



January 2005

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Editorial

Job Register Fee Change

The AAS Job Register has always had a 250 word limit per job announcement. This limit encourages the brief and informative description of jobs and greatly aids job seekers by limiting announcements to a reasonable length. In the past, we worked with institutions to edit their announcements to meet this limit, but this was always an inconvenience for both the AAS and the publishing institution.

Announcements beyond the 250 word limit can now appear, but will incur a \$0.25 per word surcharge. It is understood that some announcements must be longer than 250 words and this fee was set low so as not to incur an undue financial penalty on these lengthy announcements.

The Job Register announcement base rate remains at a very low rate compared to comparable services provided by other professional societies. The AAS will continue to strive to maintain a low rate for the announcement of employment opportunities, which we feel is of significant benefit to the astronomical community and continues to secure the AAS Job Register's position as the number one source for astronomical employment opportunities.

Kevin B. Marvel
Deputy Executive Officer

Publication Policy for the AAS Job Register

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. 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@aaas.org.

Jobs from Previous Months

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

No. 20941

Tenure-track Junior Faculty Position in Astrophysics

UNIVERSITY OF CHICAGO

5640 S. Ellis Ave.

Chicago, IL 60637

USA

Tel: 773-702-8206

FAX: 773-702-8210

URL1: <http://astro.uchicago.edu/>

(Department home page)

Email Inquiries: jmsmith@oddjob.uchicago.edu

Attention: Angela V. Olinto, Chair

The Department of Astronomy & Astrophysics of the University of Chicago expects to have a faculty position at the Assistant Professor level beginning in Fall 2005. (Exceptional candidates at a more senior level could be considered). The primary research themes in our Department are: Fundamental aspects of cosmology, birth and evolution of galaxies and clusters, star and planet formation, and multi messenger astronomy (gamma rays, cosmic rays, dark matter, and neutrinos). The Department has scientific efforts in a wide range of projects including: SDSS, SZA, SOFIA, SPT, VERITAS, Auger Project, ASC / Alliances Center for Astrophysical Thermonuclear Flashes. Department members play major roles in the Kavli Institute for Cosmological Physics at Chicago. The Department is also a 25% partner in the 3.5-meter ARC. Theorists, observers, and instrumentalists are encouraged to apply.

Completed applications received by November 15, 2004 will be given full consideration. Applicants should send a CV, list of publications, and a description of their research to the address below, and should arrange for three letters of recommendation to be sent directly to the same address: Professor Angela Olinto, Chair, Department of Astronomy & Astrophysics, The University of Chicago, 5640 S. Ellis Avenue, Chicago, IL 60637-1433. The University of Chicago is an equal opportunity/affirmative action employer.

No. 21069

Research Fellows in Astronomy and Astrophysics

ACADEMIA SINICA INSTITUTE OF ASTRONOMY AND ASTROPHYSICS (ASIAA)

PO 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

Email Inquiries: asiaa@asiaa.sinica.edu.tw

Attention: Dr. Sun Kwok, Director

The Academia Sinica Institute of Astronomy and Astrophysics 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 planning to join the Atacama Large Millimeter Array (ALMA) project through Japan. ASIAA also participates in the CFHT Wide Field Infrared Camera development in exchange for observing time on the telescope. A 4-telescope system is under construction in Lulin Mountain in Taiwan to conduct an occultation survey in search for small Kuiper Belt objects. An Array for Microwave Background Anisotropy (AMiBA) is being built on Mauna Loa. We also have access to the Arizona Radio Observatory 10 m and 12m telescopes at Kitt Peak and Mt. Graham. 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 National 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 and ALMA; (3) optical and infrared astronomers to initiate observing programs with ground and space-based telescopes; (4) solar system and planetary astronomers to participate in the search for Kuiper Belt Objects through the Taiwan-America Occultation Survey; (5) scientists and engineers to participate in instrumentation development for SMA and ALMA; and (6) scientists with backgrounds in astronomy, astrophysics, physics, and 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 at the above address. The closing date for applications is January 31, 2005.

No. 21164

Postdoctoral Research Associate in Observational Extragalactic Astronomy

EAST TENNESSEE STATE UNIVERSITY

Box 70652

Dept of Physics, Astronomy, and Geology

Johnson City, TN 37614

USA

Tel: (423)-439-8418

FAX: (423)-439-6905

URL1: <http://www.etsu.edu/physics/>

Email Submission Address: beverly@nebula.etsu.edu

Email Inquiries: beverly@nebula.etsu.edu

Attention: Beverly Smith, Associate Professor

Applications are invited for a position as a Post-Doctoral Research Fellow in Observational Extragalactic Astronomy at East Tennessee State University, to work on optical, infrared, X-ray, radio and/or ultraviolet observations of interacting galaxies. A Ph.D. in Astronomy, Astrophysics, or Physics is required. Experience in multi-wavelength studies of nearby galaxies is desirable. ETSU is part of the Southeastern Association for Research in Astronomy (SARA), thus guaranteed time on the SARA 0.9-meter optical telescope on Kitt Peak, Arizona is available. ETSU is located in Johnson City, TN, in the southern Appalachian mountains, a beautiful area of the country with many opportunities for outdoor activities. The position is for two years with a possibility of extension for a third year. Applications should be sent to Dr. Beverly Smith at the above address, and should include a curriculum vitae with a list of publications, a statement of research interests, and the names, addresses, and emails of three people able to provide letters of reference. Review of applications will begin January 15 and will continue until the position is filled. ETSU is an Equal Opportunity Employer. For more information about the Astronomy Program at ETSU, visit the Department web page listed above.

No. 21247

Postdoctoral Scholar: Palomar-Quest Sky Survey

CALTECH

MS 105-24

Pasadena, CA 91125

USA

Tel: 626 395 4415

FAX: 626 568 9352

URL1: <http://www.astro.caltech.edu/pq/>

(Survey description)

Email Submission Address: george@astro.caltech.edu

Email Inquiries: george@astro.caltech.edu

Attention: S. G. Djorgovski, Prof.

Applications are invited for a postdoctoral research position to work on a new, digital, synoptic sky survey at Palomar; see <http://www.astro.caltech.edu/pq>

The work would involve handling and analysis of the survey data, and a number of scientific projects and follow-up studies at Palomar, Keck, and elsewhere. A special emphasis will be given to searches for high redshift QSOs, and exploration of the time domain in astronomy, but we would consider candidates with scientific interests in other areas as well, especially if they can make a good use of the PQ survey data. Familiarity and proven skills with massive astronomical data sets, and good computing skills are essential. Familiarity with databases, data mining and exploration techniques would also be very useful. A Ph.D. in astronomy, physics, or a closely related discipline is required.

The position would be at a level of a Postdoctoral Scholar or a Senior Postdoctoral Scholar, depending of the candidate's experience and qualifications. The appointment would be made initially for a period of 1 year, with a possibility of renewal for up to 3 years. The position is open immediately, and will remain open until filled. To apply, please submit - by email only - a curriculum vitae, a list of publications, a brief description of research interests, and the names and contact information for three references to: Prof. S. G. Djorgovski, george@astro.caltech.edu

Caltech is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

No. 21248**Postdoctoral Research Associate****PURDUE UNIVERSITY****Department of Physics****525 Northwestern Ave.****West Lafayette, IN 47907-2036****U.S.A.****Tel: 765.494.5171****FAX: 765.496.2298****Email Submission Address: mlister@physics.purdue.edu****Email Inquiries: mlister@physics.purdue.edu*****Attention: Professor Matthew Lister***

Applications are invited for a postdoctoral position to work with Professor Matthew Lister on the study of relativistic jet phenomena in active galactic nuclei (AGN). Prof. Lister is P.I. of the MOJAVE program, which is currently investigating the kinematics and magnetic field evolution of a large sample of AGN jets using the Very Long Baseline Array (<http://www.physics.purdue.edu/astro/MOJAVE>). Both observers and theorists are encouraged to apply. The successful applicant will also have an opportunity to lead a small group of students in pursuing his/her science interests.

The postdoctoral fellowship is for two years, with the possibility of renewal for an additional year contingent on performance and continued funding. Candidates must hold a Ph.D. or equivalent in physics or astronomy. The starting date is negotiable within the range April - September 2005. To apply, please send a vita, bibliography, statement of research, and have three letters of recommendation sent to: Professor Matthew Lister, Physics Building, Room 312, 525 Northwestern Avenue, Purdue University, West Lafayette, Indiana 47907-2036. The application deadline is 31 Jan 2005, although completed applications will be evaluated as soon as they are received. Purdue University is an Equal Opportunity/Affirmative Action employer. Women and minorities are encouraged to apply.

No. 21283**Faculty Position in Theoretical Astrophysics/Cosmology****UNIVERSITY OF FLORIDA****P.O. Box 118440****Department of Physics****Gainesville, FL 32611-8440**

USA**Tel: (352) 392-5707****FAX: (352) 392-8743****Email Submission Address: tapsearch@phys.ufl.edu****Email Inquiries: dixon@phys.ufl.edu*****Attention: Ms. Yvonne Dixon, Theoretical Astrophysics Search Committee***

FACULTY POSITION IN THEORETICAL ASTROPHYSICS/COSMOLOGY UNIVERSITY OF FLORIDA

The Department of Physics, University of Florida, invites applications and nominations for a tenure-track Assistant Professor position in the field of Theoretical Astrophysics/Cosmology, to start in the fall of 2005. A more senior appointment may also be possible for a suitable candidate. Highly qualified candidates from any area of theoretical astrophysics and cosmology are encouraged to apply. Applicants should have a PhD degree or equivalent and postdoctoral research experience.

The successful candidate will be expected to teach effectively at all levels and to conduct an independent and vigorous research program. The position will complement existing programs in theoretical astrophysics, cosmology, and particle theory and experimental particle astrophysics and gravitational wave detection, within an active department housed in a new physics building with extensive laboratory space and computer facilities. Nationally competitive salaries and start-up funds are available.

Applicants should submit a CV, publication list, and a statement of research interests and plans, and should arrange to have at least three letters of recommendation sent to:

Theoretical Astrophysics Search Committee c/o Ms. Yvonne Dixon Department of Physics
University of Florida PO Box 118440 Gainesville, FL 32611-8440

Email Submissions: tapsearch@phys.ufl.edu Search Chair - James Fry: fry@phys.ufl.edu

To ensure full consideration, all application materials must be received by January 15, 2005. Women and underrepresented minorities are strongly encouraged to apply. The University of Florida is an Equal Opportunity Employer.

No. 21302**Postdoctoral Appointments in Astronomy/Astrophysics****MAX-PLANCK-INSTITUT FUER ASTROPYSIK****Karl-Schwarzschild-Strasse 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 Submission Address: car@mpa-garching.mpg.de*****Attention: The Appointments Committee***

POSTDOCTORAL APPOINTMENTS at the Max-Planck-Institut fuer Astrophysik

The MPA is the major German institution dedicated to theoretical research in astrophysics. It is situated 10 kilometers north of Munich on a campus shared with the MPI for Extraterrestrial Physics, the headquarters of the European Southern Observatory and several other research institutes and university departments. The MPA has 16 long-term staff who work with 31 postdoctoral researchers and 32 PhD students. The Institute runs a vigorous visitor programme and is housed in an attractive, specially designed building with excellent library and computer facilities. It also has privileged access to supercomputer facilities at the neighboring Supercomputer Centre of the Max-Planck-Society.

Current areas of interest include the structure and evolution of single and multiple stars, accretion theory, supernovae, star formation, high energy astrophysics, computational fluid dynamics, matter-radiation interactions in extreme conditions, galactic structure and evolution, the physics of active galactic nuclei, gravitational lensing, formation and clustering of galaxies, cosmic microwave background studies, physical cosmology and particle astrophysics. Further information may be found on our web page - <http://www.mpa-garching.mpg.de>. The MPA is currently seeking to fill a number of postdoctoral positions intended for promising young scientists who completed their PhD within the last six years. These are usually three-year and exceptionally five-year positions. Salaries are paid either at German civil service rates (gross annual pre-tax income, including health insurance contributions and child allowances, currently in the range 35.700 - 49.700 EUR, depending on age and family status) or through a tax-free stipend at equivalent take-home level.

Candidates should send a full curriculum vitae, a publication list and a summary of current research interests to the Appointments Committee by January 7, 2005. Late applications will be accepted until the posts are filled. Applicants should also arrange for three reference letters to arrive by the same date. The MPA is actively committed to equal opportunity in employment.

No. 21303

STAFF POSITION in extragalactic astrophysics or cosmology

MAX-PLANCK-INSTITUT FUER ASTROPHYSIK

Karl-Schwarzschild-Str. 1

Garching bei Muenchen, Germany 85748

Germany

Tel: +49 89 30000 2201

FAX: +49 89 30000 2899

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

Email Submission Address: car@mpa-garching.mpg.de

Attention: The Appointments Committee

STAFF POSITION in extragalactic astrophysics and cosmology at the Max-Planck-Institut fuer Astrophysik

The Max Planck Institut 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 structures; 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 to the Appointments Committee. The deadline is 15 February 2005, but late applications will be accepted until the post is filled. The MPA is actively committed to equal opportunity in employment.

No. 21308

**Harlan J. Smith Postdoctoral Fellowship
MCDONALD OBSERVATORY (UT AUSTIN)**

The University of Texas at Austin

1 University Station C1402

Austin, Texas 78712-0259

USA

Tel: 512/471-3300

FAX: 512/471-1635

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

URL2: <http://www.as.utexas.edu/mcdonald/jobs/jobs.html>

Email Submission Address: [hard copy applications preferred](#)

Email Inquiries: director@astro.as.utexas.edu

Attention: David L. Lambert, Director

The University of Texas McDonald Observatory announces competition for the Harlan J. Smith Postdoctoral Fellowship. This Fellowship is restricted to new Ph.D. graduates without previous postdoctoral experience. The applicant's research interest may be in any field of observational or theoretical astronomy actively involving observing or computing facilities of McDonald Observatory. Facilities available for research include the 9.2-m Hobby-Eberly Telescope, the 2.7-m Smith Telescope, the 2.1-m Struve Telescope, and the 0.8-m optical telescope at McDonald Observatory; the University of Texas super-computers, and a network of approximately 100 workstations. McDonald Observatory also has a collaborative program in millimeter wavelength research with the Cal Tech Submillimeter Observatory on Mauna Kea. Information on facilities is available at <http://www.as.utexas.edu/>. The Fellowship has a three year term and includes funding for research expenses including travel. Initial appointment will be for one year beginning September 2005, with the expectation of 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 resumé, a statement of proposed research to be conducted at UT Austin during the Fellowship, and letters of recommendation from three scientists familiar with the applicant's research by January 15, 2005. EOE/AE.

No. 21312**Postdoctoral Scholar - Chandra****UNIVERSITY OF CALIFORNIA, SANTA CRUZ****1156 High Street****UCO/Lick Observatory****Santa Cruz, CA 95064****USA****Tel: 831.459.2991****FAX: 831.459.5244****URL1: <http://www.ucolick.org/general/employment/ssci.html>****URL2: <http://deep.ucolick.org>****Email Submission Address: director@ucolick.org*****Attention: Joseph Miller, Director***

UNIVERSITY OF CALIFORNIA, SANTA CRUZ**UCO/LICK OBSERVATORY Postdoctoral Scholar**

The University of California Observatories/Lick Observatory invites applications for a non-ladder-rank position. Contingent on the availability of funding, the appointment will be for two years beginning July 1, 2005 (start date negotiable). The appointment may be extended to four years if funds allow. Appointee's primary responsibility will be analyzing data from a new Chandra survey of 7x200Ks in the Extended Groth Strip. Appointee will be a team member of the DEEP project, a program well underway and aimed at studying the large scale structure and the formation and evolution of faint galaxies and AGN. Data include the 80 night DEEP spectral survey of 50,000 faint galaxies with Keck, plus in-hand, very deep subsurveys with the Hubble Space Telescope, Spitzer, and GALEX. Appointee 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 Chandra X-ray data analysis, high redshift AGN surveys, and observations of faint galaxies.

RANK: Postdoctoral Scholar**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 extragalactic data reductions and analysis. Must be able to work independently yet collegially in a team environment and be willing to visit the Chandra PI, Dr. Paul Nandra, at Imperial College, London, to work on the Chandra reductions.

TERM OF APPOINTMENT: Two years in Santa Cruz, with possible addition of one or two years at Imperial College, London, contingent on availability of funding and positive

performance review.

POSITION START DATE: July 1, 2005 (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 (all letters will be treated as confidential, please direct your references to UCSC's confidentiality statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>) to:

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

Please refer to provision #T05-01 in your reply.

CLOSING DATE: All materials must be received no later than January 31, 2005.

UCSC IS AN AA/EEO Employer. <http://www2.ucsc.edu/shr/employment/bulletin.html#postdoc>

No. 21322

Assistant Astronomer/Scientist - NOAO Gemini Science Center

AURA/NATIONAL OPTICAL ASTRONOMY OBSERVATORY

P.O. Box 26732

Tucson, AZ 85726-6732

USA

Tel: 520-318-8100

FAX: 520-318-8456

URL1: <http://www.noao.edu/usgp>

URL2: <http://www.noao.edu>

Email Submission Address: hrnoao@noao.edu

Email Inquiries: armand@noao.edu

Attention: NGSC Assistant Astronomer/Scientist #693

AURA/NOAO Two Assistant Astronomer/Scientist Positions – NOAO Gemini Science Center

The National Optical Astronomy Observatory (NOAO) invites applications for two scientific staff positions that will be filled either on the tenure track (50% research) or on the scientist track (20% research), depending on the candidates' interests and qualifications. The successful candidates will be expected to pursue a significant research program in observational astronomy as well as to actively participate in the NOAO Gemini Science Center. One position will be located at NOAO's headquarters in Tucson, Arizona and the other at NOAO South in La Serena, Chile.

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. World-class observing capabilities that are available or nearing readiness on the Gemini telescopes include mid-infrared imaging and spectroscopy, adaptive-optics-enhanced infrared

imaging and spectroscopy, integral-field spectroscopy in both the infrared and optical, and multi-slit spectroscopy in both the infrared and optical. 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 NGSC activities and plans.

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

The successful candidates will reside in the active research environments of either NOAO's Tucson headquarters, which is located on the University of Arizona campus, or NOAO South, which is located in the AURA campus in La Serena, Chile. The city of La Serena is a major seaside tourist destination in South America, with a climate very similar to San Diego, California. The AURA campus in La Serena includes the offices of CTIO, SOAR and Gemini South, with the offices of Las Campanas Observatory nearby.

Applicants should submit electronically to the email address below a curriculum vitae, a statement of current research interests, and a description of how the applicant would contribute to the NOAO Gemini Science Center. Please include in the cover letter an indication of whether you would like to be considered for the Tucson NGSC position, the La Serena NGSC position, or both. Applicants should also arrange for three professional references to send letters of recommendation electronically to the address below by the due date.

Applications received prior to Saturday, January 15, 2005 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 In the subject line, please reference NGSC Assistant Astronomer/Scientist #693.

Human Resources Manager National Optical Astronomy Observatory Attn: NGSC Assistant Astronomer/Scientist #693 P.O. Box 26732 Tucson, Arizona 85726-6732

FAX: 520-318-8456

NOAO is an affirmative action/equal opportunity employer

Hiring preference is given to qualified Native Americans living on or near the Tohono O'Odham reservation.

No. 21346

**Postdoctoral Fellow, High-Energy Astrophysics
SMITHSONIAN ASTROPHYSICAL OBSERVATORY**

Tel:

Email Submission Address: nrathle@cfa.harvard.edu

Email Inquiries: nrathle@cfa.harvard.edu

Attention: Ms. Nayla Rathle

Applications are invited for a post-doctoral position in X-ray astronomy in collaboration with Rosanne Di Stefano, Jochen Greiner, Albert Kong, and Frank Primini. The focus of the research will be in the broad area of X-ray source populations in nearby galaxies. Candidates must hold a Ph.D. in physics or astronomy and have extensive experience with Chandra and XMM data. Experience with optical/infrared data is a plus. Experience with modeling and simulations is also a plus.

Applicants should submit, in PDF format, a curriculum vitae, a list of publications, a statement of research interests, and arrange for three professional references to be sent directly to Nayla Rathle, SAO, 60 Garden Street, MS-51, Cambridge, MA 02138.

The position is for one year, renewable, and is available immediately. First consideration will be given after 14 days of posting. The position will remain open until filled.

No. 21351

Postdoctoral Fellowship in Cosmological Weak Lensing

CEA/SACLAY

Service d'Astrophysique

CEA Saclay, bat. 709

Gif sur Yvette, France F-91191

France

Tel: +33-1-69-08-44-63

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

Email Inquiries: refregier@cea.fr

Attention: Alexandre Refregier, Dr

The Service d'Astrophysique (SAp) at CEA Saclay invites applications for a postdoctoral position in Cosmological Weak Lensing. The CEA Saclay is a government research center situated 40 minutes from central Paris, France. The SAp has a wide interest in astrophysics ranging from planets to cosmology, with a specialisation in space missions (eg. XMM-Newton, Herschel, JWST, Integral etc) and instrumentation (eg. Megacam on the Canada-France-Hawaii Telescope).

The successful candidate will work on various aspects on weak lensing, such as: theoretical models beyond the cosmological concordance model, analysis of current cosmic shear surveys (CFHTLS, Subaru, HST/COSMOS, etc), high precision shear measurement, etc. In particular, the candidate will take an active role in the planning of future wide-field space missions such as JDEM/SNAP and DUNE.

The position is for two years and may start as early as May 2005. The applicant should send, to the above address, a CV, a list of publications, and a research statement. He/she should

also arrange for three letters of recommendation to be sent to the same address. Completed Applications should be received by December 31.

No. 21352**Tenure-Track Faculty Positions in Astronomy****THE OHIO STATE UNIVERSITY DEPARTMENT OF ASTRONOMY****4055 McPherson Lab****140 W 18th Ave****Columbus, OH 43210****USA****Tel: 614-292-1773****FAX: 614-292-2928****URL1: <http://www.astronomy.ohio-state.edu>****Email Submission Address: facultysearch@astronomy.ohio-state.edu****Email Inquiries: facultysearch@astronomy.ohio-state.edu*****Attention: Christopher Kochanek, Chair of the Faculty Search Committee***

The Department of Astronomy in the College of Mathematical and Physical Sciences at The Ohio State University invites applications for two anticipated tenure-track Assistant Professor positions, effective Autumn Quarter 2005. Exceptional candidates at a more senior level will also be considered. We seek candidates who will broaden our areas of research, connect with our current efforts, and interact well with our programs. A Ph.D. and postdoctoral experience in astronomy or a closely related field are required, as is a commitment to teaching excellence. A key strength of the Department is its extraordinarily vital scientific atmosphere. Current concentrations of research programs include cosmology and astrophysical theory, gravitational lensing, galactic structure and evolution, quasars and active galactic nuclei, atomic astrophysics and the stellar populations and interstellar medium of the Milky Way and other galaxies. We are particularly interested in candidates who will conduct strong research programs with our one-sixth share of the Large Binocular Telescope. Applications should include a C.V., a publication list, and a statement of past, current, and planned research. Applicants should arrange for three letters of reference to be sent to the above address. The review of applications will begin 31 January 2005 and will continue until the positions are filled.

To build a diverse workforce Ohio State encourages applications from women, minorities, veterans, and individuals with disabilities. EEO/AA employer.

No. 21356**Postdoctoral Research Associate in Galaxy Formation Theory****MAX PLANCK INSTITUTE FOR ASTRONOMY****Koenigstuhl 17****Germany****Tel: +49-6221-528-210****FAX: +49-6221-528-339****URL1: <http://www.mpia.de>*****(Institute homepage)*****URL2: <http://www.mpia.de/GALAXIES/NEU>*****(Galaxies and Cosmology Group)*****Email Submission Address: somerville@mpia.de**

Email Inquiries: somerville@mpia.de

Attention: Dr. Rachel Somerville

We invite applications for a post-doctoral research position in cosmology/extragalactic astronomy at the Max Planck Institute for Astronomy (MPIA) in Heidelberg. We particularly seek applicants with a strong interest in theoretical modeling of galaxy formation and/or interpretation of multi-wavelength survey data in a cosmological context. The appointee will be encouraged to carry out an independent research program, as well as working in collaboration with Dr. Rachel Somerville and other members of the extragalactic group at MPIA. Topics of interest to the group include the dynamics and evolution of galaxies and their (active) nuclei from the nearby to the high redshift Universe, first light and reionization, the formation and evolution of supermassive black holes, and the design, execution and analysis of cosmological panchromatic wide-field surveys.

