



Centro de Estudios Avanzados en Zonas Áridas (CEAZA),
Regional Unit of Scientific and Technological Development (CONICYT)
P.O. box 599-La Serena-Chile
Phone 56-51-204378-Fax 56-51-334741
E-mail ceaza@userena.cl
<http://www.ceaza.cl>

2-YEAR POST-DOCTORAL POSITION IN GLACIOLOGY

CEAZA is seeking a post doctoral researcher in glaciology, specializing in surface energy balance modeling to join our glaciology group, which focuses on monitoring, and evaluating the water resources from the cryosphere in the arid Andes of north-central Chile. Since 2007, CEAZA has developed a glacier research program studying 8 glaciers in the arid Andes. This monitoring includes mass balance, energy balance, and hydrological balance, to establish glacier climate relationships and the hydrological resource associated with glaciers. Our work includes glaciers within the boundaries of the Pascua Lama Mine project, where we are involved in assessing any impact the mine activities may have on the glaciers.

Due to high levels of solar radiation and low humidity, sublimation is a significant process in this area, resulting in the formation of high penitentes, which further complicate the processes of turbulent flux within the boundary layer. Thus, the purpose of this post doctoral position is to undertake a full examination of the appropriate parameterization of the surface energy balance.

The work includes:

- Modeling point and distributed surface energy balance, including comparison of mass, surface energy and hydrological balances.
- Modeling snowpack evolution (using CROCUS, a 1D model developed by CEN, France)
- Analysis of meteorological data obtained on 4 glaciers.
- Measurement of turbulent fluxes using an eddy correlation system and processing data.
- Process studies of penitente formation
- Field work in a high altitude (up to 5000 m asl) environment (about ten days by month during the summer period: Nov. to March)

Required qualifications/experience:

- A PhD in glaciology or in hydrology
- Experience undertaking field work in mountainous areas
- Modelling experience (use of programming languages, execution of sensitivity tests)

Desirable qualifications/experience:

- Ability to work well in a diverse team
- Experience working with meteorological stations and data

Practical details:

- The position is available from the July 1st 2008 (July or August start is possible)
- The duration of the appointment is 2 years
- Net salary is 12.000.000 Chilean pesos (~25000 US\$). Plus, each day of field work is paid at 30,000 pesos, adding about 1,500.000 pesos per year (~3,100 US\$)
- Applications should be written in English or Spanish and include:

- A curriculum vitae including a numbered list of publications
- A statement of the applicant's research
- PhD diploma and other documents showing degrees and former positions relevant for this position.

CEAZA is a scientific consortium, established in 2003 (<http://ceaza.cl>), dedicated to studying the impact of climatic change and oscillations (e.g. ENSO) upon the hydrological cycle and the biological productivity in the arid zones of Northern-Central Chile. The successful applicant will work as part of a glaciological group that is focused on evaluating the water resources from the cryosphere. The glaciology unit consists of 6 scientists, who form part of the Hydrology and modeling group at CEAZA.

Further information on CEAZA can be found at:

<http://www.ceaza.cl/index.php>

Further information on the hydrology and modeling group can be found at:

http://ceaza.cl/index.php?option=com_content&task=section&id=7&Itemid=52

For further information about the expected area of work, the glaciology group, or CEAZA, please do not hesitate to contact Dr. Lindsey Nicholson (linznix@gmail.com) or Dr. H el ene Castebrunet (hcastebrunet@gmail.com)

Applications should be submitted by email to Dr. H el ene Castebrunet (hcastebrunet@gmail.com).