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Record no. .... dated .....

**Subject: Notice for the collection of expressions of interest for the direct award of no. 1 Research assignment, pursuant to art. 10 of the current Regulations for the award of Research assignments under art. 22-ter of Law no. 240 of 30 December 2010 - 2026\_IR\_03\_DFA - Funded by the project FIS “Assioni e settori oscuri: test sulla Terra e dall’astrofisica - ASTRA” – CUP C53C24001460001- Scientific Supervisor and/or Tutor: Dr Edoardo Vitagliano – Duration: 29 months**

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*In this notice, all positions, professions and titles relating to the functions performed and specified with regard to gender are to be understood as referring to all genders.*

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**The Director of the Department of Physics and Astronomy “Galileo Galilei”**

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HAVING REGARD TO Law no. 168 of 9 May 1989;

HAVING REGARD TO the Statute of the University of Padua, published in the Official Gazette no. 300 of 27 December 2011, as subsequently amended and supplemented;

HAVING REGARD TO Law 240/2010 and subsequent amendments and additions, and in particular Art. 22-ter of the Law as amended by Law no. 79/2022 converting, with amendments, Decree-Law no. 45 of 7 April 2025, which introduced the Research Assignment;

HAVING REGARD TO Ministerial Decree no. 592 of 6 August 2025 defining the minimum economic treatment for post-doc assignments and research assignments - Arts. 22-bis and 22-ter, Law no. 240 of 30 December 2010;



HAVING RECALLED the current Regulations for the awarding of Research Assignments pursuant to Art. 22-ter of Law 240/2010, issued by Rector's Decree No. 4508/2025 of 31 October 2025;

HAVING REGARD TO Legislative Decree no. 17 of 9 January 2008 concerning the admission of third-country nationals for scientific research purposes, as subsequently amended and supplemented;

HAVING REGARD TO the Code of Ethics of the University of Padua;

HAVING REGARD TO Presidential Decree no. 62 of 16 April 2013 "*Regulations containing the code of conduct for public employees, pursuant to Art. 54 of Legislative Decree no. 165 of 30 March 2001*", which extended, where compatible, the behavioural obligations of the code to all collaborators or consultants, regardless of the type of contract or assignment;

HAVING REGARD TO the resolution of the Council of the Department of Physics and Astronomy “Galileo Galilei” of 24/03/2026 which approved the activation of no. 1 Research Assignment aimed at introducing young scholars to research and innovation, under the supervision of a Tutor to be carried out remotely and/or at the Department of Physics and Astronomy “Galileo Galilei” under the supervision of Dr Edoardo Vitagliano, acting as Tutor;

ASCERTAINED that the research assignment is funded by external resources, obtained at national, international or European level, which allow the activation of direct award procedures on the project “**Axions and Dark Sectors: tests from neutron stars and supernovae**” within the framework of the financing FIS “Assioni e settori oscuri: test sulla Terra e dall’astrofisica - ASTRA” – CUP C53C24001460001- Scientific Supervisor Dr Edoardo Vitagliano

DEEMED APPROPRIATE to activate a procedure for the direct award of no. 1 Research assignment aimed at introducing young scholars to research and innovation, under the supervision of the Tutor Andrea Longhin

### decrees

#### Art. 1 – Subject

A procedure is hereby announced for the direct award of no. 1 Research assignment, aimed at introducing young scholars to research and innovation, within the framework of the research project entitled “**Axions**”

**and Dark Sectors: tests from neutron stars and supernovae**” to be carried out at the Department of Physics and Astronomy “Galileo Galilei” under the supervision of Dr Edoardo Vitagliano, acting as Tutor.

The Research assignment, with a duration of **29 months** and an annual gross amount, for the recipient, of **Euro 29.184** is awarded pursuant to art. 10 of the current Regulations for the awarding of Research assignments in accordance with art. 22-ter of Law 240/2010 within the framework of the aforementioned research project, Scientific Disciplinary Group 02/PHYS-02, Scientific-Disciplinary Sector PHYS-02/A.

