Duties: Responsible for management of all engineering required to develop high quality systems for the Discovery Channel/Lowell Observatory Telescope Project. Work with Project Scientist and Project Manager in development of systems for facility, telescope mount, optics, wavefront sensors, control system, electronics subsystems, and all other ancillary subsystems. Identify and select all required equipment, develop specifications for major observatory subsystem procurements, design and implement specific observatory subsystems such as telescope mount, optical system, maintenance systems, dome, etc. Responsible for cost estimation, conceptual and detailed design, procurement, integration, and debugging of all observatory systems. Manage/coordinate engineering efforts performed by other Project employees and contractors.

Knowledge, Skills, Abilities: Attention to detail a must, organized, ability to prioritize, work effectively under pressure, timelines, and complete tasks on schedule. Excellent interpersonal skills and ability to work effectively and professionally with departments, agencies, and personnel of diverse backgrounds during multi-faceted project. Self-motivated, able to work independently, control effectiveness of design, manufacture, and implementation of multiple observatory subsystems. Thorough knowledge of large optical fabrication processes, optical testing, optical alignment, optical coating, vacuum systems, precision mechanical drives, mechanical fabrication, assembly, general construction, and site preparation. Manage time to accommodate the demands of a high-pressure/volume workload characterized by numerous competing actions, projects, and issues frequently of highly complex and technically challenging natures. Experienced with all aspects of engineering inherent to modern astronomical observatories and instrumentation. Experience in direct management of engineering personnel during design and subsequent implementation of astronomical observatory systems.

To Apply: An application package & position description is available on-line at: [www.lowell.edu/hr](http://www.lowell.edu/hr) or write: Human Resources, Lowell Observatory, 1400 W. Mars Hill Rd., Flagstaff, AZ 86001-4499, e-mail: [humanresources@lowell.edu](mailto:humanresources@lowell.edu), call: 928/774-3358, or fax: 928/774-6296. Submit resume, letter of interest, three business references, salary history and the Lowell Observatory application to same. Deadline: applications must be received by 5 p.m. on January 31, 2004, to receive priority consideration. Position open until filled.

Lowell Observatory is an equal opportunity provider and employer.

**No. 20578**

**Postdoctoral Positions: Multi-Wavelength Studies of Galaxies/QSOs**  
**MAX-PLANCK-INSTITUTE FOR ASTRONOMY**  
**Koenigstuhl 17**  
**Germany**  
**Tel: +49-6221-528-210**  
**FAX: +49-6221-528-339**  
**URL1: <http://www.mpia.de>**  
**Email Submission Address: [fw@mpia.de](mailto:fw@mpia.de)**  
**Email Inquiries: [fw@mpia.de](mailto:fw@mpia.de)**

*Attention: Ms. Susanne Koltes-Al-Zoubi (reference no. 19-03)*

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The Max-Planck-Institute for Astronomy (MPIA) in Heidelberg, Germany, is seeking ambitious candidates to fill two postdoctoral research positions in a new extragalactic research group at MPIA led by Dr. F. Walter.

The main focus of this group is to study the structure and evolution of galaxies from the Local Group (Dwarf Galaxies) to systems at the end of the Epoch of Reionization (e.g. SDSS high redshift QSOs). Group members can have access to data from the SIRTf SINGS legacy project (the SIRTf Nearby Galaxy Survey), a high-resolution VLA HI survey of SINGS galaxies and the Sloan Digital Sky Survey (SDSS). We invite applications from candidates with expertise and/or interest in the studies of a) nearby galaxies or b) the properties of high-z galaxies/QSOs. For the nearby galaxy position, the successful candidate is expected to focus on multi-wavelength studies of the interstellar medium and related processes in nearby galaxies, including dwarf galaxies. For applicants with interest in the studies of the properties of high-redshift galaxies and QSOs, experience in optical/infrared spectroscopy or millimeter/submillimeter observations would be an asset, though not a requirement.

Observational researchers at the MPIA make extensive use of facilities ranging from optical through radio telescopes. In addition to the surveys mentioned above, appointees will have full access to all the facilities available to astronomers in the Max-Planck-Society, including the Very Large Telescope (VLT), the Large Binocular Telescope (LBT), the IRAM millimeter telescopes (PdBI, 30m), the Atacama Pathfinder Experiment (APEX), and the optical telescopes operated by the MPIA on Calar Alto and La Silla.

The appointments will be for an initial period of two years, starting in fall 2004, with possible extensions to 3 years. The positions include funds for publications, visitor support, and travel.

Applicants should have a PhD in astronomy or a related field. Interested candidates should send a curriculum vitae, a brief summary of past and current research and a brief outline of future plans, to the address above. Three letters of recommendation should be requested by the applicant and sent directly to the above address. The deadline for all materials is 31 January 2004. For further information, please contact Dr. Fabian Walter ([fw@mpia.de](mailto:fw@mpia.de)).

The Max Planck Society is an equal opportunity employer; in particular, disabled persons are encouraged to apply. The Max Planck Society as the employer aims at increasing the number of female staff members in fields where underrepresented. Therefore, women are particularly encouraged to apply.

**No. 20555**  
**Postdoctoral Research Associate in Extragalactic Research/Cosmology**

**ARIZONA STATE UNIVERSITY**

**Tyler Mall PSF-470**

**P.O. Box 871504**

**Tempe, AZ 85287-1504**

**USA**

**Tel: 480 965 4702**

**FAX: 480 965 7954**

**URL1: <http://ast.asu.edu/>**

**URL2: <http://www.jwst.nasa.gov>**

**URL3: <http://www.stsci.edu/ngst>**

**Email Submission Address: [Joelina.Peck@asu.edu](mailto:Joelina.Peck@asu.edu)**

**Email Inquiries: [Rogier.Windhorst@asu.edu](mailto:Rogier.Windhorst@asu.edu)**

*Attention: Joelina Peck, Administrative Assistant*

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The Department of Physics and Astronomy at Arizona State University invites applications for a Postdoctoral Research Associate position.

Candidates are required to have a doctorate in astronomy with a strong record in extragalactic astronomy observational cosmology or closely related discipline by time of appointment, and have substantial experience with CCD data reduction and analysis, and with LINUX/UNIX.

The successful candidate will be involved in reduction, analysis, and publication of ground-based as well as Hubble Space Telescope data on galaxy evolution and formation, and on the epoch of reionization. The applicant will also participate in projects that are being prepared for the James Webb Space Telescope and assist in some of the JWST mission preparation studies.

Opportunities to conduct astronomical research at ASU are excellent. ASU has access to the Steward Observatory facilities, including the 6.5m MMT at Mt Hopkins, the two 6.5m Magellan telescopes in Chile, the 2.3m Steward, 1.5m Catalina, and 1.8m VATT telescopes, and after 2004 also the 2x8.5m Large Binocular Telescope at Mt Graham.

Applicants must submit a CV plus statement of research interests, (p) reprints of their own work, and arrange for three letters of recommendation sent on their behalf. Initial review of applications will start January 31, 2004, and if not filled, every two weeks until the search is closed. Send application materials to: Postdoctoral Research Associate Search, c/o Joelina Peck, Department of Physics and Astronomy, Arizona State University, Tyler Mall PSF-470, Tempe, AZ 85287-1504. Inquiries may be made to [Joelina.Peck@asu.edu](mailto:Joelina.Peck@asu.edu). Information about the department is available at <http://ast.asu.edu/>. AA/EOE.

