



## TERMS OF REFERENCE FOR THE ALMA – CONICYT POSTDOCTORAL POSITION CONTEST 2010

### NATIONAL PROGRAM FOR THE DEVELOPMENT OF ASTRONOMY AND RELATED SCIENCES

#### 1. OVERVIEW

This program is developed within the general scope of the “**Agreement on Scientific Collaboration for the Promotion of Astronomical Research**”, dated 28 October 2003 and its subsequent modifications, between the **National Commission for Scientific and Technological Research (CONICYT)**, the **European Southern Observatory (ESO)**, **Associated Universities Inc. (AUI)**, and the **National Astronomical Observatory of Japan (NAOJ)**, executive organizations in the construction and operation of the **Atacama Large Millimeter Array (ALMA)**.

Through this Agreement, the **National Fund for the Development of Chilean Astronomy**, or the **ALMA FUND**, is created, used and managed by CONICYT jointly with the Joint Committee, whose purpose is to finance the development of Chilean Astronomy and to prepare it for the full use of ALMA Astronomy Project.

For the better use of the ALMA telescope, the **ALMA - CONICYT Chilean Center of Research (ARC, ALMA Research Center)** will be created, which will be responsible for the operational support of Chilean astronomers for observations with ALMA prior to the beginning of its operations, as well as for the data acquired after the above-mentioned telescope begins operations.

In order to support the area of radio astronomy in Chile and the **ALMA – CONICYT Chilean Research Center**, CONICYT and the ALMA Fund have decided to create a postdoctoral position.

#### 2. OBJECTIVE

The objective of the **ALMA – CONICYT Postdoctoral Position** is to fund an astronomer to support and provide assistance to the Chilean community on the most effective use of the ALMA APEX instrumentation. Such astronomer is also expected to carry out independent research in radio astronomy at a Chilean university in a postdoctoral position.

It is expected that this postdoc position will finally have a positive impact on the number of Chilean publications based on these telescopes.

#### 3. DESCRIPTION OF THE POSITION

3.1. The **duties** to be carried out by the astronomer will be:

- a) Organize the Chilean ARC Center in CONICYT and support astronomers for the effective use of ALMA.
- b) Act as a support Astronomer at the APEX telescope.

c) Carry out independent research in astronomy at a Chilean university.

3.2. The above duties mentioned include the following **tasks**:

- a) Assist users in the preparation of observing proposals (Phase I and Phase II) and the technical evaluation of these proposals.
- b) Give advice on observation data reduction and calibrations and making.
- c) Perform working stays at the ALMA and APEX Telescopes.
- d) Give technical talks at Astronomy departments at Chilean universities.
- e) Provide operational support to astronomers that will use Chilean time on ALMA.

The fraction of time expected to be dedicated by the astronomer selected to these duties is **at least 70%**.

#### 4. DURATION

The postdoctoral position will have a duration of four years, from the date of the administrative document that approves the agreement between CONICYT and the awardee. This is expected to occur during the second semester of 2010.

This period will be extendable only once, for a fifth year, upon decision of the Joint Committee, after evaluation and approval of reports that the astronomer will need to provide.

#### 5. APPLICATION REQUIREMENTS

Chilean or foreign researchers that fulfill with the following requirements may apply:

- a) PhD Degree in Astronomy (must be accredited).
- b) Experience in radio astronomy instrumentation and/or observations, including the reduction and analysis of data obtained with these instruments. Previous use of instruments in millimeter wave telescopes (SEST, APEX, IRAM, etc.) will be seen as an advantage.
- c) Sponsorship by a Chilean university, where he/she will carry out his/her research. It is expected that the research carried out during the period will be done in collaboration with researchers from that institution.
- d) Mastery of the English language, spoken and written.
- e) Research proposal focused on areas in which these telescopes have the greatest scientific impact, in order to contribute to the scientific research of the University that hosts him/her.

Note: Published experience based on observations made with millimeter wave telescopes will be seen as favorable.

#### 6. APPLICATION DOCUMENTS

The applications must be submitted in the attached **application form**, accompanied by the following documentation:

- Letter of presentation by the applicant and a description of his/her interest in this position (2 pages maximum).
- Curriculum Vitae and list of publications (last 5 years) of the applying researcher.
- Description of the research proposal (2 pages maximum).
- Three letters of reference, which must be sent in PDF format directly to CONICYT before the closing date of application to: [areyes@conicyt.cl](mailto:areyes@conicyt.cl)

- Sponsorship letter from the Chilean University that will host the CONICYT-ALMA postdoc. This letter must be signed by the legal representative of the institution and must refer to the commitment of the institution to provide the necessary facilities for the performance of the postdoctoral researcher's research project, namely appropriate physical space, infrastructure, equipment, technical personnel and others.
- Document that accredits his/her PhD degree in Astronomy.

