



ISTITUTO NAZIONALE DI ASTROFISICA

OSSERVATORIO ASTRONOMIC DI TERAMO



D.D. 24/2014

**SUBJECT:** Selection procedure based on qualification and possible interview for the awarding of one research fellowship entitled: "Advances in AGB modelling" Category: Post-Doc

**NATIONAL INSTITUTE FOR ASTROPHYSICS  
Osservatorio Astronomico di Teramo**

**The Director**

- **In accordance with** Law 240 dated 30 december 2010 and its art. 22 in particular;
- **In accordance with** the funds Provisions approved by the Italian Minister of University and Research of 18<sup>th</sup> of October 2013;
- **In accordance with** the request by Dr. Sergio Cristallo, local principal investigator of the project;
- **Ascertained** that financial coverage of the grant is granted within the funds CRAM 1.05.01.93.02 of 2014 budget;

**DECREES**

**Art. 1 – Research project**

A selection based on qualifications, possibly integrated by an interview, is open to award one research fellowship, funded under the project "Nucleosynthesis in AGB stars: an integrated approach" (Grant Agreement PRIN-MIUR 2012 n. 20128PCN59) and entitled "Advances in AGB modelling", category Post-Doc. The candidate will work in an highly interacting environment, collaborating with scientists of the INAF-Osservatorio Astronomico di Teramo (Dr. Sergio Cristallo, Prof. Oscar Straniero and Dr. Luciano Piersanti) in the field of AGB stellar modelling. Main research topics of this group are the study of the physical processes taking place in AGB stars (convection, rotation) and the analysis of the input physics of stellar models (Equation of State, Opacities, Strong and Weak reaction rates, Mass-loss law).

**Art. 2 – Requirements**

In order to participate in the selection, applicants must possess (at the date of 15<sup>th</sup> of February 2015), on pain of exclusion, a PhD degree in Astronomy or Physics awarded by an Italian university or by a foreign university. In case the candidate still not have got her/his PhD, s/he must attach to the application scan of a letterhead declaration from the PhD awarding Institute that the candidate will defend her/his PhD before the 15<sup>th</sup> of February 2015.

The following skills will be considered as preferential qualifications:

- dust formation and condensation in winds of AGB stars (both O- and C-rich), nature of dust and molecules at various metallicities;
- generation and propagation of pressure and gravity waves in stars;
- development of rotation-induced instabilities; rotation dominated accretion processes;
- magnetic field generation, magneto-convection, etc., through state-of-the-art numerical magneto-hydrodynamic simulations.

Details can be requested by e-mail to the following address: [sergio.cristallo@inaf.it](mailto:sergio.cristallo@inaf.it).

**Art. 3 – Application procedure**

Applications must be submitted in Italian or English by either:

1. certified mail (PEC) or e-mail with acknowledgement of receipt to the following email address [inafoateramo@pcert.postecert.it](mailto:inafoateramo@pcert.postecert.it) with attachments in .pdf format;
2. hand delivery to the Astronomical Observatory of Teramo;
3. express courier or by registered letter with acknowledgement of receipt.

**INAF - Osservatorio Astronomico di Teramo**

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Applications ( electronic or cartaceous ) received after **midday (UT) on 30<sup>th</sup> of September 2014** will not be considered.

Applications which are not consistent with the attached forms (Annexes 1,2) or without the applicant's signatures will be excluded from the selection procedure.

The application must be delivered reporting on the application's envelope or in the e-mail subject "Application for Research grant 'Advances in AGB modelling' at INAF-Osservatorio Astronomico di Teramo".

Aware that false declarations are punishable by law and that the Administration will carry out random checks on their accuracy, the applicant must state clearly and precisely in the application, under her/his own responsibility:

- name(s) and surname, date and place of birth, nationality, place of residence and address for correspondence;
- that s/he satisfies all the requirements described in article 2 of this Call;
- that s/he is aware of and is not ineligible under any of the restrictions described in article 4 of this Call.

The lack of any of the above mentioned declarations will determine the exclusion from the selection procedure for incomplete application.

For selection purposes the applicants:

- shall directly state any academic qualifications in the application form (Annex 1) in addition
- EU citizens, and non-EU citizens residing outside Italy, if successful, must produce originals or suitably certified copies of academic qualifications obtained outside Italy.