The successful candidate may apply for observing time on the 4x8 meter Very Large Telescope in Chile and for the MPIA's guaranteed access to the twin 8.4 meter Large Binocular Telescope in Arizona. In addition to these facilities, MPIA astronomers extensively use the 2.2m MPG telescope on La Silla, the 2.2 and 3.5 m telescopes on Calar Alto, and the IRAM facilities. MPIA participates in the Sloan Digital Sky Survey project (and its extension).

Applicants should have a PhD in astronomy, astrophysics, or a closely related field. The appointment will be for an initial period of three years, and includes sufficient funds for publications, computing, travel, etc. Interested candidates should send application materials, including curriculum vitae and a brief statement of research interests, to the address above by 15 January 2005. They should also arrange for three letters of reference to be sent directly to that address by the same date. Evaluation of candidates will begin in January 2005. Later applications may be considered. Please direct email inquiries to Dr. Rachel Somerville (somerville@mpia.de).

The Max Planck Society is an equal opportunity employer. Applications from women and historically under-represented groups are particularly welcome.

No. 21365

Frank Kerr Scientist - Radio Astronomy

UNIVERSITY OF MARYLAND

Department of Astronomy

University of Maryland

College Park, MD 20742

USA

Tel: 301-405-2134

FAX: 301-314-9067

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

(CARMA web site)

URL2: <http://www.astro.umd.edu>

(Maryland astronomy department)

Email Submission Address: vogel@astro.umd.edu

Email Inquiries: vogel@astro.umd.edu

Attention: Stuart Vogel, Professor

The Laboratory for Millimeter-wave Astronomy (LMA) in the Department of Astronomy at the University of Maryland seeks applications for the Frank Kerr Scientist position. This is a postdoctoral position for an astronomer whose interests complement science using the CARMA array. Research interests within the LMA include solar astronomy, planetary astronomy, star formation, interstellar medium, galactic structure, extragalactic astronomy, and instrument development. Scientists with observational, instrument development, or theoretical expertise related to CARMA are all encouraged to apply.

The CARMA array is a millimeter-wave interferometer formed from the merger of the BIMA, OVRO, and SZA arrays. CARMA is operated in collaboration with Caltech, UC Berkeley, Illinois, and Chicago. Dishes from the BIMA array have arrived at the CARMA site located in the mountains near the present OVRO site. First light for CARMA is expected in late 2005. CARMA will operate from 30 to 270 GHz with a resolution to about 0.1 arcsecond at the higher frequencies. Its sensitivity at 230 GHz will be about a factor of ten better than the BIMA array. Research and development activities are distributed among the CARMA universities and the CARMA operations base at OVRO.

The successful applicant will have access to all of the resources at Maryland, including the KPNO 4-meter telescope under the recent Maryland - NOAO collaborative agreement. The appointment is for two years, with renewal for a third year likely. The successful applicant must have completed the requirements for the Ph.D. degree prior to arrival. Applicants should send a curriculum vitae, list of publications, and statement of research interests. Three letters of recommendation should be requested by the applicant and sent directly to the above address. Applications must be complete by January 15, 2005 to receive full consideration. Minorities and women are particularly encouraged to apply. AAE/EOE

No. 21384**PhD in Astronomy or Astrophysics
SAM HOUSTON STATE UNIVERSITY
1908 Ave J; Farrington Room 202
Box 2267
Huntsville, Texas 77340
USA****Tel: 936 294-1607****FAX: 936 294-1585****Email Submission Address: phy_eri@shsu.edu****Email Inquiries: phy_eri@shsu.edu****Attention: Dr. Rex Isham, Professor/Chair**

The Department of Physics at Sam Houston State University invites application for a tenure-track position at the level of assistant professor to begin in August, 2005.

Requirements for the position include the following:

PhD in Astronomy or Astrophysics

Strong commitment to effectively teach at the undergraduate level.

Develop and maintain a vigorous research program that will involve students.

Commitment to continuing professional development and service to the university.

The Department of Physics offers the B.S. in physics and a pre-engineering program. In addition, the enrollment in the conceptual physics course and the introductory astronomy course are –core courses” and both have large enrollments. Currently there are 24 physics majors and 11 pre-engineering majors. Approximately one-half of the graduates pursue further education while the remainder enters the work force.

The salary and benefits are competitive. Applications should include a curriculum, vita, and a brief narrative giving your teaching philosophy and future research plans, and three confidential letters of reference. This information should be sent by January 15, 2005 to:

Chair Department of Physics Sam Houston State University Box 2267 Huntsville, Texas
77341-2267

Sam Houston State University is an equal opportunity/affirmative action employer. The university is committed to developing a culturally diverse faculty that is dedicated to teaching and research in a multicultural environment and strongly encourages applications from women and minorities.

No. 21386

Professorial Appointment in Theoretical Astrophysics

CALIFORNIA INSTITUTE OF TECHNOLOGY

Caltech 130-33

Pasadena, CA 91125

USA

Tel: 626-395-4280

FAX: 626-796-5675

URL1: <http://www.pma.caltech.edu/GSR/proftheoastro.html>

Email Submission Address: joann@caltech.edu

Email Inquiries: joann@caltech.edu

Attention: JoAnn Boyd, Staffing Secretary

The Division of Physics, Mathematics and Astronomy at Caltech invites applications for a professorial position in theoretical astrophysics. We are primarily interested in candidates for a tenure-track appointment, but will consider applications for tenured professorial positions as well. The initial term of appointment for a non-tenured position is normally four years and appointment is contingent upon completion of the Ph.D. degree. We are seeking highly qualified candidates committed to a career in research and teaching. We are considering applications in all areas of theoretical astrophysics. Caltech is generally methodical and thorough in its professorial searches, and may take several years to fill a position in a targeted field, so failure to make an appointment in any given year should not be misinterpreted as a loss of interest in that field. Applications should include a curriculum vitae, a list of papers published and submitted (with refereed papers indicated), and a brief essay describing the

applicant's current research interests and the program of research he or she proposes to carry out at Caltech. Applicants are also requested to have at least three letters of reference sent to the address below; the names and email addresses of the referees should be included in the application. Applications should be sent to Professorship in Theoretical Astrophysics, c/o Staffing Secretary, M/C 130-33, California Institute of Technology, Pasadena, CA 91125, USA. Consideration of applications will begin February 1, 2005, and will continue until the position is filled. Caltech is an Affirmative Action / Equal Opportunity Employer. Women, Minorities, Veterans and Disabled Persons are encouraged to apply.

No. 21388

IMAGE ANALYSIS AND DATABASE PROGRAMMER

UNIVERSITY OF CALIFORNIA, DAVIS

One Shields Av

Physics Department

Davis, CA 95616-8677

USA

Tel: 530 752-4088

FAX: 530 752-4717

URL1: <http://dls.physics.ucdavis.edu>

Email Submission Address: tolle@physics.ucdavis.edu

Attention: Georgie Tolle, DLS Programmer Search

The Deep Lens Survey (DLS) is seeking one or two scientific programmers with a wide range of experience to start in 2004-05. The DLS is a national collaboration of astrophysicists centered at the University of California, Davis. We have approximately 1 TB of digital images of the sky taken at large telescopes and are currently processing and analyzing the data. In addition to applying our own scientific analyses, we post the data on the web for use by the astronomical community (<http://dls.physics.ucdavis.edu>).

Candidates will be involved in one or more of the following projects: (1) Design and implement a fully integrated database of metadata describing the raw images, the processing steps applied to each dataset, and the final processed datasets. This system will then drive the processing; as new images come in, or new processing steps are required, the system will invoke the necessary steps. (2) Implement a wide variety of image reconstruction and analysis algorithms as needed by the scientific analysis. For example, the programmer may work rather closely with an astrophysicist to write a tree code version of an existing analysis program, design regularized image reconstruction algorithms, or implement a principal component analysis. We envision a large number of small projects of this nature, with the opportunity for substantial creative input from the programmer. (3) Develop visualization tools specific to our dataset and our set of processing and analysis steps. (4) Design and implement a battery of automatic quality checks for the data before we release it to the community. We have the expertise to identify problems in the data, but that expertise must be translated into a set of rigorous procedures. This is another opportunity for substantial creative input from the programmer.

Desirable skills include M.S. in computational science or related field (preferred), or a minimum of five year's of experience and training in relevant specialization; strong knowledge of a large variety of algorithms; strong knowledge and experience in the development of databases,

image reconstruction, visualization tools; experience in a scientific environment; some understanding of astrophysical concepts and image processing preferred. Our environment is mostly Linux, C, perl, and python; we are open to new languages and tools as appropriate, but the candidate must feel comfortable in this environment. The candidate must have initiative and be able to work sometimes independently, sometimes in close collaboration with astrophysicists. Salary and benefits are competitive. This Specialist position is three years, renewable.

Candidates should send vitae and three professional references to the above address. Clearly indicate in the cover letter that this is for the DLS Programmer position. Applications will be received until the positions are filled.

The University of California is an affirmative action/equal opportunity employer.

No. 21400
Postdoctoral Fellow
SPACE TELESCOPE SCIENCE INSTITUTE
3700 San Martin Dr.
Baltimore, MD 21218
USA
Tel:
URL1: <http://www.stsci.edu>

Attention: Human Resources Req 426

Applications are invited for a postdoctoral research position at the Space Telescope Science Institute to work in collaboration with Dr. Kailash C. Sahu. Candidates must hold a Ph.D. degree and should be observational stellar astronomers with expertise and interest in stellar astrophysics and/or extra-solar planet detection.

The successful applicant will participate in analysis and interpretation of extensive HST time-series CCD data obtained with the Advanced Camera for Surveys on some 300,000 stars towards the Galactic bulge. The principal aim of this large program is to detect transiting "hot Jupiters" around F, G, and K stars. In addition, the data will have many other applications in variable and binary star research, microlensing, and deep luminosity functions in this rich stellar environment. Opportunities for independent research will also be available.

The initial appointment will be for one year, starting in the summer or fall of 2005, or as soon thereafter as a suitable candidate is found. The initial appointment will be for one year, 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 address below:

Space Telescope Science Institute ATTN: Human Resources, Req 426 3700 San Martin Drive

Baltimore, MD 21218

Completed applications received by February 1, 2005, are assured full consideration. Women and members of minority groups are strongly encouraged to apply. EOE/AA/M/F/D/V

No. 21401

Postdoctoral Researcher in Extragalactic Astronomy

INDIANA UNIVERSITY

Dept. of Astronomy

727 E 3rd St

Bloomington, IN 47405-7105

USA

Tel: 812 855 0274

FAX: 812 855 8725

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

(Indiana University Dept. of Astronomy)

URL2: <http://www.astro.indiana.edu/~vanzee/SMUDGES/>

(The SMUDGES Survey)

Email Inquiries: vanzee@astro.indiana.edu

Attention: Dr. Liese van Zee

Applications are invited for a postdoctoral position in the Department of Astronomy at Indiana University, Bloomington. Indiana University is a founding member of the WIYN consortium, and has a 17% share of the WIYN 0.9m and WIYN 3.5m telescopes on Kitt Peak. The postdoctoral researcher will work with Dr. Liese van Zee on the SMUDGES survey (see <http://www.astro.indiana.edu/~vanzee/research/research2.html> for more details). The ideal candidate will have interests in the formation and evolution of nearby galaxies and have experience with optical imaging and analysis.

The position is for two years, with a possible third year extension subject to the availability of funding and performance. The position is available starting August 15, 2005, but the actual start date is negotiable. Qualified applicants must have a PhD or equivalent degree by the date of appointment.

Applicants should send a curriculum vitae, a list of publications, a summary of research interests, and names and e-mail address of three references. All inquiries and applications should be sent to Dr. van Zee at the above address. Applications received by January 31, 2005 will receive full consideration. Indiana University is an Affirmative Action/Equal Opportunity employer. Applications from women and minorities are particularly encouraged.

No. 21403

FACULTY POSITION IN OBSERVATIONAL SOLAR PHYSICS

MONTANA STATE UNIVERSITY

Montana State University

PO Box 173840

Bozeman, MT 59717

Tel: (406) 994-6186

FAX: (406) 994-4452

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

(Solar Physics Group Home Page)

URL2: <http://www.physics.montana.edu/>

(Physics Department Home Page)

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

(Montana State University Home Page)

Email Submission Address: waldon@physics.montana.edu

Email Inquiries: waldon@physics.montana.edu

Attention: Solar Search Committee c/o Rose Waldon

FACULTY POSITION IN OBSERVATIONAL SOLAR PHYSICS

The Department of Physics at Montana State University invites applications for a tenure-track faculty position at the rank of Assistant Professor starting August 16, 2005. We seek a candidate with expertise in ground-based or space-based observational Solar physics. For more information about the Solar Physics research group at MSU see <http://solar.physics.montana.edu>. The candidate will be expected to teach classes at the undergraduate and graduate level.

Required: A Ph.D. in Physics, Astronomy or a closely related field. Demonstrated ability to conduct independent research in observational solar physics, and evidence of potential to successfully teach undergraduate and graduate physics, supervise Ph.D. students, and obtain extramural funding. The preferred candidate will be one whose observational research complements the Physics Department's existing programs.

To be considered, the following materials are required: - A letter of application addressing the qualifications above. - Vitae, including a list of publications. - A statement of research interests and plans. - A detailed description of teaching experience and interests. - Three (3) letters of recommendation.

Electronic submission in PDF format can be sent to Rose Waldon at waldon@physics.montana.edu. Paper submissions can be sent to: Solar Search Committee c/o Rose Waldon Physics Department Montana State University PO Box 173840 Bozeman, MT 59717-3840

Arrange to have signed copies of recommendation letters to be sent to the above address. Screening of applicants will begin on January 15, 2005, and continue until the position is filled. Inquires may be mailed to the address above, or directed to (406) 994-6186 (voice) or waldon@physics.montana.edu ADA/EO/AA/Veteran Preference. Women and minorities are encouraged to apply.

No. 21404

Postdoctoral position in astrophysics at the University of Texas at Brownsville

THE UNIVERSITY OF TEXAS AT BROWNSVILLE

University of Texas at Brownsville

80 Fort Brown

Brownsville, Texas 78520

USA

Tel: 956-574-6778
FAX: 956-574-6726
URL1: <http://cgwa.pyhs.utb.edu>
(The CGWA web site)
Email Submission Address: merlyn@phys.utb.edu
Email Inquiries: merlyn@phys.utb.edu

Attention: Fredrick Jenet (attn: Leslie Gomez), Professor of Physics

The Center for Gravitational Wave Astronomy (CGWA) at the University of Texas at Brownsville (UTB) invites applications for a postdoctoral position in the areas of radio pulsar astrophysics, gravitational wave astrophysics, and astrophysical data analysis. The focus of the astrophysics group at UTB is on the detection of gravitational waves using radio pulsar timing methods. The position is for one year, renewable for a one-year period, pending on continued financial support and satisfactory performance. The starting date for the position is Fall 2005 or earlier. We will be continuously reviewing applications from December 2004 until the position is filled.

The CGWA began operation in January 2003 at The University of Texas at Brownsville. The center consists of seven faculty members (Manuela Campanelli, Mario Diaz, Fredrick Jenet, Carlos Lousto, Soumya Mohanty, Soma Mukerjee, and Richard Price), five post-docs, and a dozen graduate students. A new faculty, in the area of Relativistic Astrophysics, will join the group in the coming year. Current activities of the group include: i) development of tools for data analysis for the LIGO project (in particular stochastic background and burst searches), ii) the 'Lazarus project' (a combined approach to binary black hole merger simulations using full numerical, perturbative, and post-Newtonian techniques), iii) the computation of radiation reaction effects in binary systems with small mass ratio using perturbative techniques, and iv) grid computing.

Applications shall consist of a cover letter, brief statement of research interests, a curriculum vitae, and at least three letters of recommendation.

No. 21406
Postdoctoral Researcher (Astronomer/Astrophysicist)
LOUISIANA STATE UNIVERSITY
Department of Physics and Astronomy
Baton Rouge, LA 70803
USA
Tel:
URL1: <http://www.lsu.edu>
(University website)
Email Inquiries: beverly@rouge.phys.lsu.edu

Attention: Dr. Arlo U. Landolt

There will be a Postdoctoral Researcher opening for an astronomer/astrophysicist beginning after July 1, 2005 subject to final funding approval, to anticipate 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 well documented experience in photometric image processing; firm knowledge of computer systems; knowledge of UNIX, FORTRAN and C++ programming language and some software development. The successful candidate will have opportunities for research. Responsibilities: data acquisition, analysis, and interpretation of faint object multi-color photometry. The appointment is for one year, extendable for up to two additional years upon satisfactory performance. Salary will be commensurate with qualifications and experience.

Applications will be accepted until January 31, 2005, 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 #0208, Baton Rouge LA 70803-4001. LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

No. 21407

Postdoctoral Appointment - Caltech - Combined Array for Research in Millimeter-wave Astronomy

CALIFORNIA INSTITUTE OF TECHNOLOGY

1200 E. California Blvd.

MS 105-24

Pasadena, CA 91125

USA

Tel: 626-395-4935

FAX: 626-568-9352

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

Email Submission Address: afs@astro.caltech.edu

Email Inquiries: fdh@astro.caltech.edu

Attention: Prof. Anneila Sargent, Prof. of Astronomy, Director of CARMA

We invite applications for a Postdoctoral Scholar or Senior Postdoctoral Scholar appointment associated with the Owens Valley Radio Observatory (OVRO) and the Combined Array for Research in Millimeter-wave Astronomy (CARMA). The appointment, which is contingent upon evidence of completion of a Ph.D., will be for one year, with likely renewal up to three years. CARMA merges the 6 10-m telescopes of Caltech's Owens Valley Radio Observatory (OVRO) millimeter array with the 9 6-m telescopes of the Berkeley-Illinois-Maryland Association (BIMA) array on a new, higher elevation site in the Inyo Mountains, at Cedar Flat. It is anticipated that within two years the array will also incorporate the 8 3.5-m telescopes of the UChicago Sunyaev-Zeldovich Array. Initially, CARMA will observe in the 1.3 and 3 mm atmospheric windows, with baselines to 2 km providing sub-arcsecond spatial resolution. The heterogeneous nature of the array enables large scale high resolution imaging of molecular gas and dust in our own and other galaxies at high dynamic range and with superb image fidelity. 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 2005, but later applications will be considered. Women, minorities, veterans and disabled persons are encouraged to apply. AAE/EOE.

No. 21410

Observational Astronomer
TEXAS A&M UNIVERSITY-KINGSVILLE
MSC 175
Department of Physics/Geosciences
Kingsville, Texas 78363-8202
USA

Tel: 361-593-2618

FAX: 361-593-2184

URL1: http://www.tamuk.edu/jobs/faculty_positions.htm

(Observational Astronomer)

Email Submission Address: daniel.suson@tamuk.edu

Email Inquiries: daniel.suson@tamuk.edu

Attention: Daniel Suson, Astronomer Search Committee Chair

OBSERVATIONAL ASTRONOMER TEXAS A&M UNIVERSITY-KINGSVILLE The Department of Physics/Geosciences has a tenure-track opening at the assistant professor level for an observational astronomer. Candidates should have a Ph.D. from a regionally accredited institution in astronomy, experience in astronomical instrumentation, enthusiasm for teaching in physics and astronomy, desire to participate in all facets of the departmental curriculum, and willingness to engage in an active research program involving undergraduate students and to participate in our public outreach program. The position also entails maintenance of the 16-inch telescope and other observing facilities. Qualified candidates must be experienced in maintenance, repair, and upgrade of telescopic equipment. Materials needed for review include a cover letter, vita, proposed research program, statement of teaching philosophy, and contact information for three references. Send these to Dr. Daniel Suson, Astronomer Search Committee Chair, Department of Physics/Geosciences, MSC 175, Texas A&M University-Kingsville, Kingsville, TX 78363-8202. Review of applications will begin on Jan. 15, 2005, although applications will be accepted until the position is filled. Materials needed for a complete application can be found at http://www.tamuk.edu/jobs/faculty_positions.htm . EEO/AA/ADA.

No. 21411

Postdoctoral Fellowship in Theoretical Nuclear Astrophysics
ORIGINS INSTITUTE -- MCMASTER UNIVERSITY
NRB 104
1280 Main Street West
Hamilton, ON L8S 4K1
Canada

Tel:

URL1: <http://origins.mcmaster.ca>

(Origins Institute)

URL2: <http://www.physics.mcmaster.ca>

(Department of Physics and Astronomy)

Email Inquiries: asills@mcmaster.ca, chenal@mcmaster.ca

Attention: Kristina Trollip

The Origins Institute at McMaster University invites applications for a Postdoctoral Fellowship to begin in July 2005. The successful applicant will have completed a Ph.D. in theoretical/computational nuclear astrophysics by the time the appointment begins. The appointee will conduct research in the field of theoretical nuclear astrophysics within the Origins Institute, which promotes interdisciplinary research programs at McMaster University. The research will be carried out in collaboration with Drs. Alan Chen and Alison Sills. McMaster has an active program in experimental nuclear astrophysics centered at the TRIUMF laboratory in Vancouver, and has state-of-the-art High Performance Computing facilities. Applicants will compete for a H.G. Thode Postdoctoral Fellowship, which will be open to the general areas of Nuclear Medicine, Nuclear Science, and Nuclear Engineering, and which was established in the honour of the late Dr. Harry Thode, an accomplished nuclear scientist and former McMaster University president. While the Thode fellowship has a duration of two years, the postdoctoral position can be renewed for an additional year.

Applicants should send, by January 31st 2005, a full Curriculum Vitae, a 2-page statement of research interests, and three reference letters to Kristina Trollip, McMaster Institute of Applied Radiation Sciences, NRB Room 104, McMaster University, 1280 Main St. West, Hamilton, ON, L8S 4K1, Canada. The application package should be labeled "H.G. Thode Fellowship: Nuclear Science / Origin of the Elements."

McMaster is committed to Employment Equity and encourages applications from all qualified candidates, including aboriginal peoples, persons with disabilities, members of visible minorities and women.

No. 21413

Postdoctoral Position in Supernova Research

UNIVERSITY OF TEXAS AT AUSTIN

1 University Station, C1400

Austin, TX 78712

USA

Tel: 512-471-6407

FAX: 512-471-6016

Email Submission Address: wheel@astro.as.utexas.edu

Email Inquiries: wheel@astro.as.utexas.edu

Attention: J. Craig Wheeler, Professor

A postdoctoral position is open to candidates with expertise in the observations or theory of supernovae. Special consideration will be given to candidates with experience in spectropolarimetry. The starting date is expected to be in the summer or fall of 2005, but could be earlier. The position is available for two years with the possibility of a third year if funding is renewed.

Applicants should send a CV, bibliography and research proposal, and arrange to have three

letters of recommendation sent.

AAE/EOE

No. 21414
Postdoctoral Position in Theoretical Asteroseismology
YALE UNIVERSITY
P.O. Box 208101
New Haven, CT 06520-8101
USA
Tel: 203-432-3000
FAX: 203-432-5048
URL1: <http://astro.yale.edu>
Email Submission Address: basu@astro.yale.edu
Email Inquiries: basu@astro.yale.edu

Attention: Sarbani Basu, Professor

The Department of Astronomy, Yale University invites applications for a Post Doctoral position to work with Prof. Sarbani Basu in the field of asteroseismology. Applicants should have completed a Ph.D. in astronomy or astrophysics, specializing in stellar physics. Experience in helio- or asteroseismology is desired. Personal research is encouraged. Joining date is flexible, but should be after July 1, 2005. Applicants should send a CV, a summary of research goals, and three letters of recommendation to the above address. Email for additional details.

Yale University is an Affirmative Action Equal Opportunity Employer.

No. 21416
Assistant Professor of Physics (Astronomy)
ALBION COLLEGE
611 E. Porter Street
Albion, MI 49224
US
Tel: 517-629-0263
FAX: 517-629-0264
URL1: <http://www.albion.edu>
Email Submission Address: mludington@albion.edu
Email Inquiries: mludington@albion.edu

Attention: Dr. Martin Ludington, Search Committee Chair

Introductory Astronomy: Albion College invites applications for a tenure-track assistant professor of Physics beginning August, 2005. Qualifications: Ph.D. in Physics, Astronomy, or a related field; ability to teach an introductory level, lab-based, observational astronomy course and some additional physics courses; demonstrated teaching excellence; and strong promise for research vitality in an area that may accommodate research projects for high-caliber, well-motivated undergraduates. ABD candidates will be considered. In 2005, the department will move into a newly renovated and expanded science complex, which will have dedicated

research space for physics and astronomy. The department has two observatories, one with an 8" Alvan Clark refractor, and the other with 14" Celestron. In addition there will be one 10" and three 8" pier-mounted Meades and several smaller telescopes. The facility has a shared instrumentation laboratory with 400-MHz NMR, XRF, XRD, and low-background gamma ray spectrometers and a DNA sequencer. Research in astronomy-related areas is perceived to have the greatest overlap with the curricular needs of the department, but all applications will be considered. Albion College is a selective liberal arts college of 1800 students located in a small diverse community in south-central Michigan within an hour's drive of major universities. For full consideration, candidates should send a letter of application, vitae, undergraduate and graduate transcripts, a statement of teaching philosophy and evidence of effective teaching, a proposed research program, and the names and addresses (including email addresses) of three references to Martin Ludington, Search Committee Chair, Department of Physics, Albion College, Albion, MI 49224. Review of applications will begin February 15, 2005, and will continue until the position is filled. Albion College is an equal opportunity employer committed to diversity as a core institutional value.

