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**SUMMARY OUTLINE OF THE NOTICE OF COMPETITION**

**Subject:**

Public selection procedure, based on qualifications and potential interview, for the awarding of a post-doctoral research fellowship, lasting two years, for the needs of the project "INAF Exploration of Diffuse Galaxies with *Euclid* (INAF-EDGE)", entitled: "Surface brightness fluctuation distances with simulated *Euclid* images".

**Description of the research activity to be carried out:**

- simulation of *Euclid* images aimed at enabling the measurement of the signal of surface brightness fluctuations (SBF) in external galaxies;
- adaptation of images from other space observatories (e.g. *HST*) to the characteristics of *Euclid* (the so-called "Euclidization");
- Assessment of the *Euclid* pipeline for the capability of SBF detection, and developing methods for mitigation in the case of difficulty.

The possible oral interview, upon discretion of the exam commission, will focus on the topics relating to the sector of activity for which the selection is announced and the activities specified in art. 1 of the announcement (see above):

**Admission requirements:**

In order to be admitted to the selection procedure governed by this "Call", the possession of one of the following qualifications is required:

- PhD in Physics, Astronomy or Astrophysics, Fisica o Astrofisica or equivalent, issued by a Higher Institute or University (including foreign);

or

- Master degree (or 2nd level Laurea degree, if issued by an Italian University) in Physics, Astronomy or Astrophysics or equivalent qualification, issued by a Higher Institute or University (including foreign), together with at least three years of documented experience in scientific activities or technological after graduation. The equivalence will be established by the selection board according to criteria defined for the purposes of the selection procedure.

A good knowledge of the English language is required.

The following skills and experiences will be considered preferential requirements:

- experience with Python programming and associated packages (astropy, numpy, Scipy, matplotlib, pandas, jupyter-notebook, ec.);

- experience with data from optical and near-infrared surveys;
- experience with simulation of galaxy images (e.g., using the ArtPop tool)
- knowledge of methods for astronomical data reduction and analysis (e.g., SExtractor, Aladin, TopCat, IRAF, ...)

### **Application for admission:**

Applications must be submitted in one of the following ways:

- for Italian citizens:
  - ✓ by certified e-mail, including all required documents in PDF format, sent to [inafoateramo@pcert.postecert.it](mailto:inafoateramo@pcert.postecert.it) . Only e-mail PEC from one of the operators indicated in the list of the AgID Digital Italy Agency pursuant to Presidential Decree No. 68 of 11/02/2005 is considered valid;
  - ✓ by regular electronic mail (e-mail), to the address [inafoateramo@pcert.postecert.it](mailto:inafoateramo@pcert.postecert.it) if the sender does not hold a certified e-mail address;
  - ✓ registered mail with return receipt to the National Institute of Astrophysics - Astronomical Observatory of Abruzzo - Via Maggini snc - 64100 Teramo (TE), Italy;
  - ✓ authorized express courier to INAF-Osservatorio Astronomico d'Abruzzo- Via Maggini snc, 62100 Teramo (TE), Italy.
- for foreign citizens:
  - ✓ by regular electronic mail (e-mail) [inafoateramo@pcert.postecert.it](mailto:inafoateramo@pcert.postecert.it) .
  - ✓ authorized express courier to INAF-Osservatorio Astronomico d'Abruzzo- Via Maggini snc, 62100 Teramo (TE), Italy.

**Applications must be received no later than April 30, 2023 - 11:59 pm CET (not postmarked). Late applications will not be considered.**

Requests to participate can be delivered by reporting in the subject of the e-mail the following sentence: "Selection Research Grant SBF-EDGE". The presumed starting period of the job is June 2023.

Aware that false declarations against the law are punishable for and that the Administration can proceed to verify the veracity of the declarations made, the candidate must clearly and precisely declare:

- name and surname, date and place of birth, nationality, residence and address for sending correspondence,
- to possess all the requisites described in this announcement (article 2 of the "Call", in Italian);
- not to be in some of the incompatibility conditions added to article 4 of the "Call" (only in Italian).

The lack of the declarations mentioned will result in exclusion from the selective procedure for incomplete application.

For the purposes of selection, the candidate can self-certify the possession of academic qualifications through Annex 1.

In addition, non-EU citizens residing outside Italy, if successful, must produce originals or suitably certified copies of academic qualifications obtained outside Italy.

To participate, the following documents must be presented:

- Complete Application Form, as provided in the Annex 1 of this announcement;
- Annex 2 - substitutive declaration of certification - substitutive declaration of deed of notoriety (art. 19 - 46 - 47 of Presidential Decree 28 December 2000, n. 445);
- “Curriculum vitae”, signed and dated by the candidate, which also indicates any scholarships and research grants previously or in progress;
- Copy of a valid identity document;
- List of publications;
- Any other qualification, work experience, research activity at private public institutions and publications that the candidate deems appropriate to attach;
- List of all documents presented.