The Research assignment, funded by Department of Physics and Astronomy “Galileo Galilei” concerns the performance of the research activity specified as follows

*“An exciting possibility in the near future of particle physics is the potential discovery of “feebly interacting particles” (FIPs). Potential searches for axions and other FIPs include both laboratory and astrophysical signals. The IR will be expected to perform original research on the effects of FIPs with masses smaller than 1 GeV on dense astrophysical environments (neutron stars and supernovae). The IR is organized on three different phases, dedicated respectively to the impact of FIPs on the early protoneutron star phase in the context of specific particle models, on the impact of FIPs on the cooling of cold neutron stars in the context of specific particle models, and finally on the systematic study of bounds on different models of physics beyond the Standard Model.*

*The astrophysical aspects of the proposal will require the acquisition of expertise in:*

- *neutron star and supernova simulations;*
- *knowledge of astrophysical data and the latest results in stellar structure;*
- *analytical calculation of particle production in a plasma and subsequent generation of several observables.”*

## **Art. 2 – Admission requirements**

Young scholars who hold a **master's degree or a single-cycle master's degree in Physics, Astrophysics or Cosmology obtained no more than six years ago** and have a curriculum suitable for assisting in research activities may submit an expression of interest for the assignment.

The qualifications must be held on the announcement deadline date.

If the degree diploma was obtained abroad, it must be declared equivalent, for selection purposes only, to the master's degree or single-cycle master's degree by the Selection Committee.

Research Assignments, pursuant to Art. 22-ter of Law no. 240 of 30 December 2010, may not be awarded to those who are in one or more of the following situations:

- those who have held contracts referred to in Article 24 of Law 240/2010;
- permanent staff, employed on a permanent basis, of universities, public research bodies and institutions whose scientific specialization diploma has been recognized as equivalent to the PhD pursuant to Article 74, fourth paragraph, of Presidential Decree no. 382 of 11 July 1980;
- those who have a degree of kinship or affinity, up to and including the fourth degree, with a professor or researcher belonging to the Department proposing the selection or with the Rector, the Director General or a member of the University's Board of Directors;
- have already benefited from Research Assignments referred to in Art. 22-ter of Law 240/2010 as amended by Law no. 79/2022 for a period which, added to the duration of the assignment provided for in the announcement, exceeds a total of 3 years, even if not continuous. For the purposes of the duration of the aforementioned relationships, periods spent on maternity or paternity leave or for health reasons according to current legislation are not relevant.

The total duration of relationships established with holders of positions referred to in Articles 22 - (Research Contracts), 22-bis (Post-doc Assignments), 22-ter (Research Assignments) and contracts referred to in Article 24 (RTT) of Law 240/2010, even with different universities, state, non-state or online, with institutions of higher artistic, musical and dance education, with institutions whose scientific specialization diploma has been recognized as equivalent to the PhD pursuant to Article 74, fourth paragraph, of Presidential Decree no. 382 of 11 July 1980, and with public research bodies may not in any case exceed 11 years, even if not continuous. For the purposes of the duration of the aforementioned

relationships, periods spent on maternity or paternity leave or for health reasons according to current legislation are not relevant.

Candidates are admitted to the selection with reserve.

The Structure that issued the announcement may order at any time, by reasoned decree of the Director, the exclusion from the selection for lack of the required requisites.

### **Art. 3 – Submission of expressions of interest**

The expression of interest, as well as the qualifications held, documents, publications and all attachments deemed useful, must be submitted, under penalty of exclusion, electronically, using the dedicated application, on the Pica platform page: <https://pica.cineca.it/unipd/>.

The expression of interest form can be completed starting **from 4:00 PM (Italian time) on 27/03/2026 and must be submitted by 4:00 PM (Italian time) on 07/04/2026**.

For registration, completion, signature and submission of the application, candidates must comply with the provisions of the **Guidelines for completing applications - Research Assignments** (Annex 1 - Guidelines), which form an integral and substantial part of this announcement.

