GEOBULLETIN
FEBRUARY 20TH, 2009

Geobulletin is distributed weekly, on Friday by E-mail. Contributions are requested! Anything and everything (well almost) that you want to see in print. If you have a news item, a request, an announcement etc. email it to geodept@geology.wisc.edu. or leave it at the reception desk, Room 236 by noon on Wednesdays.

LECTURE SCHEDULE ---- All lectures (unless otherwise noted) are held on Fridays at 3:30 PM in AB20 (Laudon Lecture Hall). Coffee & cookies are served in the lobby starting at 3:15 PM.

Feb. 20 - Reserved for sed interview talk

STEPHEN R. MEYERS

DEPARTMENT OF GEOLOGICAL SCIENCES

UNIVERSITY OF NORTH CAROLINA - CHAPEL HILL

Specialty Lecture

Thursday February 19th, Noon, Room A259 – Weeks Hall

The Evolution of Cenozoic Climate Noise: Linkages to Ice Sheet History?

Orbital-climate theory provides a powerful deterministic framework for the analysis of Cenozoic climate change, and has become a cornerstone of paleoclimatology. The stochastic component of climate has received considerably less attention, although some studies have argued for the dominance of stochastic climate processes. Undoubtedly, a complete understanding of the controls on climate change necessitates an assessment of both deterministic and stochastic processes, as well as potential linkages between the two.

In this study, we investigate changes in deterministic versus stochastic climate processes associated with evolution of the Cenozoic climate system. Initial work has focused on time-frequency analysis of key Plio-Pleistocene proxy records, and reveals that development of the Northern Hemisphere ice sheet is paralleled by an overall amplification of both deterministic and stochastic climate energy. The progression from a more stochastic early Pliocene, to a strongly deterministic late Pleistocene, is primarily accommodated during two transitory phases of Northern Hemisphere ice sheet growth. This long-term trend is punctuated by "stochastic events", which indicate abrupt reorganization of the climate system at the initiation and termination of the Mid-Pleistocene Transition, and at the onset of Northern Hemisphere glaciation. Our results highlight a complex interplay between deterministic and stochastic climate change during the Plio-Pleistocene, reveal some new characteristics of the orbital signal response, and support an early onset for Northern Hemisphere glaciation.

General Lecture:

Friday February 20th, 3:30 PM, Room 140, Weeks Hall

The Astrochronologic Calibration of Oceanic Anoxic Event 2: Towards a Global Synthesis

The middle Cretaceous Oceanic Anoxic Event 2 (OAE 2; ~94 Ma) is characterized by widespread rhythmic marine sedimentation, commonly inferred to represent Milankovitch orbital forcing. Numerous studies have utilized these rhythmic OAE 2 deposits to construct high-resolution astrochronologies, but disparity among the resultant timescales has hindered an accurate global synthesis of the event. One of the reasons for this disparity is the lack of a consistent

and objective methodology for calibration of observed spatial rhythms to temporal periods. In this study, we develop a time-frequency statistical methodology ("Evolutive Average Spectral Misfit", or E-ASM), which allows us to quantitatively test for the presence of orbital forcing in OAE 2 deposits spanning high-latitude to near-equatorial sites. The method does not require supplementary time control (e.g., radio isotopic data, biozonation schemes, etc.), provides a means to objectively and independently calibrate the orbital chronometers at widely separated sites, and is specifically designed to evaluate orbital signals that are distorted by unsteady sedimentation rate histories. Importantly, the technique also provides a formal statistical test to evaluate the null hypothesis (no orbital signal).

Our analyses indicate that the null hypothesis can be rejected with a high degree of confidence at four investigated OAE 2 sites, spanning paleolatitudes from 5°N to 60°N. Temporal calibration of the lithologic rhythms using the method yields new independent, high-resolution astrochronologies at each location. These astrochronologies provide a means to precisely assess the timing of the OAE 2 carbon isotope excursion, and estimate geochemical burial fluxes (e.g., organic carbon burial rate) at each site. Finally, time-frequency analysis of the orbitally-tuned records reveals a progressive amplification of obliquity forcing during OAE 2. We attribute the observed obliquity amplification to cooling of the climate system associated with carbon dioxide sequestration, resulting in a globally enhanced sensitivity to high-latitude climate/oceanographic processes. Our results are consistent with an increasing influence of high-latitude climate/oceanographic processes on thermohaline circulation during OAE 2, and/or the growth of high-latitude ice sheets.