Candidates are admitted to the selection with reserve and may, at each stage, be notified of their exclusion from the selection for any of the following reasons:

- the application was submitted after the deadline;
- lack of a signature;
- lack of a copy of a valid identity document;
- lack of the requisites indicated in article 2 of the “Call” in Italian;

If the reasons for exclusion are ascertained after the conclusion of the selection procedure, the candidate will lose all rights to participate in the selection; similarly, we will proceed if the production of false declarations is ascertained.

In case of the potential oral interview, the admitted candidates will be notified by e-mail 15 days in advance. It is possible to waive the 15 days period if all the admitted candidates agree. Applicants are required to indicate in the application form if he/she intends to waive the 15-advance period before the potential interview.

INAF declines all responsibility for loss of the application or documentation when this derives from the fact of the applicant for having provided incorrect contact details or for having failed or delayed notification of any changes.

### **Duration of the research fellowship**

The duration of the fellowship is two years, renewable if necessary subject to the assessment of the needs of the research program, subject to a reasoned request from the Scientific Responsible and subject to verification of financial availability and, in any case, within the limits provided for in article 22, paragraph 3, of Law 240/2010 and subsequent amendments and additions.

### **Location of the research grant**

The location of the study and research activity will be the Astronomical Observatory of Abruzzo under the direction of Dr. Michele Cantiello. The candidate will be able to undertake transfers within Italy and abroad.

### **Amount of the research grant**

The gross annual amount of the research grant is **€ 30,000.00**; this amount is to be understood net of the charges to be borne by the Astronomical Observatory of Abruzzo and will be paid in deferred monthly installments.

All details of the present summary outline are available in the Italian version (DD n. 22/2022), published on the web sites of INAF and of the INAF-O.A. Abruzzo. For further clarifications, the interested applicants can send an email to the local coordinator of the project activities, Dr Michele Cantiello ([michele.cantiello@inaf.it](mailto:michele.cantiello@inaf.it)).

For what not explicitly mentioned in the detailed version of the call announcement (in Italian), the INAF-O.A. Abruzzo shall act in compliance with the regulations in force concerning Italian public selection procedures, when applicable by analogy.

**THE DIRECTOR OF THE “INAF-OSSERVATORIO ASTRONOMICICO DI ABRUZZO”**

Dr. Enzo Brocato

ANNEX A

APPLICATION SAMPLE

To the Director of the Astronomical Observatory of Abruzzo

via Mentore Maggini snc

64100 Teramo

The undersigned ..... (married candidates must indicate their maiden name), born in ....., prov. ...., on ....., and resident in ....., prov. ...., In Via / Piazza ....., N ° ....., C.A.P. ....

applies

to be admitted to participate in the selection procedure based on qualifications and interview, for the awarding of a two-year research grant for the needs of the project "INAF Exploration of Diffuse Galaxies with Euclid", entitled: "Surface brightness fluctuation distances with simulated Euclid images", announced with Directorial Determination no. \_\_\_\_ of the \_\_\_\_\_.

To this end, under one's own responsibility and aware that the declarations made and signed in this application have the value of a substitutive declaration of certification and/or deed of notoriety pursuant to art. 38, 46 and 47 of Presidential Decree no. 445/2000 and that in the case of falsification of documents or false declarations, the sanctions provided for by art. 76 of the aforementioned Presidential Decree,

**declares**

1. fiscal code (italian) \_\_\_\_\_
2. to be an Italian citizen or to be a citizen of the following State .....
3. to benefit from civil and political rights and to be registered in the electoral roll of the municipality of ..... or not to be registered on the electoral roll or to have been canceled from the electoral roll for the following reasons: .....
4. not to have been convicted of a crime or to have pending criminal proceedings, not to be the recipient of preventive measures and administrative measures registered in the criminal record; otherwise, the reported convictions, the measures applied and the pending criminal proceedings of which one is aware are specified ..... (1);
5. to be in possession of a PhD in \_\_\_\_\_ obtained on (dd/mm/yyyy) \_\_\_\_\_ at the University \_\_\_\_\_;
6. to have a degree in \_\_\_\_\_ obtained on (dd/mm/yyyy) \_\_\_\_\_ at the University \_\_\_\_\_ with the mark of \_\_\_\_\_

In the event that the qualification was not obtained in Italy:

- a) if you are in possession of the title of equivalence or the procedure to obtain it has been activated, you must provide the following information:

degree in \_\_\_\_\_ obtained on (dd/mm/yyyy) \_\_\_\_\_ at \_\_\_\_\_ with grade \_\_\_\_\_ declared equivalent by MIUR/MUR decree number ..... of ..... or alternatively an equivalence request sent to the MIUR/MUR on \_\_\_\_\_

b) if you are NOT in possession of the title of equivalence, you must provide the following information (\*):

degree in \_\_\_\_\_ obtained on (dd/mm/yyyy) \_\_\_\_\_ at \_\_\_\_\_ with grade \_\_\_\_\_ and that the legal duration of the course is years \_\_\_\_\_