**No. 20583**

**Postdoctoral Scholar - Faint Galaxies - DEEP**

**UNIVERSITY OF CALIFORNIA, SANTA CRUZ**

**University of California, Santa Cruz**

**1156 High Street**

**Santa Cruz, CA 95064**

**USA**

**Tel: 831.459.2991**

**FAX: 831.459.5244**

**URL1: <http://deep.ucolick.org>**

**Email Submission Address: [director@ucolick.org](mailto:director@ucolick.org)**

*Attention: Joseph Miller, Director*

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UNIVERSITY OF CALIFORNIA, SANTA CRUZ

UCO/LICK OBSERVATORY Postdoctoral Scholar

The University of California Observatories/Lick Observatory invites applications for one to two postgraduate researcher positions, contingent on funding. Appointee will be a team member of the DEEP project, a program well underway and aimed at studying the large scale structure, formation and evolution of faint galaxies. Data include the 120-night DEEP survey of 50,000 faint galaxies with Keck, plus subsurveys with the Hubble Space Telescope and other telescopes. Appointee(s) will lead one or more projects in collaboration with Drs. Sandra Faber, Raja Guhathakurta, and David Koo, senior members of DEEP. Opportunity and funds will be provided for independent research. Preference will be given to candidates with demonstrated experience with observations of faint galaxies.

RANK: Postdoctoral Scholar Step V to Step VIII

SALARY: \$36,912 - \$41,940

MINIMUM QUALIFICATIONS: PhD or equivalent in Astronomy or Physics or a closely related field, relevant refereed publications, and experience with galaxy data reductions and analysis. Must be able to work independently yet collegially in a team environment.

TERM OF APPOINTMENT: Two years, with likely extension to three, contingent on availability of funding.

POSITION START DATE: July 1, 2004 (negotiable).

URL FOR MORE INFO: DEEP – <http://deep.ucolick.org>

APPLICATION MATERIALS: Please send a vita, two-page summary of relevant experience and plans, and three or more letters of recommendation.

SUBMISSION ADDRESS: Postgraduate Researcher Recruitment c/o UCO/Lick, Office of the Director  
1156 High Street University of California Santa Cruz, CA 95064

Please refer to provision #T04-12 in your reply.

CLOSING DATE: All materials must be received no later than January 31, 2004. The University of California is an equal opportunity and affirmative action employer.

**No. 20579**

**Summer Student Research Programme 2004**

**NETHERLANDS FOUNDATION FOR RESEARCH IN ASTRONOMY (ASTRON) AND JIVE**

**Oude Hoogeveensedijk 4**

**Dwingeloo, Drenthe 7991 PD**

**The Netherlands**

**Tel: +31 521 595100**

**FAX: +31 521 597332**

**URL1:** <http://www.astron.nl/wsrt>  
**URL2:** <http://www.jive.nl>  
**Email Submission Address:** [csonka@astron.nl](mailto:csonka@astron.nl)  
**Email Inquiries:** [csonka@astron.nl](mailto:csonka@astron.nl)

*Attention: N. Csonka, Office Manager*

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The Netherlands Foundation for Research in Astronomy (ASTRON) and the Joint Institute for VLBI in Europe (JIVE) announce the availability of a limited number of grants for their 2004 Summer Research Programme. The Programme 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. There are also possibilities to get involved in astronomical tests with the ITS, a prototype LOFAR station, operating from 10 - 40 MHz. 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.

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 2004. If this is not possible please indicate why.

Completed applications AND two letters of reference should be received by 15 February 2004 (Att. Ms. Nanuschka Csonka). Please send or fax to the address given above the letters of reference AND the completed application form, which can be obtained from <http://www.astron.nl/wsrt/summer.html>

**No. 20573**

**Postdoctoral Research Positions in Stellar Populations/Galaxy Evolution**

**UNIVERSITY OF BASEL**

**Astronomical Institute**

**Venusstrasse 7**

**Switzerland**

**Tel: +41 61 2055 403**

**FAX: +41 61 2055 455**

**URL1:** <http://www.astro.unibas.ch/indexengl.shtml>

*(Astronomical Institute)*

**Email Submission Address:** [grebel@astro.unibas.ch](mailto:grebel@astro.unibas.ch)

**Email Inquiries:** [grebel@astro.unibas.ch](mailto:grebel@astro.unibas.ch)

*Attention: Eva K. Grebel, Professor*

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The Astronomical Institute of Basel University invites applications for one, possibly two postdoctoral research positions to work with Prof. Eva K. Grebel on projects in one or several of the following areas: stellar populations, chemical abundances and evolution, Galactic structure and kinematics, or the overall evolution of nearby galaxies. A publication record in one of the above areas will be an asset. Basel

participates in the RAdial Velocity Velocity Experiment (RAVE) for Galactic structure and chemical evolution, in an ESO/VLT Large Programme for the kinematics and chemical evolution of Milky Way satellites, and in an approved key project with the Space Interferometry Mission (SIM) for Galactic structure. Applicants whose research interests match well with ongoing research programs will be given preference.

The appointments will be for one year with a possible extension to three to five years based on performance and availability of funding. The starting date is around October 1, 2004 (negotiable).

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

Applicants should send a CV, a brief description of research experience, a statement of research interests, and a bibliography, and arrange for three letters of reference to be sent to the above address by March 1, 2004.

**No. 20577**

**Near-IR Extragalactic Astronomy**

**AUSTRALIAN NATIONAL UNIVERSITY**

**Tel:**

**URL1: <http://www.mso.anu.edu.au>**

**Email Submission Address: [jobs@anu.edu.au](mailto:jobs@anu.edu.au)**

**Email Inquiries: [academic.services.rsaa@anu.edu.au](mailto:academic.services.rsaa@anu.edu.au)**

***Attention: Staffing Recruitment Officer***

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Postdoctoral Fellow or Research Fellow in Near-IR Extragalactic Astronomy. Salary package (inclusive of superannuation): Postdoctoral Fellow \$AUD58,625 - \$AUD62,735; Research Fellow \$AUD65,896 - \$AUD77,748

The Research School of Astronomy and Astrophysics at the Australian National University invites applications for a Postdoctoral Fellow or Research Fellow to assist in the study of the near-IR properties of Nearby Galaxies. The successful applicant will work closely with Dr Simon Driver and Dr Helmut Jerjen to complete two major near-IR surveys: The near-IR extension of the Millennium Galaxy Catalog (MGC) and the Local Sphere of Influence (LSI) survey. Both surveys will provide unprecedented deep near-IR insight into the luminosity, size, shape and profile distributions of the very near ( $d < 10$  Mpc) and low redshift ( $z < 0.15$ ) galaxy population.

The surveys and their research output is in part directly intended to provide the vital zero redshift reference material for the upcoming James Webb Space Telescope mission to study the Origin and Evolution of Galaxies.

The candidate should possess a PhD in astronomy or related field and be familiar with optical/near-IR imaging, galaxy catalogs, galaxy morphology and galaxy surface photometry. A component of the MGC work will involve near-IR bulge-disk decomposition and a component of the LSI work will involve measuring direct distances to nearby galaxies using surface brightness fluctuations.

For further information on the position contact Simon Driver ([spd@mso.anu.edu.au](mailto:spd@mso.anu.edu.au)) or Helmut Jerjen

(jerjen@mso.anu.edu.au).

Selection documentation MUST be obtained prior to application and can be obtained from: academic.services.rsaa@anu.edu.au . Please note that referees must supply their reports at the time of application.

Closing date for receipt of applications and referee reports: 29 February 2004. Please quote reference: RSAA2124

**No. 20574**

**Postdoctoral position(s) in theoretical astrophysics**

**LAVAL UNIVERSITY**

**Department of Physics, Physics**

**Engineering, and Optics**

**Saint-Foy (Quebec City), Quebec G1K 7P4**

**Canada**

**Tel: 418-656-2652**

**FAX: 418-656-2040**

**URL1: [http://galileo.as.utexas.edu/hugo\\_c.html](http://galileo.as.utexas.edu/hugo_c.html)**

*(Dr. Martel's web page)*

**Email Submission Address: [hugo@astro.as.utexas.edu](mailto:hugo@astro.as.utexas.edu)**

**Email Inquiries: [hugo@astro.as.utexas.edu](mailto:hugo@astro.as.utexas.edu)**

*Attention: Hugo Martel, Professor*

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Applications are invited for one or possibly several postdoctoral positions in theoretical astrophysics, starting September 2004. Appointments will be for three years. The goal is to develop a strong research group in theoretical and computational astrophysics at Laval, under the direction of Prof. Hugo Martel (CRC Chairholder, Theoretical and Numerical Cosmology).