Feb. 27 - Reserved for sed interview talk
Mar. 6 - Reserved for sed interview talk
Mar. 13 - Reserved for sed interview talk

Mar. 20 - Spring break

Mar. 27 - Leigh Royden (MIT) (SPONSOR: DEMETS)
"Uplift, Evolution and Geodynamics of the Tibetan Plateau

Apr. 3 - Stephanie Prejean (USGS Anchorage) (SPONSOR: THURBER)

Apr. 10 - Joe Stoner Oregon State, Quaternary (SPONSOR: ANDERS)
"Climatic implications of abrupt geomagnetic change"

Apr. 17 - Board of visitor's meeting (OPEN)

Apr. 24 - Susanne Janecke (Utah State University) (SPONSOR: DEMETS)
"Reorganizing plate boundaries, evolving basins, pseudotachylyte, detachment faults, and crossing strike-slip faults: Southern California"

May 1 - Laurent Charlet, Univ. Grenoble (SPONSOR: NITA)

May 8 - Peter Visscher (SPONSOR: ERIC)
"Microbial mechanisms forming modern marine stromatolites - Using the present to predict the past"

Subject: Graduate summer internships in volcano seismology/geodesy

The University of Alaska Fairbanks (UAF) announces the availability of paid summer internships for U.S. graduate students from U.S. universities in seismology, crustal deformation, igneous petrology, and physical volcanology. Successful applicants will become members of a US-Russia-Japan team comparing the response of crustal magma systems to catastrophic decompression at Bezymianny and Shiveluch Volcanoes, Kamchatka, Russia, and Mount St Helens, Washington. The project is part of the National Science Foundation's program, Partnerships in International Research and Education (PIRE), which seeks to introduce US graduate students to internationally collaborative science.

The ideal student participant will be at an early or middle stage of her or his PhD program, be physically and mentally prepared for rigorous field investigations under difficult conditions, and have a strong interest in international collaboration and understanding. It is also desirable that the student's major advisor share an interest in the research and, although not a requirement, that the work can become a component of the student's PhD program. Complete announcement and application forms can be obtained at http://gps.alaska.edu/PIRE and by contacting the relevant science team leaders below. The deadline for application is March 1. Selections will be made by March 15. As required by the NSF, the competition is open only to US citizens or US permanent residents.

Seismology
Michael West (west@gi.alaska.edu)
Geodesy
Jeff Freymueller (jeff@giseis.alaska.edu)
Petrology/Volcanology
Pavel Izbekov (pavel@gi.alaska.edu)

POSITION OPENINGS:

- U.S. Geological Survey (USGS) Position Available -- Chemist/Physical Scientist
- GeoSciences: Edinburgh Materials and Micro-Analysis Centre (EMMAC) Research Fellow
- The Faculty of Geosciences at Ruhr-University Bochum (Department of Geology, Mineralogy, and Geophysics) seeks to appoint a junior-professor (W1) (approximately equivalent to the rank of an assistant professor / lecturer) in Petrology
- The U.S. Geological Survey (USGS) Florida Integrated Science Center in St. Petersburg, Florida (FISC-St. Pete), is recruiting highly motivated scientists in the field of coastal geology.
- The University of Alaska Fairbanks (UAF) announces the availability of paid summer internships for U.S. graduate students from U.S. universities in seismology, crustal deformation, igneous petrology, and physical volcanology
- The University of Wyoming Stable Isotope Facility (UWSIF) invites applications for a full-time laboratory technician.
- Position Outreach-Forest Minerals Program Leader - Bridger-Teton National Forest - Pinedale, Wyoming
- KineMed, Inc., a bio-medical firm located in Emeryville, CA, has an opening for an Analytical Chemist (or equivalent) with significant experience in operating and maintaining ultra-sensitive Isotope Ratio Mass Spectrometers (IRMS).
- The Department of Geology at Colorado College invites applications for a one-year non-tenure track position in Petrology/Geochemistry/Volcanology, to begin in August 2009.
- Postdoc Opportunity, Los Alamos National Lab - Stable Isotopes in Secondary Organic Aerosols
- Towson University will be hosting a second Research Experience for Undergraduates site in Urban Environmental Biogeochemistry in Summer 2009
- Science Instructor & TA -SUMMER EMPLOYMENT OPPORTUNITIES - Summer 2009 -Johns Hopkins University Center for Talented Youth (CTY)
- Geohydrology Summer Research Assistantship -Kansas Geological Survey -The University Of Kansas