No. 21418

Research Astronomer

CORNELL UNIVERSITY

228 Space Sciences Building

Dept. of Astronomy

Ithaca, NY 14853-6801

USA

Tel: 607-255-4805

FAX: 607-255-5875

Email Submission Address: LM19@cornell.edu

Email Inquiries: LM19@cornell.edu

Attention: Laurie McCall, Executive Staff Assistant

The Spitzer/IRS group at the Astronomy Department of Cornell University invites applications for Research Astronomer positions within the Spitzer Space Telescope (SST) Infrared Spectrograph (IRS) project (PI Jim Houck). Information on the Spitzer Space Telescope and the IRS can be found at: <http://ssc.spitzer.caltech.edu> and <http://isc.astro.cornell.edu/> The successful applicant(s) is expected to play a significant role in the analysis, interpretation and publication of the IRS Guaranteed Time Observing (GTO) program on the Spitzer Space Telescope (SST). For the first 2.5 years of the Spitzer mission the IRS team has 875 hours of observations using all three instruments on board Spitzer (IRAC, IRS and MIPS). The IRS is working extremely well and the data quality is outstanding. The GTO program covers a wide range of scientific topics from our solar system, circumstellar disks, and ISM, to nearby galaxies, ULIRGs, AGN, and objects at high redshift. All observations of the IRS GTO program are covered by a one-year proprietary period. The successful applicant will actively participate in the interpretation of the scientific data, presentation of the results at scientific meetings and their publication in scientific journals. We are interested in innovative individuals with some background in infrared astronomy and/or spectroscopy, who work well on group activities, and have the desire to see the scientific end products. A Ph.D. in astronomy, physics, or a closely related field is required. Applications from both observers and theorists with relevant experience are welcome. We are interested in individuals who have several years of post-PhD research experience as well as recent graduates. The appointment will initially be for two

years, with possible extensions up to the expected 5+ (five-plus) years life time of the mission. Candidates will also have access to Cornell operated facilities (such as Palomar and Arecibo observatories) and benefit from stimulating scientific interactions within the Department of Astronomy (<http://www.astro.cornell.edu>). Salaries will depend on experience and are likely to be well above average. If this opportunity sounds interesting to you, please send a copy of your vita, research interests and the names of three individuals who are willing to write reference letters to Ms. Laurie McCall, Cornell University, 228 Space Sciences Building, Ithaca, NY 14853. Applications via email to lm19@cornell.edu are encouraged. For full consideration applications should be received before 15 April 2005, although applications will be reviewed up until the positions are filled.

No. 21419**Postdoctoral scholar in extragalactic astrophysics/astronomy University of California Santa Barbara****UNIVERSITY OF CALIFORNIA SANTA BARBARA****Mail applications to UCLA, Division of Astronomy & Astrophysics****Physics and Astronomy Building 430 Portola Plaza, Box 951547****Los Angeles, CA 90095-1547****USA****Tel: 1-310-825-3648****FAX: 1-310-206-2096****Email Submission Address: tt@physics.ucsb.edu****Email Inquiries: tt@physics.ucsb.edu*****Attention: Tommaso Treu, Professor***

Applications are invited for a post-doctoral research position at the University of California Santa Barbara. The successful applicant will work with Prof. Tommaso Treu on one or more of the following subjects: gravitational lensing, cosmic evolution of spheroids and black holes, galaxy evolution in clusters. Observational projects will include analysis and interpretation of data obtained with the Keck-10m and Lick-3m Telescopes and NASA satellites Hubble, Spitzer and GALEX. Observers and theorists with a strong interest in modeling and interpreting observations are encouraged to apply. A fraction of the successful candidate's time is expected to be devoted to independent research; a research fund (5,000USD) will be available for this purpose. The appointment is for two years; renewal for a third year is subject to performance and funding. The UCSB physics department and the Kavli Institute for Theoretical Physics host a strong research program in astrophysics and provide a stimulating environment.

The appointment is expected to start on Sep 1 2005 and requires the completion of a PhD. Applicants should submit a brief statement of research interests, list of publications, a curriculum vitae, and should arrange for three letters of reference to be sent. Full consideration will be given to application received by January 15 2005, although the position is open until filled. Applicants that plan on attending the AAS meeting in San Diego are encouraged to apply early and contact Tommaso Treu for possible interviews. The University of California is an Equal Opportunity/Affirmative Action Employer committed to excellence through diversity.

No. 21421**FCRAO Postdoc/MM-Wave Instrumentation**

UNIVERSITY OF MASSACHUSETTS
710 N. Pleasant Street
619 Lederle GRT/Dept. of Astronomy
Amherst, MA 01003
Tel: 413-545-0789
FAX: 413-545-4223
URL1: <http://www.astro.umass.edu/~wilson/CDL>

Attention: FCRAO Search Committee

The Continuum Detector Group at the Five College Radio Astronomy Observatory (FCRAO) at the University of Massachusetts, Amherst, invites applicants to apply for a post-doctoral research position. The successful candidate will perform research with Professor Grant Wilson in the fields of both instrumentation and observational astronomy/cosmology by aiding in the commissioning and first-light observations of two bolometric cameras BOLOCAM II and SPEED. BOLOCAM II is a 144 pixel bolometer array designed for efficient, wide-field mapping of the sky at either 1.4 or 2.1 mm wavelengths. SPEED is a 4 pixel/16 bolometer prototype camera designed to make simultaneous measurements of the mm-wave SED of an object in four frequency bands in each pixel. The research program will involve testing and characterization of these two cameras, commissioning and first-science observations with the two cameras as guest instruments on existing mm-wave telescopes, and commissioning and first-science observations with the instruments on the 50m-diameter Large Millimeter Telescope.

The position requires a Ph.D. in physics or astronomy with a strong background in instrumentation and/or observational astronomy. It is nominally funded for two years with the possibility of a third year, with the annual contract renewals following satisfactory yearly reviews. The salary will be commensurate with qualifications and experience.

Evaluation of applications will begin on January 3, 2005, and continue until the position is filled. Please send a letter describing your background, a curriculum vita, and have three letters of reference sent to the above address. The University of Massachusetts is an equal opportunity/affirmative action employer. Women and members of minority groups are encouraged to apply.

No. 21422
Post Doctoral Research Associate in X-ray Astronomy
DEPARTMENT OF ASTRONOMY, UNIVERSITY OF VIRGINIA
530 McCormick Road
P.O. Box 3818
Charlottesville, VA 22903-0818
USA
Tel: 1-434-924-4903
FAX: 1-434-924-3104
URL1: <http://www.astro.virginia.edu/~cls7i/>
(Sarazin's homepage)
Email Submission Address: sarazin@virginia.edu
Email Inquiries: sarazin@virginia.edu

Attention: Craig L. Sarazin, Professor

Applications are invited for a postdoctoral research associate position in X-ray astronomy at the University of Virginia. The position will involve the analysis of data from X-ray observations with Chandra, XMM/Newton, Astro-E2, ROSAT, and ASCA, in collaboration with Craig Sarazin. The X-ray observations will be focussed mainly on clusters of galaxies and elliptical galaxies, but may also involve X-ray data on other classes of objects, such as supernova remnants, globular clusters, X-ray binaries, or spiral galaxies. The position may also involve the analysis of related optical, radio, UV, or IR observations. It is likely that the successful applicant will also collaborate on the preparation of proposals for additional observations. The position is initially for two years, with a possible extension for a third year. I would like the person to start in September 2005, although this is negotiable.

Applicants should send a curriculum vitae, a publication list, and a letter outlining relevant interests and experience, and arrange to have three letters of recommendation sent to the above address. Complete applications should be received by January 5, 2005 for full consideration. Women and minorities are encouraged to apply.

No. 21423**Postdoctoral Researcher in Supernova Remnants/Neutron Stars****SMITHSONIAN ASTROPHYSICAL OBSERVATORY****60 Garden Street****MS 3****Cambridge, MA 02138****USA****Tel: 617-495-7134****FAX: 617-495-7356****URL1: http://hea-www.harvard.edu/~psr_snr****(Description of research)****Email Submission Address: michelle@cfa.harvard.edu****Email Inquiries: pslane@cfa.harvard.edu****Attention: Michelle Henson, Administrative Assistant**

Applications are invited for a postdoctoral research position at the Smithsonian Astrophysical Observatory to work on supernova remnant and neutron star research. The successful applicant will participate in ongoing programs within an energetic research group, currently consisting of two senior scientists, six postdoctoral fellows, two graduate students and other associated researchers. Depending on the applicant's experience and expertise, work to be undertaken may include the analysis and interpretation of X-ray observations, hydrodynamical modeling of supernova remnants and pulsar wind nebulae, and incorporation of multiwavelength data where appropriate.

Candidates must possess a Ph.D. or equivalent in astronomy or physics; experience in observational or theoretical research related to supernova remnant and/or neutron star physics; experience in the analysis and modeling of X-ray data, or in hydrodynamical modeling, are particularly solicited. Candidates must have familiarity with modern computer techniques as well as demonstrated ability to communicate and work with other scientists and

to prepare material for publications, proposals, and presentations.

The appointment will be for two years, beginning in the spring or summer of 2005. Extension to a third year will be subject to performance and availability of funds.

Interested applicants should send a curriculum vita and bibliography, a statement of research interests, and the names of three references to the above address before 31 January 2005. For further information, please contact Dr. Patrick Slane (slane@cfa.harvard.edu) or at(617) 495-7256. AAE/EOE.

No. 21424

**Postdoctoral Research Associate position in observational cosmology
UNIVERSITY OF COLORADO AT BOULDER, CENTER FOR ASTROPHYSICS AND
SPACE ASTRONOMY**

1255 38th St.

593 UCB

Boulder, CO 80309

Tel: 303-492-0469

FAX: 303-492-5941

Email Submission Address: nils.halverson@colorado.edu

Email Inquiries: nils.halverson@colorado.edu

Attention: Dr. Nils Halverson, c/o Darcy Towle

Applications are invited for a postdoctoral research associate position in observational cosmology in the Center for Astrophysics and Space Astronomy at the University of Colorado, Boulder. Research will be in collaboration with Prof. Nils Halverson in observational studies of the Cosmic Microwave Background (CMB) and instrumentation development efforts. Potential projects include participation in two experiments to conduct Sunyaev-Zel'dovich effect galaxy cluster surveys and fine scale CMB anisotropy measurements: the APEX-SZ survey and the South Pole Telescope, as well as other instrumentation efforts. A doctorate in Physics or Astronomy, and experience with low-temperature techniques and detectors, electronics, or CMB data analysis is desired.

Candidates should have completed all requirements for their PhD by August 2005. Review of applications will begin January 15, 2005 and applications will be accepted until position is filled.

Please send a curriculum vitae with publication list, statement of research interests, selected publications, and three letters of recommendation to Nils Halverson, c/o Darcy Towle, University of Colorado at Boulder, 593 UCB, Boulder, CO 80309.

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

No. 21426

**Postdoctoral Position in Optical Interferometry
UNIVERSITY OF MICHIGAN**

501 E. University Ave.

830 Dennison Building
Ann Arbor, MI 48109-1090
USA
Tel: 734-764-3440
FAX: 734-763-6317
Email Submission Address: monnier@umich.edu
Email Inquiries: monnier@umich.edu

Attention: John Monnier, Professor

Postdoctoral Position in Optical Interferometry UNIVERSITY OF MICHIGAN Astronomy
Department 830 Dennison Bldg. 501 E. University Ave. Ann Arbor, MI 48109-1090 Tel: 734-
764-3440 FAX: 734-763-6317

ATTN: Prof. John Monnier

We seek a postdoctoral researcher to contribute to the hardware and software development of an infrared fringe tracker for the CHARA Interferometer. Previous experience with optical interferometry, high-precision metrology, real-time control systems, and/or infrared detectors is highly desired. In addition, the successful applicant will interface with collaborators at the Georgia State University CHARA Interferometer (located outside Los Angeles, on Mt. Wilson) and the Michelson Science Center (Caltech) to commission the fringe tracker and carry-out first scientific observations.

The successful applicant will join the optical interferometry group at University of Michigan currently consisting of Prof. Monnier, two postdoctoral fellows, and a few graduate students, working on observational and instrumentation projects primarily with the Keck, IOTA and CHARA interferometers. Astronomical research in our group focuses on star and planet formation, direct detection of extra-solar planets, and other areas of stellar astrophysics.

As a Postdoctoral Fellow, the successful applicant will also have access to available UM research facilities including the twin Magellan 6.5 meter telescopes in Chile, the MDM 1.3 meter and 2.4 meter telescopes on Kitt Peak, the 26 meter UM radio telescope and the departmental computing network.

This position is funded for three years, subject to annual renewal, and can begin as early as September 1, 2005. Applicants should provide a vita, bibliography and a statement of research interests, and secure at least three letters of recommendation. Applications received prior to February 1, 2005, will receive first consideration. Please address all applications and recommendations to Prof. John Monnier at the above address. Email inquiries may also be directed to monnier@umich.edu. The University of Michigan is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

No. 21433
Assistant Professor/Instructor of Astronomy
APPALACHIAN STATE UNIVERSITY
CAP 231
525 Rivers St.
Boone, NC 28608

USA**Tel: 828-262-3090****URL1: <http://www.phys.appstate.edu>****(Departmental Website)****URL2: <http://www.appstate.edu>****(University Website)****Email Inquiries: pollockjt@appstate.edu*****Attention: Physics and Astronomy Search Committee***

Full-Time Astronomy Teaching Position The Department of Physics and Astronomy, <http://www.phys.appstate.edu> , invites applications for a full-time Astronomy Laboratory Instructor position at the Assistant Professor or Instructor level beginning August 2005. A Masters or PhD in an appropriate area is required. Candidates must have a strong commitment to quality teaching in the astronomy laboratory environment. New on-campus laboratory facilities, slated for completion in 2005, will include a retractable-roof observing deck housing eighteen 10-inch computerized telescopes with CCD cameras and a dome-enclosed CCD-equipped 16-inch DFM telescope available at times for projects of interest to the instructor. The instructional load includes laboratory sections from 8:00-12:00 at least three evenings per week. Experience with outdoor astronomical observational techniques and a familiarity with computer and web applications is essential. Applications must be submitted in hard copy and include an application letter, a curriculum vita, evidence of expertise in indicated areas , a statement of teaching philosophy, and three letters of reference. Particularly encouraged to apply are candidates who will promote diversity within the university community. Send applications to the Physics and Astronomy Search Committee, Department of Physics and Astronomy, 525 Rivers Street, Appalachian State University, Boone, NC 28608. Review of completed applications begins January 31st, 2005. However, applications will continue to be accepted after this date until the position is filled. Appalachian State University is an Equal Opportunity Employer.

No. 21437**JUNIOR SCIENTIFIC RESEARCHER (SOLAR PHYSICS) - ID# 24590****RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII****2530 DOLE ST.****SAKAMAKI HALL, D-100****HONOLULU, HI 96822****USA****Tel: 808-956-3100****FAX: 808-956-5022****URL1: <http://www.rcuh.com>*****Attention: NELSON SAKAMOTO, DIRECTOR, HUMAN RESOURCES***

JUNIOR SCIENTIFIC RESEARCHER IN SOLAR PHYSICS ID# 24590

The Institute for Astronomy (IfA), University of Hawaii in Honolulu, Hawaii invites applications for Non-Regular, Full-Time Postdoctoral position located in Maui. IfA Maui Division operates Haleakala Observatory, which is equipped with an array of solar telescopes and visible and

infrared instrumentations for observation of solar magnetic fields in the photosphere, chromosphere and coroneae; for study of energetic solar events and for general solar physics research. The IfA Solar Physics group is actively engaged in infrared solar physics research and is currently developing several innovative new IR instruments, as well as new telescope design concepts. The group is also closely involved in the design and development activities of the Advanced Technology Solar Telescope (ATST) project, a community-wide effort to build the next generation, large aperture solar telescope.

The successful candidate is expected to collaborate with IfA scientists on existing projects to study solar magnetic fields, to assist in the development of new instrumentations, and pursue independent research. The appointment is initially for one year and is renewable contingent upon performance and continued funding. Closing date for this recruitment is: January 31, 2005.

Candidates must have Ph.D. in Physics, Astrophysics, or a directly related field by the date of appointment and experience in solar physics related observations, data analysis and astronomical instrumentation development and knowledge of solar physics and instrumentation development. Ability to interpret solar physics related observation and data analysis. Must be able to work at an elevation of 14,000 feet above sea level. Salary commensurate with qualifications.

Prospective candidates are encouraged to call Dr. Haosheng Lin (808-876-7600 ext. 110), to discuss scientific aspects of the job.

TO APPLY: The preferred method of applying for this job is through our on-line application process. Please go to www.rcuh.com, click on "Employment" and navigate to "Job Announcements/Apply for a Job." However, if you do not have access to the Internet, you may apply by submitting resume; cover letter including ID#, referral source, narrative of your qualifications for position and salary history; names, phone numbers and addresses of three supervisory references and copy of degree(s)/transcripts/certificate(s) to confirm your credentials by fax (808) 956-5022 or mail to Director of Human Resources, Research Corporation of the University of Hawaii, 2530 Dole Street, Sakamaki Hall D-100, Honolulu, HI 96822 before the closing date. EEO/AA Employer.

No. 21443

Two one-year post-doctoral positions in RTN Network Gamma-Ray Bursts: An Enigma and a Tool

MAX-PLANCK-INSTITUT FUER ASTROPHYSIK

Karl-Schwarzschild-Str. 1

Garching bei Muenchen, Bavaria 85748

Germany

Tel: +49 89 30000 2244

FAX: +49 89 30000 2899

URL1: <http://www.mpa-garching.mpg.de/~heinzs/grb-position.html>

Email Submission Address: car@mpa-garching.mpg.de

Attention: Professor Rashid Sunyaev, Managing Director

Post-doctoral positions at the Max-Planck-Institut fuer Astrophysik RTN Network "Gamma-Ray

Bursts: an Enigma and a Tool"

In the framework of the Research and Training Network (RTN) "Gamma-Ray Bursts: an Enigma and a Tool", the Max-Planck-Institut for Astrophysics is now accepting applications for two one year post-doctoral research positions in the field of theoretical modeling of gamma-ray burst physics. Details regarding the application procedure and the requirements can be found at:

http://www.mpa-garching.mpg.de/~heinzs/grb_position.html.

The starting date is flexible.

We would be very grateful if you could forward this information to students and postdoctoral researchers working on related subjects. Please note that the positions are open to all EU citizens and to citizens of associated countries, except for citizens of the country where the host institute is located, i.e. Germany.

No. 21444

Post-doctoral Researcher

U.S. NAVAL OBSERVATORY FLAGSTAFF STATION

P.O. Box 1149

West Highway 66

Flagstaff, Arizona 86002-1149

USA

Tel: 928-779-5132 x232

FAX: 928-774-3626

URL1: <http://www.nofs.navy.mil>

Email Submission Address: dgm@nofs.navy.mil

Email Inquiries: dgm@nofs.navy.mil

Attention: David Monet, Astronomer

The US Naval Observatory Flagstaff Station anticipates an opening for a post-doctoral researcher to work with the Wide Field Astrometry program. The goal of this program is to place the 1.3-m astrometric telescope and its large-format CCD mosaic camera into routine, automated operation and to optimize its mission and scientific productivity. Applicants with experience and expertise in the areas of telescope automation and scheduling, pipeline processing and calibration of data, and compilation and usage of large scientific databases will receive preference. The incumbent can anticipate up to 25 percent of his/her time will be available for personal scientific research.

Applicants should send a discussion of their interests and qualifications, a list of recent publications, and a brief curriculum vita to David Monet, US Naval Observatory, P.O. Box 1149, Flagstaff AZ 86002, USA, or to dgm@nofs.navy.mil. Dave, and other members of the USNO staff, will be at the upcoming AAS meeting in San Diego, and personal interviews are recommended. Once the short list has been assembled, letters of recommendation will be solicited and the appropriate Federal forms will need to be completed.

The position will be a civil service term appointment for one year. A renewal for a second year

will be made unless circumstances preclude this, and further renewals up to a maximum of four years will be considered. The US Government is an equal opportunity employer, but preference will be given to US citizens.

No. 21445**Computational Astrophysicist/Software Engineer****ASTROPHYSIKALISCHES INSTITUT POTSDAM****An der Sternwarte 16****Potsdam, Brandenburg 14482****Deutschland****Tel: +49 331 74 99-381****FAX: + 49 331 74 99-267****URL1: <http://www.aip.de>****Email Submission Address: software04@aip.de****Email Inquiries: software04@aip.de*****Attention: Matthias Steinmetz, Prof. Dr.***

The Astrophysikalisches Institut Potsdam (AIP) is offering a position to coordinate and to participate in AIP's efforts in computational astrophysics and software engineering. In particular candidates with a background in astrophysics and experience in developing parallel simulation and data reduction software and/or grid computing are encouraged to apply. The initial appointment will be made for 2-3 years, depending on experience, with yearly extensions possible up to a maximum of 6 years.

The AIP is located in the beautiful Potsdam/Babelsberg area, close to the southwestern border of Berlin. About 70 scientists work on a variety of astrophysical topics, ranging from solar physics, star formation, galaxy formation and evolution to cosmology. The AIP is partner of the LBT project and has access to the ESO VLT. AIP is a main partner in the development of the VLT instrument MUSE. It leads the international RAVE collaboration and intends a participation in SEGUE. It is involved in the XMM survey science center. It features excellent computer facilities, has access to supercomputers, and also coordinates the German Astronomical Community Grid. 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 2005. Applicants should arrange for three letters of recommendation to be sent by the same date. Later applications will be considered until the posts is filled. The AIP is an equal opportunity employer and particularly encourages applications from women.

No. 21446**Postdoctoral Associates in Galactic or Extragalactic Astrophysics****ASTROPHYSIKALISCHES INSTITUT POTSDAM****An der Sternwarte 16****Potsdam, Brandenburg 14482****Deutschland****Tel: +49 331 74 99-381**

FAX: + 49 331 74 99-267
URL1: <http://www.aip.de>
Email Submission Address: postdoc04@aip.de
Email Inquiries: postdoc04@aip.de

Attention: Matthias Steinmetz, Prof. Dr.

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 the following areas: star formation; the structure, formation, and evolution of the Milky Way, of galaxy systems, and of the large scale structures; and cosmology. The initial appointment will be made for 2-3 years, depending on experience, with yearly extensions possible to a maximum of 6 years.

The AIP is located in the beautiful Potsdam/Babelsberg area, close to the southwestern border of 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. The AIP is a main partner in the development of the VLT instrument MUSE. It leads the international RAVE collaboration and intends a participation in SEGUE. It is involved in the XMM survey science center. It features excellent computer facilities and has access to supercomputers. Applicants are encouraged to consider participation in some of these projects. 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 2005. 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. 21466
Systems Programmer
YALE UNIVERSITY
P.O. Box 208256
New Haven, CT 06520-8256
USA
Tel: 203-432-5775
FAX: 203-432-6194
URL1: <http://www.yale.edu/jobs>
Email Submission Address: eileen.dubois@yale.edu
Email Inquiries: bailyn@astro.yale.edu

Attention: Eileen Dubois, Human Resources Representative

Systems Programmer

Yale University's Department of Astronomy seeks an experienced systems programmer to

manage a mixed platform environment that includes 65 LINUX workstations and servers and to provide computer expertise and end user support to faculty, research staff and students. Requires a bachelor's degree in astronomy, computer science, physics or a closely related field and two years of systems administration experience in a research oriented environment managing LINUX/UNIX operating systems. Must also have an understanding of Windows and Macintosh operating systems. Master's degree preferred.

Yale University's outstanding benefit program includes:

Fully-paid medical insurance for employee. Other health insurance options partially paid by the employee

22 vacation days, 14 holiday/recess days, 12 sick days, 4 personal days per year

A scholarship program for sons and daughters if they attend a four-year degree program

A generous retirement annuity program

Access to University academic and recreational facilities

Discover the excitement, diversity, rewards, and excellence of a career at Yale University, an equal opportunity employer. Apply on line at www.yale.edu/jobs with resume and cover letter addressed to Ms. E. Dubois. Please reference Source Code EAAST20920.