We are particularly interested in candidates with expertise in either cosmology, galaxy formation, or star formation, and previous experience with high-performance numerical simulations. HOWEVER, candidates with expertise in analytical or semi-analytical modelling will be considered, and candidates with expertise in related fields (galaxy evolution, structure and dynamics, or evolution of the ISM) will also be considered. Prof. Martel's current research interests include the evolution of X-ray clusters, the reionization of the universe, and the formation of massive star clusters and its feedback on the evolution of the ISM.

Candidates should send a cover letter, resume, brief summary of past accomplishments and research goals, and 3 letters of recommendation to the above address. The resume should include a list of computer systems, programming languages, and numerical algorithms that the candidate is familiar with. Review of applications will start on Feb 15, 2004, and continue until the position(s) is(are) filled.

**No. 20575**

**Postdoctoral Position in Stellar Astrophysics**

**PAUL SCHERRER INSTITUTE, SWITZERLAND**

**Wuerenlingen and Villigen**

**Switzerland**

**Tel: 0041 - 56 - 310 2676**

**FAX: 0041 - 56 - 310 2679**

**Email Submission Address: [guedel@astro.phys.ethz.ch](mailto:guedel@astro.phys.ethz.ch)**

**Email Inquiries: [guedel@astro.phys.ethz.ch](mailto:guedel@astro.phys.ethz.ch)**

***Attention: Human Resources, Ref. Code 1513***

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We invite applications for a new postdoctoral research position in stellar astrophysics, starting between spring-fall 2004. This position will be awarded for two years; extension is contingent on further funding. Candidates with an observational or theoretical background in star formation and/or magnetic activity/coronal physics in young stars are particularly encouraged to apply. Experience in either infrared, millimeter, or X-ray astronomical observing and/or related theory are welcome. Candidates with expertise in related fields of stellar astronomy are also invited to apply.

The successful candidate will work in a joint team of astronomers from the Paul Scherrer Institute and ETH Zurich. This team has a strong background and interest in X-ray, millimeter and radio astronomy of magnetically active and young stars, star formation, plasma physics, and solar physics. PSI has been involved in the development of space missions such as XMM-Newton, the James Webb Space Telescope (JWST), RHESSI, and Integral. We offer extensive scientific collaborations within several ongoing research projects. The candidate is expected to develop further vigorous research activities. Office space and computing facilities will be provided by both PSI and ETH Zurich.

Please send CV, publication list, and a short description of research interests, and arrange for two letters of recommendation sent directly to us. Applications are requested by 20 February 2004 but will continue to be considered thereafter until the position is filled. For questions, please send e-mail to Dr. M. Guedel ([guedel@astro.phys.ethz.ch](mailto:guedel@astro.phys.ethz.ch)).

**No. 20584**

**EDUCATION PROGRAMS MANAGER**

**UNIVERSITY OF COLORADO**

**Univ. of Colorado**

**UCB 408**

**Boulder, CO 80309**

**USA**

**Tel: 303-492-5002**

**FAX: 303-492-1725**

**URL1: <http://www.colorado.edu/Fiske/>**

***(Planetarium)***

**URL2: <http://aps.colorado.edu>**

***(Department)***

**URL3: <http://www.colorado.edu/humres/jobs/>**

***("Application Form")***

**Email Submission Address: [Julie.Carmen@colorado.edu](mailto:Julie.Carmen@colorado.edu)**

**Email Inquiries: [Julie.Carmen@colorado.edu](mailto:Julie.Carmen@colorado.edu)**

***Attention: Julie Carmen, Administrative Assistant***

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Fiske Planetarium, University of Colorado, is filling two staff positions. The first is: EDUCATION PROGRAMS MANAGER -- Masters or Ph. D. in astronomy, physics, or science education or equivalent experience; significant teaching experience, some in an informal setting. The primary

purpose of Fiske Planetarium, a campus unit, is to support the teaching of undergraduate classes. Candidate must be self-directed and able to work with CU professors, K-12 teachers and students, train and manage student workers, manage projects and budgets. Experience writing education grant proposals, planning exhibits and signage, and familiarity with evaluation (formative and summative) is a plus. This position has a significant role in planetarium show production and some in show presentation. Salary depends on experience, approximately \$50,000.

Fiske is an integral part of CU's Department of Astrophysics & Planetary Science, a top US department. Salaries and benefits are very good; performance expectations are high. Computer expertise is a plus: we expect to add digital capability in the future. We will start considering candidates Feb. 1, 2004. For more information see the site: <http://www.colorado.edu/Fiske> , or contact Julie.Carmen@colorado.edu . For all positions a resume is expected as well as a 1-2 page description of how you create an excellent educational program. Names of 3 references are desired but NO letters unless solicited. In accordance with Colorado law preference will be given to candidates who are Colorado residents. CU Director of Astronomical Laboratories Douglas Duncan will be present at the Atlanta AAS meeting.

**No. 20589**  
**Astronomy Instructor**  
**MIRACOSTA COMMUNITY COLLEGE**  
**United States**  
**Tel: 760-795-6868**  
**URL1: <http://www.miracosta.edu/info/admin/HR/jobs>**  
**Email Inquiries: [jobs@miracosta.edu](mailto:jobs@miracosta.edu)**

*Attention: [www.miracosta.edu/info/admin/HR/jobs](http://www.miracosta.edu/info/admin/HR/jobs)*

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Astronomy Instructor: MiraCosta Community College in coastal San Diego County, California, invites applications for tenure-track position beginning August 2004. Responsibilities will include teaching general education introductory astronomy lecture courses, and development and teaching of an introductory astronomy lab. Closing date 1/28/04. Must submit complete application packet. For application, job announcement, and salary information, visit website [www.miracosta.edu/info/admin/HR/jobs](http://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](mailto:jobs@miracosta.edu) EOE

**No. 20585**  
**Software Developer for SCUBA-2**  
**UNIVERSITY OF BRITISH COLUMBIA**  
**Department of Physics & Astronomy**  
**6224 Agricultural Road**  
**Vancouver, British Columbia V6T 1Z1**  
**Canada**  
**Tel: 604-822-1938**  
**FAX: 604-822-5324**  
**URL1: [http://www.roe.ac.uk/atc/projects/scuba\\_two](http://www.roe.ac.uk/atc/projects/scuba_two)**  
**URL2: [http://www.jach.hawaii.edu/JACpublic/JCMT/Continuum\\_observing/SCUBA-2/home.html](http://www.jach.hawaii.edu/JACpublic/JCMT/Continuum_observing/SCUBA-2/home.html)**  
**Email Submission Address: [jmolnar@physics.ubc.ca](mailto:jmolnar@physics.ubc.ca)**  
**Email Inquiries: [jmolnar@physics.ubc.ca](mailto:jmolnar@physics.ubc.ca)**

*Attention: Janos Molnar, Canadian SCUBA-2 Project Manager*

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SCUBA-2 is a highly innovative wide-field camera designed to replace SCUBA and be operational on the James Clerk Maxwell Telescope in 2006. With over 9,000 pixels in two arrays, SCUBA-2 will map the submillimetre sky up to a thousand times faster than SCUBA, and is expected to have a huge impact on many areas of astronomy from studies of galaxy formation and evolution in the early Universe to understanding star and planet formation in our own Galaxy.

We are seeking a skilled software developer to join a small team based at UBC and at the JAC in Hawaii, working on the pipeline infrastructure and algorithms required to convert the raw data into scientifically meaningful images.

The position requires a minimum of a B.Sc. in Physics, Computer Science or a related field. Preference will be given to candidates with a background or experience in Astronomy, particularly submillimetre astronomy or related astronomical data reduction or software development. Candidates should have at least three years of software development experience overall, including: C programming, and/or object-oriented programming languages; Perl programming, or experience with modern interpreted languages; code optimization, performance profiling and testing; Unix and/or Linux operating system usage.