POSITION OPENINGS:

Lamont-Doherty Earth Observatory of Columbia
University REU Summer Intern Program
Sponsored by the Columbia University Department of Earth and Environmental Sciences and the Lamont-Doherty Earth Observatory of Columbia University - Theme: Analyzing Global Databases
Program dates: June 2nd - August 4th, 2009. Now accepting applications for 2009 Summer Programs.
Application deadline is March 1, 2009
Visit the Department of Earth and Environmental Sciences website for detailed information.http://eesc.columbia.edu
Click on the 2009 program brochure link for 2009 research project descriptions and contact information.
Click on the online application link to apply.

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U.S. Geological Survey (USGS) Position Available -- Chemist/Physical Scientist

The USGS, Central Energy Resources Team, is soliciting interest from qualified individuals for one Chemist/Physical Scientist position in Lakewood, Colorado. Successful applicants will have qualifying education and expertise in the concepts, principles, and practices of physical and analytical chemistry, mass spectroscopy, gas chromatography, elemental analysis, and high vacuum technology. Knowledge of petroleum/coal geology/geochemistry is highly desirable. He/she will be responsible for the operation and maintenance of three continuous flow (CF) stable isotope ratio mass spectrometers (IRMS) and related peripherals necessary to acquire stable isotopic data. The incumbent must additionally develop new techniques and procedures with an emphasis on compound-specific gas-chromatography (GC)-IRMS for stable carbon and hydrogen isotopes. Candidates must be able to work as part of an analytical laboratory team, and exchange technical information related to sample analysis, data interpretation, and QA/QC with analysts and other research scientists.

Applications (resume and application questions) for this vacancy must be received on-line via USAJOBS BEFORE midnight Eastern Time (Washington, D.C. time) on the closing date of this announcement. If you fail to submit a complete on-line resume, you will not be considered for this position. Requests for extensions will not be granted. If applying on-line poses a hardship for you, please speak to someone in the Servicing Personnel Office listed on the announcement PRIOR TO THE CLOSING DATE. For assistance and questions contact the Office of Human Resources at 303-236-9586 or hdorsey@usgs.gov.

Effective February 27, 2009, USAJOBS can be accessed at http://www.usajobs.opm.gov. Announcement numbers are CR-2009-0237, CR- 2009-0238, CR-2009-0239, and CR-2009-0240. This is a full time permanent position (Chemist/Physical Scientist, GS-1320/1301-09/11/12) with a salary range of $49,970-$94,200 depending upon qualifications. The closing date is March 20, 2009.
U.S. Citizenship is required. USGS is an Equal Opportunity Employer.
Technical questions related to this position may be directed to gsellis@usgs.gov.

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GeoSciences: Edinburgh Materials and Micro-Analysis Centre (EMMAC) Research Fellow
Vacancy details

* Vacancy Reference: 3010426
* Department: GeoSciences
* Job Title: Edinburgh Materials and Micro-Analysis Centre (EMMAC) Research Fellow
* Job Function: Academic
* Job Type: Full Time
* Live Date: 12-Feb-2009
* Expiry Date: 17-Mar-2009
* Salary Scale: £36,532 - £43,622
* Internal job: No. Anybody can apply for this position.
* Further Information: Further Information
* Conditions Of Employment: View Conditions of Employment

The School of GeoSciences, one of the largest in the UK, is currently seeking a Research Fellow to support the School's and the Research Council's (NERC) Ion Microprobe Facility. You will be involved in developing new analytical techniques, teaching and supervising Facility users, assisting in the maintenance of the two Ion Microprobes that are part of EMMAC and undertaking research. You should have a PhD in a relevant science discipline and a proven research record. Knowledge of Ion Microprobe

instrumentation is not required but experience in the maintenance, development and use of related or similar analytical equipment is essential. You will work closely with the existing EMMAC staff in providing an analytical service and develop their own research programme.

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The Faculty of Geosciences at Ruhr-University Bochum (Department of Geology, Mineralogy, and Geophysics) seeks to appoint a junior-professor (W1) (approximately equivalent to the rank of an assistant professor / lecturer) in Petrology by October 1, 2009.