No. 21467

Postdoctoral / Assistant /Associate Researcher in Astronomy/Astrophysics with HST's Advanced Camera for Surveys

JOHNS HOPKINS UNIVERSITY

Dept Physics and Astronomy

3701 San Martin Drive

Baltimore, MD 21218

USA

Tel: 410-516-5367

FAX: 410-516-8260

URL1: <http://acs.pha.jhu.edu/employment>

Email Submission Address: skb@pha.jhu.edu

Email Inquiries: skb@pha.jhu.edu

Attention: Holland Ford, Professor

Applications are invited for two positions with the Hubble Space Telescope's (HST) Advanced Camera for Surveys (ACS) project at Johns Hopkins University. New PhDs and postdoctoral fellows are encouraged to apply; salary and position are commensurate with level of experience.

The ACS science program includes multi-color WFC imaging of five strongly lensing clusters of galaxies. The cluster observations are supported by ground-based optical and infrared images. The large number of arcs that can be identified in ACS images enable construction of detailed models of the clusters' dark matter distribution, and studies of the properties of delensed high-

z galaxies. The ACS team has NICMOS Cycle 14 time for imaging Abell 1689's critical curve with the goal of finding galaxies at redshifts between 6 and 7.

We are seeking two people, one with experience in analyzing images of strongly lensed clusters and modeling the mass distribution, and another person with experience in analyzing NICMOS images. Experience with astronomical software and other programming languages is essential. Applicants must have a PhD in astronomy or closely related field. Appointments will be for a minimum of one year. Nominal start dates are May 2005 or September 2005; however, some flexibility is possible. Applicants should send a curriculum vitae, description of research interests, and letters from three references to the above address by January 15, 2005. Application review will begin immediately and continue until the position is filled. The Johns Hopkins University and the ACS science team encourage applications from women and minority candidates. AAE/EOE.

No. 21470

Support Scientist for Mt. Hamilton Observers

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

1156 High Street

UCO/Lick Observatory

Santa Cruz, CA 95064

USA

Tel: 831.459.2991

FAX: 831.459.5244

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

Email Submission Address: director@ucolick.org

Attention: Joseph Miller, Director

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

L I C K O B S E R V A T O R Y Support Scientist for Mt. Hamilton Observers

The University of California Observatories/Lick Observatory invites applications for a non-ladder-rank academic position in the UCO/Lick Observatory. Contingent on the availability of funding, the appointment initially will be for two years beginning March 1, 2005, with the possibility of extension. The major area of responsibility will be providing instruction, help, and scientific guidance to observers on the use of the observatory's telescopes and instruments, with particular emphasis on the adaptive optics program at the 3-m Shane telescope. Other duties may include supporting installation and commissioning of new equipment; carrying out observing programs for observers, as requested; providing support for remote observing; performing on-call trouble-shooting and simple repairs; conducting observatory tours and night viewing programs, as scheduled by Director. The appointee will work closely with observatory faculty and technical staff and will be under the general direction of the UCO/Lick Observatory Director. Participation in research programs leading to published results is encouraged. Considerable nighttime work required. Applicant expected to reside in University-subsidized residence on Mt. Hamilton.

RANK: Assistant Specialist II—Associate Specialist III

SALARY: \$38,652—\$51,660

MINIMUM QUALIFICATIONS: Strong experience in research-level astronomical instrumentation. Candidates must have a working knowledge of observational techniques and astronomical data reduction. Knowledge of high-precision optical alignment and calibration, adaptive optics, electronics, and computer programming, and experience with the operation of large telescopes are highly desirable. Candidates must have the ability to work with a diverse population and have excellent communication skills.

POSITION AVAILABLE: March 1, 2005 (start date negotiable).

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

Assistant Specialist Recruitment c/o UCO/Lick, Office of the Director University of California Santa Cruz, CA 95064 Please refer to provision #T05-18 in your reply.

CLOSING DATE: This position is open until filled. Applications will first be considered on February 1, 2005.

**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. Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986.

If you need assistance due to a disability please contact the Academic Human Resources Office at 350 McHenry Library (831) 459-4300. This position description is available in alternate formats, which may be requested from Academic Human Resources at (831) 459-4300.

VISIT THE AHR WEB SITE AT <http://www2.ucsc.edu/ahr/employment/>

No. 21477

Resident Astronomer, Submillimeter Array, Hilo, Hawaii

THE INSTITUTE OF ASTRONOMY AND ASTROPHYSICS, ACADEMIA SINICA (ASIAA)

PO 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: kwok@asiaa.sinica.edu.tw

Email Inquiries: kwok@asiaa.sinica.edu.tw

Attention: Dr. Sun Kwok, Director

ASIAA RESIDENT ASTRONOMER - ID# 24628

Regular, Full-Time position with the Institute of Astronomy and Astrophysics, Academia Sinica (ASIAA), located in Hilo, Hawaii. Duties: The Resident Astronomer carries out scheduled observations for Submillimeter Array (SMA), and is responsible for the analysis and processing of data of ASIAA programs. The ASIAA resident astronomer will work closely with the SMA scientists in Hilo and is expected to participate in the testing and other scientific activities of the Observatory. The resident astronomer is eligible to apply for telescope time on all ASIAA facilities (including the SMA) and will have approximately 50% of time reserved for personal research. Requires: Ph.D. from an accredited college or university in Physics or Astronomy. At least one (1) year of observing experience with radio telescope. General knowledge of radio telescopes and interferometry arrays. Possession of a valid driver's license and the ability to drive a 4-wheel-drive vehicle up the summit. Must be able to work at 14,000 feet, and pass a high-altitude medical examination. Inquiries: Sun Kwok (808) 961-2932 (Hilo). Closing: Jan. 31, 2005. Min Salary: \$3,488/Mon.

No. 21480**Observatory Scientist (TMT07)****CELT DEVELOPMENT CORPORATION - THIRTY METER TELESCOPE PROJECT****1200 E. California Blvd.****Mail Code 102-8****Pasadena, CA 91125****U.S.A.****Tel: 626-395-2997****FAX: 626-395-8909****URL1: <http://www.astro.caltech.edu/observatories/tmt/>****(Thirty Meter Telescope Project)****Email Submission Address: tmtjobs@caltech.edu****Email Inquiries: tmtjobs@caltech.edu*****Attention: Gary Sanders, Project Manager***

Observatory Scientist (TMT07), Posted June 16, 2004

To apply, please submit an electronic resume to tmtjobs@caltech.edu , in the subject line reference Job Title and position number (TMT#).

Anticipated Hiring Range: \$88,375 - \$152,450 per year

Job Summary

The Thirty Meter Telescope (TMT) project is a collaboration of Caltech, University of California (UC), the Association of Universities for Research in Astronomy (AURA), and the Association of Canadian Universities for Research in Astronomy (ACURA). The TMT design and development activity is currently funded by a grant to Caltech and UC from the Gordon and Betty Moore Foundation. The TMT project office is being established in Pasadena to lead and coordinate the work in Pasadena and at partner locations.

The Observatory Scientist will be functionally supervised by the Project Scientist and formally report to the System Engineer. The Observatory Scientist will work closely with the Project Scientist to ensure that the project plans and technical approaches adopted and implemented are consistent with the TMT Science Requirements. The Observatory Scientist will also participate in the System Engineering Team. The System Engineering team consists of scientists and engineers responsible for system studies and system oversight of TMT observatory requirements, performance, controls, optics, integrated level and component level system modeling, and observatory software architecture.

Primary Job Duties

The Observatory Scientist will be responsible to:

- * Support the PS in working with the TMT Science Advisory Committee (SAC), comprising representatives from the science community of each partner, who advise the PS on science priorities.
- * Participate in all design reviews to ensure that science priorities are met.
- * Play a lead role in developing the operations plan, the plan whose aim is to maximize the scientific productivity of the Observatory.
- * Play a lead role in converting the plan into operational requirements, considering operational impact of hardware and software designs.
- * Play a lead role in the development and delivery of the Observatory Requirements Document and perform or provide science guidance for trade studies used for key telescope design decisions
- * Play a lead role in defining relevant science models and related merit functions to support cost versus performance trade analyses.

Minimum Requirements

10 years experience in the scientific and technical aspects of observational optical/infrared astronomy with large optical telescopes with significant experience in an operating observatory environment is required. Experience leading a team in these activities is required. A doctoral degree in astronomy or a closely related physical science discipline is required. Experience in large projects is strongly preferred.

The project office will be located in Pasadena and residence in the area is required. Significant travel will be required to partner, vendor and observatory locations. A background investigation will be required for this position. Skills, Knowledge & Abilities

Incumbent must have a demonstrated record of leadership in scientific research involving astronomy related to TMT. A significant record in leading research projects and systems activities to completion and a record of scientific publication in professional journals is required. Significant demonstrated accomplishments in one or more of mechanical, optical, controls, electronics, modeling and systems studies are required. Excellent oral/written communications skills are a must.

CELTCO/TMT is an Affirmative Action/Equal Opportunity Employer. Women, Minorities, Veterans and Disabled Persons are encouraged to apply.

No. 21488**St Andrews Astrophysics Fellowship****UNIVERSITY OF ST ANDREWS**

College Gate, North Street

St Andrews, Scotland KY16 9SS

UK

Tel: 44 (0)1334 462571

FAX: 44 (0)1334 462570

URL1: <http://star-www.st-and.ac.uk/astronomy/>*(University of St Andrews Astronomy)*URL2: <http://www-st-andrews.ac.uk/hr/recruitment/vacancies/vacancy-list>*(Human Resources)*Email Submission Address: Jobline@st-andrews.ac.ukEmail Inquiries: kdh1@st-and.ac.uk***Attention: Human resources***

SCHOOL OF PHYSICS AND ASTRONOMY

RESEARCH FELLOW IN ASTROPHYSICS

Salary: £19,460 - £35,883

The St Andrews Astrophysics Fellowship, intended to promote outstanding research and teaching in astronomy, is funded initially for three years, with a possible extension for a further two years. The position includes half-time teaching duties, allowing for a generous allocation of research time. You will be expected to undertake a world-class research program that complements and extends our current portfolio. The research interests of the Astronomy Group include the search for extra-solar planets, debris discs and young stellar objects, star and planet formation, magnetic activity of young stars, accretion in interacting binary stars and active galactic nuclei, galactic dynamics, and gravitational lensing.

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

Please quote ref: SK18/04 Closing Date: 25 February 2005

Application forms and further particulars are available from <http://www.st-andrews.ac.uk/hr/recruitment/vacancies> or from Human Resources, University of St Andrews, College Gate, North Street, St Andrews, Fife KY16 9AJ, (tel: 01334 462571, by fax 01334 462570 or by e-mail Jobline@st-andrews.ac.uk).

The University operates Equal Opportunities and No Smoking policies.

No. 21503**Postdoctoral Fellow in Theoretical Cosmology**

THE UNIVERSITY OF TEXAS AT AUSTIN**1 University Station, C1400****2511 Speedway****Austin, TX 78712****USA****Tel: 512-471-3409****FAX: 512-471-6016****URL1: <http://www.as.utexas.edu/astronomy/people/fellowships.html>****Email Inquiries: shapiro@astro.as.utexas.edu*****Attention: Prof. Paul Shapiro***

Applications are invited for a postdoctoral fellowship in theoretical cosmology. A background in cosmology, computational cosmology, and related areas would be useful, including galaxy and large-scale structure formation, cosmic reionization, high-redshift star formation, gas and gravitational dynamics, radiative processes, and numerical simulation. This position will be for up to three years, subject to the availability of funding. 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, 2005. Women and minorities are encouraged to apply. EOE/AE

New Jobs This Month

No. 21473**Software Developer****SMITHSONIAN ASTROPHYSICAL INSTITUTE****60 Garden Street, MS-17****Cambridge, MA 021338****USA****Tel:****Email Submission Address: saoresumes@cfa.harvard.edu*****Attention: Recruiter #229, Job #24-51***

IT Specialist (Data Specialist) IS-2210, Grades 7, 9; \$41,153 to \$63,071/yr

The employee in this position will provide computer-related support of x-ray astronomy research and space observatory operations, using the Chandra X-ray Observatory. The Data Specialist will be involved in coding, modifying, debugging, and documenting software for mission planning; developing and maintaining databases; drafting and maintaining materials for websites; providing user support; and participating in the daily operations of the Chandra Observatory. REQUIREMENTS: BS/MS or comparable experience in Computer Science, Astronomy, Physics or related field Experience in computer operations and/or software development Ability to perform, with responsibility and good judgment, technically complete work needed for space observatory operations Good communication and interpersonal skills Experience with Unix strongly preferred Knowledge of Perl, C/C++, databases, data analysis software, or HTML a plus

Candidates must be U.S. Citizen or permanent resident. Selection may be made at the Grade 7 or 9 level. This is a career ladder opportunity with promotion potential to Grade 11. Employee may be non-competitively promoted to the next higher grade, up to Grade 11, upon the recommendation of his/her supervisor, based on the position classification as well as his/her qualifications and satisfactory performance.

Applicants who have experience in a research environment are encouraged to augment their resumes by elaborating on their software and research experience by 1) briefly relating research projects and their objectives, and 2) describing how specific software was applied to the scientific research being conducted.

To view the complete vacancy announcement for this position, please go to: <http://cfa-www.harvard.edu/cfa/hr/postings/25-07.htm>

Qualified applicants should send resumes to: Recruiter #229, Job #25-07 Smithsonian Astrophysical Observatory 60 Garden St. MS-17 Cambridge, MA 02138 or via e-mail to: saoresumes@cfa.harvard.edu (email is for submission of application materials only)

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

No. 21474

IT Specialist (Data Specialist)

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

60 Garden Street. MS-17

Cambridge, MA 02318

USA

Tel:

Email Submission Address: saoresumes@cfa.harvard.edu

Attention: Recruiter #229, Job #25-07

Software Developer Trust Fund, Indefinite (Non-Federal) \$48,516 - \$ 70,571/yr Salary commensurate with qualifications and experience

We have openings for software developers to provide software engineering support to astrophysical research being conducted on data obtained by NASA's Chandra Observatory. Launched in 1999, Chandra is a large, orbiting x-ray telescope which searches the Universe for x-rays from high energy sources such as black holes, quasars, and supernova remnants. The Smithsonian Astrophysical Observatory operates the Chandra X-ray Center. Scientific Applications Developer (#24-51) Interact with scientists to acquire and understand specifications; develop, maintain, and test scientific application software in a team project setting.

Requirements BS or better (or equivalent experience) with a software engineering background in a structured setting; Experience with C/C++ in a Unix/Linux environment; Ability to work effectively as a member of a team in a scientific environment; Good communications skills; Familiarity with astronomy applications, multi-platform environments, scripting languages, and Clearcase highly desirable; Additional background in physical sciences: engineering, physics, chemistry, or mathematics is a plus;

To view the complete vacancy announcements for these positions, please go to: <http://cfa-www.harvard.edu/cfa/hr/postings/24-51.htm>

Qualified applicants should send resumes to: Recruiter #229, Job #24-51 Smithsonian Astrophysical Observatory 60 Garden St. MS-17 Cambridge, MA 02138 or via e-mail to: saoresumes@cfa.harvard.edu

Please note that the e-mail address is for the submission of application materials only.

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

No. 21479

FACULTY POSITION IN NUCLEAR ASTROPHYSICS

WESTERN MICHIGAN UNIVERSITY

Physics Department, MS-5252

Western Michigan University

Kalamazoo, MI 49008-5252

USA

Tel: (269) 387-4940

FAX: (269) 387-4939

URL1: <http://www.wmich.edu/physics/>

(Physics Dept. webpage)

Email Submission Address: Paul.Pancella@WMich.edu

Email Inquiries: Paul.Pancella@WMich.edu

Attention: Professor Paul V. Pancella, Department Chair

The Physics Department at Western Michigan University seeks candidates for a tenure-track faculty position at the assistant professor level, in the field of Nuclear Astrophysics, beginning Fall 2005, pending budgetary approval. Faculty in the Physics Department have ongoing research programs in experimental nuclear physics at the nearby ATLAS facility at Argonne National Laboratory, and the National Superconducting Cyclotron Laboratory at Michigan State University, studying nuclear structure, nuclear reactions, with an interest in astrophysical reactions. They are also actively involved in research in observational astrophysics, including spectroscopic observations with the Hubble Space Telescope, and numerical simulations of emission-line spectra. The successful candidate will be expected to pursue a vigorous research program that can encompass nuclear-physics research relevant to astrophysical phenomena, and/or studies of astrophysical processes. Opportunities for experimentally based research exist at nearby accelerator facilities at Argonne National Laboratory and Michigan State University. Collaboration with the Joint Institute for Nuclear Astrophysics at the University of Notre Dame, and interest in a research program at the planned Rare Isotope Accelerator (RIA), would also be encouraged. Other research areas could include the modeling of astrophysical environments, reaction network calculations, or application of nuclear physics data to astrophysical processes. The candidate must possess a strong commitment to undergraduate education, and will be expected to teach courses in astronomy and physics. Applicants must have Ph.D. in physics, astrophysics, or other related field. At least two years of post-doctoral research experience is preferred.

Western Michigan University, a Carnegie Classification Research Extensive Institution, is an

Equal Opportunity/Affirmative Action Employer and encourages applications from women, minorities and other underrepresented groups. Send letter of application, vita, statement of research and teaching philosophy, and three letters of reference to: Prof. Paul V. Pancella, Chair (email: Paul.Pancella@WMich.edu) Physics Department MS 5252, Western Michigan University, 1903 W. Michigan Avenue, Kalamazoo, MI 49008-5252. Review of applications will begin January 6, 2005 and applications will continue to be accepted until the position is filled.

No. 21481**Research Associate in Experimental/observational Cosmology****UNIVERSITY OF MINNESOTA****School of Physics & Astronomy****116 Church St. SE****Minneapolis, MN, MN 55455****USA****Tel:****Email Inquiries: hanany@physics.umn.edu*****Attention: Shaul Hanany, Associate Professor***

The observational cosmology group in the Department of Physics at the University of Minnesota/Twin Cities invites applications for two research associate openings in experimental/observational cosmology. The successful candidate will develop instruments to measure the polarization of the cosmic microwave background (CMB) radiation, will work on related technologies and will analyze data from existing experiments. They will also have the opportunity to lead the work on a newly funded balloon borne experiment. Previous experience with cryogenic equipment, mm-wave optics, or other CMB experiments is an advantage, however excellent candidates without such experience will also be considered.

The cosmology group at the University of Minnesota/Twin Cities is in a growth phase. In addition to the experimental and data analysis activities in CMB the group is involved in theoretical and observational work in astro-particle physics, big bang nucleosynthesis, nuclear astrophysics, HE abundance and dwarf galaxies.

No. 21482**QUaD experiment CMB data analysis PDRA****CARDIFF UNIVERSITY****School of Physics and Astronomy****5, The Parade****Cardiff, Wales CF24 3YB****UK****Tel: 44-(0)29-875526****FAX: 44-(0)29-874056****URL1: <http://carina.astro.cf.ac.uk/groups/instrumentation/>****Email Submission Address: gear@astro.cf.ac.uk****Email Inquiries: gear@astro.cf.ac.uk*****Attention: Prof. W.K. Gear***

The Astronomy Instrumentation Group in Cardiff require a post-doctoral research assistant for two years in the first instance (renewal subject to funding) to work on the analysis of from the QUaD (QUEST at DAS1) experiment which is currently being commissioned at the South Pole (see Bowden et al astro-ph/039610 and Church et al 2003 New A.R. 47,1083-1089 for more details about QUaD).

Candidates must possess or shortly expect to obtain a PhD in Astrophysics or closely related subject. Previous experience of data analysis from CMB experiments is also essential.

Opportunity also exists to become involved in sub-millimetre survey data analysis, using data from e.g. Bolocam, BLAST and Olampo.

The Cardiff instrumentation group is the largest submillimetre group in the UK and takes a major role in many world-leading instruments at far-infrared to millimetre wavelengths (see <http://carina.astro.cf.ac.uk/groups/instrumentation/> for details about the activities within the group. Prof W.K. Gear, to whom this postholder will report, is the head of the group and the UK PI of the QUaD experiment. Any queries regarding the post may be made to Prof Gear (gear@astro.cf.ac.uk)

No. 21486

**Manager of Siding Spring Observatory
AUSTRALIAN NATIONAL UNIVERSITY**

Tel:

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

Email Submission Address: jobs@anu.edu.au

Email Inquiries: director.rsaa@anu.edu.au

Attention: Recruitment Officer

Manager, Siding Spring Observatory (SSO). Research School of Astronomy and Astrophysics (RSAA). ANU Officer Grade 10: \$AUD73,738 pa plus generous 17% superannuation plus relocation allowance. The RSAA seeks an energetic, self-motivated manager, with an interest in astronomy, to operate and maintain all ANU facilities at Siding Spring Observatory, including the telescopes and their instruments, and to manage SSO human and material resources. The observatory is located near the beautiful town of Coonabarabran - gateway to the Warrumbungle ranges in NSW. The appointee will have an important role in liaising with the local community, participating in scientific, technical, leadership and publicity missions, and contributing to the corporate and strategic planning for the RSAA as a whole. On behalf of the ANU, RSAA operates the Mount Stromlo and the Siding Spring Observatories and has a highly successful astronomical instrumentation program for its own telescopes, as well as for the international Gemini consortium. Also on Siding Spring mountain are the separately operated national and international scientific and educational facilities - the Anglo-Australian telescope and the UK Southern Faulkes telescope. To its own suite of telescopes, the RSAA is anticipating the addition of the ultra-wide field ANU Skymapper, with first light in 2006. Prior to submission, selection documentation and information on how to apply must be sought from: <http://www.anu.edu.au/hr/jobs/> (ANU job reference number RSAA2643). Enquiries about the position: director.rsaa@anu.edu.au. Closing date: 31 January 2005

No. 21487

Postdoctoral Research Fellow in Cosmology Institution
KOREA INSTITUTE FOR ADVANCED STUDY
KIAS 207-43 Cheongnyangni 2-dong
Dongdaemun-gu
Korea
Tel: 82-2-958-3747
FAX: 82-2-958-3770
URL1: <http://www.kias.re.kr>
(The KIAS homepage)
Email Submission Address: heureux@kias.re.kr
Email Inquiries: heureux@kias.re.kr

Attention: Yoon Hee Kim, Ms.

Applications are invited for a postdoctoral research fellow position in cosmology and structure formation in the school of physics, Korea Institute for Advanced Study (KIAS). The successful candidate will work with the members of KIAS astrophysics group on analytical and numerical studies of the large scale structure of the universe. The research topics concern the dark matter distribution, dark halo modeling, large scale structure, peculiar velocity field, and cosmic microwave background radiation. In addition, the KIAS astrophysics group recently joined the Sloan Digital Sky Survey (SDSS). The successful candidate will have an opportunity to work with the KIAS astrophysics group member on the SDSS-related topics. The position is for two years with a possibility of renewal for up to two more years. The annual salary ranges from 23,000 US \$ to 34,000 US \$, and research fund of US\$6,600 is available per year. Applicants should send curriculum vitae with a list of publications, a statement of research interests, and should arrange for three letters of recommendation to be sent directly to Ms. Yoon Hee Kim at heureux@kias.re.kr. Applications received before May 1st, 2004 will receive full consideration

No. 21489
NRAO Postdoctoral Positions
NATIONAL RADIO ASTRONOMY OBSERVATORY
P.O. Box 0
Socorro, NM 87801
USA
Tel:
URL1: <http://www.nrao.edu>

Attention: Dr. W.M. Goss, Head of Division of Science and Academic Affairs

NRAO Postdoctoral Positions

The National Radio Astronomy Observatory invites applications for a number of NRAO Postdoctoral appointments to be distributed between its Green Bank, WV and Socorro, NM operational sites. These positions provide 50% time for independent research, with the remaining 50% assigned to project and operational duties at the sites.

The starting salary will be \$45,000 per year. The appointment duration is two years, with renewal for a third year, by agreement. Conference and observing travel are supported.

Computing resources, page charge support, vacation accrual, health insurance, and a moving allowance are also provided. Some appointments may be available as early as Spring 2005, with the remainder available in Fall 2005.

Functional needs at the Green Bank Telescope include support and development of the Penn Array Bolometer Camera (expected in 2005), support of visiting observers, development of the Precision Telescope Control System Project, and pulsar observing support and development.

Functional needs in New Mexico include EVLA scientific hardware testing, new EVLA receiver characterization, proto-type and WIDAR Correlator testing, developing sensor data for dynamic scheduling, water vapor radiometer tests, user support, documentation of EVLA procedures for outside users, and scientific support for e2e and offline software development

The candidates should have, or expect to receive by no later than 1 September 2005, a PhD in astronomy, physics, or a related field, and a plan of continuing independent research.