The position will begin as soon as it can be filled after the deadline and is expected to be for 3 years. Work will be based in Vancouver, but the successful candidate must be able to travel to Hawaii and the Edinburgh as the need arises. The ability to occasionally perform work at 14000 feet elevations also required. The successful candidate will be responsible for new code development, code maintenance and, when the instrument is delivered, user support.

**No. 20590**

**Postdoctoral Fellow in Galaxy Formation and Globular Cluster Systems**

**MICHIGAN STATE UNIVERSITY**

**Department of Physics and Astronomy**

**East Lansing, Michigan 48824**

**USA**

**Tel:**

**FAX: 517-353-4500**

**URL1: <http://www.pa.msu.edu>**

**Email Inquiries: [zepf@pa.msu.edu](mailto:zepf@pa.msu.edu)**

***Attention: Steve Zepf, Prof.***

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Applications are invited for a postdoctoral position to work with Steve Zepf and his research group at Michigan State University. The successful applicant will collaborate with members of the group on current projects aimed at understanding the formation and evolution of galaxies and their globular cluster systems, and will be encouraged to carry out new projects with these same general goals. An interest in working with Chandra and/or HST data will be considered a plus, but is not required. The postdoctoral fellow will have access to the SOAR 4.2m telescope in Chile. The position is initially for two years, with a possible extension for a third year. The target starting date is September, 2004, and the applicant must have received their PhD before beginning in the position. Applicants should send a curriculum vitae, publication list, a concise description of research interests, and contact information for three references to the above address. Applications received by February 15, 2004 will receive full consideration. The search process will continue until the position is filled. Applications from women and minority candidates are strongly encouraged.

**No. 20588**  
**Superintendent**  
**MCDONALD OBSERVATORY (FT. DAVIS, TX)**  
**The University of Texas at Austin**  
**RLM 15.208, C1402**  
**Austin, TX 78712**  
**USA**  
**Tel: 512/471-3300**  
**FAX: 512/471-6016**  
**URL1: [http:// www.as.utexas.edu/mcdonald/mcdonald/html](http://www.as.utexas.edu/mcdonald/mcdonald/html)**  
**URL2: <http://www.as.utexas.edu/mcdonald/jobs/jobs/html>**  
**Email Submission Address: [no email submission](#)**  
**Email Inquiries: [director@astro.as.utexas.edu](mailto:director@astro.as.utexas.edu)**

*Attention: David L. Lambert, Director*

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The University of Texas McDonald Observatory seeks highly qualified and strongly motivated applicants for the position of Superintendent, McDonald Observatory. The position primarily involves oversight of operations at McDonald Observatory, located in Ft. Davis Texas. The Observatory consists of four optical telescopes (2.7-m, 2.1-m, 0.9-m and 0.76-m). The Superintendent acts as the scientific and operational liaison between the west Texas and Austin staffs. The qualified applicant will lead a staff of approximately 60 employees who operate and maintain the telescopes and associated instrumentation, physical plant facilities and visiting astronomer dormitory. In addition, the Superintendent will be expected to host visiting official and special visitors to the Observatory. The Observatory functions as a small community and the Superintendent will be responsible for establishing an environment conducive to the mission of the observatory, including maintaining resident morale and observatory relations with the surrounding towns and communities. The successful applicant will be resident at McDonald Observatory where a house will be provided.

Required qualifications include a Masters or Doctoral degree in Astronomy or related discipline and several years experience in management of a research group/organization. Research and operational experience with advanced instrumentation including telescopes is desirable, as is the ability to communicate with the public, the press, official visitors and governmental officials.

For applicant instructions, please visit: <http://www.as.utexas.edu/mcdonald/jobs/jobs.html> To assure full consideration, applications should be submitted by February 29, 2004.

**No. 20593**  
**Postdoctoral and Senior Research Awards in US Government Laboratories**  
**NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES**  
**500 5th Street NW**  
**GR 322A**  
**Washington, DC 20001**  
**US**  
**Tel: 202-334-2760**  
**FAX: 202-334-2759**  
**URL1: <http://www.national-academies.org/rap>**  
*(Web site for detailed program informatio)*  
**Email Submission Address: [rap@nas.edu](mailto:rap@nas.edu)**  
**Email Inquiries: [rap@nas.edu](mailto:rap@nas.edu)**

### ***Attention: Research Associateship Programs***

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The National Research Council of the National Academies is accepting applications for competitive awards for independent postdoctoral and senior scientific research to be conducted at participating U.S. government laboratories. Awards are offered in all fields of science and engineering, including space and planetary sciences. These awards provide recent Ph.D. recipients as well as more experienced investigators with the opportunity to devote full time to research without the responsibilities and distractions of permanent career positions. Applicants design their own research projects to be compatible with the interests of the sponsoring laboratory. Stipends for recent Ph.D. recipients range from \$36,000 to \$61,000 and are higher for additional experience. Awards include relocation, professional travel and health insurance. Prospective applicants must identify a research opportunity at a participating laboratory using the Web site listed below, and contact the Research Adviser listed with that opportunity prior to submitting a formal application. Applications are to be submitted directly to the NRC. Application deadlines are February 1, May 1, August 1, and November 1 for reviews in mid-March, mid-June, mid-September and mid-January respectively. Awards are announced within one month of each application review. Detailed program information, including information on how to apply, can be found on the NRC Web site at [www.national-academies.org/rap](http://www.national-academies.org/rap). NRC representatives will be available in exhibit booth #118 at the AAS 203rd Annual Meeting.

**No. 20594**

**FACULTY POSITION IN EXPERIMENTAL SOLAR ASTROPHYSICS**

**CALIFORNIA STATE UNIVERSITY NORTHRIDGE**

**California State University Northridge**

**18111 Nordhoff St.**

**Northridge, CA 91330-8268**

**USA**

**Tel: 818-677-2775**

**FAX: 818-677-3234**

**URL1: <http://www.csun.edu/physics>**

***(Physics and Astronomy Department)***

**URL2: <http://www.csun.edu/sfo>**

***(San Fernando Observatory)***

**Email Inquiries: [gary.chapman@csun.edu](mailto:gary.chapman@csun.edu)**

***Attention: Gary A. Chapman, Chair, Search & Screen Committee***

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The Department of Physics and Astronomy at California State University Northridge (CSUN), invites applications for a tenure-track faculty position. The appointment is expected to be at the Assistant Professor level and to begin in the Fall 2004 semester. To be considered, candidates must be in possession of a doctorate in Physics, Astronomy, or other closely related field. Postdoctoral experience and a record of research accomplishments are preferred. Candidates are expected to establish and maintain a vigorous research program in experimental solar astrophysics, involving students, and with potential for external funding. Candidates with the capability for eventual leadership in the operation of the San Fernando Observatory are especially sought. They must give evidence of effective communication skills and commitment to excellence in teaching at both the undergraduate and graduate levels.

Active participation in experimental solar physics research at CSUN's San Fernando Observatory will be expected of the successful candidate. Current programs include observations of solar irradiance

variations and photospheric magnetism using photometric telescopes and a state-of-the-art IR camera/polarimeter system. Data from these observational programs are used with modern mathematical methods in the analysis of magnetic and velocity field structures. The scientific staff includes three full-time, one part-time, one emeritus, and one adjunct faculty member.