The successful candidate should have a Ph.D degree in a relevant field of science that was obtained not longer than five years ago. The position is not tenure track a priori, but possibility of getting tenure, subject to evaluation of performance, is not excluded. The Junior-professor will have a teaching obligation of four hours per week per semester at the B. Sc- and M. Sc levels within the Geoscience curriculum of the department. The candidate is required to be able to provide basic training in field work to students.

Research interest should preferentially cover some aspect of the quantitative investigation of large-scale processes in the Earth's interior with direct connection to field observations. It is expected that the successful candidate will be able to acquire external research funding. At the time of appointment, proficiency in German is a plus but not a requirement.

Ruhr-University Bochum seeks to increase the number of women in its faculty and thus explicitly invites applications from qualified women. We welcome applications from qualified academics with handicaps.

Applications should include a statement on current and planned research activities, teaching experience and a statement of teaching philosophy, a curriculum vita, and a list of publications. The deadline for application is April 30, 2009. Applications should be sent to Prof. Dr. Uta Hohn, Dean of the Faculty of Geosciences (Geowissenschaften), Ruhr-Universität Bochum, D-44780 Bochum. Email: geodekanat@rub.de

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The U.S. Geological Survey (USGS) Florida Integrated Science Center in St. Petersburg, Florida (FISC-St. Pete), is recruiting highly motivated scientists in the field of coastal geology. We are looking for candidates who demonstrate strong potential to become scientific leaders in their field. Recent graduates and scientists with established research programs will be considered.

The USGS FISC-St. Pete (http://coastal.er.usgs.gov/cfcg/) supports an integrated science team of 120 geologists, oceanographers, geochemists, engineers, microbiologists, biologists, ecologists, physical scientists, hydrologists, technicians, interns, students, and administrative staff. The FISC-St.Pete office has a $15 M annual budget primarily funded by five USGS Programs, including the Coastal and Marine Geology Program (http://marine.usgs.gov/), and multiple reimbursable projects. Our research facility consists of three buildings totaling more than 50,000 sq. ft. that are well equipped with state-of-the-art labs and outstanding field capabilities. We are located on the University of South Florida Bayboro Campus that provides ample collaboration opportunities with many partners: the USF College of Marine Science and Center for Ocean Technologies, USF St. Petersburg Department of Environmental Science and Policy, Florida's Fish and Wildlife Research Institute, NOAA National Marine Fisheries, and SRI International Marine Technology R&D Facility.

Scientific activities at FISC-St.Pete include:

- basic research in geology, hydrology, biology, ecology, and related sciences;
- evaluation of hazards including floods, droughts, hurricanes, and climate change;
- research on links between biodiversity, habitat, ecosystem processes, and health;
- mapping of onshore and offshore benthic habitat and geologic framework;
- assessment of mineral resources and development of techniques for their discovery;
- development of technologies for collection and interpretation of Earth science data;
- collection and archival of data and information for a variety of uses and users;
- development of technology to process and distribute geospatial information;
- provision of scientific support for legislative, regulatory, and management decisions;
- cooperation with academia, industry, and other Federal, State, and local agencies.

The successful applicant will participate in a broad research program that addresses coastal response to natural and human-

induced processes. Processes of particular interest include geologic and societal impacts of climate change, sea-level rise, and extreme storms (http://coastal.er.usgs.gov/hurricanes/). In addition to leading new efforts, the applicant will contribute to ongoing research at the USGS that is aimed at understanding geologic processes that drive environmental change, decline of coral reef ecosystems, geomorphology, geology, stratigraphic framework, and aggregate resources. Our program currently supports major national and international field research projects in the Gulf of Mexico, southeastern United States, and U.S. Virgin Islands. The program utilizes remote sensing (such as lidar) and GIS capabilities, high-resolution seismic profiling, side-scan sonar, and bathymetric surveys as well as development and application of marine and land-based sediment sampling techniques. The northern Gulf of Mexico is expected to be an important focus area for future efforts (http://ngom.usgs.gov/).

The successful applicant is expected to collaborate with other Federal and academic researchers and apply state-of-the art analytical methods, which may include both observation and modeling. Research results must be published in peer-reviewed journals and USGS reports. In addition to having significant scientific impact, research results should also impact a broad range of societal issues including, for example, management of coastal resources, land use, and geologic hazards.