7. to be in possession of at least 3 years of documented experience in scientific, technological or management activities, gained at \_\_\_\_\_ from \_\_\_\_\_ as of \_\_\_\_\_, carrying out the following activities

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ as per attachments (.../...) (to be completed in case of missing PhD)

8. to have a good knowledge of the English language, written and spoken;  
9. to be aware of the conditions of inadmissibility specified in art. 3 of the "Call";  
10. the non-existence of incompatibility causes as indicated in art. 4 of the "Call";  
11. to be in possession of the following additional qualifications:

\_\_\_\_\_  
\_\_\_\_\_

12. not to have been dispensed and or dismissed from another job employed by a public administration for persistent, insufficient performance and not to have been declared forfeited from another employment by a public administration, pursuant to article 127, paragraph 1, letter d), of the Decree of the President of the Republic of January 10, 1957, number 3, and that the employment relationship has not been terminated for disciplinary reasons;  
13. not to be the beneficiary of / scholarships / research grants / research contracts awarded for any reason *or* to be the beneficiary of / scholarships / research grants / research contracts awarded for any reason at the Entity / University / Institute \_\_\_\_\_ from \_\_\_\_\_ with expiry \_\_\_\_\_ and to undertake to renounce it in case of passing this selective procedure;  
14. to be in the following position for the effects and fulfillment of military obligations

\_\_\_\_\_

The undersigned would like communications regarding this public selection to be sent to the following address:

Address: \_\_\_\_\_

Municipality: \_\_\_\_\_ ZIP code \_\_\_\_\_ Province: \_\_\_\_\_

Phone: \_\_\_\_\_ email: \_\_\_\_\_

certified email: \_\_\_\_\_

The undersigned attaches the following documentation:

1. Curriculum vitae et studiorum dated and signed;
2. Annex B - substitutive declaration of certification or substitutive declaration of deed of notoriety (art. 19 - 46 - 47 of Presidential Decree 28 December 2000, n. 445);
3. Double-sided copy of a valid identity document;
4. Other qualifications, documents or publications deemed useful for the purposes of the evaluation;
6. List of all documents submitted.

(\*) The candidate in possession of the foreign qualification, in the absence of equivalence, is required to attach to the application for admission a copy of the certificate or, alternatively, of the documentation certifying the qualification possessed, the exams taken and the final grade, in order to allow the Examining Commission to acquire all the evaluation elements necessary and/or useful for ascertaining its equivalence to one of the qualifications required for admission to the selection procedure covered by this "Call"

(Place and date) \_\_\_\_\_

(Signature)

\_\_\_\_\_

The undersigned expresses his/her consent so that the personal data provided can be processed, in compliance with Legislative Decree 30 June 2003 n. 196 as amended by the "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 concerning the protection of individuals with regard to the processing of personal data, as well as the free circulation of such data and repealing Directive 95 / 46 / EC (" General Data Protection Regulation ") , for the obligations related to this procedure.

(Place and date) \_\_\_\_\_

(Signature)

\_\_\_\_\_

ANNEX B

**SUBSTITUTE DECLARATION OF CERTIFICATION AND SUBSTITUTE DECLARATION OF THE NOTICE ACT**

(articles 19, 46 and 47 of Presidential Decree no. 445/2000 and subsequent amendments and articles 75 and 76 of Presidential Decree no. 445/2000 and subsequent amendments)

The undersigned *Last name* ..... *Name*..... (for women indicate maiden name)  
born..... in .....province..... on ..... tax identification number/code  
..... currently resident in ..... province .....

address..... postal code.....,

aware of the penal sanctions referred to in art. 76 of the Presidential Decree 445 of 28.12.2000, in the event of false declarations and formation or use of false documents

**DECLARES**

1. that all the information contained in the Curriculum vitae et Studiorum is true;
2. to be in possession of the following evaluable qualifications:  
(specify each element that allows the Examining Commission to correctly evaluate the qualifications, including periods and institutions)

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3. not to be the holder of other scholarships, research grants, research contracts conferred for any reason

or

to be the holder of scholarships/research grants/research contracts awarded in any capacity at the Organization/University/Institute \_\_\_\_\_

- from \_\_\_\_\_ to \_\_\_\_\_ (dd/mm/yyyy)
- from \_\_\_\_\_ to \_\_\_\_\_ (dd/mm/yyyy)
- from \_\_\_\_\_ to \_\_\_\_\_ (dd/mm/yyyy)

4. other: \_\_\_\_\_

Attach a copy of a valid ID or identification document.

Place and date \_\_\_\_\_

(signature)

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The undersigned expresses his/her consent so that the personal data provided can be processed, in compliance with Legislative Decree 30 June 2003 n. 196 as amended by the "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 concerning the protection of individuals with regard to the processing of personal data, as well as the free circulation of such data and repealing Directive 95 / 46 / EC ("General Data Protection Regulation "), for the obligations related to this procedure.

(Place and date)

(signature)

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