Appointments will be considered for Green Bank, WV, site of the 100-m GBT; and for Socorro, NM, the Operations Center for the Very Large Array (eventually EVLA) and the Very Long Baseline Array.

Applications should include a statement of research interests and plans, a description of any software or instrumentation experience, a curriculum vitae including a publication list, and the names of three scientists who have agreed to send in letters of reference. The application and letters of reference should be sent to: Dr. W. M. Goss, Division of Science and Academic Affairs, NRAO, P.O. Box 0, Socorro, NM 87801-0387. All applications received by 15 February 2005 will receive full consideration. If any positions remain unfilled, additional applications will be accepted through 15 March.

No. 21490

Postdoctoral Positions in the Very-Long-Baseline Interferometry Group

MAX-PLANCK-INSTITUT FUER RADIOASTRONOMIE

Auf dem Huegel 69

Germany

Tel: +49 228 525 298

FAX: +48 228 525 229

URL1: <http://www.mpifr-bonn.mpg.de/div/vlbi/>

(MPIfR VLBI Group)

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

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

Attention: Dr. J. A. Zensus, Director

Applications are invited for up to two postdoctoral positions from recent Ph.D.s with experience in radio astronomy, especially in VLBI astrophysics and/or AGN research. The appointments will be made in the research group led by Dr. J. A. Zensus, for an initial one-year term starting in mid 2005, and renewable for up to two more years.

The VLBI group at the Max-Planck-Institut für Radioastronomie is engaged in a broad range of scientific fields, offering a number of research opportunities which include mm-VLBI, parsec-

scale jets in AGN, gravitational lenses, radio supernovae, high precision astrometry, intraday variability in AGN, radio stars, ultra-luminous infra-red and Seyfert galaxies, cosmology, VLBI technology, radio interferometric imaging, and theoretical studies. The MPIfR offers access to first-rate research facilities, including a state-of-the-art VLBI correlator centre for astronomical and geodetic data analysis, the Effelsberg 100-meter radio telescope, the IRAM telescopes, and the APEX submillimetre telescope. It is also involved in the development of future facilities, such as ALMA and the Square Kilometre Array. The institute is member of the RadioNet consortium and participates in EU projects such as ENIGMA, ANGLES, and ALBUS.

Applicants will have the opportunity to pursue independent research and to collaborate in ongoing research projects. There is also ample opportunity to cooperate with graduate students in the International Max-Planck Research School program and to participate as a lecturer in this program to gain teaching experience.

Interested and qualified individuals are encouraged to submit vita, bibliography, research interests, and have three letters of recommendation sent to the above address. Email submission is also possible. The application deadline is 28 Feb 2005.

No. 21491

**Postdoctoral Position in Observational Cosmology & Galaxy Evolution
CALIFORNIA INSTITUTE OF TECHNOLOGY**

1200 E. California Blvd.

MC 105-24

Pasadena, CA 91125

USA

Tel: 626-395-2598

FAX: 626-568-9352

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

Email Submission Address: jlm@astro.caltech.edu

Attention: Richard Ellis, Professor

Applications are invited for a postdoctoral position in Richard Ellis' research group at Caltech. Using the Keck and Palomar observatories and space facilities such as Hubble, Spitzer and Galex, the group is working actively on many areas of galaxy evolution from locating the earliest systems to the assembly history, environmental trends and origin of internal structures in regular spirals and ellipticals. Ongoing programs in gravitational lensing and studies of the diversity of distant supernovae are being used to explore the prospects for constraining the properties of dark matter and dark energy. The successful candidate will have a Ph.D. in physics or astronomy and relevant experience and will be encouraged to develop their own research programs on Caltech's facilities. The position is available from Fall 2005 (or sooner) and is for two years with the possibility of renewal for a third year. Send CV, bibliography, statement of research interests and 3 letters of recommendation to the above address.

All materials should be received by January 31, 2005. Caltech is a AOE/EOE

No. 21492

**Assistat Professor --Theorist, Kavli Institute for Particle Astrophysics and Cosmology
STANFORD UNIVERSITY, KAVLI INSTITUTE OF PARTICLE ASTROPHYSICS AND**

COSMOLOGY
382 Via Pueblo Mall
Stanford, CA 94305-4060
United States
Tel: 650-926-3355
FAX: 650-926-3826
URL1: <http://http://www.stanford.edu/dept/physics/facultysearch.html>
(Stanford Physics Department Website)
Email Submission Address: lilian@slac.stanford.edu

Attention: Roger Blandford, Professor

The Department of Physics and the Stanford Linear Accelerator Center invite applications for a joint appointment for a theoretical physicist working in particle astrophysics or cosmology. This appointment includes membership in the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC). We seek candidates with significant accomplishments and promise for further achievement in these rapidly developing fields. We will consider applicants at the beginning assistant professor level through tenured associate professor level for this tenure track appointment. The successful candidate is expected to teach in Physics and supervise undergraduate and graduate students. Candidates should submit a curriculum vitae, publication list, a statement of research plans and the names of three references to: Professor R. Blandford, KIPAC, Stanford University, 382 Via Pueblo Mall, Stanford, CA 94305-4060. The deadline for receipt of applications is JANUARY 31, 2005. Stanford University and SLAC are equal opportunity, affirmative action employers.

No. 21493
Tenure-Track Assistant Professor---Experimentalist, Kavli Institute for Particle Astrophysics and Cosmology
STANFORD UNIVERSITY, KAVLI INSTITUTE FOR PARTICLE ATROPHYSICS AND COSMOLOGY
382 Via Pueblo Mall
Stanford, CA 94305-4060
United States
Tel: 650-926-3355
FAX: 650-926-3826
URL1: <http://www.stanford.edu/dept/physics/facultysearch.html>
(Stanford Univ., Physics Dept. Website)
Email Submission Address: lilian@slac.stanford.edu
Email Inquiries: lilian@slac.stanford.edu

Attention: Steve Kahn, Professor

The Department of Physics and the Stanford Linear Accelerator Center invite applications for a joint appointment for an experimental physicist working in astrophysics or cosmology. This appointment includes membership in the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC). We seek candidates with significant accomplishments and promise for further achievement in this rapidly developing field. We will consider applicants for a tenure-track assistant professor appointment. The successful candidate is expected to teach in

Physics and supervise undergraduate and graduate students. Candidates should submit a curriculum vitae, publication list, a statement of research plans and the names of three references to: Professor S. Kahn, KIPAC, Stanford University, 382 Via Pueblo Mall, Stanford, CA 94305-4060. The deadline for receipt of applications is JANUARY 31, 2005. Stanford University and SLAC are equal opportunity, affirmative action employers.

No. 21494**Postdoctoral Fellowship in Computational Astrophysics of Star Formation****UNIVERSITY OF CALIFORNIA, BERKELEY****Dept. of Astronomy****601 Campbell Hall****Berkeley, California 94720-5313****USA****Tel: 510 642-3379****FAX: 510 642-3411****Email Inquiries: rklein@astron.berkeley.edu*****Attention: Richard I. Klein, Professor of Astronomy***

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

Applications are invited for a postdoctoral fellowship in computational astrophysics of star formation at the UC Berkeley Department of Astronomy. Contingent upon the availability of funding, the position will begin on or before 1 September 2005 for an initial period of two years with possible extension for a third year. The successful candidate will hold a PhD in astronomy, astrophysics or physics and have experience in computational astrophysical fluid dynamics, preferably including MHD. Salary will be \$40,512 - 46,056 commensurate with experience.

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

Applicants should send a curriculum vitae, bibliography, and a statement of their research interests, and arrange for three letters of recommendation to be sent by 31 January 2005 to Prof. Richard I. Klein at the above address.

Closing Date: 31 January 2005.

No. 21495**Reader/Professor of Astrophysics****ASTROPHYSICS RESEARCH INSTITUTE, LIVERPOOL JOHN MOORES UNIVERSITY****Rodney House****70 Mount Pleasant****Liverpool, Merseyside L3 5UX**

UK**Tel: +44 (0) 151 231 3519****FAX: +44 (0) 151 231 3191****URL1: <http://www.livjm.ac.uk/about/vacancies>****(Further details and application form)****URL2: <http://www.astro.livjm.ac.uk>****(ARI home page)****URL3: <http://www.livjm.ac.uk>****(LJMU home page)****Email Inquiries: cac@astro.livjm.ac.uk*****Attention: Personnel Office, Personnel Services***

The Astrophysics Research Institute (ARI) wishes to appoint an accomplished astronomer to lead and develop a major research program at the Institute. This post is part of a major expansion of the ARI involving 5 new academic positions created as a result of expansion and additional funding. It is expected that the appointee will have an outstanding track record of research achievement and leadership and will make a major contribution to the research output of the ARI. We welcome those candidates with interests that match current areas of expertise in the Institute.

The ARI is one of the most productive astronomy centres in the UK, carrying out research in time-domain astrophysics, star formation the structure and stellar content of galaxies and cosmology. The Institute owns and operates as a national facility the 2 metre robotic Liverpool Telescope, sited on La Palma in the Canary Islands, and is also a centre for astronomical instrumentation, e-Science, the lead partner in RoboNet and a consortium partner of e-Merlin. The ARI runs innovative distance learning courses and a joint degree programme with the University of Liverpool which achieved the maximum rating in the last QAA subject review. It is also engaged in major outreach activities principally through the National Schools' Observatory and an astronomical visitors centre Spaceport.

For informal discussions please contact Professor Chris Collins, ARI, +44(0) 151 231 2918, email: cac@astro.livjm.ac.uk

A full CV, together with a statement of research interests and the names of two referees should be sent quoting reference B6857.

No. 21496**Postdoctoral Fellow (Circumstellar Matter)****SPACE TELESCOPE SCIENCE INSTITUTE****Tel:****URL1: <http://www.stsci.edu>*****Attention: Jennifer Serrano, Senior Employment Administrator***

Applications are invited for a postdoctoral research position at the Space Telescope Science Institute starting as early as summer 2005. The successful applicant will work with Dr. Margaret Meixner and collaborators on studies of circumstellar dust shells found around main

sequence stars, pre-main sequence stars, supernovae and evolved stars. This research will involve observations with HST, Spitzer, and ground based facilities. Independent research in related areas will be supported and encouraged. Research experience in the areas of planet formation, star formation, supernovae, evolved stars, dust or radiative transfer is desirable. A PhD in astronomy or astrophysics is required.

The position is for two years, with a possible renewal for a third year. STScI, located on Johns Hopkins University Campus in Baltimore, Maryland, offers an excellent benefit package, competitive salaries, and a stimulating work environment.

Applicants should send a cover letter with position applying for, curriculum vitae, list of publications, and a brief statement of research interests, accomplishments, and relevant technical expertise to the address below:

Space Telescope Science Institute

ATTN: Human Resources, Req 428

3700 San Martin Drive

Baltimore, MD 21218

They should also arrange for three letters of recommendation to be sent directly to the same address. Completed applications received by March 1, 2005 are assured of full consideration. Women and members of minority groups are strongly encouraged to apply. EOE/AA/M/F/D/V

Inquires regarding this position can be submitted to: meixner@stsci.edu

No. 21497

Fellowship in Supernovae and Gamma Ray Bursts

AUSTRALIAN NATIONAL UNIVERSITY

Tel:

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

Email Submission Address: jobs@anu.edu.au

Email Inquiries: academic.services.rsaa@anu.edu.au

Attention: Recruitment Officer

The Research School of Astronomy and Astrophysics at the Australian National University invites applications for a Postdoctoral or Research Fellow to work on supernovae and gamma ray bursts. The successful candidate will work with Prof Brian Schmidt and Dr Bruce Peterson on a program to understand the physics of supernovae and gamma ray bursts, and using them as cosmological probes. Work will take place on independent projects, as well as within the Essence Project (which is using SN Ia to measure the equation of state of Dark Energy) and the REACT GRB network. Candidates should possess a PhD in astronomy or a related field and have expertise in one or more of the following areas: Optical / IR photometry and spectroscopy, supernova and gamma ray burst observations, supernova physics, observational cosmology. While it is preferable for the position to be taken up in the first half of 2005, the position may be taken up anytime in 2005. Salary range: \$AUD52,863 -

\$AUD70,106 pa (depending on level of experience and skills), plus generous 17% superannuation, plus relocation allowance. Prior to submission selection criteria and information on how to apply must be obtained from: <http://www.anu.edu.au/hr/jobs> (ANU job reference number RSAA2664) or from: academic.services.rsaa@anu.edu.au. Enquiries about the position: brian@mso.anu.edu.au. Closing date: 31 January 2005

No. 21498**Lecturer/Senior Lecturer in Astrophysics (2 posts)****ASTROPHYSICS RESEARCH INSTITUTE, LIVERPOOL JOHN MOORES UNIVERSITY****Rodney House****70 Mount Pleasant****Liverpool, Merseyside L3 5 UX****UK****Tel: +44 (0) 151 231 3519****FAX: +44 (0) 151 231 3191****URL1: <http://www.livjm.ac.uk/about/vacancies>****(Further details and application form)****URL2: <http://www.astro.livjm.ac.uk>****(ARI home page)****URL3: <http://www.livjm.ac.uk>****(LJMU home page)****Email Inquiries: cac@astro.livjm.ac.uk*****Attention: Personnel Services***

The Astrophysics Research Institute (ARI) seeks to appoint two lecturers to carry out internationally competitive research contributing to one of the Institute's existing areas of excellence. These posts are part of a major expansion of the ARI involving 5 new academic positions created as a result of expansion and additional funding. It is expected that the appointed candidates will already have a PhD in astronomy or related subject and be established independent researchers with excellent publication records. In addition to research, the appointees will be expected to contribute to other areas of the Institute's activities, namely teaching, astronomical instrumentation or e-Science.

The ARI is one of the most productive astronomy centres in the UK, carrying out research in time-domain astrophysics, star formation, the structure and stellar content of galaxies and cosmology. The Institute owns and operates as a national facility the 2 metre robotic Liverpool Telescope sited on La Palma in the Canary Islands, and is also a centre for e-Science, astronomical instrumentation, the lead partner in RoboNet and a consortium partner of e-Merlin. The ARI runs innovative distance learning courses and a joint degree programme with the University of Liverpool which achieved the maximum rating in the last QAA subject review. It is also engaged in major outreach activities principally through the National Schools' Observatory and an astronomical visitors centre Spaceport.

A full CV, together with a statement of research interests and the names of two referees should be sent quoting reference B6858.

No. 21499**Assistant Research Scientist and Postdoctoral Research positions in Cosmology**

JOHNS HOPKINS UNIVERSITY DEPARTMENT OF PHYSICS & ASTRONOMY

Johns Hopkins University
3400 North Charles Street
Baltimore, MD 21218
US

Tel: 410-516-7347

FAX: 410-516-7239

Email Submission Address: cbennett@jhu.edu

Email Inquiries: cbennett@jhu.edu

Attention: Professor C. Bennett

The Center for Astrophysical Sciences at Johns Hopkins University seeks assistant research scientists and/or postdoctoral scholars to assist with cosmic microwave background research in one or more of three separate programs: the Wilkinson Microwave Anisotropy Probe (WMAP) mission, the Legacy Archive for Microwave Background Data Analysis (LAMBDA) data center, and in the hardware development for polarization anisotropy measurements. Research is conducted in close collaboration with the nearby NASAGoddard Space Flight Center.

Applicants must have a Ph.D. in astrophysics or closely related field and relevant research experience. The review of materials will begin immediately and will continue until the positions are filled. Specific questions about the positions may be addressed to Prof. C. Bennett at cbennett@jhu.edu. Applications including curriculum vitae, a statement of interest and relevant work experience, and a list of publications should be sent to:

Professor C. Bennett Department of Physics and Astronomy Johns Hopkins University 3400 North Charles St. Baltimore, MD 21218

Applicants must also arrange for three letters of reference to be sent to the same address (hardcopy preferred). JHU encourages applications from women and minority candidates. AAE/EOE

No. 21500

Postdoctoral Researcher, Supernovae and Dark Energy

HARVARD UNIVERSITY

MS-20

60 Garden Street

Cambridge, MA 02138

USA

Tel: 617-495-7375

FAX: 617-495-7467

Email Submission Address: kirshner@cfa.harvard.edu

Email Inquiries: kirshner@cfa.harvard.edu

Attention: Robert P. Kirshner, Professor

We seek a postdoctoral researcher to contribute to ongoing observational programs in Arizona

and Chile aimed at understanding supernova explosions and exploiting them to learn the nature of the dark energy. The successful applicant will have opportunities to engage in independent research related to supernovae and their application to cosmology using the extensive facilities of the Harvard-Smithsonian Center for Astrophysics. This position is most suitable for a recent Astronomy or Physics Ph.D. with experience in observational optical and infrared astronomy. This 1 year appointment could begin as early as March 2005 and, pending grant renewal, would ordinarily extend for a total of three years. Applications in hand by January 31, 2005 will receive full consideration.

Send a CV and 3 references to Prof. Robert Kirshner Center for Astrophysics MS-19 60 Garden Street Cambridge, MA 02138

We are an Equal Opportunity/Affirmative Action Employer - all qualified applicants will receive consideration without regard to race, creed, color, sex or national origin.

No. 21501

Physics & Astronomy - Assistant Professor

UNIVERSITY OF ALASKA, ANCHORAGE

3211 Providence Dr. ENGR 333D

Anchorage, Alaska 99508

United States

Tel: 907-786-1094

FAX: 907-786-4607

URL1: <http://www.uaa.alaska.edu>

(University web-site)

URL2: <http://hosting.uaa.alaska.edu/afjtp/physics.html>

(Physic/Astronomy Department)

URL3: <http://www.finsys.uaa.alaska.edu/uaahrs/>

(UAA Human Resource Department Web-Site)

Email Submission Address: afdhm@uaa.alaska.edu

Attention: Don Martins, Chair - Physics Department

SUMMARY: The College of Arts and Sciences (CAS) offers graduate and undergraduate programs, electives across all of its departments, essential coursework for degree programs throughout the university, and the general education classes required for all students' lifelong preparation. Through these offerings, and its substantial research and service activities, the college serves the development of society and constitutes a significant intellectual and cultural resource both within the university and in its larger external communities.

Recent advances in Physics & Astronomy have exerted a profound influence on the progress of basic knowledge. The Department of Physics and Astronomy offers a minor in physics, and directly supports degree programs in engineering, chemistry, biology, Mathematics and computer science by offering a variety of lower and upper division courses in physics and astronomy.

QUALIFICATIONS: A Ph.D. in physics or astronomy; previous teaching experience in college physics or astronomy; demonstrated evidence for research and scholarly publications; and an interest and aptitude for teaching undergraduates in introductory and advanced laboratories

and classes is required. Candidate with demonstrated ability to effectively work as part of a group; potential for excellence in teaching; and demonstrated likelihood of successfully obtaining external funding is preferred. Applicant with overlapping interests with department's existing interest in theoretical and observational studies of astrophysics, neutrino physics and complex systems is preferred.

RESPONSIBILITIES: Incumbent's workload includes undergraduate teaching, research, and a service component.

INQUIRIES MAY BE DIRECTED TO: Dr. Donald H. Martins Physics & Astronomy Department
- Chair Phone: 907 786-1094 Email: afdhm@uaa.alaska.edu

REVIEW DATE: Review of applications begins on February 3, 2005.

APPLICATION PROCESS: We do not accept application materials via e-mail. Please carefully follow the specific instructions given on each vacancy announcement. Applicants must submit a separate application packet for each position because documentation requirements are different for various positions.

Application packet for this position must include: • A University of Alaska Applicant Form - mandatory when applying for any UA position (available on our website) • A cover letter (please note the PCN 304036 on your cover letter); • A comprehensive curriculum vita containing educational preparation, teaching experience and philosophy, research interests and publications; • Three (3) letters of references which include references current contact information; and • Copy of college transcripts verifying terminal degree (official transcripts will be required prior to hiring).

Please submit the application packet to: Human Resource Services University of Alaska
Anchorage Administration Building, Rm 125 (Physical Address) 3211 Providence Drive
(Mailing Address) Anchorage, AK 99508-4614

Phone: (907) 786-4608 Fax: (907) 786-4727 Hearing Impaired TTY Phone: (907) 786-1420

Background checks may be required, please contact the Office of Human Resource Services for further information.

Applicants needing reasonable accommodations to participate in the application or interview process should contact Human Resource Services. UAA is an AA/EO Employer and Educational Institution. Applicants must be eligible for employment under the Immigration Reform and Control Act as of 1986 and subsequent amendments. Your application for employment with the University of Alaska is subject to public disclosure.

No. 21502

Summer students - radio astronomy and VLBI

ASTRON AND THE JOINT INSTITUTE FOR VLBI IN EUROPE

P.O. Box 2

Dwingeloo, 7990 AA

The Netherlands

Tel: +31 (0)521 596524

FAX: +31 (0)521 596539

URL1: <http://www.astron.nl/wsrt/summer.html>
URL2: <http://www.jive.nl/sstudents/sstudents.html>
URL3:
Email Submission Address: secretary@jive.nl

Attention: Ms. Marjan Tibbe, Office manager

Summer Research Programme 2005 NETHERLANDS FOUNDATION FOR RESEARCH IN ASTRONOMY (ASTRON),

JOINT INSTITUTE FOR VLBI IN EUROPE (JIVE)

P.O. Box 2 Dwingeloo, 7990 AA The Netherlands Tel: +31-521-595100 FAX: +31-521-597332
URL: www.astron.nl/wsrt or www.jive.nl

Attention: Ms. Marjan Tibbe

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 2005 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 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 in the locality of the Observatory, a modest stipend for up to three months, and full travel reimbursement. We expect most participants to begin in early June 2005. If this is not possible please indicate why.

An application form can be downloaded from <http://www.astron.nl/wsrt/summer.html>. This form should be completed in full, AND TOGETHER with two letters of reference sent by post (or fax) to the address given above before the due deadline, 15 February 2005 (Att. Ms. Marjan Tibbe).

No. 21504
Operations Staff Astronomer VLT
EUROPEAN SOUTHERN OBSERVATORY
Karl-Schwarschild-Str. 2
Germany
Tel: 0049-89-32006219
FAX: 0049-89-32006490

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

Email Submission Address: vacancy@eso.org

Attention: *Katjuscha Haase, Mrs.*

Applications are invited for an Operations Staff Astronomer at the VLT Observatory on Paranal, Chile. This post is open to suitably qualified men and women. You will support observing operations in both visitor and service mode at the VLT Unit Telescopes (UT) on Paranal. The tasks include short-term (flexible) scheduling of queue observations, calibration and monitoring of the instruments, and assessment of the scientific quality of the astronomical data. Operations Staff Astronomers contribute to the challenge of operating a world leading astronomical facility so as to optimize its scientific output, have the opportunity to acquire expert knowledge of novel instrumentation, and may get the overall responsibility for an instrument. Operations Astronomers may be members of the ESO Science Faculty and will be expected and encouraged to actively conduct astronomical research up to 50% of the time or alternatively be offered an appointment with up to 20% of the time for personal research. Education and experience: Ph.D. in Astronomy, Physics or equivalent. Excellent communication skills, a good command of the English language, a working knowledge of Spanish or a willingness to learn and a strong sense of team spirit are essential. For further details, including required education and experience, see the ESO Vacancy Announcement on the ESO home page (<http://www.eso.org/gen-fac/adm/pers/vacant/>). Duty station: Paranal and Santiago, Chile. Starting date: As soon as possible. The initial contract is for a period of three years with the possibility of a fixed-term extension or permanence. We offer an attractive remuneration package including a competitive salary (tax-free), comprehensive pension scheme, medical, educational and other social benefits as well as financial support in relocating your family. Applications (CV in English language and the ESO Application Form ; to be obtained from the ESO Home Page at <http://www.eso.org/gen-fac/adm/pers/vacant/>) and four letters of reference should be submitted by 31 January 2005.