How to apply:
Detailed vacancy requirements and application procedures can be found at USAJOBS.com. This position is being advertised concurrently under the following vacancy announcement numbers: ER-2009-0103, ER-2009-0104 and ER-2009-0105 (e.g., http://jobsearch.usajobs.gov/ftva.asp?seeker=1&JobID=78837770). To be considered, applications must be submitted online by midnight Eastern Standard Time, February 27, 2009. This is an interdisciplinary position that is advertised as a 4-year term Research Geologist, Research Oceanographer, or Research Physical Scientist. Salary is $67,613.00 to $87,893.00 per annum (GS-1350/1360/1301-12). This position is being advertised as entry-level research at the Federal pay rate of GS-12, but exceptional candidates will be considered for a permanent position with a full promotion potential to GS-15.

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The University of Alaska Fairbanks (UAF) announces the availability of paid summer internships for U.S. graduate students from U.S. universities in seismology, crustal deformation, igneous petrology, and physical volcanology. Successful applicants will become members of a US-Russia-Japan team comparing the response of crustal magma systems to catastrophic decompression at Bezymianny and Shiveluch Volcanoes, Kamchatka, Russia, and Mount St Helens, Washington. The project is part of the National Science Foundation's program, Partnerships in International Research and Education (PIRE), which seeks to introduce US graduate students to internationally collaborative science. The ideal student participant will be at an early or middle stage of her or his PhD program, be physically and mentally prepared for rigorous field investigations under difficult conditions, and have a strong interest in international collaboration and understanding. It is also desirable that the student's major advisor share an interest in the research and, although not a requirement, that the work can become a component of the student's PhD program. Complete announcement and application forms can be obtained at http://gps.alaska.edu/PIRE and by contacting the relevant science team leaders below. The deadline for application is March 1.
Selections will be made by March 15. As required by the NSF, the competition is open only to US citizens or US permanent residents.

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Stable Isotope Laboratory Technician

The University of Wyoming Stable Isotope Facility (UWSIF) invites applications for a full-time laboratory technician. This is a permanent, state-funded staff position with full health and retirement benefits. The UWSIF is a core research laboratory on the University of Wyoming campus in Laramie, Wyoming. The facility has four gas-source isotope ratio mass spectrometers with automated preparation systems, a laser spectroscopy isotope analyzer for liquid water samples and a support laboratory with vacuum extraction lines, gas flushing lines, sample weighing and grinding facilities, and standard wet and dry lab supplies and equipment. Additional information about the laboratory is available at http://uwacadweb.uwyo.edu/SIF/.

Primary responsibilities include but are not limited to: (1) operation and maintenance of analytical instruments and attached peripherals; (2) preparation of samples for stable isotope analysis; (3) maintenance and repair of vacuum extraction lines, vacuum pumps, air and gas delivery systems; (4) purchase and inventory of daily lab supplies and spare parts; (5) training and oversight of part-time technicians for routine lab duties; and (6) oversight of lab safety.

Applicants should have at minimum a bachelor's degree and experience with stable isotope measurements and/or analytical instrumentation. For additional details of the position and the application procedure, please refer to following website: http://uwadmnweb.uwyo.edu/HREmployment/showjob.asp?jobid=3425 Questions should be directed to Dr. Shikha Sharma (e-mail:shikha@uwyo.edu; phone: 307-766-5021)

The University of Wyoming is an equal opportunity/affirmative action employer

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POSITION OUTREACH-FOREST MINERALS PROGRAM LEADER
GS-401/801-11
BRIDGER-TETON NATIONAL FOREST
Pinedale, Wyoming

The Bridger-Teton National Forest will soon be re-advertising for a forest minerals program leader responsible for the operation of the Forest's minerals activities. This notification is being circulated to inform prospective applicants of the upcoming opportunity and to determine interest in the position. The location for this position is Pinedale, Wyoming. The successful applicant will work 50 percent for the forest and 50 percent for the Pinedale Bureau of Land Management. They will occupy offices at both Pinedale locations.

TOUR OF DUTY: Permanent, Full-time.

HOUSING STATUS: No housing is available.