The normal teaching load is 12 contact hours per week during a nine-month academic year. It is anticipated that the University will provide reduced first-year teaching assignments. In addition, the University on a competitive basis normally makes small grants for research available. Release time from teaching is also normally provided by the University to faculty members who carry out research with significant external support. The campus is located in Northridge, a suburb of Los Angeles, in close proximity to other Universities and major research centers. The San Fernando Observatory is located 9 miles NE of the main campus. Additional information about the Department programs can be found at <http://www.csun.edu/physics>. Applicants should submit (1) a curriculum vitae, (2) a statement of current research interests and pursuits, (3) a statement on teaching interests and (4) arrange to have three letters of recommendation sent to: Experimental Solar Astrophysics Search and Screen Committee, Department of Physics and Astronomy, California State University Northridge, Northridge, CA 91330-8268. Evaluation of applications will begin on November 17, 2003 and continue until the position is filled. Preference will be given to applications reviewed by January 16, 2004. Filling of the position is subject to funding approval. California State University Northridge is an Equal Opportunity/Affirmative Action, Title IX, Section 504 Employer.

**No. 20587**

**Research Assistant**

**AURA-GEMINI OBSERVATORY**

**670 N. A'ohoku Place**

**Hilo, HI 96720**

**USA**

**Tel:**

**FAX: (808) 933-1624**

**URL1: <http://www.gemini.edu>**

**(Gemini Observatory Website)**

**URL2: <http://www.ociw.edu/lcirs/gdds.html>**

**(Gemini Deep Deep Survey)**

**Email Submission Address: [gemini-jobs@gemini.edu](mailto:gemini-jobs@gemini.edu)**

**Email Inquiries: [kroth@gemini.edu](mailto:kroth@gemini.edu)**

***Attention: HR Department/RA***

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Applications are invited for an advanced undergraduate or beginning graduate student to spend a 6-month term working on Hubble Space Telescope (HST) data related to the Gemini Deep Deep Survey (GDDS). The GDDS is a spectroscopic survey designed to find galaxies in the redshift range 1.3 - 2 using the Gemini Multi-Object Spectrograph (please see <http://www.ociw.edu/lcirs/gdds.html> for more information about the GDDS). The research assistant will have the opportunity to work with members of the GDDS team to search for morphological characteristics of these galaxies as imaged by the Advanced Camera for Surveys on-board HST.

A strong interest or experience in optical extra-galactic astronomy research is desired. The position requires knowledge of basic computer programming skills and the UNIX operating system environment. Familiarity with astronomical data analysis tools, in particular IRAF, is preferred. The qualified applicant will possess (or be working toward) an undergraduate or advanced degree in astronomy,

astrophysics or related field. The salary offered is \$2000/month. The anticipated starting date is July 1, 2004. The research assistant will be stationed at Gemini Observatory, Northern Operations Center, Hilo, Hawaii with possible collaborative travel to Toronto, Canada.

For further information contact Kathy Roth (kroth@gemini.edu). To apply, please send a cover letter, resume or CV, short description of experience and interests, and the names of three references to HR Department/RA, Gemini Observatory, 670 N. A'ohoku Place, Hilo, HI 96720 USA. Email: gemini-jobs@gemini.edu. Applications may be processed as they arrive. AA/EOE.

**No. 20544**

**Academic and Post-Doctoral Positions in Astronomy and Astrophysics**

**TATA INSTITUTE OF FUNDAMENTAL RESEARCH**

**Homi Bhabha Road**

**Colaba**

**Mumbai, Maharashtra 400005**

**India**

**Tel: 91-22-22804545**

**FAX: 91-22-22804610**

**URL1: <http://www.tifr.res.in/>**

**(T.I.F.R.)**

**URL2: <http://tifrc1.tifr.res.in/~space/>**

**(Department of Astronomy and Astrophysics)**

**URL3: [tifrc1.tifr.res.in/~space/staff.html](http://tifrc1.tifr.res.in/~space/staff.html)**

**(Members)**

**Email Submission Address: [daa@tifr.res.in](mailto:daa@tifr.res.in)**

**Email Inquiries: [daa@tifr.res.in](mailto:daa@tifr.res.in)**

***Attention: The Chairperson***

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The Astronomy and Astrophysics Department of Tata Institute of Fundamental Research, Mumbai is looking for bright young scientists for regular academic, visiting and post-doctoral positions.

At present, research in this Department is being pursued in various branches of theoretical astrophysics and observational astronomy. The research areas in theoretical astrophysics include helioseismology, stellar convection and pulsation, accretion by compact stars, cosmic star formation history, supernovae and nuclear astrophysics, multiwaveband studies of pulsars, gravitational lensing and large scale structure, general relativity and cosmology. In observational astronomy there are programmes in Near/Far Infrared Astronomy to study star formation, interstellar dust, radiative transfer in dust clouds, Galactic structure and kinematics of stellar populations. Several X-ray astronomy programmes with TIFR's own balloon-borne and satellite based instruments and other international observatories are being actively pursued. Instruments are being developed for the Indian astronomy mission ASTROSAT. Research interests in X-ray astronomy include black-hole candidates & micro-quasars, X-ray pulsars, CVs, AGNs and Cluster of Galaxies.

Candidates with a Ph. D. in any area of theoretical and observational astronomy, and a minimum of 2 years of post-doctoral experience with excellent academic record are encouraged to apply for permanent academic or visiting positions. Applicants with proven research leadership and higher experience would be considered for appropriate senior academic positions. Fresh Ph.D.'s will be considered for a post-doctoral appointment. Post-doctoral appointments are on yearly basis and generally renewable up to two years. The Institute offers competitive academic environment, career profiles, on-campus

accommodation and health and other family-welfare benefits.

Candidates should send curriculum vitae, complete list of publications, a statement of research interest and names of four referees for post-doctoral and six referees for visiting and regular positions. Interested persons may contact any of the department members for additional information.

**No. 20545**

**Assistant Professor to Professor in Physics & Astrophysics in Planetary Science or Geophysics**

**UNIVERSITY OF TORONTO**

**University of Toronto at Scarborough**

**1265 Military Trail**

**Toronto, Ontario M1C 1A4**

**Canada**

**Tel: 416-287-9196**

**FAX: 416-287-7204**

**URL1: <http://www.utsc.utoronto.ca>**

**(University of Toronto at Scarborough)**

**URL2: <http://www.astro.utoronto.ca>**

**(Astronomy/Astrophysics at Toronto)**

**URL3: <http://www.physics.utoronto.ca>**

**(Physics at University of Toronto)**

**Email Submission Address: [dyer@astro.utoronto.ca](mailto:dyer@astro.utoronto.ca)**

**Email Inquiries: [janetr@utsc.utoronto.ca](mailto:janetr@utsc.utoronto.ca)**

*Attention: Charles C. Dyer, Chair*

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The Department of Physical and Environmental Sciences in the University of Toronto at Scarborough seeks candidates for two tenure-stream faculty appointments in the Physics and Astrophysics group in the fields of geophysics and planetary physics/astrophysics to begin 1 July 2004. One appointment will be made at the Assistant Professor level while the second appointment will be at a more senior level. The appointed faculty will join a physics/astrophysics group developing a new concentration in planets, both solar and extrasolar. This group will work in close collaboration with existing groups in environmental and earth science and in chemistry. We seek candidates who have outstanding research records to augment the present research strengths and who have a demonstrated capacity for excellence in teaching. Those appointed will be able to hold graduate appointments in the Graduate Department of Physics and the Graduate Department of Astronomy and Astrophysics, each having active research groups in related areas. We also encourage close ties with the Canadian Institute for Theoretical Astrophysics, hosted by the University of Toronto. The University of Toronto offers the opportunity to teach, conduct research, and live in one of the most diverse cities in the world. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University is strongly committed to diversity within its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to the further diversification of ideas.

**No. 20548**

**Numerical Modelling and/or Star/Planet Formation**

**MAX-PLANCK-INSTITUT FUER ASTRONOMIE**

**Koenigstuhl 17**

**Germany**

**Tel: 0049 6221 528283**  
**FAX: 0049 6221 528373**  
**URL1: <http://www.mpia.de>**  
**Email Inquiries: [swolf@astro.caltech.edu](mailto:swolf@astro.caltech.edu)**

*Attention: Personnel Department (16-03), Ingrid Apfel*

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The MPIA department "Star and Planet Formation" invites applications for a postdoctoral position in the Emmy Noether Research Group "Evolution of Circumstellar Dust Disks to Planetary Systems". The position is initially for 2 years with a possible extension to a total of 4 years.