The following documents have to be submitted:

- Annex 1 "Application form";
- "Curriculum vitae", **signed and dated** by the applicant, providing evidence of possession of the PhD (or declaration presented by the PhD awarding Institute that the candidate will defend her/his PhD before the beginning of the present grant) and the skills required to carry out the research, including a list, if applicable, of grants and fellowships held in the past and a statement of research interests;
- copy of a valid identity document (ID card or passport);
- list of publications;
- any other qualification, working task, research activity for public and private institutions and publications that the applicant deems appropriate to submit.
- Annex 2 – Self-certification;

Applicant should also arrange for two signed letters of reference by persons familiar with her/his work who shall send them directly and within the deadline by e-mail with acknowledgement of receipt to the address [inafoateramo\[at\]pcert.postecert.it](mailto:inafoateramo[at]pcert.postecert.it), and in copy to the address [sergio.cristallo\[at\]inaf.it](mailto:sergio.cristallo[at]inaf.it).

Applicants are admitted for selection with reservation and may – at any time – be notified of exclusion from the selection procedure for the following reasons:

- submission of the application after the deadline;
- failure to complete and sign the application form;
- failure to sign the curriculum vitae;
- lack of the copy of a valid identity document;
- lack of the requirements indicated in paragraph 2.

Should the reasons for exclusion be ascertained after completion of the selection procedure the applicant will lose any right deriving from participation in the selection procedure; similar loss will be applied to applicants providing any false statement or document.

INAF-Osservatorio Astronomico di Teramo accepts no responsibility for lost applications or documents where this is due to the applicant having provided incorrect contact details or having failed or delayed in notifying any changes to these details.

**Art. 4 – Ineligibility and incompatibility with other funding**

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Full professors, associate professors and “ricercatori” in Italian universities and employees of Italian research public institutions are all excluded from entering the competition.

The grant cannot be held at the same time with attendance at academic courses as those that formally give access to a PhD, as well as with attendance at PhD courses with fellowship. For employees of the Italian Public Administration (Italian State) compulsory unpaid leave of absence is foreseen.

The grant cannot be held contemporarily with other fellowships of whatever kind, except those awarded with the aim of integrating the training or research activity of the fellowship holder through a period spent abroad. Aggregation of income from working activities, also part-time, carried out continuously is not accepted. Instead, limited self-employed occasional work is compatible with the grant, only if this is not prejudicial to the research activity carried out for INAF. This must be authorized in advance by the Director of INAF-Osservatorio Astronomico di Teramo.

Retired persons are not eligible for Research fellowship.

Also excluded from participation are any person who has carried out Research fellowships under article 22 of Italian Law 240/2010 for a total period exceeding four years, including extensions, but excluding the periods in which the grant has been held in coincidence with doctoral studies up to the maximum legal time limit of the course and excluding periods of maternity leave or sick leave, in accordance with current legislation.

**Art. 5 – Duration of the Research fellowship**

The Research fellowship is expected to begin between the 1<sup>st</sup> of March 2015 and the 1<sup>st</sup> of May 2015. The exact initial date could be reasonably delayed if requested by the completion of administrative procedures and/or for the cases mentioned in the art. 10 of this call.

The duration of the fellowship is one year, with a possible extension of another year, depending on the favourable review of the scientific responsible of the project, dr Sergio Cristallo. Periods of maternity leave or sick leave are excluded, in accordance with current legislation.

**Art. 6 – Host Institution**

The fellow will carry out the research at INAF-Osservatorio Astronomico di Teramo. Abroad periods for scientific collaborations expressly authorized by the scientific responsible of the project are allowed.

**Art. 7 – Salary amount**

The gross annual salary will be 28000 Euro. This amount is net of burdens to be charged to INAF-Osservatorio Astronomico di Teramo and will be paid in deferred monthly instalments. Expenses for authorized missions will be reimbursed within the limits of the budget assigned to the project and under the INAF rules. Applicable fiscal rules are the provisions of art. n. 4 of Italian law n. 476/1984 and subsequent modifications and integrations.

Applicable social security rules are art. n. 2, paragraph 26 and following paragraphs of the Italian law n. 335/1995 and subsequent modifications and integrations.

Applicable rules for obligatory maternity leave are provided in the Decree of the Ministry of Labour and Social Security dated 12 July 2007, published in the “Gazzetta Ufficiale” n. 247 dated 23 October 2007.

