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DETERMINA n. 9/2026

SELECTION PROCEDURE BASED ON QUALIFICATIONS AND POSSIBLE INTERVIEW FOR THE ASSIGNMENT OF ONE FELLOWSHIP, OF THE DURATION OF 12 MONTHS, ENTITLED "FLUORESCENCE MODEL FOR COMETS IN THE UV".

CUP: F83D24000170001

THE DIRECTOR

TAKING INTO ACCOUNT Italian Law n. 138, dated June 4, 2003, for the Reorganization of the Istituto Nazionale di Astrofisica (INAF), in particular the article 3;

TAKING INTO ACCOUNT the INAF Statute, approved and effective as of September 24, 2018;

TAKING INTO ACCOUNT the Resolution of September 13, 2024, number 16, by which the Board of Directors approved both the amendment to Article 14, paragraph 1, second sentence, and the amendment to Article 16, paragraph 2, first sentence, of the current "*Statuto*" of the "*Istituto Nazionale di Astrofisica*".

TAKING INTO ACCOUNT the note dated October 23, 2024, protocol number 19624, recorded in the General Registry of the Institute on the same date with progressive number 11537, by which the amendments to the "*Statuto*" of the "*Istituto Nazionale di Astrofisica*" were definitively approved, as proposed by the Administrative Board of the same "*Istituto*" in Resolution no. 16 of September 13, 2024;

GIVEN that the "*Statuto*" of the "*Istituto Nazionale di Astrofisica*", with the aforementioned amendments, it comes into force on October 30, 2024;

TAKING INTO ACCOUNT the "Regolamento di Organizzazione e Funzionamento" of the "*Istituto Nazionale di Astrofisica*", approved by the Administrative Board with the resolution of June 5, 2020, number 46, and modified by the same Board through Resolution no. 21 of April 29, 2021, published on June 24, 2021, and comes into force on July 9, 2021, and most recently amended and supplemented by Resolution no. 16 of September 13, 2024;

TAKING INTO ACCOUNT the note dated October 23, 2024, protocol number 19624, recorded in the General Registry of the Institute on the same date with progressive number 11537, by which the latest amendments to the "Regolamento di Organizzazione e Funzionamento" of the "*Istituto Nazionale di Astrofisica*" were definitively approved;

TAKING INTO ACCOUNT the INAF "Disciplinare di Organizzazione e Funzionamento (DOF)", approved with resolution n. 44/2012 by INAF Administrative Board on June 21, 2012;

TAKING INTO ACCOUNT the instructions issued by the Director of the Department of Research Structures on 07/01/2005 and on 02/17/2005;

TAKING INTO ACCOUNT the note protocol number 4022 dated 19/06/2008 of the President of INAF;

TAKING INTO ACCOUNT the Guidelines concerning the recruitment of non-permanent staff, approved by the Administration Board of INAF at the meeting held on January 30, 2018;

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TAKING INTO ACCOUNT the request from Dr. Migliorini Alessandra, received by this Observatory on January 12, 2026 with protocol number 52, concerning the activation of a fellowship entitled "Fluorescence model for comets in the UV";

ACKNOWLEDGING the information provided to the Scientific Supervisor on January 13, 2026 regarding the launch of the current procedure, received by the same for the purpose of the relevant monitoring activities;

GIVEN that the fellowship will be funded with the resources allocated in the Budget under Objective Function 1.05.24.05.16 project "FLU-OHM: Fluorescence OH/OD model for Cometary Observations applied to CUBES/VLT" item 1.04.02.03.001 'Fellowships', of the cost center 1.03 (INAF – Astronomical Observatory of Padua);

TAKING INTO ACCOUNT the Annual Budget Forecast of INAF for the 2025 Fiscal Year, approved by the Administration Board with Resolution no. 57 of December 30, 2024;

ASCERTAINED the financial coverage;

DECREES:

Art. 1

Research Project

A selection based on titles and qualifications, possibly integrated by an interview, is open to award one fellowship of the duration of 12 months, entitled: "**Fluorescence model for comets in the UV**", based on project " FLU-OHM: Fluorescence OH/OD model for Cometary Observations applied to CUBES/VLT" to be carried out at INAF - Astronomical Observatory of Padua.

The successful candidate will work in collaboration with staff researchers of the above mentioned project. Description of the research activity to be carried out:

- Retrieve the most accurate chemical, spectroscopic and quantum-mechanical parameters needed to solve a complete fluorescence model for OH and OD 308 nm band;
- Develop a complete fluorescence model for OH and OD near-UV band. Determine accurate individual transitions wavelengths and synthetic spectra.
- Test the fluorescence model using the available measurements of comets, observed in the UV using ground-based facilities.
- Compare the model to CUBES performances to check observability with the spectrograph.
- Apply the model to estimate expected line intensities with CUBES for the determination of the OH and OD production rates (and therefore to the determination of the isotopic ratio OD/OH).