We are searching for an internationally recognized scientist working in the area of circumstellar disk evolution and planet formation with significant knowledge and experience in numerical modelling techniques. The successful candidate is expected to investigate various phases of the planet formation in circumstellar disks on the basis of predominantly hydrodynamic and/or N-particle/SPH simulations. In addition to the general computing facilities of the MPIA, the successful candidate will have access to special computers including a multiprocessor workstation, an ORIGIN 2000 system, and a cluster of special hardware devices (GRAPE-5/6) connected to local PC clusters. The MPIA has access to two computing centers with several parallel systems: At the IPP Computing Center Garching: a 4.0 TFlop/s IBM pSeries "Regatta" system and a vector NEC SX-5/3C supercomputer at the GWDG (society for scientific computing) in Goettingen: a 422 GigaFlop/s Regatta System and a 55 node linux cluster (2 x 3 GHz XEON each).

The position is available on the German BAT scale (BAT IIa).

Prerequisites: - PhD in astrophysics, physics, or related field by the start of the appointment; - Profound experience in numerical modelling, in particular in hydrodynamic simulations and/or N-particle/SPH simulations.

The application should briefly describe research experience and interests, and should include a complete curriculum vitae and bibliography. At least two letters of recommendation should be sent directly to the address above. Applications received before February 1, 2004 will receive fullest consideration. Later applications will be considered on the basis of availability. This position will be open until a suitable candidate is found.

We encourage applications from women, minorities and disabled persons.

**No. 20552**  
**Postdoctoral Position in Computational Astrophysics/Code Validation**  
**THE UNIVERSITY OF CHICAGO**  
**5640 S. Ellis Ave., RI 468**  
**Chicago, Illinois 60637**  
**USA**  
**Tel: (773) 834 2057**  
**FAX: 773 834 3230**  
**URL1: <http://http://flash.uchicago.edu>**  
**URL2: <http://flash.uchicago.edu/compphys/>**  
**Email Submission Address: [eder@flash.uchicago.edu](mailto:eder@flash.uchicago.edu)**  
**Email Inquiries: [eder@flash.uchicago.edu](mailto:eder@flash.uchicago.edu)**

*Attention: Ms. Carrie Eder, Administrative Assistant*

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The DOE-funded ASCI/Alliances Center for Astrophysical Thermonuclear Flashes at the University of Chicago, the FLASH Center, invites applications for a postdoctoral research position in computational physics/code validation.

The Center's purpose is to develop and apply a general-purpose multi-physics adaptive mesh refinement code, FLASH. The primary applications of the FLASH code are modeling of astrophysical thermonuclear explosions and laboratory experiment for code validation. The Center's vigorous scientific program involves frequent interactions with theorists and experimentalists from the National Laboratories, and collaborations with leading academic centers in the US and Europe.

Research activities will include:

Construction of detailed physics models representing laboratory experiments. Critical assessment of experimental uncertainties, including initial conditions, material properties, and experimental diagnostics. Identification of essential physical processes, implementation and verification of corresponding computational modules within the framework of adaptive mesh refinement methods, and comparison of simulation results with experimental data using physics-motivated metrics. Providing feedback to experimentalist and actively aiding design of the next generation experiments, especially high-energy-density experiments on the National Ignition Facility (NIF). Close interaction with other members of the Center, sharing and exchanging scientific ideas with the wide scientific community through participation in meetings, workshops, and conferences. Publication of results in conference materials and scientific journals.

The successful candidate will develop mathematical and computational models required for simulations of flows with strong shocks typical of explosive astrophysical phenomena (core collapse and thermonuclear supernovae, supernova remnants). Studies will focus on classical shock-tube experiments and high-energy-density plasma laser experiments in collaboration with experimentalists from the National Laboratories and academia.

A PhD in one of the computational sciences is required. Experience in computational fluid dynamics and high performance parallel computing is essential. Knowledge of problems of code verification and validation and interest in theoretical astrophysics is highly desirable. Good communication skills and the ability to work in a team environment are also needed.

The position is for a period of two years with the possibility of renewal. The expected date of the appointment is April 1, 2004.

To apply, please submit to the above address a curriculum vitae, a list of publications, a brief description of research interests, and the names and contact information for three references. Please refer to "Position in Code Validation" when applying. Applications received prior to February 1, 2004 will receive first consideration. Applications will be accepted until the position is filled.

AA/EEO.

**No. 20549**

**Star and planet formation/Evolution of circumstellar dust disks to planetary systems  
MAX-PLANCK-INSTITUT FUER ASTRONOMIE**

Koenigstuhl 17  
Heidelberg, . D - 69117  
Germany  
Tel: 0049 6221 528283  
FAX: 0049 6221 528373  
URL1: <http://www.mpia-hd.mpg.de>  
Email Submission Address: [swolf@astro.caltech.edu](mailto:swolf@astro.caltech.edu)  
Email Inquiries: [swolf@astro.caltech.edu](mailto:swolf@astro.caltech.edu)

*Attention: Personnel Department (17-03), Ingrid Apfel*

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A position for a Ph.D. student is available in the new Emmy Noether Research Group "Evolution of circumstellar dust disks to planetary systems" at the Max Planck Institute for Astronomy in Heidelberg, Germany. The position will start on February 1, 2004. It is initially for 2 years with a possible extension to a total of 4 years. The Emmy Noether Research Group, when fully established in mid-2004, will consist of the group leader, a Postdoc, a Ph.D. student and possibly several diploma students. It is embedded in the department "Star and Planet Formation" at the MPIA. The successful applicant is expected to perform observational and theoretical studies on the evolution of circumstellar disks from young massive gas/dust disks to possibly planet-harboring debris disks. Applicants should hold the equivalent of an MSc in astronomy or physics (Dipl.-Phys.) and ideally should have first experiences with astronomical research (numerical simulations / analysis of astronomical observations). The position is available on the German BAT federal public service scale (BAT IIa/2). Interested students are invited to send an application including a curriculum vitae, copies of University degrees/records, and two letters of recommendation to the address above or electronically by e-mail to Dr. Sebastian Wolf. Applications received before February 1, 2004 will receive fullest consideration. Later applications will be considered on the basis of availability. This position will be open until a suitable candidate is found. The MPIA is an equal opportunity employer and particularly welcomes applications from women and minorities.

**No. 20551**

**Postdoctoral Position in Computational Astrophysics/Interface Modeling**

**THE UNIVERSITY OF CHICAGO**

**5640 S. Ellis Ave., RI 468**

**Chicago, IL 60637**

**United States**

**Tel: Tel: 773 834 2057**

**FAX: FAX: 773 834 3230**

**URL1: <http://flash.uchicago.edu>**

**URL2: <http://flash.uchicago.edu/compphys/>**

**Email Submission Address: [eder@flash.uchicago.edu](mailto:eder@flash.uchicago.edu)**

**Email Inquiries: [eder@flash.uchicago.edu](mailto:eder@flash.uchicago.edu)**

*Attention: Ms. Carrie Eder, Administrative Assistant*

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The DOE-funded ASCI/Alliances Center for Astrophysical Thermonuclear Flashes at the University of Chicago, the FLASH Center, invites applications for a postdoctoral research position in computational physics/interface modeling.

The Center's purpose is to develop and apply a general-purpose multi-physics adaptive mesh refinement code, FLASH. The primary applications of the FLASH code are modeling of astrophysical

thermonuclear explosions and laboratory experiments for code validation. The Center's vigorous scientific program involves frequent interactions with theorists and experimentalists from the National Laboratories, and collaborations with leading academic centers in the US and Europe.