**Applications must be submitted in English.**

## **7. RESTRICTION**

- 7.1. Researchers that have debts or other contractual pending obligations or commitments with CONICYT can not apply to this contest.
- 7.2. The CONICYT- ALMA postdoctoral position is incompatible with other scholarships and/or national and/or international subsidies that the applicant may have or may later obtain. However, the awardee applicant may apply for telescope time on ALMA and APEX, as long as he/she complies with the time dedication established in point 3.2 of these terms of reference.

## **8. FINANCING AND BENEFITS**

- 8.1 Annual financing for maintenance will be up to **USD55,000 (fifty-five thousand American dollars)**, given Chilean currency at the moment of the Resolution that approves the agreement, and will be given to the postdoctoral researcher in 12 installments.
- 8.2. In addition the applicant may request financing of up to **USD5,000 (five thousand American dollars)** annually for travel (tickets and travel allowance) directly related to the research proposals or presentation of the results, and for expenses of operations, laboratory supplies, books, a laptop computer, magazines, subscriptions to congresses, purchase of services, petty expenditures and others.
- 8.3. Travel costs (tickets and travel allowance) arising from functions in the Chilean ARC- CONICYT and in APEX, will be finance by the ALMA-CONICYT fund.
- 8.4. An annual medical insurance premium for the awardee, for a maximum amount of **USD800 (eight hundred American dollars)** per year.

These benefits will be granted exclusively to awardee; they do not include his/her family group.

## **9. EVALUATION AND SELECTION**

The applications submitted that comply with these terms of reference will be evaluated in accordance with the following procedure:

### **9.1. Technical evaluation**

External evaluators, named by CONICYT, will review the applications in accordance with the following factors, in order of priority:

- Academic background of the applicant.
- Academic quality of the research proposal.
- That the research is at least partially based on sub-millimeter.
- Quality of the academic unit where the research will be conducted.

### 9.2. Pre-selection and interview

In accordance with the results of the external evaluation, the ALMA - CONICYT joint committee will pre-select and interview the most suitable applicants.

### 9.3. Resolution and decision

Taking into account the external evaluation and the personal interview, the ALMA – CONICYT joint committee will propose an applicant to the president of CONICYT.

## 10. RESULTS OF THE CONTEST

Once the decision is made, the result will be posted on the CONICYT web site. In addition, the selected applicant will be notified by e-mail.

## 11. OBLIGATIONS

### 11.1. Applying researcher.

- After the decision is made, CONICYT will notify the date on which an Agreement must be signed between CONICYT and the postdoctoral astronomer. This document will establish the rights and obligations of the parties and the duration of the benefits.
- Submit an annual technical and financial report, the time periods and formalities for which will be established in the agreement.

### 11.2. Sponsoring University

The sponsoring Chilean University must provide the necessary infrastructure during the period of execution. It must also respect the researcher's time dedication to research and support the Chilean community in the use of ALMA.

## 12. TRANSFERS

Fund transfers by CONICYT will be done directly to the postdoc by means of electronic transfer and will be subject to compliance with the following conditions:

- Complete processing of the resolution that approves the agreement.
- Delivery and approval of the rendering of accounts and technical reports of the project, on the dates stipulated in the agreement.
- Availability of resources from CONICYT.

## 13. COMPLETION OF THE PROJECT

The position will be ended after four or five years as applicable, in accordance with the end date that is indicated in the agreement. At the end of the postdoctoral position and on the date stipulated in the agreement, the beneficiary must present a final report and a rendering of accounts, which must be approved by CONICYT, to the satisfaction of the objectives and results committed.

## 14. COMPLIANCE WITH AND INTERPRETATION OF THE TERMS OF REFERENCE

- Only complete applications that comply with the requirements established in these terms of reference will be accepted; non-compliance with these will be grounds for declaring the applicant outside the terms of reference.
- Applications will not be accepted after the deadline.

- CONICYT reserves the right to interpret the meaning and scope of these terms of reference in the case of doubts and conflicts that may arise over their application.
- CONICYT may at any time, prior to contract signing, verify the complete compliance with these terms of reference, and more specifically, the precision and completeness of the information presented in the respective applications made in this contest, as well as in relation to the support of the documentation required. If inconsistencies, omissions and/or incompatibilities are detected, CONICYT will declare the award inadmissible to the project or projects that it deals with.
- **Documents and materials appended to the applications will not be returned.**

## **15. APPLICATION**

This contest will be published in a national newspaper.

The time period for submitting applications expires with no possibility for postponement, on **Monday, November 15<sup>th</sup>, 2010 at 16:00 hours**. The applications must be sent by e-mail to [areyes@conicyt.cl](mailto:areyes@conicyt.cl) in PDF format or in one sole compressed file.

**For further information write to the e-mail: [www.conicyt.cl/oirs](http://www.conicyt.cl/oirs)**