No. 21505

**Operations Staff Astronomer VLT
EUROPEAN SOUTHERN OBSERVATORY**

Karl-Schwarzschild-Str. 2

Garching, b. Munich 85748

Germany

Tel: 0049-89-32006219

FAX: 0049-89-32006490

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

Email Submission Address: vacancy@eso.org

Attention: *Katjuscha Haase, Mrs.*

Applications are invited for a Staff Astronomer position at the VLT Observatory on Paranal, Chile. This post is open to suitably qualified men and women. The first components of the VLT Interferometric Array (VLTI), including the science instruments MIDI and AMBER, are currently being commissioned. Scientific operations of the VLTI are foreseen for the first half of 2004. You will support observing operations in both visitor and service mode at the VLTI. The tasks include short-term (flexible) scheduling of queue observations, calibration and monitoring of

the instruments, and assessment of the scientific quality of the astronomical data. You will contribute to the challenge of operating a world leading astronomical facility so as to optimize its scientific output, acquire expert knowledge of novel instrumentation and techniques, and may get the overall responsibility for an instrument. Operations astronomers may be members of the ESO Science Faculty and will be expected and encouraged to actively conduct astronomical research up to 50% or alternatively be offered an appointment with up to 20% of their time for personal research. Education and experience: PhD in Astronomy, Physics or equivalent. Excellent communication skills, a good command of the English language, a working knowledge of Spanish or a willingness to learn and a strong sense of team spirit are essential. For further details, including required education and experience, see the ESO Vacancy Announcement on the ESO home page (<http://www.eso.org/gen-fac/adm/pers/vacant/>). Duty station: Paranal and Santiago, Chile. Starting date: As soon as possible. The initial contract is for a period of three years with the possibility of a fixed-term extension or permanence. We offer an attractive remuneration package including a competitive salary (tax-free), comprehensive pension scheme, medical, educational and other social benefits as well as financial support in relocating your family. Applications (CV in English language and the ESO Application Form ; to be obtained from the ESO Home Page at <http://www.eso.org/gen-fac/adm/pers/vacant/>) and four letters of reference should be submitted by 31 January 2005.

No. 21506**Tenur-Track Assistant Professor of Astronomy****UNIVERSITY OF WASHINGTON****Department of Astronomy****Box 351580****Seattle, WA 98195****USA****Tel: 206-543-2888****FAX: 206-685-0403****Email Submission Address: office@astro.washington.edu****Email Inquiries: ivezic@astro.washington.edu*****Attention: Zeljko Ivezic, Chair, Search Committee***

The Astronomy Department of the University of Washington seeks to fill a tenure-track position of Assistant Professor in Astrophysics starting in 2005, and no later than 2006. The Department wishes to strengthen its strategic orientation toward survey astronomy, and seeks a leader in any area of astrophysics whose scientific interests include the mining and analysis of large data volumes.

The responsibilities of this position include developing a vigorous program of original research, helping to provide scientific leadership in survey astrophysics pursued by the department, mentoring of Ph.D. students, and course design and teaching modern astronomy at the undergraduate and graduate levels. At a minimum, applicants must have a Ph.D. in Astronomy or a closely related field, postdoctoral research experience involving astronomy or astrophysics, and a strong record of original published research. The position is offered in the Astronomy Department; however a shared appointment with another department at U.W. can be considered after tenure is conferred. In exceptional circumstances, appointment at the Associate Professor or Professor level may be considered for candidates who have

demonstrated a commitment to mentoring underrepresented students in the sciences.

All faculty, postdocs, and graduate students have access to the Apache Point Observatory's 3.5-m telescope (100 nights annually), the Sloan Digital Sky Survey data, and powerful parallel computing facilities. U.W. is a founding partner of the Large Synoptic Survey Telescope that will become operational in about 2012. Interdisciplinary research is strongly encouraged with other departments and programs on campus, including physics, statistics, computer science, earth and space sciences, and astrobiology. See www.astro.washington.edu for details.

Please send a 2-page statement of professional qualifications, interests, goals, and accomplishments; a curriculum vitae; bibliography; and the names of three people who will send a letter of reference directly to the Department. Priority will be given to complete applications (with letters) received by February 15, 2005. Documents will be accepted electronically in pdf format sent to office@astro.washington.edu, with subject line "faculty application (your name)".

The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates. The University is an Equal opportunity/Affirmative Action employer.

No. 21507

Academic Fellowship in Astrophysics

ASTROPHYSICS RESEARCH INSTITUTE, LIVERPOOL JOHN MOORES UNIVERSITY

Rodney House

70 Mount Pleasant

Liverpool, Merseyside L3 5UX

UK

Tel: +44 (0) 151 231 3519

FAX: +44 (0) 151 231 3191

URL1: <http://www.livjm.ac.uk/about/vacancies>

(Further details and application form)

URL2: <http://www.astro.livjm.ac.uk>

(ARI home page)

URL3: <http://www.rcuk.ac.uk/acfellow>

(Details of Academic Fellowship scheme)

Email Inquiries: cac@astro.livjm.ac.uk

Attention: Personnel Services

The Astrophysics Research Institute (ARI) seeks to appoint an Academic Fellow in astrophysics. The Fellowship is established by Research Councils UK to provide contract research staff with more attractive and stable paths into permanent academic positions and will be held at the ARI. Successful candidates should have an excellent publication record and sufficient postdoctoral experience to demonstrate outstanding research potential. Candidates with research interests in extreme-environment astrophysics (e.g. gamma-ray burts, AGN supernovae, QSOs) are particularly welcome. The nature of the funding provided means that applicants currently holding a personal research fellowship or research grant are eligible to apply. The appointment will last for 5 years after which the University will guarantee a permanent academic position. Those with permanent positions are not eligible to apply.

The ARI is one of the most productive astronomy centres in the UK, carrying out research in time-domain astrophysics, star formation, the structure and stellar content of galaxies and cosmology. The Institute owns and operates as a national facility the 2 metre robotic Liverpool Telescope sited on La Palma in the Canary Islands, and is also a centre for e-Science, astronomical instrumentation, the lead partner in RoboNet and a consortium partner for e-Merlin. The ARI runs innovative distance learning courses and a joint degree programme with the University of Liverpool which achieved the maximum rating in the last QAA subject review. It is also engaged in major outreach activities principally through the National Schools' Observatory and the astronomical visitors centre Spaceport.

A full CV, together with a statement of research interests and the names of two referees should be sent quoting reference B6859.

No. 21508

Isaac Roberts Fellowship in Astrophysics

ASTROPHYSICS RESEARCH INSTITUTE, LIVERPOOL JOHN MOORES UNIVERSITY

Rodney House

70 Mount Pleasant

Liverpool, Merseyside L3 5UX

UK

Tel: +44 (0) 151 231 3519

FAX: +44 (0) 151 231 3191

URL1: <http://www.livjm.ac.uk/about/vacancies>

(Further details and application form)

URL2: <http://www.astro.livjm.ac.uk>

(ARI home page)

URL3: <http://www.livjm.ac.uk>

(LJMU home page)

Email Inquiries: cac@astro.livjm.ac.uk

Attention: Personnel Services

The Astrophysics Research Institute (ARI) seeks an enthusiastic research fellow with a good track record and excellent promise in a research area close to the interests of the Institute. This post is part of a major expansion of the ARI involving 5 new academic positions created as a result of additional funding. It is expected that the appointed fellow will have excellent communication skills and contribute to the wider research environment of the Institute. The fellowship is named after the Welsh astronomer Isaac Roberts (1829-1904), who was a pioneer of astro-photography while working locally in Birkenhead and had a long association with Merseyside.

The ARI is one of the most productive astronomy centres in the UK, carrying out research in time-domain astrophysics, star formation, the structure and stellar content of galaxies and cosmology. The Institute owns and operates as a national facility the 2 metre robotic Liverpool Telescope sited on La Palma in the Canary Islands, and is also a centre for e-Science, astronomical instrumentation, the lead partner in RoboNet and a consortium partner of e-Merlin. The ARI runs innovative distance learning courses and a joint degree with the University of Liverpool which achieved the maximum rating in the last QAA subject review. The ARI is also engaged in major outreach activities principally through the National Schools'

Observatory and an astronomical visitors centre Spaceport.

A full CV, together with a statement of research interests and the names of two referees should be sent quoting reference B6860.

No. 21509

Postdoctoral Reseach Associate

AURA

P.O. Box 26732

Tucson, AZ 85726

USA

Tel:

FAX: 520-318-8456

Email Submission Address: hrnoao@noao.edu

Email Inquiries: hrnoao@noao.edu

Attention: Human Resources Manager, GONG Postdoctoral Research Associate, #696

Postdoctoral Research Associate Tucson, Arizona

The National Solar Observatory (NSO) has an opening for a full-time Postdoctoral Research Associate to work with the helioseismic and magnetic-field data acquired by the upgraded cameras in the network of observing instruments that is operated by the Global Oscillation Network Group (GONG). The data reduction and analysis system consists of helioseismic processing and reduction software on Sun and Linux workstations (Unix, IRAF, IDL). Requirements include a Ph.D. in Astronomy or closely related Physical Science; demonstrated record of scientific accomplishments; experience with scientific-based operating systems, programming languages, and data reduction and analysis packages.

Position open until filled.

To apply, send resume, names and address of three professional references electronically to hrnoao@noao.edu, please reference GONG Postdoctoral Research Associate, Position 696 in the subject line or mail to:

Human Resources Manager National Optical Astronomy Observatory Attn: GONG
Postdoctoral Research Associate, #696 P.O. Box 26732 Tucson, Arizona 85726-6732 FAX:
520-318-8456

NOAO is an affirmative action and equal employment opportunity employer.

Preference will be granted to qualified Native Americans living on or near the Tohono O'odham reservation.

We value and foster a diverse research environment. Women and underrepresented minorities are particularly encouraged to apply.

No. 21510

Astronomy Instructor

CYPRESS COLLEGE

Tel:

URL1: <http://www.nocccd.cc.ca.us>**Attention: Human Resources**

Astronomy Instructor CYPRESS COLLEGE Tenure-track position, 100% contract, beginning Fall Semester 2005. Closing Date: February 4, 2005.

SALARY The initial salary placement range is \$41,578 to \$69,187 depending on education and experience. Excellent fringe benefits including medical insurance.

SAMPLE OF DUTIES Participate in curriculum development and serve on division, college and district committees as necessary to maintain and improve the instructional program; participate in appropriate professional development activities. Maintain formal office and campus hours; participate in department and division meetings. Teach scheduled classes and perform related duties as assigned, including timely compliance with clerical and administrative responsibilities; comply with district, college and division policies in the performance of duties. Instruct and assist in the growth and success of a diverse population of students through careful preparation of course materials, effective teaching methodologies and informed critical feedback on assignments and discussions. Sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability and ethnic backgrounds of students. Evening and/or Saturday assignments may be required as part of the regular contract.

APPLICATION INSTRUCTIONS For job announcement and employment application, visit our web site at: www.nocccd.cc.ca.us or contact the Human Resources Office at (714) 808-4810. Join us in our commitment to academic excellence, student success, and lifelong learning. EEO



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No. 21511
UKZN/SAAO Postdoctoral Fellowships in Extragalactic Astronomy & Cosmology
UNIVERSITY OF KWAZULU-NATAL
School of Physics (Pietermaritzburg)
Private Bag X01
Scottsville, KZN 3209
South Africa
Tel: 27-33-260-5660
FAX: 27-33-260-5876
URL1: <http://www.acru.ukzn.ac.za/~acru/index.html>
(Astro&Cosmology Research Unit address)
URL2: <http://www.sao.ac.za>
(South African Astronomical Observatory)
URL3: <http://www.southafrica.info/>
(Info on South Africa)
Email Submission Address: cressc@ukzn.ac.za
Email Inquiries: cressc@ukzn.ac.za

Attention: Catherine Cress, Dr.

The 10m-class Southern African Large Telescope is scheduled to see first light in 2005 and many opportunities for astronomers will thus be opening up in South Africa over the next few years.

The Astrophysics and Cosmology Research Unit at the University of KwaZulu-Natal is currently offering two postdoctoral positions in the areas of extragalactic astronomy and cosmology. Positions are for two years with the possibility of extension to three or more years. One of the positions is offered jointly with the SA Astronomical Observatory and allows for 6 months per year at SAAO in Cape Town. Members of ACRU have interests in large-scale structure and galaxy evolution, the cosmic microwave background and in theoretical cosmology. There are opportunities to participate in the Atacama Cosmology Telescope project, of which UKZN is a partner institution. The successful candidate will have access to all National Facilities including those at the SA Astronomical Observatory and Hartebeesthoek Radio Observatory and candidates with observational expertise are particularly encouraged to apply.

In addition to the basic salary, an allowance will be provided for international travel and research expenses.

Applications should include a statement of research interests, a CV, a list of publications and the names and email addresses of three referees. The applications, as well as 3 letters of reference, should be emailed to Catherine Cress (cressc@ukzn.ac.za) before 31 January 2005. Preference will be given to early applications but late applications will be considered.

For more information visit <http://www.acru.ukzn.ac.za/~acru/index.html>

No. 21512
Director of Planetarium and Science Center
UNIVERSITY OF TEXAS AT ARLINGTON
Box 19059
501 Yates St., 108 Science Hall
Arlington, TX 76013
USA
Tel: 817-272-2087
FAX: 817-272-3637
URL1: <http://www.uta.edu/eoaa/adblank.htm>
(UTA Employment Openings)
Email Submission Address: osborn@uta.edu
Email Inquiries: osborn@uta.edu

Attention: Amy Osborn, Planetarium Search Committee

The Department of Physics at the University of Texas at Arlington (UTA) is seeking qualified candidates for a full-time position as Director of the UTA Planetarium and Science Center.

Applicants for the position of director are expected to have significant experience in planetarium operations. Candidates with appropriate degrees will be preferred, but extensive experience may substitute for degrees. Candidates with PhD or Ed. D. in Physics, Astronomy, Science Education, or a related discipline may be considered for possible academic appointment and duties. Applicants should have demonstrated interest in astronomy education and outreach activities. The successful applicant must show evidence of leadership, management abilities, technical expertise, budgetary acumen, and ability to obtain external funding. Salary and type of appointment will be commensurate with education and experience. Evaluation of candidates will begin immediately and continue until the position is filled.

In January, 2006 the UTA Physics Department will move into a new building that is now under construction. This three-story, 123,000 sq ft building will house research and instructional facilities, including a state-of-the-art planetarium with a fifty-five foot diameter dome which seats about 200 people. The planetarium will be equipped with a digital imaging system (DigiStar3), and will be used for classroom instruction, K-12 outreach and public shows. In addition to astronomy programs it will present feature productions and interactive computer simulations of a large variety of academic subjects. A second, separately housed planetarium with a thirty foot diameter dome and a digital projector (DigiStar3 SP) is now ready for use as a program production studio and teaching facility.

Candidates should forward a letter of application, curriculum vitae, and the names of three references to: Chairperson, Planetarium Search Committee, Box 19059, The University of Texas at Arlington, Arlington, TX 76019. This offer is contingent upon satisfactory completion of all pre-employment screening requirements, including a criminal background check for security sensitive positions.

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

No. 21513
Postdoctoral Research Associate in MHD Astrophysics
ECOLE NORMALE SUPERIEURE
Laboratoire de Radioastronomie
24 rue Lhomond
FRANCE
Tel: 011-33-1-44-32-33-53
FAX: 011-33-1-44-32-39-92
URL1: <http://www.lra.ens.fr>
(ENS Lab. de Radioastron. homepage)
Email Submission Address: balbus@lra.ens.fr

Attention: Steven A. Balbus, Professor of Astrophysics

Applications are invited for Postdoctoral Fellowships in the Physics Department at the Ecole Normale Supérieure (ENS) in Paris. These positions have been made available by a Chaire d'Excellence award to Prof. Steven Balbus, for the purpose of establishing a center for high-performance multi-processor computation dedicated to numerical research in MHD problems in astrophysics and closely related areas (e.g. dynamo theory). We seek applicants with a background in either numerical or theoretical MHD processes who will be able to use the Center's resources productively. Funding will initially be for a period of one year, with the expectation of renewal for a second year based on satisfactory performance. The positions will be hosted by the Laboratoire de Radioastronomie at the ENS, whose permanent members include S. Balbus, E. Dormy, E. Falgarone, M. Gerin, P. Hennebelle, and M. Perault. The group enjoys strong ties with the ENS physics department, in particular with the laboratory of S. Fauve, where MHD fluid experiments are actively pursued. There are also ongoing interactions with members of the Institut d'Astrophysique and the Observatoire de Paris, a 15 minute walk from the ENS. Applicants should send a curriculum vitae, a publication list, a statement of research interests and experience, and arrange to have three letters of recommendation sent to the above address. Complete applications should be received before FEBRUARY 1, 2005 for full consideration. Later applications will also be accepted as new positions are made available. Women and minorities are encouraged to apply.

No. 21514
Assistant Professor of Astrophysics
HARVARD UNIVERSITY
Jefferson Physical Lab., Rm. 370
17 Oxford St.
Cambridge, MA 02138
USA
Tel: 6174952866
FAX: 6174950416
Email Submission Address: currier@physics.harvard.edu

Attention: Ms. Bonnie Currier, Administrator to the Chair

Assistant Professor Appointment in Astrophysics Harvard University seeks to expand its program at the interface between physics and astronomy. Applications are invited from applicants working in the areas of particle astrophysics, cosmology, gravitation, and related fields. We encourage applications from both theorists and experimental/observational scientists. We seek to appoint an Assistant Professor for an initial five-year term, to start in the 2005-06 academic year, with eventual promotion (to untenured Associate Professor and subsequently to tenured Professor) possible for outstanding candidates. We are especially interested in receiving applications from, or information about, women and minority candidates. Applications should be sent by January 31, 2005 to: Astrophysics Search Committee, c/o Bonnie Currier, Department of Physics, Harvard University, Jefferson Physical Lab, Rm. 370, 17 Oxford St., Cambridge, MA 02138 Applications should include a curriculum vitae, a publication list, and brief research and teaching statements. Candidates should ask three referees to send professional evaluations to the above address. Harvard University is an Equal Opportunity/Affirmative Action Employer.

No. 21515
Fellowship in Stellar Astrophysics
AUSTRALIAN NATIONAL UNIVERSITY
Tel:
URL1: <http://www.mso.anu.edu.au>
Email Submission Address: jobs@anu.edu.au
Email Inquiries: academic.services.rsaa@anu.edu.au

Attention: Recruitment Officer

The Research School of Astronomy and Astrophysics invites applications for a three-year Postdoctoral or Research Fellowship in stellar astrophysics starting in 2005 to work in the research group of Dr Martin Asplund. The successful candidate will participate in a research program aimed at modelling stellar atmospheres and spectral line formation and applying these state-of-the-art techniques to abundance analyses of Galactic bulge and halo stars. The research is part of a vigorous international collaboration with access to excellent observing (eg AAT, Gemini, VLT, McDonald) and supercomputing facilities. Both observational and computational / theoretical candidates with interest in either of the above sub-projects are encouraged to apply. Candidates should have a strong background in one or more of the following areas: numerical hydrodynamics, radiative transfer, non-LTE line formation, observational high-resolution optical/IR stellar spectroscopy, data reduction, stellar abundance analysis techniques. Salary range: \$AUD52,863 - \$AUD70,106 (depending on level of qualifications and experience) plus generous 17% superannuation, plus relocation allowance and research funds for travel and computing equipment. Enquiries about the position: Dr Martin Asplund, E: martin@mso.anu.edu.au. Selection criteria must be obtained prior to application and can be obtained from: <http://info.anu.edu.au/hr/jobs/> (ANU job reference number RSAA2673), or from: academic.services.rsaa@anu.edu.au. Closing date: 31 January 2005. Candidates should arrange for three letters of recommendation to be sent to: academic.services.rsaa@anu.edu.au by the closing date.

No. 21516
Fellowship in extragalactic astronomy
AUSTRALIAN NATIONAL UNIVERSITY
Tel:
URL1: <http://www.mso.anu.edu.au>
Email Submission Address: jobs@anu.edu.au
Email Inquiries: academic.services.rsaa@anu.edu.au

Attention: Recruitment Officer

The Research School of Astronomy and Astrophysics (RSAA) invites applications for a three-year postdoctoral position in extragalactic astronomy. The successful candidate will join Frank Briggs (RSAA), Matthew Colless (AAO) and Jayaram Chengalur (NCR-TIFR) in an Australian Research Council

sponsored project to explore the relationship between star formation and gas consumption in galaxies as a function of redshift. RSAA is part of the Institute of Advanced Studies at the Australian National University (ANU) and operates the Mount Stromlo and the Siding Spring Observatories. In addition, RSAA staff have access to Australia's radio and optical astronomical facilities / partnerships (including the Australia National Telescope Facility, the Anglo-Australian Telescope and Gemini) and ANU supercomputing facilities. Salary range: \$AUD52,863 - \$56,569 per annum, plus generous 17% superannuation, plus relocation allowance. Start date: by July 2005 preferred. Enquiries about the position: Frank Briggs, E: fbriggs@mso.anu.edu.au; or Matthew Colless, E: colless@aao.gov.au. Selection criteria must be obtained prior to application and can be obtained from: <http://info.anu.edu.au/hr/jobs/> (ANU job reference: RSAA2674), or from: academic.services.rsaa@anu.edu.au. Closing date: 31 January 2005. Candidates should arrange for a minimum of two letters of recommendation to be sent to: academic.services.rsaa@anu.edu.au by the closing date.

No. 21517**Postdoctoral and Senior Research Awards in the Space and Planetary Sciences in US Government Laboratories****NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES**

500 5th Street NW

GR 322A

Washington, DC 20001

US

Tel: 202-334-2768

FAX: 202-334-2759

URL1: <http://www.national-academies.org/rap>Email Submission Address: jdellamo@nas.edu**Attention: Jane Dell'Amore, Manager for Promotions and Outreach**

The National Research Council of the National Academies is seeking applications for competitive awards for independent postdoctoral and senior scientific research to be conducted at participating US 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 \$65,000 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 establish contact with a Research Adviser prior to submitting a formal application to the NRC. Annual 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 instructions on how to apply, can be found on the NRC Web site at www.national-academies.org/rap. Applications must be submitted online. NRC representatives will be available at the NRC/NA exhibit booth #324 at the American Astronomical Society 205th Annual meeting in January 2005 in San Diego, CA.

No. 21518**Director of Multiple Mirror Telescope Observatory (MMTO)****UNIVERSITY OF ARIZONA**

Steward Observatory

933 N. Cherry Ave.

Tucson, Arizona 85721

USA

Tel: (520) 626-7558

FAX: (520) 621-1532

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

(Steward Observatory/Astronomy Home Page)

URL2: <http://www.mmt.org>

(Multiple Mirror Telescope Observatory HP)

Email Submission Address: dzaritsky@as.arizona.edu**Attention: Dr. Dennis Zaritsky, Chairman, Search Committee**

The University Of Arizona Department Of MMTO and Steward Observatory invite applications for the position of Director of the Multiple Mirror Telescope Observatory, held jointly at the University of Arizona and the Smithsonian Astrophysical Observatory (SAO). The MMT is a versatile 6.5m telescope with unique capabilities in adaptive optics and wide-field imaging and spectroscopy. The MMTO administrative offices are located on the University of Arizona campus in Tucson, although the Director is expected to make regular visits to the observatory site.

For full details and qualifications, and to complete on-line application, see posting #31952 at <http://www.uacareertrack.com>. Curriculum vitae, statements of research interest and contact information for 3 individuals who can provide references must be submitted directly to Dr. Dennis Zaritsky, at the above address.

The application review process will begin 2/1/05 (though applications after this time will certainly be entertained) and will continue until the position is filled.

The University of Arizona and the Smithsonian Astrophysical Observatory are EEO/AA Employers - M/W/D/V.

No. 21521**Director Spanish-German Astronomy Centre Centro Astronómico Hispano Alemán (CAHA)****MAX-PLANCK-SOCIETY**

Koenigstuhl 17

Heidelberg, Germany D - 69117

Germany

Tel: +49 6221 528201

URL1: <http://www.caha.es>URL2: <http://mpg.de>Email Submission Address: henning@mpia.deEmail Inquiries: henning@mpia.de**Attention: Prof. Dr. Thomas Henning, Chairman of the Search Comitee**

The Spanish Consejo Superior de Investigaciones Científicas (CSIC) and the German Max-Planck-Gesellschaft (MPG) seek a new Director for the Centro Astronómico Hispano Alemán (CAHA), located at Calar Alto (Spain). CAHA is operated jointly by CSIC and MPG with the two partner institutes Instituto de Astrofísica de Andalucía (IAA) Granada, and the Max-Planck-Institut für Astronomie (MPIA), Heidelberg. CAHA operates the Calar Alto Observatory with 3.5, 2.2., and 1.23m telescopes (<http://www.caha.es>).

The CAHA director is responsible for the overall operation of the Observatory within CSIC and MPG guidelines. The Director interacts actively with the partner institutes in order to promote excellence in the scientific exploitation of the Observatory. The Director should have demonstrated experience in running a large facility. He should also have demonstrated talent for administration and management, and skill in institutional and international relations.

The appointment is initially for five years and should start January 1st, 2006 with an overlapping period with the present director, starting in fall 2005. CAHA offers a competitive salary and an interesting working environment.

The Search Committee will begin evaluating applications on February 1st, 2005. Applications will be accepted until the position is filled. Application letters should include a CV, publication list, relevant information on experience, and three letters of reference.