OUTREACH RESPONSE: Interested applicants or those requiring further information should contact Steve Haydon at 307-739-5535 (shaydon@fs.fed.us). **Please send Steve an email if interested.**

ABOUT THE POSITION:

The position is responsible for the coordination of all forest minerals activities on the Bridger – Teton National Forest and specific minerals assignments from the BLM. Forest assignments include both our oil and gas program, gravel operations, required NEPA, and work on the forest plan revision team. BLM work includes NEPA, environmental review of activities, and other specific assignments. The position is a unique opportunity to work together with both organizations and help them both to implement their minerals programs. During field season, the incumbant will be required to spend some time in the field completing and coordinating projects. The position is located within the Engineering/ Minerals staff group of the forest.

ABOUT THE FOREST AND AREA:
The Bridger-Teton National Forest (BTNF) is part of the largest intact ecosystem in the lower 48 states. The 3.4 million acres stretch from the southern border of Yellowstone National Park, covering the entire eastern flank of Grand Teton National Park, wrapping around Jackson Hole valley, to the sage-brush prairies of southwest-central Wyoming.

The Greater Yellowstone Ecosystem is a loosely defined area characterized by high elevation coniferous forests, sage/grass steppes, mountain ranges and deep valleys, large expanses of wild lands and three wilderness areas, abundant wildlife, and internationally recognized scenic and natural features.

The Forest includes headwaters of three nationally significant rivers (Yellowstone, Snake and Green). Tributaries to these rivers are considered exceptional in trout habitat and home to native strains of cutthroat trout.

Some of the largest and most diverse populations of mammals in North America exist here. This ecosystem still includes all of the major carnivores, an indication of its ecological completeness. The area includes undisturbed habitat for threatened and endangered species including the grizzly bear.

Recreation opportunities and scenic quality are internationally renowned. The BTNF attracts over 3.6 million visitors each year. The three wilderness areas cover over 1.3 million acres; the Bridger, the Teton and the Gros Ventre totaling more than one-third of the BTNF acreage, and containing major migration routes for wildlife. The Forest offers some of the nations best opportunities for winter sports. The backcountry landscape contains a multitude of cross-country skiing trails and miles of trails for snowmobiling.

The Forest also offers unique features such as the scenic and challenging Snake River Canyon, where more than 150 thousand visitors float through its whitewater each year; Periodic Springs on Swift Creek near Afton, which is one of the few coldwater geysers in the world; Fremont Lake, the second largest lake in the State of Wyoming, and one of the deepest in the U.S.; Kendall Warm Springs known as the only home for the Kendall Warm Springs Dace; and Gannett Peak (elev. 13,804) the highest point in Wyoming.

The BTNF also has important commodity resources as the biggest producer of helium in the world. Approximately 360,000 acres are open to oil and gas leasing. The Pinedale BLM is one of the most highly productive oil and gas offices in the state, working with many of the largest producers in the world. This is a highly complex program from which you will assigned individual projects, most of which complement your forest assignments.

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KineMed, Inc., a bio-medical firm located in Emeryville, CA, has an opening for an Analytical Chemist (or equivalent) with significant experience in operating and maintaining ultra-sensitive Isotope Ratio Mass Spectrometers (IRMS). In its analytical core facility, KineMed operates three Thermo-Electron IRMS instruments, along with six GCMS units and two LGR ICOS optical spectrophotometers. Applicants should be broadly familiar with chromatographic instrumentation, and are required to have experience in working with biological analytes labeled with stable isotopes of C, H, and O. Experience with hands-on maintenance and repair is required.
Interested applicants should send a letter of interest and a current resume to Dr. Alexander Glass, Executive VP, Instrumentation, at <aglass@kinemed.com>. Please include names and contact information for three references. Further information about KineMed can be obtained at <http://www.kinemed.com>.

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The Department of Geology at Colorado College invites applications for a one-year non-tenure track position in Petrology/Geochemistry/Volcanology, to begin in August 2009.Consideration of applications will begin on February 3, 2009.

The faculty visitor in will teach an Introductory Petrology course; a course inIgneous Petrology or high temperature geochemistry; and courses in the candidate'sareas of specialization. Appointments will be at the assistant professor level for candidates holding a PhD. The PhD or ABD is a requirement for employment.