The lack of signature and/or identity document is grounds for exclusion from the selection process.

The candidate may also access the procedure for completing the expression of interest through identification via the SPID system (Public Digital Identity System). In this case, it will not be necessary to sign the application form.

The submission of the expression of interest to the Department of Physics and Astronomy “Galileo Galilei” takes place automatically with the final closure of the online procedure. Therefore, no delivery or shipment of paper material should be carried out.

Candidates whose expressions of interest have not been submitted within the deadline or have been submitted in a manner other than that indicated above are not admitted to the selection.

The expression of interest must be accompanied by:

1. copy of a valid identity document in .pdf format;
2. scientific-professional curriculum vitae in .pdf format;
3. qualifications and publications relevant to the selection;

The expression of interest form is to be considered, for all legal purposes, as a self-certification pursuant to Articles 46 and 47 of Presidential Decree 445/2000 and subsequent amendments and additions, with regard to the data contained therein and the attached documents.

Those coming from non-EU countries in possession of a valid residence permit may use substitute declarations according to the procedures provided for EU citizens, if it is a matter of declaring states, facts and personal qualities that can be certified or attested by Italian public entities or if the production of substitute declarations is made in accordance with international agreements between Italy and the declarant's country of origin.

Those coming from non-EU countries not in possession of a regular residence permit may use the online procedure for uploading qualifications in .pdf format and certificates, issued by the competent authorities of the of their Country of citizenship, accompanied by a translation into Italian authenticated by the Italian consular authority which certifies their conformity to the original. The originals of these documents must be exhibited to the Committee during the interview, where applicable, and in any case, produced to the Structure upon any conferral of the assignment.

Any information or clarification regarding the procedures for submitting expressions of interest may be requested from the Structure (telephone number 0498277062/7299, email [settore.ricerca@dfa.unipd.it](mailto:settore.ricerca@dfa.unipd.it)).

For technical issues only, please contact the support service via the link at the bottom of the page: <https://pica.cineca.it/unipd>.

The candidate undertakes to notify any changes to the contact details provided in the expression of interest form.

#### **Art. 4 – Assessment procedure**

The assignment will be awarded based on the evaluation of expressions of interest received by the Research Supervisor Dr Edoardo Vitagliano according to their competencies in:

- theoretical astroparticle physics;
- analytical and numerical calculations related to the production of both light particles (sub-eV) in stellar environments.

#### **Art. 10 – Safeguard rules**

For matters not specified in this announcement, reference is made to the provisions contained in Law no. 240/2010 as subsequently amended and implemented, in the current Regulations for the awarding of Research Assignments pursuant to Art. 22-ter of Law 240/2010 of the University of Padua, and to current legislation.

The Structure reserves the right to verify the accuracy of substitute declarations of certifications or notarial deeds made by candidates pursuant to D.P.R. 445/2000, at any stage of the procedure. If the above-mentioned check reveals the untruthfulness of the content of the declarations, the declarant shall forfeit any benefits resulting from the provision issued on the basis of the untruthful declaration, without prejudice to the provisions of Art. 76 of D.P.R. 445/2000, concerning the penalties provided for by the Criminal code and special laws on the matter.

The person responsible for the procedure is the Administrative Secretary of the Department/, Dr Marco Agnello.

#### **Art. 11 - Processing of personal data**

The processing of personal data provided by candidates takes place in compliance with the provisions EU Regulation No. 679 of 27 April 2016 (General Data Protection Regulation - GDPR).

The complete privacy policy is available at the following link: <http://www.unipd.it/privacy>

Pursuant to art. 22-ter, paragraph 4, of Law 240/2010, this notice will be published on the Structure's web and on all other websites required by the funding body.

This announcement is also translated into English for informational purposes only; for all legal purposes, only the Italian version is valid.

Padua, 27/03/2026

The Director of the Department  
Prof. Flavio Seno