Applications should be sent to

Prof. Dr. Thomas Henning Chairman of the Search Committee Max-Planck-Institut für Astronomie Königstuhl 17 D-69 117 Heidelberg Germany

The MPG and the Csic are equal opportunity employers. Applications from women and historically under-represented groups are particularly welcome.

No. 21522**Postdoctoral Position in Cosmology****UNIVERSITY OF MELBOURNE**

Tel:

Email Submission Address: hr-applications@unimelb.edu.auEmail Inquiries: swyithe@physics.unimelb.edu.au**Attention: Vice Principle (Human Resources)**

The Astrophysics Group in the School of Physics at the University of Melbourne invites applications for a Postdoctoral Research Position in Cosmology (either theoretical or observational) with interests in the formation of structure in the early universe and the reionization of cosmic hydrogen. The successful applicant will work with Dr Stuart Wyithe and Dr David Barnes (University of Melbourne) and Prof. Abraham Loeb (Harvard University). The position includes provision for annual visits to Harvard University for the purpose of collaboration with Prof Loeb.

The nominal start date is 1st April 2005, but later appointments are possible. The position is for two years, renewable for a third year, contingent on performance and funding. For information and position description, contact: Dr Stuart Wyithe +61 3 8344 5083, email: swyithe@physics.unimelb.edu.au. Prospective applicants are invited to inspect the Astrophysics home page for further details: <http://astro.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 hr-applications@unimelb.edu.au by January 31, 2005, quoting position number Y0015092.

No. 21525**Software Engineers****THE INSTITUTE OF ASTRONOMY AND ASTROPHYSICS, ACADEMIA SINICA (ASIAA)**

PO Box 23-141

Taipei, Taiwan 106

ROC

Tel: +886-2-33652200

FAX: +886-2-23677849

URL1: <http://www.asiaa.sinica.edu.tw>

(ASIAA)

Email Inquiries: pslaw@asiaa.sinica.edu.tw; syliu@asiaa.sinica.edu.tw**Attention: Dr. Sun Kwok, Director**

The Academia Sinica Institute of Astronomy and Astrophysics (ASIAA) has openings for two software engineers work for the Atacama Large Millimeter

Array (ALMA) project.

The ALMA will be comprised of 80 sub-millimeter quality antennas and will be located in Chile at an altitude of 5000 m. The ALMA will be the largest ground-based astronomy project of the next decade and an international collaboration among Europe, North America, and Japan. We are planning to join the ALMA project through Japan. The software engineers for the ALMA are expected to join the development activities in the US and Europe. However, they are also expected to support the users in Taiwan after the major part of the software is released.

1) Software engineer for pipeline & scheduler subsystem

The primary function of the pipeline system is to perform automated calibration and imaging of ALMA data taken in the standard observing modes and to write standard data products to the archive. The ALMA scheduling subsystem manages the execution of approved observing projects. The scheduling subsystem selects work to be executed by the ALMA telescope taking into account the current conditions and input from the operator, and monitors the state of active observing projects.

The successful candidate will join the software development groups of pipeline and offline data reduction subsystems in the National Radio Astronomical Observatory (NRAO) in the US. Development tools of these subsystems are Java, Python, C, and C++. The work location will primarily be in Socorro, NM, U.S.A.

2) Software engineer for ALMA archiving subsystem

The ALMA archiving subsystem provides services for persistent archiving and retrieval of all proposal and preparation input, all observational data, observation descriptors, all data products (e.g. images) generated by the pipeline and technical and environmental data.

The successful candidate will join the archive subsystem development group in European Southern Observatory (ESO) in Germany. The successful candidate will also be required to join the development of ALMA Common Software that is used as a framework for all software subsystems. Therefore applicants are desirable to be familiar with CORBA and XML in addition to Java, Python, C, and C++. The work location will primary be in Garhing, Germany.

Both positions are the full-time, three-year term appointment with a three-month probation period at the beginning as well as a yearly performance assessment procedure. Renewal for up to five years is possible, subject to satisfactory performance. Further extension for user support in Taiwan will be taken into consideration. The starting date is May 2005, but earlier appointment is preferred.

Qualifications 1) The position requires a Bachelor's or equivalent degree in computer science, astronomy, physics, or a related field and experience with Java, C, C++, and Linux/Unix development. 2) Candidates who are familiar with CORBA, Python and XML are desirable. 3) Candidates must possess good communication skills (both written and verbal) in English

Inquires about these positions may be directed to Mr. Paul Yang-Tai Shaw (pshaw@asiaa.sinica.edu.tw) and those related to the ALMA projects may be directed to Dr. Sheng-Yuan Liu (syliu@asiaa.sinica.edu.tw).

Applicants should submit an English resume listing relevant experience, and university transcript written in English to be sent to the above address. Also, applicants must arrange for at least one letter of reference to be sent directly to the same address. Applications are due by January 31, 2005.

No. 21526

Postdoc position in cosmology (dark energy)
INSTITUTE OF THEORETICAL ASTROPHYSICS, UNIVERSITY OF OSLO
P.O.Box 1032 Blindern
Norway
Tel: +47 22856357
FAX: +47 22856339
URL1: <http://www.astro.uio.no>
(Home page of the ITA)
URL2: <http://www.astro.uio.no/ita/seminarer/kosmologi/front.html>
(Home page of the project)
Email Inquiries: oelgaroy@astro.uio.no

Attention: Gro Corell, consultant

A position as a postdoctoral research fellow at the Institute of theoretical astrophysics, University of Oslo, is available. The position is vacant from February 2005, or from a date to be agreed upon with the successful applicant, and can be held for a period of up to two years. The applicant should hold a Ph.D. degree in physics, astrophysics or a closely related subject.

The position is connected to the project "Shedding light on dark energy - theory and observations", funded by the Research Council of Norway. The successful applicant is expected to carry out theoretical and/or observational research on problems related to dark energy in the universe.

The application must include a CV, list of publications, exam marks, and a short research proposal. The applicant should also arrange for two letters of reference to be sent to the address above. Note that email applications are not accepted.

The University of Oslo is an equal opportunities employer. Women are encouraged to employ.

No. 21527

**Quantitative Financial Analyst
WATERFRONT INTERNATIONAL LTD**

Tel:

Email Submission Address: recruiting@wil.com

Email Inquiries: recruiting@wil.com

Attention: WIL Recruiter

Waterfront International is a Toronto-based financial consulting firm, specializing in developing computer based statistical trading strategies. Waterfront's selective hiring process considers only highly talented individuals with a history of exceptional professional and academic achievement, and solid real-world experience.

Primary Responsibilities:

- Developing, testing and implementing quantitative trading models.
- Models will be based on quantitative data analysis rather than qualitative analysis.
- Research strategies in equities and other markets.

Requirements of the Candidate include:

- PhD or Masters in physics, statistics or mathematics.
- Strong working knowledge of finance and statistics.
- CFA or working toward the CFA designation.
- Must possess expert level C/C++ programming skills.
- Must be a strong self-starter and able to work well independently.

Please submit a resume to: recruiting@wil.com

No. 21528

**Assistant Professor in Astronomy
UNIVERSITY OF NEVADA, LAS VEGAS**

Tel: 702-895-1655

URL1: <http://hrsearch.unlv.edu/>

(Human Resources Employment Services)

URL2: <http://www.physics.unlv.edu/>

(UNLV Physics Department Information)

Email Submission Address: hrsearch@ccmail.nevada.edu

Email Inquiries: hrsearch@ccmail.nevada.edu

Attention: Bob Sitts, Manager of Employment and Compensation

The Physics Department at UNLV invites applicants for a full-time, 9-month, tenure-track Assistant Professor in Astronomy starting August 2005. The successful candidate must have a Ph.D. in astronomy or related area from an accredited college of university and is expected to teach effectively at the undergraduate and graduate levels, as well as carry out an active, independent research program. Preference will be given to applicants who primary interest overlaps departmental research areas and who have at least two years post doctoral experience. Current research interests in the astronomy group include cosmology, high energy astrophysics, interstellar medium, galactic astronomy, and star formation. Departmental facilities include a distributed computing laboratory. Las Vegas has easy access to the major astronomical centers in the southwest US. The successful candidate will also be expected to participate in service activities at the department, college and university levels. Additional information about the department may be obtained from our web site, <http://www.physics.unlv.edu/>. Salary competitive; contingent on labor market. Position is contingent upon funding. Start-up funding will be available.

Application details may be obtained by visiting <http://hrsearch.unlv.edu/> .

UNLV is an Affirmative Action/Equal Opportunity educator and employer committed to excellence through diversity.

No. 21529

Astrophysics Support to the Planck Science Office

SERCO FM BV AT ESA/ESTEC

Ambachtsweg 20A,1e

Katwijk, Zuid-Holland 2222AL

The Netherlands

Tel: +31 71 401 6070

FAX: +31 407 4014

Email Submission Address: careers@serco-fm.nl

Attention: M. R Thomas, Recruitment Manager

SERCO FACILITIES MANAGEMENT BV SERCO GESTION DE NEGOCIOS S.L.

Serco is a leading international task management contractor. Our reputation for quality has seen us provide comprehensive support and engineering services to many governments and industrial clients world-wide. Serco Gestion de Negocios S.L. and Serco Facilities Management BV are part of the Serco Group of companies. We have a vacancy for Support Scientists for the Planck Science Office with the European Space Agency, based initially at ESTEC, Noordwijk, The Netherlands, and later on at VILSPA, ESA's Satellite Tracking Station in Villafranca del Castillo near Madrid, Spain.

Planck is the third Medium-Sized Mission (M3) of ESA's Horizon 2000 Scientific Programme. It is designed to image the anisotropies of the Cosmic Background Radiation Field over the whole sky, with unprecedented sensitivity and angular resolution. Planck will provide a major source of information relevant to several cosmological and astrophysical issues, such as testing theories of the early universe and the origin of cosmic structure. More information on Planck is available at <http://www.rssd.esa.int/Planck/>.

The Planck Science Office (PSO) is taking care of the Planck scientific programme, to safeguard the interests of the science community, and to maximise the scientific return of the Planck mission during all its phases. It is ESA's interface to the scientific community, the instrument consortia, and the Reflector Provider for all Planck scientific matters. The Support Scientist should give support to the Project Scientist (PS) and his deputy on all issues concerning scientific operations of the satellite, and the coordination of the interface with the community. This comprises among others participation in the following tasks:

- Instrument specific support tasks pre-launch: instrument testing, validation and calibration, data analysis and processing, writing of documentation
- Instrument specific support tasks post-launch: instrument commissioning, calibration and data analysis, updating and maintaining of documentation (e.g. Instrument Calibration Handbook), quality control and monitoring of instrument data processing, software maintenance and upgrades.
- Scientific Operations Support Tasks pre- and post-launch: preparing and maintaining the Planck Science operations plans and survey strategy

Workload permitting, the Support Scientists are encouraged to carry out scientific research activities as long as they are connected to the Cosmic Microwave Background or any other area of research related to Planck.

We are seeking candidates with the following education and skills:

- Ph.D. thesis in astrophysics or equivalent

Experience in space experiments, in particular the testing, operation, and calibration of scientific instruments and the development of data analysis software

- Active involvement in astronomical research in one of the areas within the scientific objectives of Planck
- Strong communication and co-ordination skills and an understanding of the relevant scientific issues
- Computer skills and familiarity with modern operating systems, experience with development of scientific software in an environment such as IDL
- Fluent in English (the official languages of ESA are English and French)

The positions will initially be for a three-year period with a possible two-year extension thereafter, located initially in ESTEC and later on in VILSPA, Madrid, Spain, starting as soon as. Serco is an equal opportunity employer and provides relocation assistance where required.

No. 21530

Postdoctoral and Doctoral Positions in ALMA and APEX-SZ Science

ASTRONOMICAL INSTITUTES, UNIVERSITY OF BONN

Auf dem Huegel 71

Bonn, D- 53121

Germany

Tel: +49-228-736789

FAX: +49-228-731775

URL1: <http://www.mpifr-bonn.mpg.de/staff/bertoldi/sz/>
(APEX-SZ Project)

URL2: <http://www.astro.uni-bonn.de>
(Astronomy at the University of Bonn)

Email Submission Address: bertoldi@astro.uni-bonn.de

Email Inquiries: bertoldi@astro.uni-bonn.de

Attention: Frank Bertoldi, Prof. Dr.

Applications are invited for three postdoctoral positions and three PhD fellowships.

Two postdoctoral positions are offered in observational cosmology associated with the APEX Sunyaev-Zeldovich Survey, the first large scale galaxy cluster survey which is expected to begin in 2005. Relevant skills and areas of interest for the candidate may include cosmology, dark energy, galaxy evolution, bolometer observations, the identification of galaxy clusters in radio, optical, or X-rays surveys, optical/NIR spectroscopy.

Successful candidates will join the APEX-SZ team at the University of Bonn and the Max-Planck-Institute for Radioastronomy in Bonn, and will closely interact with the partners at U.C. Berkeley, the MPA and MPE Garching, and the IAP in Paris. They are expected to actively participate in the APEX survey through bolometric, optical, or near-IR observations, data and cosmological modeling, or software development. The positions are for two years, possibly renewable for a third year.

Applications are also invited for a postdoctoral position in (sub)mm interferometry. The applicant is expected to lead the establishment of local expertise in extragalactic science and observational techniques in preparation for ALMA, within the newly founded Center for Interferometry joining the Universities of Bonn, Cologne, Bochum, and the MPIfR. The position is initially for two years, with the possibility of a long-term appointment.

Three PhD fellowships are available in the above mentioned and in related fields.

All applicants should send an application including a CV, publication list, description of research interests, and arrange for the submission of three letters (at least one for PhD applicants) of recommendation by 1 Feb 2005, although applications will be accepted until the positions are filled. Postdoc salaries are paid at the German civil service rate. Women and minorities are particularly encouraged to apply.

No. 21531
Electronic Engineers
NATIONAL RADIO ASTRONOMY OBSERVATORY
520 Edgemont Road
Charlottesville, Virginia 22903
USA
Tel:
URL1: <http://www.nrao.edu>
(Home Page)
Email Submission Address: rnorvill@nrao.edu

Attention: Roy Norville, Deputy HR Manager

The National Radio Astronomy Observatory (NRAO) has openings for Electronic Engineers: (1) Utilize radio astronomy instrumentation including vector network analyzers, signal generators, spectrum analyzers and power meters to design and develop equip. for radio-telescope receiver syst. Specify and test integrated IF switch/amplifier/equalizer modules. Design monitor and control electronics for cryogenic and vacuum syst. Responsible for overall syst. integration testing and debugging of cryogenically cooled mm/sub-mm wave receivers. Req. Master's degree (or foreign equivalent) in Engineering, Info. Syst., or rel. field, plus 5 yrs. of related exp. (2) Utilize code development tools and low-noise mm wave receiver syst. exp. to design, develop and test embedded control and monitor software for the receiver syst. in the ALMA radio telescopes array. Utilize specified bus. architecture/protocols, hardware design concepts and test instruments including logic analyzers and mixed-signal oscilloscopes to design, develop and document firmware/software for photonic local oscillator syst. Develop and design software for testing/tuning of phase-locked laser synthesizers. Req. Bachelor's degree (or foreign equivalent) in Physics or rel. field plus rel. education, training or experience. (3) Utilize engineering techniques common to instrumentation for radio astronomy telescopes including electronics module testing using LabView, digital/analog electronic design and debugging and designing /specifying modular DC power supply types and specifications to design and develop support electronics and test software for cryogenically cooled, low-noise mm wave receivers. Using knowledge of mm-wave SIS mixers, receiver bias and control electronics, cooled low-noise microwave amplifiers, cryogenic syst. and photonics to utilize dig. electronics, Xilinx CPLDs and OrCAD CAE tools to design dig. interface logic for synchronous serial links. Design and test DC power supply switching and conditioning electronics using logic analyzers, oscilloscopes and signal generators. Design and develop custom LabView applications for testing prototype and production receiver hardware and test syst. Req. 10 yrs. of electronic engineering exp. including exp. w/ electronics module testing, troubleshooting/repairing analog/digital electronic assembly at circuitry level and designing instrumentation in collaboration with scientists. Indicate clearly which position. No phone calls.

No. 21532
POSTDOCTORAL POSITION IN HIGH-ENERGY ASTROPHYSICS/OBSERVATIONAL COSMOLOGY
UNIVERSITY OF NORTH CAROLINA
Department of Physics and Astronomy
Phillips Hall, Campus Box 3255
Chapel Hill, NC 27599-3255
USA
Tel: (919) 962-5310
FAX: (919) 962-0480
URL1: <http://www.physics.unc.edu/~reichart>
(Dan Reichart's Homepage)
Email Submission Address: reichart@physics.unc.edu
Email Inquiries: reichart@physics.unc.edu

Attention: Dan Reichart, Assistant Professor

Applications are invited for a postdoctoral position in high-energy astrophysics/observational cosmology. Those with experience in the gamma-ray burst (GRB) field or with high-redshift quasars or galaxies are especially encouraged to apply. The successful candidate will have observational experience and preferably spectroscopic experience, and will work with Prof. Dan Reichart's growing group on one or more of the following projects:

1. Supported by NSF's MRI and PREST programs, we are now building PROMPT (Panchromatic Robotic Optical Monitoring and Polarimetry Telescopes) at the Cerro Tololo Inter-American Observatory (CTIO). PROMPT consists of six rapidly slewing 0.41-meter diameter Ritchey-Chrétien telescopes that image GRB afterglows in u'g'r'Rci'z'YJH and measure polarizations in Rc within seconds of spacecraft notification of the explosion, when they are still potentially very bright, even if at great distance. Swift should localize ~150 GRBs per year and ~10% of these are expected to be at $z > 7$. PROMPT will be able to identify such events by dropout and distinguish this signature from the similar signature of extinction.

For more information about PROMPT:

<http://www.physics.unc.edu/~reichart/prompt.html>

<http://www.physics.unc.edu/~reichart/solidworks.html>

<http://www.physics.unc.edu/~reichart/promptpics.html>

<http://www.physics.unc.edu/~evans/promptcam/promptcam.html>

2. UNC is a 17% partner in the 4.1-meter diameter SOAR (Southern Observatory for Astrophysical Research) telescope, which is also at CTIO. From our remote observing centers in Chapel Hill, we will be able to interrupt the current observation, even if UNC is not on the telescope at this time, switch to either the NIR or UNC-built optical spectrograph in less than a minute, and begin observing within minutes. With SOAR, we will use GRBs to extend our knowledge of the star-formation, metallicity, and reionization histories of the universe.

3. UNC is also a 3% partner in the 9.1-meter effective diameter SALT (Southern African Large Telescope), which we will use to follow up sufficiently bright afterglows that we first observe with PROMPT and SOAR. UNC also has exclusive GRB access at Tenagra Observatories, Ltd., in southern Arizona, where we will robotically observe afterglows on the rapid timescale with their 0.8-meter, 0.6-meter, and 0.5-meter diameter telescopes.

4. Finally, UNC is the organizational center of the Follow-Up Network for Gamma-Ray Bursts (a.k.a. the FUN GRB Collaboration), a global network of ~40 telescopes. Our remote observing centers will serve as coordination centers for the collaboration in the Swift era.

Applicants should send a curriculum vitae, a statement of research experience and interests, a publication list, and three letters of recommendation to Prof. Dan Reichart at the above address by February 1, 2005. This position is funded by NASA's APRA program and nominally begins July 1, 2005.

The University of North Carolina is an equal opportunity employer. Minorities and women are encouraged to apply.

No. 21533

Research Positions in Planetary Formation, Accretion Disk Theory, and Solar System Dynamics

QUEEN MARY, UNIVERSITY OF LONDON

Queen Mary, University of London

Mile End Road

U.K.

Tel: +44 20 7882 5454

FAX: +44 20 8983 3255

URL1: <http://www.maths.qmul.ac.uk/Astronomy/jobs/>

(Application forms and job description)

Email Submission Address: Astronomy@qmul.ac.uk

Email Inquiries: Astronomy@qmul.ac.uk

Attention: Ms. Kay Whitehead, Astronomy Secretary

The Astronomy Unit at Queen Mary, University of London invites applications for postdoctoral research positions in the areas of planetary formation, accretion disk theory, and solar system dynamics.

The Astronomy Unit has active research groups in solar system dynamics, solar and stellar physics, planetary formation, galaxies, and cosmology, covering both observations and theory.

Appointments will be for two years in the first instance, starting from October 1, 2005. Salary will be in the range 23774 - 25777 U.K. pounds depending on age and experience. Applicants should have a PhD in astronomy or related field at the start of employment.

Informal enquiries may be made to Prof J.P. Emerson (Tel: +44 20 7882 5040; email: Astronomy@qmul.ac.uk). Application forms are available from the web address given above, or by request from Astronomy@qmul.ac.uk. Completed application forms, a CV, a statement of research interests and three letters of reference should arrive by February 4, 2005 to receive full consideration.

No. 21534
JUNIOR SCIENTIFIC RESEARCHER (THEORETICAL ASTROPHYSICS)-ID# 24659
RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII
 2530 DOLE ST.
 SAKAMAKI HALL, D-100
 HONOLULU, HI 96822
 USA
 Tel: 808-956-3100
 FAX: 808-956-5022
 URL1: <http://www.rcuh.com>

Attention: NELSON SAKAMOTO, DIRECTOR, HUMAN RESOURCES

The Institute for Astronomy, University of Hawaii in Honolulu, Hawaii invites applications for Non-Regular, Full-Time Postdoctoral position. Perform work on novel techniques to analyze large data sets, particularly megapixel CMB maps & large galaxy surveys. Project also includes development, testing & implementation of new analysis methods, as well as data & simulations. Closing date for this recruitment is: February 28, 2005.

Candidates should have Ph.D. in Astronomy or Physics. Experience in CMB and/or large-scale structure research. Experience in computational methods, data analysis & programming. Knowledge of CMB and/or large-scale structure research. Skill in computational methods, data analysis & programming. Salary commensurate with qualifications.

Prospective candidates are encouraged to call or email Istvan Szapudi (808-956-6196, szapudi@ifa.hawaii.edu) to discuss scientific aspects of the job.

TO APPLY: The preferred method of applying for this job is through our on-line application process. Please go to www.rcuh.com, click on "Employment" and navigate to "Job Announcements/Apply for a Job." However, if you do not have access to the Internet, you may apply by submitting resume; cover letter including ID#, referral source, narrative of your qualifications for position and salary history; names, phone numbers and addresses of three supervisory references and copy of degree(s)/transcripts/certificate(s) to confirm your credentials by fax (808) 956-5022 or mail to Director of Human Resources, Research Corporation of the University of Hawaii, 2530 Dole Street, Sakamaki Hall D-100, Honolulu, HI 96822 before the closing date. EEO/AA Employer

No. 21535
Instrumentation Scientist
ANGLO-AUSTRALIAN OBSERVATORY
 PO Box 296
 Epping
 Sydney, NSW 1710
 Australia
 Tel: 61293724863
 FAX: 61293724860
 URL1: <http://www.aao.gov.au/local/www/jobs>
 Email Submission Address: jobs@aaoepp.aao.gov.au
 Email Inquiries: jbh@aaoepp.aao.gov.au

Attention: Greta Simms, Recruitment Officer

ANGLO-AUSTRALIAN OBSERVATORY

INSTRUMENT SCIENTIST Aus\$72,936–Aus\$89,975 per annum

Applications are invited for the above position, which is based at the Anglo-Australian Observatory (AAO) at Epping in Sydney. The AAO, which is one of the world's leading astronomical facilities, operates two major optical telescopes, the 3.9m Anglo-Australian Telescope (AAT) and the 1.2m United Kingdom Schmidt Telescope (UKST). The telescopes are located at Siding Spring Mountain near Coonabarabran in north-west New South Wales.

The Observatory is seeking an Instrumentation Scientist to work on enhancing the existing instrumentation and telescope systems, and develop new instrumentation both for the AAO's telescopes and other observatories. The current instrumentation includes state of the art robotic fibre optic positioning systems and optical and near infrared imagers and spectrographs (see <http://www.aao.gov.au/astro/instrum.html>).

The successful applicant will have a degree in astronomy, physics, engineering or a similar field, and high technical competence and experience in the development and commissioning of complex instrumentation. Tasks will include identifying and implementing improvements to current instrumentation and R&D of technologies for new instrumentation.

The appointment is for a fixed 3-year term and includes an attractive superannuation scheme. Starting salary will be based on experience and skills.

In order to apply you need to obtain the employment information package and follow its guidelines. You can get the package by contacting Greta Simms (+61-2-9372-4863; gcs@aao.gov.au) or from the WWW: <http://www.aao.gov.au/local/www/jobs>. The contact officer for this position is Joss Hawthorn (+61-2-9372-4851; jbh@aao.gov.au).