Applicants must be committed to high-quality innovative undergraduate teaching,including field-oriented courses. The Block System of education at Colorado College, in which professors teach and students take only one course at a time for 3-1/2 weeks, lends itself to field and project-based teaching. The visitor will teach 6 out of 8.5 blocks in the academic calendar. The Department has excellent field equipment and laboratory facilities for teaching and research in all geological disciplines. Information on the position, facilities, and Department is on line at http://www.coloradocollege.edu/dept/GY/.

Undergraduate research is an integral part of the Colorado College Geology curriculum; thus a willingness to advise research in the candidate's areas of expertise is highly desirable. The Geology Dept contributes to CC's Environmental Sciences program, and possibilities may exist for candidates to participate in teaching/advising in that program. The ability to teach GIS and/or to integrate GIS into courses is advantageous. Colorado College is committed to increasing diversity of the community and curriculum. Candidates who can contribute to that goal are particularly encouraged to apply.

Applicants should send statement of teaching and research interests, curriculum vitae, and names and addresses of three referees by February 3, 2009 to: Christine Siddoway, Chair, Colorado College, 14 E. Cache la Poudre, Colorado Springs, CO 80903, 719-389-6717; email: geology@coloradocollege.edu. The search will remain open until the position is filled. The Colorado College welcomes members of all groups, and reaffirms its commitment not to discriminate on the basis of race, color, age, religion, sex, national origin, sexual orientation, or disability in its educational programs, activities, and employment practices. The institution is an equal opportunity employer.

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Postdoc Opportunity, Los Alamos National Lab - Stable Isotopes in Secondary Organic Aerosols

Funds are available for a postdoctoral scholar who will assist in development of methods to extract and analyze the carbon and oxygen isotopic content of secondary organic aerosols. Initial studies will focus on samples produced under controlled conditions in our laboratory with the developed techniques subsequently being applied to atmospheric samples from a variety of environments. The successful applicant will have a strong background in hands on sample prep and isotopic analyses. Candidates with experience in method development are particularly encouraged to apply. Exceptional candidates with strong publication

records may be eligible for one of several competitive Fellowship opportunities. Information on LANL's postdoctoral programs, including benefits and salary guidelines, can be found at http://www.lanl.gov/science/postdocs/ . A PhD in Chemistry or the Earth and Atmospheric Sciences or a related discipline is required at the time of appointment. Interested applicants should send a letter of interest and a curriculum vitae along with names and contact information of 3 references to trahn@lanl.gov . For specific questions, call Thom Rahn at (505) 667-1812. Los Alamos National Lab is located on the eastern slope of the Jemez Mountains in North Central New Mexico, adjacent to the Sangre de Cristo Mountains, the Rio Grande River and Rio Grande Rift and is ~45 minutes from the NM State Capital of Santa Fe.

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Towson University will be hosting a second Research Experience for Undergraduates site in Urban Environmental Biogeochemistry in Summer 2009. We are now accepting applications for this summer. Benefits include a $4500 stipend, room and board, and travel expenses to and from Towson University. Students with backgrounds in Chemistry, Biology, Geology and Environmental Science are encouraged to apply.

Complete information and an online application form can be found at www.towson.edu/chemistry/reu.asp. The application deadline is March 20, 2008 and admissions will be made on a rolling basis.

If you or your students require any additional information, please feel free to contact me. Also, please forward this to any other institutions or individuals you think might be interested.

Ryan E. Casey, PhD
Associate Professor of Chemistry
Environmental Science and Studies Program Towson University 8000 York Rd.
Towson, MD 21252-0001
T: 410.704.3051
F: 410.704.4265

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Science Instructor & TA -SUMMER EMPLOYMENT OPPORTUNITIES - Summer 2009

Johns Hopkins University Center for Talented Youth (CTY)
<http://www.cty.jhu.edu/summer/employment>http://www.cty.jhu.edu/summer/employment

CTY is seeking outstanding staff to work in our summer programs. The Center for Talented Youth offers challenging academic programs for highly talented elementary, middle, and high school students from across the country and around the world.

Locations throughout the United States, Mexico, China, and Spain.

We are looking for individuals for the following positions: Instructor
Summer programs instructors are responsible for teaching an appropriately challenging and rigorous course to approximately 15-18 highly able students (12-14 in Young Students classes). Instructors' primary responsibilities are to plan and conduct their classes and labs within our guidelines, to monitor the progress of each of their students, and to supervise their assistants (there is one assistant for each instructor).