Applicable rules for sick leave are provided by art. n. 1, paragraph n. 788 of Italian law n. 296 dated 27 December 2006 and subsequent modifications. During the period of obligatory maternity leave the allowance paid by INPS (Italian national institute for social security) according to art. n. 5 of the above Decree dated 12 July 2007 is supplemented by INAF up to the total amount of the grant.

The period of obligatory maternity leave will not contribute to the duration of the grant foreseen by the contract.

Insurance coverage against accidents must be personally provided by the grant holder and the insurance policy documents must be produced when formally signing the contract.

**Art. 8 – Selection Committee and selection procedure**

The selection will be performed by a Selection Committee appointed by the Director of INAF-Osservatorio Astronomico di Teramo, and composed of 3 members.

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The selection is based on qualifications possibly integrated by an interview. The Selection Committee can establish a short list of the eligible applicants to be interviewed, on the basis of qualifications and documented experience in scientific or technological activities on the specific subject of the research fellowship. Eventual interviews will be performed using electronic devices for the communications.

Applicants selected for the interview will be summoned with 15 days notice by e-mail with acknowledgement of receipt, containing the individual score for qualifications.

At the end of the selection procedure the Selection Committee will draw up the ranked list.

The approval decree of the selection procedure and the ranked list will be published on the following website: [www.aa-teramo.inaf.it](http://www.aa-teramo.inaf.it).

### Art. 9 – Awarding of the fellowship

The highest ranked candidate will receive notification of award of the research.

Within 10 days from receipt of the formal notification of the award she/he must provide by secured mail (or courier) a formal declaration of acceptance of the research grant. The declaration will also state that she/he is not subject to any of the exclusion conditions listed in article 4 of this Call.

A scanned copy of such a declaration must also be sent by e-mail with acknowledgement of receipt to the following address [inafoateramo\[at\]pcert.postecert.it](mailto:inafoateramo[at]pcert.postecert.it).

If the candidate does not provide declaration of acceptance within a time limit of 10 days, she/he will surrender her/his entitlement to the research fellowship and it can be awarded to the next ranked candidate.

Under no circumstances the signing of the contract starts a subordinate employment relationship or ensures any rights to access to permanent INAF staff positions.

In case the fellow declines the grant, s/he has to notify it by e-mail with acknowledgement of receipt to the following address [inafoateramo\[at\]pcert.postecert.it](mailto:inafoateramo[at]pcert.postecert.it).

### Art. 10 – Fellowship obligations

The holder of the fellowship:

- will start the research activity at the date due as per the contract at INAF-Osservatorio Astronomico di Teramo, unless prevented by force majeure or exceptional circumstances, of which the Director of INAF- Osservatorio Astronomico di Teramo must be timely informed;
- will carry out her/his research activities under the supervision of the scientist in charge of the project, Dr Sergio Cristallo, who will also monitor the fellow's progress;
- is required to issue an activity reports every 6 months. The activity reports will be subject to approval from the scientist in charge of the project, Dr Sergio Cristallo, and will be transmitted to the Director of INAF- Osservatorio Astronomico di Teramo. Approval failing, duly reasoned by the scientist in charge, will give INAF- Osservatorio Astronomico di Teramo the right to terminate the contract;
- is required to send a written note in case of withdrawal, with at least 30 days notice, otherwise the INAF- Osservatorio Astronomico di Teramo is entitled to retain or request the reimbursement of the salary amount corresponding to the notice time-span she/he has failed to send.

The holder of the fellowship who does not carry out her/his research activity regularly without producing justified reasons or lacks repeatedly to fulfil requirements or, according to the evaluation of the local coordinator of the project activities, Dr Sergio Cristallo, eventually shows evident lack of skills at the planned research activities, will incur the termination of the contract.

Temporary suspensions of the research fellowship are due in case of obligatory maternity leave or in case of illness which lasts longer than one month or to any other serious reason. The reasons for suspending the research fellowship must be proved and certified, and promptly sent to the Director of INAF-Teramo.

### Art. 11 – Proceeding Responsible

In accordance with article 8, paragraph 3 of INAF Provisions on the assignment of research grants, Mr. Pasquale Buonocore is the responsible of the competition proceedings relevant to this competition announcement (e-mail: [buonocore\[at\]aa-teramo.inaf.it](mailto:buonocore[at]aa-teramo.inaf.it)).