Research activities will include:

Design, implementation, and rigorous verification of appropriate numerical algorithms for studying evolution of thin interfaces (e.g. volume-of-fluid algorithms, level set methods) within the framework of adaptive mesh refinement methods. Validation of numerical models against experiments involving complex hydrodynamic flows and combustion processes. Close interaction with other members of the Center, sharing and exchanging scientific ideas with wide scientific community through participation in meetings, workshops, and conferences. Publication of results in conference materials and scientific journals.

The successful candidate will develop physics models and numerical algorithms needed for simulations of multidimensional reactive flows characteristic for astrophysical phenomena (Type Ia supernovae, classical novae, x-ray bursts).

A PhD in one of the computational sciences is required. Strong background in computational physics and computational fluid dynamics, and experience with high performance parallel computing is essential. Interest in theoretical astrophysics and validation of scientific codes is highly desirable. Good communication skills and the ability to work in a team environment are also needed.

The position is for a period of two years with the possibility of renewal. The expected start date of the appointment is April 1, 2004.

To apply, please submit to the above address a curriculum vitae, a list of publications, a brief description of research interests, and the names and contact information for three references. Please refer to "Position in Interface Modeling" when applying. Applications received prior to February 1, 2004 will receive first consideration. Applications will be accepted until the position is filled.

AA/EEO

**No. 20550**

**Postdoctoral Position in High-Resolution Spectroscopic Analysis at MSU**

**MICHIGAN STATE UNIVERSITY**

**3268 Biomedical Physical Sciences Building**

**Michigan State University**

**E. Lansing, MI 48824-2320**

**USA**

**Tel: 517-355-9200 ext 2416**

**URL1: <http://www.nsl.msu.edu/ourlab/employment/index.php>**

**Email Submission Address: [beers@pa.msu.edu](mailto:beers@pa.msu.edu)**

**Email Inquiries: [beers@pa.msu.edu](mailto:beers@pa.msu.edu)**

***Attention: Timothy Beers, Professor***

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Applications are now being accepted for a three-year postdoctoral position for discovery and analysis of metal-deficient stars in the Galaxy. This position is funded as part of the "Joint Institute for Nuclear

Astrophysics" (JINA), a newly-established NSF Physics Frontier Center involving the University of Notre Dame, Michigan State University, and the University of Chicago. More information on JINA may be obtained at: <http://www.jinaweb.org/>

The successful candidate will work with JINA members at MSU to measure the abundances of light and heavy elements produced in the first generations of stars in the Milky Way, in particular, stars that are highly enhanced in neutron-capture elements arising from the s- and r- processes, based on analysis of high-resolution spectroscopic data presently being obtained with the world's largest telescopes. This information will be used to improve our understanding of the site(s) of neutron-capture element production, and the formation and evolution of the first elements in the Universe. The successful applicant will have access to the SOAR 4.1m telescope in Chile, in which MSU is a partner, as well as to the facilities of the National Superconducting Cyclotron Laboratory at MSU, where fundamental studies of nuclear properties beyond the valley of stability are being conducted.

Interested individuals should mail a CV and arrange for three letters of reference to be sent directly to Professor Beers.

Applications received will be reviewed starting on Feb. 15, 2004

Michigan State University is an Affirmative Action/Equal Opportunity employer. Women and minorities are especially encouraged to apply.

**No. 20576**

**Research Astronomy**

**AUSTRALIAN NATIONAL UNIVERSITY**

**Tel:**

**URL1: <http://www.mso.anu.edu.au>**

**Email Submission Address: [jobs@anu.edu.au](mailto:jobs@anu.edu.au)**

**Email Inquiries: [academic.services.rsaa@anu.edu.au](mailto:academic.services.rsaa@anu.edu.au)**

***Attention: Staffing Recruitment Officer***

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Research Astronomer/Astrophysicist. Fellow or Senior Fellow level. Salary package (inclusive of superannuation): Fellow \$AUD80,116 - \$AUD91,971; Senior Fellow \$AUD95,918 - \$AUD105,401. The Research School of Astronomy and Astrophysics of the Australian National University is seeking to appoint a distinguished early to mid-career Research Astronomer or Astrophysicist to a continuing position. We expect the successful appointee to play a leading role in RSAA's vigorous research program through full time, self-directed research in astronomy and astrophysics and the training of graduate students. The appointee will also play an active role in the life of the School and will undertake duties such as chairing and serving on School committees, representing the School on ANU and national committees and leading or participating in proposals for research and/or infrastructure funding.

We favour an appointment in one of the current observational or theoretical areas of research of RSAA, but will give serious consideration to outstanding applicants in any field of astronomy. The appointee will exhibit a track record of independent research, as evidenced, for example, by the ability to initiate and resource their own research programs, and a substantial well-cited publications record.

RSAA operates the Mount Stromlo and Siding Spring Observatories and has a highly successful astronomical instrumentation program. RSAA staff has access to Australia's radio and optical

astronomical facilities/partnerships, world-class ANU supercomputing facilities, and may apply for research and infrastructure funding via a peer-reviewed process operated by the Australian Research Council.

For further information on the position contact Professor Penny Sackett: [director.RSAA@anu.edu.au](mailto:director.RSAA@anu.edu.au) .

Selection documentation MUST be obtained prior to application and can be obtained from: [academic.services.rsaa@anu.edu.au](mailto:academic.services.rsaa@anu.edu.au) . Please note that referees must supply their reports at the time of application

Closing date for receipt of applications and referee reports: 1 March 2004. Please quote reference: RSAA2123.

**No. 20565**

**Postdoctoral Position in Submm-Astronomy**

**UNIVERSITAET ZU KOELN**

**1. Physikalisches Institut**

**Zuelpicher Str. 77**

**Germany**

**Tel:**

**URL1: <http://www.ph1.uni-koeln.de>**

**(Web page of institut)**

***Attention: Martina C. Wiedner, Dr.***

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Applicants are invited for a postdoctoral position at the Universitaet zu Koeln, Germany, to develop, construct and/or use a modular heterodyne receiver at THz frequencies for ground based (e.g. APEX) and airborne (SOFIA) observatories. Astronomical observations with this newly developed instrument will include high mass star forming regions and the warm ionized medium. Applicants should have a Ph.D. in astronomy or physics prior to beginning the appointment. Previous experience in instrumentation and/or radio observations and data analysis is highly desirable. Knowledge of German is not required, but helpful.

The university of Cologne pursues research in radio and infrared astronomy as well as molecular spectroscopy (see <http://www.ph1.uni-koeln.de> ). We have a strong instrumentation group, developing and fabricating mixers as well as building receivers for many leading telescopes. We have our own 3m KOSMA submm telescope in Zermatt, Switzerland, but also take part in many international programs such as SOFIA, LBT, Herschel, etc..

The appointment is funded by the German research foundation (Deutsche Forschungsgemeinschaft) and will begin as soon as a suitable candidate has been found (preferably spring 2004). The initial appointment is for two years with a possible extension of an additional two years. Candidates should submit a curriculum vitae, publication list and a short (1-2 page) statement of research interests, and have two letters of recommendations submitted on their behalf. Applications and letters should be sent to Dr. Martina Wiedner, 1. Physikalisches Institut, Zuelpicher Str. 77, 50937 Koeln, Germany. For full consideration applications should be received by 15 February 04.