Written applications addressing the selection criteria should be sent to:

Greta Simms Anglo-Australian Observatory P.O. Box 296, Epping NSW 1710, Australia

Or Fax to +61-2-9372-4880

Applications close on Friday, 4 February 2005.

The Anglo-Australian Observatory is an equal opportunity employer.

No. 21536
Software Engineer
ANGLO-AUSTRALIAN OBSERVATORY
PO Box 296
Epping
Sydney, NSW 1710
Australia
Tel: 61293724863
FAX: 61293724860
URL1: <http://www.aao.gov.au/local/www/jobs>
Email Submission Address: jobs@aoepp.aao.gov.au
Email Inquiries: scb@aoepp.aao.gov.au

Attention: Greta Simms, Recruitment Officer

SOFTWARE ENGINEER Aus\$72,936–Aus\$84,970 per annum

Applications are invited for the above position, which is based at the Anglo-Australian Observatory (AAO) at Epping in Sydney. The AAO, which is one of the world's leading astronomical facilities, operates two major optical telescopes, the 3.9m Anglo-Australian Telescope (AAT) and the 1.2m United Kingdom Schmidt Telescope (UKST). The telescopes are located at Siding Spring Mountain near Coonabarabran in north-west New South Wales.

The Observatory is seeking a Software Engineer to work on a project to upgrade the telescope control system for the AAT. The successful applicant will have a degree in computing, astronomy, physics, engineering or a similar field, and high technical competence and experience in the development and commissioning of complex software. Experience of telescope control systems is highly desirable.

The appointment is for a fixed 3-year term and includes an attractive superannuation scheme. Starting salary will be based on experience and skills.

In order to apply you need to obtain the employment information package and follow its guidelines. You can get the package by contacting Greta Simms (+61-2-9372-4863; gcs@ao.gov.au) or from the WWW: <http://www.aao.gov.au/local/www/jobs>. The contact officer for this position is Sam Barden (+61-2-9372-4852; scb@ao.gov.au).

Written applications addressing the selection criteria should be sent to:

Greta Simms Anglo-Australian Observatory P.O. Box 296, Epping NSW 1710, Australia

Or Fax to +61-2-9372-4880

Applications close on Friday, 4 February 2005.

The Anglo-Australian Observatory is an equal opportunity employer.

No. 21537
instrument scientist for high-energy astrophysics
SPACE RESEARCH ORGANIZATION OF THE NETHERLANDS
Sorbonnelaan 2
Utrecht, Utrecht 3854 CA
Netherlands
Tel: +31-30-253 8594
FAX: +31-30-254 0860
URL1: <http://www.sron.nl>
Email Submission Address: J.den.Herder@sron.nl
Email Inquiries: J.den.Herder@sron.nl

Attention: J-W den Herder, Dr

SRON exploits state of the art instruments for advanced space research and participates in the X-ray missions XMM-Newton and Chandra. For future X-ray missions SRON develops an imaging cryogenic microcalorimeter array of moderate size with very good energy resolving power and multiplexed read-out. In the next three years a prototype will be developed together with European partners. The instrument scientist will participate in this development and become responsible for the integration, testing and calibration of the prototype instrument. The detector will, eventually, be part of the new X-ray observatory and analysis of the instrument performance as a result of the design of the observatory (X-ray optics, straylight etc) will be also part of the job.

Candidates are expected to have a Ph.D. in experimental (astro)physics, practical experience with experiments and data analysis and good communication and organizational skills.

The position is offered for an initial period of two years with the possibility for a permanent position.

No. 21538

Postdoctoral research associate (astrophysical discs)

DEPARTMENT OF APPLIED MATHEMATICS AND THEORETICAL PHYSICS UNIVERSITY OF CAMBRIDGE

Centre for Mathematical Sciences

Wilberforce Road

United Kingdom

Tel: +44 (0)1223 760395

FAX: +44 (0)1223 765900

URL1: <http://www.damtp.cam.ac.uk/user/afdnld/>

Email Submission Address: gjo10@cam.ac.uk

Email Inquiries: gjo10@cam.ac.uk

Attention: Dr Gordon Ogilvie

The Astrophysical Fluid Dynamics and Nonlinear Dynamics research group in the Department of Applied Mathematics and Theoretical Physics, University of Cambridge, invites applications for a postdoctoral research associate position. The successful candidate will work with Dr Gordon Ogilvie and Professor Michael Proctor on instabilities, turbulence and angular momentum transport in astrophysical accretion discs. The project is likely to involve a combination of numerical and analytical techniques. Applicants should have, or be about to obtain, a PhD in a related area of theoretical astrophysics, fluid dynamics or magnetohydrodynamics and should have experience of numerical methods for fluid dynamics. The position is available for approximately two and a half years, with a start date to be arranged by mutual convenience. The salary will be on the research associate scale (GBP 19460-29127) according to age and experience.

DAMTP is located in the new Centre for Mathematical Sciences. The AFD group has strong interests in solar and stellar magnetic fields, accretion discs and nonlinear pattern formation, and will be joined in 2005 by Professor John Papaloizou. We also have close connections with the nearby Institute of Astronomy. Further information can be found at <http://www.damtp.cam.ac.uk/user/afdnld/>

Applicants are requested to send a Form PD18 (downloadable from <http://www.admin.cam.ac.uk/offices/personnel/forms/pd18/>), together with a curriculum vitae, a list of publications, a statement of research interests and the names and e-mail addresses of at least two referees, to Gordon Ogilvie by 1st February 2005.

"Informal enquiries are welcome and should be addressed to gjo10@cam.ac.uk The University of Cambridge is committed to equality of opportunity."

No. 21539

Lectureship in Astronomy

UNIVERSITY OF SOUTHAMPTON

Highfield

Southampton, Hampshire SO17 1BJ

UK

Tel: 44-23-8059-2750

URL1: <http://www.jobs.soton.ac.uk>

(Human Resources, Southampton University)

URL2: <http://www.astro.soton.ac.uk>

(Astronomy Group, Southampton University)

URL3: <http://www.phys.soton.ac.uk>

(School of Physics and Astronomy)

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

Attention: Human Resources (F)

University of Southampton

School of Physics and Astronomy

Lectureship in Astronomy

Ref: 04F0363

The School of Physics & Astronomy seeks to appoint a Lecturer in Astronomy, although this post could be filled at Senior Lecturer/Reader level if an applicant with an outstanding international track record in research is identified.

The Southampton Astronomy Group is a world leading group in high energy astrophysics. Research interests, both observational and theoretical, include X-ray Deep Surveys, Active Galactic Nuclei, Interacting Binaries, Jets and Accretion Physics, and Gamma-Ray Astronomy/Instrumentation. Southampton is the UK centre for involvement in ESA's INTEGRAL Gamma-Ray Observatory. Although applicants with an extragalactic interest are particularly encouraged, we are seeking all applicants whose research interests complement, extend and strengthen the existing areas.

The Southampton School of Physics & Astronomy achieved the highest 5* rating in the last national Research Assessment Exercise, making it one of the top five Physics departments in the UK for research.

Further details of the Astronomy group and its research may be found at: <http://www.astro.soton.ac.uk/>

Informal enquiries may be made to Professor Ian McHardy, email imh@astro.soton.ac.uk, Tel 44-23-80592101

For an appointment at Lecturer level the salary will be in the range 28,850 - 36,546 pounds, depending on experience. For a Senior Lecturer/Reader the scale is 37,643 to 47,335 pounds. The post is available immediately.

Further details are available from Human Resources (F), University of Southampton, Highfield, Southampton, SO17 1BJ, UK. Tel+44 (0)23 8059 2750; email recruit@soton.ac.uk or minicom +44 (0)23 8059 5595 to whom applicants should send a full curriculum vitae (3 copies from UK applicants, 1 from overseas), including the names and addresses of three referees. Alternatively, visit our website www.jobs.soton.ac.uk. To arrive no later than 14 February 2005. Please quote reference number 04F0363.

Working for Equal Opportunities.

No. 21540
Postdoctoral Position in Survey Science and Image Processing - LSST Research Fellow
UNIVERSITY OF WASHINGTON
Department of Astronomy
Box 351580
Seattle, WA 98195
USA
Tel: 206-543-2888
FAX: 206-685-0403
Email Submission Address: office@astro.washington.edu
Email Inquiries: ivezic@astro.washington.edu

Attention: Prof. Zeljko Ivezic, Chair, Search Committee

Applications are invited for a postdoctoral position at the University of Washington starting preferably on July 1, 2005, and no later than Sep 1, 2005, for the duration of three years, pending continuing funding. The responsibilities of this position include work on critical research issues related to the design and construction of image processing pipeline for the Large Synoptic Survey Telescope (www.lsst.org). The successful applicant will be a part of the U.W. LSST design and development group which includes Zeljko Ivezic, Andrew Becker, Suzanne Hawley and Russell Owen, and operates in a close collaboration with LSST research groups led by Chris Stubbs at Harvard University, Robert Lupton at Princeton University, and John Haggerty at Brookhaven National Laboratory. At a minimum, applicants must have a Ph.D. in Astronomy or a closely related field. Experience with image processing, analysis of large data sets and computer science applications in astronomy is preferred, but not necessary.

Please send a 2-page statement of professional qualifications, interests, goals, and accomplishments; a curriculum vitae; bibliography; and the names of three people who will send a letter of reference directly to the Department. Priority will be given to complete applications (with letters) received by March 15, 2005. Documents will be accepted electronically in pdf format sent to office@astro.washington.edu, with subject line "LSST Research Fellow application (your name)".

The University is an Equal Opportunity/Affirmative Action employer.

No. 21541
Senior Scientific Programmer for the Kepler Mission
SETI INSTITUTE
515 N. Whisman Rd.
Mountain View, CA 94043
Tel:
FAX: 650-961-7099
URL1: <http://kepler.nasa.gov>
(Kepler Mission description)
URL2: <http://www.seti.org>
(SETI Institute home page)
Email Submission Address: keplerjobs@seti.org
Email Inquiries: keplerjobs@seti.org

Attention: Human Resources

The SETI Institute is seeking a Senior Scientific Programmer for the Kepler Mission to help develop the Science Operations Center at NASA Ames. Kepler is slated for launch in 2007 to search for Earth-sized planets transiting solar-like stars. The individual will work with other scientists and engineers to develop and implement algorithms to be used in processing the science data and for monitoring the performance of the experiment and the instrument.

Tasks include developing, refining, testing, and documenting the algorithms for science analysis and non-science support analysis. Kepler science analysis tasks include aperture and difference image analysis photometry, systematic noise removal from flux time series, and planet candidate validation. Supporting analysis tasks include target selection, photometer characterization, modeling the instrument to understand performance bounds, and generating test data for system integration and testing.

The successful candidate must possess a strong background in numerical analysis and modeling, reducing/analyzing astronomical data sets, preferably with experience in differential photometry, CCD imaging, and time series analysis. Experience developing algorithms in MATLAB, or IDL is required. A strong background in C or C++ is required. Java experience is a plus. Experience with Object Oriented design, source code control, and debugging tools in a production environment is highly desirable.

No. 21560

**Associate Program Director
NATIONAL SCIENCE FOUNDATION
4201 Wilson Blvd.
Rm. 315N
Arlington, VA 22230
USA
Tel: 703-292-4351
URL1: <http://www.nsf.gov/jobs>
Email Submission Address: lcodario@nsf.gov
Email Inquiries: efriel@nsf.gov**

Attention: Lisa Codario, Human Resources Specialist, HRM

DIVISION OF ASTRONOMICAL SCIENCES National Science Foundation, Arlington, VA

NSF's Division of Astronomical Sciences is seeking qualified applicants for the position of Associate Program Director. The person selected for this position will be involved in program activities that include planning, budget development, the merit review and proposal recommendation process, and the administration of awards, including those in special grants and fellowship programs for postdoctoral researchers and students that seek to encourage the activities of researchers engaged in education and outreach, and to increase the participation of under-represented minorities in science. The person selected will also assist with the preparation of written material about research areas supported by the Division, serve as a liaison with other NSF programs, Federal agencies and organizations and undertake special projects for the office of the Division Director. The position will be filled on a permanent basis to commence in early 2005. The salary range, which includes locality pay adjustment, is from \$72,108 to \$113,597 per annum. Applicants must have a Ph.D. or equivalent experience in astronomy, astrophysics, or a closely related field, plus four years of successful research, research administration, and/or managerial experience beyond the Ph.D.

Announcement E20050027, with position requirements and application procedures, is located on the NSF Home Page at www.nsf.gov/jobs. Applicants should submit a resume or application of your choice, up to three letters of recommendation, and a narrative statement that addresses your background and/or experience related to the position to the address above by February 15, 2005. Applicants should refer to vacancy announcement number E20050027. Telephone inquiries may be referred to Lisa Codario at 703-292-4351. For technical information, contact Dr. Eileen D. Friel, AST Executive Officer, 703-292-4895. (Hearing impaired individuals may call TDD 703-292-8044).

NSF is an Equal Opportunity Employer. The National Science Foundation provides reasonable accommodations to applicants with disabilities on a case-by-case basis. If you need a reasonable accommodation for any part of the application and hiring process, please notify the point of contact listed on this vacancy announcement.

No. 21561

**Chair of Physics and Astronomy Department
UNIVERSITY OF ARKANSAS AT LITTLE ROCK
University of Arkansas at Little Rock
2801 S University Ave
Little Rock, Arkansas 72204-1099
USA
Tel: (501)569-8010
FAX: (501)569-8020
URL1: <http://lepus.physics.ualr.edu/>
Email Submission Address: rmhawk@ualr.edu
Email Inquiries: rmhawk@ualr.edu**

Attention: Dr. Roger Hawk, Chair, Physics/Astronomy Search Cmt

Chair, Department of Physics and Astronomy University of Arkansas at Little Rock

The University of Arkansas at Little Rock (UALR) seeks applications for Chair, Department of Physics and Astronomy. Preferred starting date is July 1, 2005. The Department has nine faculty members and offers BS/BA degrees in physics as well as minors in astronomy and physics. Faculty teach 2600 undergraduate and graduate students annually and direct MS and PhD students enrolled in Applied Physics, through the Department of Applied Science. Several retirement positions will be filled in the next few years, giving the new chair an opportunity to stimulate the department in new areas of emphasis that will attract extramural funding. More information about the position is available at <http://lepus.physics.ualr.edu/>. Applications should include curriculum vitae, statements of administrative philosophy and contact information for four references. Review of applications will begin February 15 and continue until the position is filled. Applications should be addressed to Dr. Roger Hawk, Chair, Search Committee, Department of Applied Sciences, ETAS Room 575, University of Arkansas at Little Rock, 2801 S. University Ave., Little Rock, AR 72204-1099. The University of Arkansas at Little Rock is an equal opportunity, affirmative action employer and actively seeks the candidacy of minorities, women and persons with disabilities. Under Arkansas law, all applications are subject to disclosure. Persons hired must have proof of legal authority to work in the United States.

No. 21562**Postdoctoral Fellowship in Active Galactic Nuclei****UNIVERSITY OF MARYLAND, COLLEGE PARK****Astronomy Department****Space Sciences Building****College Park, MD 20742****U.S.A.****Tel: (301) 405 1519****FAX: (301) 314 9067****Email Submission Address: wilson@astro.umd.edu****Email Inquiries: wilson@astro.umd.edu****Attention: Andrew S. Wilson, Professor**

Applications are invited for a postdoctoral position involving observational or theoretical work in the general area of active galactic nuclei (AGN) and possibly related objects (such as cooling flows, ULIRGs or "distant" objects, such as identifications of deep field X-ray sources). The preferred observational bands are X-rays (using Chandra and XMM), optical/infrared, or radio line (especially water vapor masers, observed with single dish or VLBI techniques). Familiarity with both the relevant physics and software analysis packages is essential. The University of Maryland has guaranteed observing time at Kitt Peak, equivalent to about 20% of the 4 meter time on Kitt Peak mountain, and projects involving Kitt Peak telescopes are welcome. Willingness to help and work with graduate students is desirable.

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

This research fellowship will be for one year initially and is renewable annually for up to three more years contingent on performance and funding. Applicants must have a Ph. D. degree in astronomy or physics and should mail to Prof. Wilson a curriculum vitae, a description of their research plans within the range of areas described above, and should arrange for three letters of recommendation to be sent. Applications received before March 1 2005 will be assured of full consideration. Salary is negotiable. EOE/AEE.

No. 21563**Postdoctoral Scholar in Laboratory for Adaptive Optics****UNIVERSITY OF CALIFORNIA, SANTA CRUZ****UCO/Lick Observatory****1156 High Street****Santa Cruz, CA 95064****USA****Tel: 831.459.2991****FAX: 831.459.5244****URL1: <http://lao.ucolick.org>****URL2: <http://www.ucolick.org>****Email Submission Address: jacky@ucolick.org****Attention: Joseph Miller, Director**

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

UCO/LICK OBSERVATORY Laboratory for Adaptive Optics

Postdoctoral Scholar

The University of California Observatories/Lick Observatory invites applications for a postdoctoral scholar position in the Observatory's Laboratory for Adaptive Optics (LAO). Contingent on the availability of funding, the appointment will be for two years beginning March 1, 2005 (start date negotiable). The appointment may be extended for up to two additional years if funds allow. The LAO is a new research and teaching facility for the development of adaptive optics technology for ground-based astronomical observatories. The Laboratory is a component of the UCO/Lick Observatory, headquartered

on the University of California's Santa Cruz campus, and is affiliated with the NSF Center for Adaptive Optics, also headquartered at Santa Cruz. Experiments within the Laboratory will test new technologies and establish techniques that will be used in complex adaptive optics systems on the next generation of large astronomical telescopes. The appointee will design and perform optical bench experiments to test concepts in the design of adaptive optics systems and related subsystems; plan and perform data analysis from laboratory testbed experiments; and aid in subsequent construction and commissioning of adaptive optics instruments. Preference will be given to candidates with experience in testing and building optical astronomical instruments.

RANK: Postdoctoral Scholar

SALARY: \$40,512 - \$46,056, dependent upon experience and qualifications.

MINIMUM QUALIFICATIONS: PhD or equivalent in Astronomy, Physics, or Engineering. Candidates should have experience in mathematical modeling, complex simulations, and analytical reasoning. Candidates should demonstrate experience in laboratory experiment planning, execution, and data analysis. Candidates should demonstrate the ability to present results in published work and in conference presentations, should have knowledge geometric and diffractive optics, and have a familiarity with optical components and optical laboratory equipment. Candidates should have the ability to work as part of a multidisciplinary team. Familiarity with adaptive optics systems and components and a familiarity with astronomical instruments (telescopes, cameras, spectrographs) is desirable.

TERM OF APPOINTMENT: Two years, contingent on the availability of funding. The appointment may be renewed for up to two additional years, contingent on positive performance evaluation and availability of funds.

POSITION AVAILABLE: March 1, 2005 (start date negotiable).

APPLY TO: Applicants should send a vita, publication list, brief (one- to two-page) summary of relevant experience and plans, and the names of three referees who have been asked by the applicant to submit letters of recommendation (all letters will be treated as confidential documents, please direct referees to the UCSC Confidentiality Statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>) to:

Postdoctoral Scholar Recruitment c/o UCO/Lick, Office of the Director University of California 1156 High Street Santa Cruz, CA 95064 Please refer to position LAO/PD in your reply.

CLOSING DATE: This position is open until filled. Applications will first be considered on February 15, 2005.

URLs for more information: Laboratory for Adaptive Optics website: <http://lao.ucolick.org> UCO/Lick Observatory website: <http://www.ucolick.org>

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

No. 21564
Postdoctoral Scholar in Adaptive Optics Systems for Astronomy
UNIVERSITY OF CALIFORNIA, SANTA CRUZ
UCO/Lick Observatory
1156 High Street
Santa Cruz, CA 95064
USA
Tel: 831.459.2991
FAX: 831.459.5244
URL1: <http://cfao.ucolick.org>
URL2: <http://ucolick.org>
Email Submission Address: jacky@ucolick.org

Attention: Joseph Miller, Director

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

CENTER FOR ADAPTIVE OPTICS Postdoctoral Scholar

The Center for Adaptive Optics (CfAO) and the Laboratory for Adaptive Optics (LAO) invites applications for a non-ladder-rank position in analysis and modeling of the next generation of adaptive optics systems for astronomy in the CfAO. Contingent on the availability of funding, the appointment will be for two years beginning March 2005 (start date negotiable). The appointment may be extended to three years if funds allow. The CfAO, a Science and Technology Center funded by the National Science Foundation, brings together researchers from around the nation and is headquartered at the University of California's Santa Cruz campus. The Center sponsors collaborative research projects in the fields of astronomy and vision science to remove the effects of image blurring through turbulent media. Applications include astronomical telescopes, laser guide stars, wavefront sensing, micro electromechanical systems (MEMS) technology, and retinal imaging. The CfAO has close proximity to the headquarters of the UCO/Lick Observatory and its facilities, including the new Laboratory for Adaptive Optics. The appointee will perform analysis, design, and modeling of adaptive optics systems and related subsystems, with an emphasis on designing adaptive optics instruments for the next generation of large astronomical telescopes. The appointee will also perform experiment planning and data analysis for experiments in the LAO and with the laser guide star adaptive optics system on the Lick Observatory 3-meter Telescope at Mount Hamilton. Preference will be given to candidates with demonstrated experience in mathematical modeling, complex simulations, and analytical reasoning.

RANK: Postdoctoral Scholar

SALARY: \$40,512 - \$43,908, dependent upon experience and qualifications.

MINIMUM QUALIFICATIONS: PhD or equivalent in Astronomy, Physics, Mathematics, or Engineering. Candidates should have experience in mathematical modeling, complex simulations, and analytical reasoning. Candidates should demonstrate ability to present results in published work and in conference presentations, have knowledge of Fourier and wave optics, and an understanding of numerical linear algebra and statistical analysis methods (e.g., Bayesian minimum-variance analysis. Candidates should have a strong proficiency with scientific computing tools (e.g., IDL, Matlab, Mathematica, etc.) and the ability to work as part of a multidisciplinary team. Familiarity with adaptive optics systems and components and with astronomical or equivalent optical instruments (telescopes, cameras, spectrographs) is desirable.

TERM OF APPOINTMENT: Two years, contingent on the availability of funding. The appointment may be renewed for one additional year, contingent on positive performance evaluation and availability of funds.

POSITION AVAILABLE: March 1, 2005 (start date negotiable).

APPLY TO: Applicants should send a vita, publication list, brief (one- to two-page) summary of relevant experience and plans, and the names of three referees who have been asked by the applicant to submit letters of recommendation (all letters will be treated as confidential documents, please direct referees to the UCSC Confidentiality Statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>) to:

Postdoctoral Scholar Recruitment c/o UCO/Lick, Office of the Director University of California 1156 High Street Santa Cruz, CA 95064 Please refer to position CFAO/PD in your reply.

CLOSING DATE: This position is open until filled. Applications will first be considered on February 15, 2005.

URLs for more information: Center for Adaptive Optics website: <http://cfao.ucolick.org> UCO/Lick Observatory website: <http://www.ucolick.org>

No. 21565

Postdoctoral Position in Astrophysics (AGN/Black Hole Evolution)

THE OHIO STATE UNIVERSITY DEPARTMENT OF ASTRONOMY

4055 McPherson Lab

140 W 18th Ave

Columbus, OH 43210

USA

Tel: 614-292-1773

FAX: 614-292-2928

URL1: <http://www.astronomy.ohio-state.edu>

Email Inquiries: dhw@astronomy.ohio-state.edu

Attention: David Weinberg, Professor

Applications are invited for a postdoctoral position in the Astronomy Department of the Ohio State University, in the field of quasar evolution and its link to the population of black holes in galactic nuclei. The successful applicant will have the opportunity to define a broad research program in this field and related areas of cosmology, and will carry it out independently and in collaboration with Professors J. Miralda-Escudé, D. Weinberg, and others at Ohio State with overlapping interests (including C. Kochanek, S. Mathur, R. Pogge, B. Peterson, and P. Osmer). We seek applicants with a PhD in astronomy or physics and prior experience in theoretical research; this position would also be appropriate for an observer with strong theoretical interests and skills. Assets of the Ohio State department include a 1/6 observing share of the Large Binocular Telescope, a 1/4 share of MDM observatory, and a lively scientific environment.

The availability of this position is subject to funding. The appointment will be for a duration of two years, with a likely extension to a third year subject to performance and adequate work progress.

Interested applicants should send a resume and statement of research interests, and they should arrange for three letters of reference to be sent to David Weinberg at the above address by the January 31 deadline. To build a diverse workforce Ohio State encourages applications from individuals with disabilities, minorities, veterans, and women. EEO/AA employer.

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