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**Art. 12 – Applicable regulation**

The INAF- Osservatorio Astronomico di Teramo shall abide by provisions in force promoting equal opportunities for women and men, non-discrimination and respect of privacy in processing personal data. For what not explicitly mentioned in this announcement, the INAF- Osservatorio Astronomico di Teramo shall act in compliance with the regulations in force concerning Italian public selection procedures, when applicable by analogy.

Teramo, *July 2nd 2014*



*The Director*  
*[Signature]*  
Prof. Roberto Buonanno

*INAF - Osservatorio Astronomico di Teramo*

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# ANNEX 1

## APPLICATION FORM

To  
the Director of INAF-Osservatorio Astronomico di Teramo  
via Maggini snc  
64100 Teramo - ITALY

I, THE UNDERSIGNED,

(Forename(s)) .....  
(Surname).....  
Place of birth (City/State/Country) .....  
Date of birth (dd/mm/yy) .....  
Nationality .....  
Gender .....  
Permanent residence address (number/street/town/postal code/Country):  
.....

Email address: .....

agree to the processing of my personal data, in accordance with Italian Leg. Decree n. 196/2003, for the purposes of the present selection procedure.

I, THE UNDERSIGNED,

having read the Call for applications D.D. 24/2014 for the appointment of one research fellowship entitled:  
“Advances in AGB modelling ”.

REQUEST

to apply for the above mentioned fellowship, and to this end, aware that false declarations are punishable by law and that this Administration will carry out random checks on the accuracy of the declarations made by candidates,

DECLARE

under my own responsibility

- that I hold the following Research Doctorate (PhD) ..... awarded by..... on date..... Title of thesis .....
- that I will defend the following Research Doctorate (PhD) ..... awarded by..... on date..... Title of thesis .....
- that I have a professional level of knowledge of English language;
- that I am aware of the restrictions described in Article 4, of the Call for applications for this research fellowship;
- that I have never received a research award as per art. 22, Italian Law 240/2010;
- that I have previously received a research awards as per art. 22, Italian Law 240/2010 and, in particular I have been the recipient of:
  - a research fellowship entitled ....., at (name of the institution)....., beginning.....ending.....total months .....

- a research fellowship entitled .....,  
at (name of the institution).....,  
beginning.....ending.....total months .....
- a research fellowship entitled .....,  
at (name of the institution).....,  
beginning.....ending.....total months .....

that I am not a retired person;

that I am aware that, under art. 22 Italian Law 240/2010, the research fellowship:

- cannot be held contemporarily with attendance at academic courses, “laurea specialistica” academic courses, and “laurea magistrale” academic courses, as well as with attendance at PhD courses with fellowship;
- cannot be held contemporarily with other fellowships of whatever kind, except those awarded with the aim of integrating the training or research activity of the fellowship holder through a period spent abroad;
- cannot permit aggregation of income from working activities, also part-time, carried out continuously.

that I wish to receive any communication relating to the selection at the following address and that I will give due notice of any change of address:

Address (number/street/city /postal code/Country):

.....

Email address: .....

To be attached to this form:

- Curriculum vitae, **signed and dated** by the applicant, providing evidence of possession of the skills required to carry out the research and including a list, if applicable of grants and fellowships held in the past;
- Annex 2 Self-Certification
- copy of a valid identity document (ID card or passport);
- list of publications;
- any other qualification, working task, research activity at public and private institutions and publications that the applicant deems appropriate to submit.

Date

Signature

\_\_\_\_\_

\_\_\_\_\_

## ANNEX 2

### SELF-CERTIFICATION

The undersigned (Forename(s)) ..... (Surname) .....

Place of birth (Town/State) .....

Permanent resident address (number/Street/town/postal code/Country)  
.....

As candidate to the selection for one research grant issued by INAF-Osservatorio astronomico di Teramo with Director Decree n. 24/2014, aware that producing false statements shall be punished in accordance with law and with any other applicable acts on this matter,

DECLARE UNDER MY OWN RESPONSIBILITY

THAT THE CONTENT OF THE ATTACHED "CURRICULUM VITAE" IS TRUE

Date

Signature\*

\_\_\_\_\_

\_\_\_\_\_

\* The copy of a valid identity document of the signer must be attached