**No. 20554**

**Interferometer Scientist & Interferometer Operator**

**C.A.R.A./W.M. KECK OBSV.**  
**65-1120 Mamalahoa Hwy.**  
**Kamuela, HI 96743**  
**USA**  
**Tel:**  
**FAX: 808-885-4464**  
**URL1: <http://www.keckobservatory.org>**  
**Email Submission Address: [employment@keck.hawaii.edu](mailto:employment@keck.hawaii.edu)**  
**Email Inquiries: [employment@keck.hawaii.edu](mailto:employment@keck.hawaii.edu)**

*Attention: Interferometer Scientist & Interferometer Operator*

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The WMKO, which operates the world's two largest optical/infrared telescopes, seeks an Interferometer Scientist and an Interferometer Operator to work at its headquarters in Waimea on the Big Island of Hawaii and on the summit of Mauna Kea. These are regular positions with relocation assistance and a complete and competitive benefits package

The successful candidates will be members of a team developing and operating the Keck Interferometer. This project is funded by NASA and is being built as a collaboration between WMKO and the Jet Propulsion Lab. The Interferometer currently combines the light from the two Keck telescopes to do visibility science. The Keck Interferometer is part of the NASA Origins program and as such the goals are primarily the detection of planets and providing information for future space-based interferometers. Specific future science goals include: exozodiacal dust detection by nulling the light from the two Kecks and differential phase with the Kecks to detect hot Jupiters. Further information can be found at [http://planetquest.jpl.nasa.gov/Keck/keck\\_index.html](http://planetquest.jpl.nasa.gov/Keck/keck_index.html).

**INTERFEROMETER SCIENTIST** The Interferometer Scientist (IS) will join a group of Interferometer Specialists who play a central role in the development, operation, and maintenance of the Keck Interferometer. The IS has responsibility for ensuring that the Interferometer is achieving its scientific potential on a routine basis. The IS will play a lead role in the commissioning, handover and operation of the Interferometer science modes and will provide a science perspective to help guide the operation and continued development of the Interferometer.

The requirements for this position include: A PhD level degree in astronomy, or equivalent experience, and two years of relevant experience in the use of scientific instrumentation for astronomical research.

Desirable qualifications include: Astronomical and technical expertise with interferometry; optical engineering expertise; previous experience in an observatory setting; a proven track record in the optimization of instrumentation for astronomy; and experience in the use of data visualization and analysis software.

**INTERFEROMETER OPERATOR** The primary role of the Interferometer Operator will be to set up, calibrate, check out and operate the Interferometer both for science observations and engineering tests. They will also support the implementation of the new science modes and play a role in defining and documenting the Interferometer operation tools and procedures.

The requirements for this position include: A Bachelor of Science level degree in the physical sciences or engineering, or equivalent experience, and two years of relevant experience.

Desirable qualifications include: Experience operating complex scientific instrumentation; previous experience in an observatory setting; knowledge of astronomy, astronomical observing procedures and computers; and engineering skills.

Employment is conditional on successful completion of drug tests and high altitude physical. Fax (808) 885-4464 or mail resumes, references, and salary history to: Interferometer Operator OR Interferometer Scientist, CARA, 65-1120 Mamalahoa Hwy., Kamuela, HI 96743 or [employment@keck.hawaii.edu](mailto:employment@keck.hawaii.edu) .  
EEO/M/F/D/V

**No. 20556**

**Assistant Research Scientist in Extragalactic Astronomy/Cosmology**

**ARIZONA STATE UNIVERSITY**

**Department of Physics and Astronomy**

**Tyler Mall Room PSF-470**

**Tempe, AZ 85287-1504**

**USA**

**Tel: 480 965 0355**

**FAX: 480 965 7954**

**URL1: <http://ast.asu.edu/>**

**URL2: <http://www.jwst.nasa.gov>**

**URL3: <http://www.stsci.edu/ngst>**

**Email Submission Address: [Linda.Scowen@asu.edu](mailto:Linda.Scowen@asu.edu)**

**Email Inquiries: [Rogier.Windhorst@asu.edu](mailto:Rogier.Windhorst@asu.edu)**

***Attention: Linda Scowen, Administrative Assistant***

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The Department of Physics and Astronomy at Arizona State University invites applications for an Academic Research Scientist position.

Candidates are required to have a doctorate in astronomy with a strong record in observational Extragalactic Astronomy/Cosmology or closely related discipline. Candidates are particularly sought that have a strong record in UV-NIR imaging and spectroscopic studies of nearby galaxies. The candidate is expected to have a proven track record in getting external funding, to work well independently and collaboratively, and to help with the supervision of graduate students. The candidate will be working in Prof. Windhorst's group. This position starts in 2004 at the Assistant level, and will be for a three-year period, but depending on performance can be renewed for successive periods.

This position has a 75% research component. The successful candidate must have a proven track record in astronomical observing, data reduction and analysis, and publication of ground-based as well as Hubble Space Telescope projects. The applicant will also participate in projects that are being prepared for the James Webb Space Telescope and assist in some of the JWST design studies.

This position has a 15% component to provide support on astronomical data processing techniques and pipelines in areas related to the candidate's specialty. A 10% service component includes some committee work on campus and occasional assistance with undergraduate teaching.

Opportunities to conduct astronomical research at ASU are excellent. ASU has access to the Steward Observatory facilities, including the 6.5m MMT at Mt Hopkins, the two 6.5m Magellan telescopes in Chile, the 2.3m Steward, 1.5m Catalina, and 1.8m VATT telescopes, and after 2004 also the 2x8.5m

Large Binocular Telescope at Mt Graham.

Applicants must submit a CV plus statement of research interests, (p) reprints of their own work, and arrange for three letters of recommendation sent on their behalf. Review of applications will start January 31, 2004, and if not filled, continue every two weeks until the search is closed. Send application materials to: Academic Research Scientist Search Committee, c/o Linda Scowen, Department of Physics and Astronomy, Arizona State University, Tyler Mall Room PSF-470, Tempe, AZ 85287-1504. Inquiries may be made to Linda.Scowen@asu.edu . Information about the department is available at <http://ast.asu.edu/> . AA/EOE.

**No. 20586**

**Postdoctoral Researcher in Submillimetre Mapping**

**UNIVERSITY OF BRITISH COLUMBIA**

**Department of Physics & Astronomy**

**6224 Agricultural Road**

**Vancouver, British Columbia V6T 1Z1**

**Canada**

**Tel: 604-822-1938**

**FAX: 604-822-5324**

**URL1: [http://www.roe.ac.uk/atc/projects/scuba\\_two/](http://www.roe.ac.uk/atc/projects/scuba_two/)  
(SCUBA-2)**

**URL2: <http://astro.estec.esa.nl/SA-general/Projects/Planck/>  
(Planck)**

**URL3: <http://www.astro.ubc.ca>  
(Astronomy at UBC)**

**Email Submission Address: [jmolnar@physics.ubc.ca](mailto:jmolnar@physics.ubc.ca)**

**Email Inquiries: [dscott@astro.ubc.ca](mailto:dscott@astro.ubc.ca)**

***Attention: Janos Molnar, Canadian SCUBA-2 Project Manager***

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The Astronomy group at UBC is looking for a postdoctoral researcher to work on map-making techniques for millimetre-wave "total power" detector arrays. The group led by Douglas Scott and Mark Halpern is working on a set of experiments (SCUBA-2, Planck, BLAST and SPIRE) with related data analysis issues. We particularly require someone who will split their time between work on SCUBA-2 and on Planck.

SCUBA-2 is a highly innovative wide-field camera designed to replace SCUBA and be operational on the James Clerk Maxwell Telescope in 2006. With over 9,000 pixels in two arrays, SCUBA-2 will map the submillimetre sky up to a thousand times faster than SCUBA, and is expected to have a huge impact on many areas of astronomy from studies of galaxy formation and evolution in the early Universe to understanding star and planet formation in our own Galaxy. The SCUBA-2 Data Reduction Software team, based at UBC, needs someone to help define how scan-mode data will be converted into nearly-lossless, artefact-free images.

Planck is an ESA mission to map the Cosmic Microwave Background over the whole sky at 10 frequencies with unprecedented sensitivity and angular resolution. A large international consortium is preparing for the launch of Planck in 2007. The successful candidate will join the Canadian team, which is working on several different aspects of Planck, and will contribute to the Planck effort in the most appropriate way.

Applicants should already have experience working on map-making at similar wavelengths. The position will begin on 1st September 2004 and last for 2 years. Candidates should send a CV, statement of research interests and arrange for 3 letters of recommendation to be sent on their behalf.

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*[aas@aas.org](mailto:aas@aas.org)*