Teaching Assistant
The primary responsibilities of teaching assistants (TAs) are tutoring students, assisting with the paperwork of a class, teaching the class as requested by the instructor, supervising late afternoon/evening study sessions, assisting with administrative tasks such as typing and photocopying, and generally helping to ensure that the class runs smoothly. Additionally, teaching assistants in science classes must assist with class demonstrations, prepare lab sessions, teach the lab sessions as requested, clean up after lab sessions, and complete an end-of-session inventory.

We are looking for individuals with expertise in the following Earth Science-related subjects:
* Dynamic Earth * Volcanoes: Hawaii * Paleobiology * Oceanography: The Hawaiian Pacific
* Astronomy/Introduction to Astronomy * Bay Ecology

For more details about these positions, site locations, dates, and employment applications, please see our website: http://cty.jhu.edu/summer/employment.

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The Geohydrology Section of the Kansas Geological Survey (KGS) invites applications for up to THREE KGS Applied Geohydrology Summer Research Assistantship positions for the summer of 2009. The positions are available for graduate students and upper-level undergraduates with an interest in learning more about recent developments in hydrogeological field methods. Positions are open to students at any university. This will be the tenth year for the program. Positions in previous summers have been held by students from Appalachian State, Colorado School of Mines, Free University of Brussels, Montana Tech, Northern Iowa University, Oberlin College, Southern Illinois University, University of Colorado, University of Göttingen, University of Illinois, University of Kansas, University of Minnesota at Duluth, University of Mississippi, University of Pittsburg, University of Rhode Island, University of Tübingen, and University of Wisconsin-Madison. Most past participants have co-authored articles or presentations based on the summer work.

POSITION: KGS Applied Geohydrology Summer Research Assistantships

STARTING DATE: May 26, 2009.
APPLICATION DEADLINE: First consideration given to application material received by **February 23, 2009**.
SALARY: Salary $**6,250** for each 12-week assistantship. Expenses of travel to and from Lawrence are not provided. All work-related travel expenses will be provided by the Kansas Geological Survey.
DUTIES: This assistantship is a 12-week summer position during which the individual will work with KGS and Kansas State University (KSU) hydrologists on a variety of field activities in support of KGS research programs. There are expected to be three primary themes for the 2009 activities. Four weeks of the summer will be spent on fieldwork in support of a cooperative KGS/KSU study of groundwater consumption by phreatophytes in riparian corridors (Butler et al., 2007, Water Resour. Res., 43, W02404; Loheide et al., 2005, Water Resour. Res., 41, W07030; www.kgs.ku.edu/Hydro/Phreato/index.html). Four weeks of the summer will be spent investigating new direct-push methods for estimating spatial variations in hydraulic conductivity (Liu et al., 2008, Water Resour. Res, v. 44, W02432, doi:10.1029/ 2007WR006078; Dietrich et al., 2008, Ground Water, 46, no. 2; Butler et al., 2007, Ground Water, 45, no. 4; www.kgs.ku.edu/Hydro/DirectPush/index.html). Two weeks will be spent on new slug test methods (Butler et al., 2003, Ground Water, 41, no. 5). The remainder of the summer will be spent on preparing the results of the research for publication.
REQUIRED QUALIFICATIONS: Relevant coursework in earth sciences or engineering. Interest in hydrogeology. Ability and willingness to participate in moderate physical activity in mid-summer temperatures in Kansas. Clear communication skills.
PREFERRED QUALIFICATIONS: Coursework in hydrogeology. Experience with Windows-based computers and Excel.
APPLICATION PROCEDURE: Apply online at http://jobs.ku.edu; search by Research Assistant title. Complete online application, provide contact information for three professional references, attach resume, and mail official college transcripts to: Annette Delaney, Kansas Geological Survey, The University of Kansas, 1930 Constant Avenue, Lawrence, KS 66047; PH: (785) 864-2152, FAX: (785) 864-5317, hr@kgs.ku.edu. For further technical information contact Jim Butler at jbutler@kgs.ku.edu or Ed Reboulet at reboulet@kgs.ku.edu. Additional information about the type of work to be done can be found at **www.kgs.ku.edu/General/Personnel/abc/butler.html**

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~ ~ ~ ~ ~ ~ ~ ~ HAVE A GREAT WEEKEND! ~ ~ ~ ~ ~ ~ ~ ~