Art. 2

Requirements for participation

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Participation to the selection is reserved to Italian and foreign citizens meeting the following minimum requirements:

- **Bachelor's Degree in Physics, Astronomy, Chemistry, Mathematics, or Engineering**, or an equivalent qualification recognized under international agreements or current legislation;
- At least **three years of documented experience** in scientific or technological activities related to spectroscopy of comets, fluorescence modelling and/or other topics related and to the present project, obtained after the degree;
- Good knowledge of **English**.

Preferred qualifications will be considered the following:

- Experience in spectral investigation of comets using ground- and space-based facilities;
- Experience in applying the radiative equilibrium to molecules;
- Experience in molecular spectroscopy of diatomic molecules;
- Experience with software for molecular spectroscopy simulation.

Art. 3 **Duration of the fellowship**

The fellowship will last for **12 months**, with possible extension depending on the positive evaluation of the Scientific Supervisor of the project and on funding availability.

The annual gross amount of the fellowship is 28.000,00 Euro.

The fellowship will presumably start on April 01, 2026.

The fellowship will be paid in monthly instalments in arrears, unless the Scientific Supervisor, Dr. Alessandra Migliorini, issues an unfavourable opinion regarding the work performed.

The Director of INAF – Astronomical Observatory of Padua is expressly granted the authority to revoke the fellowship in the event that the assessment of the fellow's activity is not satisfactory.

The fellowship holder will be required to attend the host institution for the entire duration of the fellowship, in accordance with the needs of the research program as determined by the Scientific Supervisor. The fellowship activities will be carried out at the premises of INAF – Astronomical Observatory of Padua.

Interruptions of the fellowship may only be justified for health reasons or force majeure, duly proven and documented, and must be promptly communicated to the Observatory. Any postponement or continuation of the fellowship beyond the scheduled end date will be subject to further evaluation by the Director and may be constrained by budgetary limitations.

The fellowship is not compatible with any other public or private employment, other fellowships, grants or subsidies of a similar nature.

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The fellowship may be combined with attendance in doctoral programs without scholarships, as well as postgraduate specialization schools without scholarships, subject to authorization from the Scientific Supervisor.

Art. 4 **Application procedure**

Applications for admission to the selection, written on plain paper according to the attached template (Annex 1) and signed by the candidates, may be submitted directly to the headquarters of INAF – Astronomical Observatory of Padua (from Monday to Friday, from 9:00 a.m. to 1:00 p.m.), or via authorized courier, or by registered mail with return receipt (the postmark will be considered proof), or by certified email, with attachments in non-editable "PDF" format, to the following address: inafoapadova@pcert.postecert.it, **no later than 11:59 p.m. (Italian time) on February 12, 2025**, under penalty of exclusion. This deadline is final, and applications received after this date will not be considered.

Only for foreign citizens and for Italian citizens who do not have a certified email address (PEC), the submission of the application and the related declarations and/or communications required by this selection may be carried out via ordinary email to the address inafoapadova@pcert.postecert.it or to the address alessandra.migliorini@inaf.it.

Emails sent from a non-PEC account to a PEC account may not be delivered; confirmation of receipt of applications sent from non-PEC addresses to the institutional PEC is valid only if the sender receives the protocol confirmation message.

Applications for admission to the selection procedure will not be accepted if sent from an email account, whether ordinary or certified, that is not registered in the name of the applicant.

The application for admission to the selection, if submitted via certified email, must be signed with a digital signature or, alternatively, signed and sent as a non-editable PDF reproduction and accompanied by a copy of a legally valid identity document.

The signature of the applicant at the bottom of the application is not subject to authentication, pursuant to Article 39 of the Presidential Decree of December 28, 2000, No. 445, and subsequent amendments and additions.

All documentation must be sent in a sealed envelope clearly indicating the candidate's name and surname and the reference to this call (Ref. Director's Decree No. 9/2026); if sent via PEC or email, these references must appear in the subject line, indicating: "Fellowship – Fluorescence model for comets in the UV – at the Astronomical Observatory of Padua," as well as the name and surname of the applicant. The date and time of submission will be certified by the IT system.

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Applications for admission to the selection procedure submitted in violation of the above provisions will therefore be considered inadmissible.

In the application, the candidate must declare, under his/her own responsibility and under penalty of exclusion:

- a) surname and name(s);
- b) date and place of birth;
- c) place of residence;
- d) citizenship;
- e) the enjoyment of civil and political rights in the State of citizenship/origin;
- f) possession of the educational qualification required by Article 2 of this call for applications, including the date and place of attainment and the final grade. Candidates holding a degree obtained abroad must also specify that, under current legislation, it has been declared equivalent to the qualification required by this call. If such declaration is not available, the candidate must attach a copy of the degree certificate including the list of exams taken and the final grade, for proper assessment by the Selection Committee;
- g) that he/she has not received any criminal convictions and is not involved in any ongoing criminal proceedings; if otherwise, the candidate must specify the convictions or proceedings;
- h) whether he/she has previously benefited from or is currently benefiting from any other fellowships from public or private institutions and for what duration;
- i) the address to which all communications regarding the selection process should be sent, including a telephone number and an email address.

The following documents must also be attached for evaluation:

1. A self-certification regarding the possession of a Bachelor's degree, indicating the final grade obtained;
2. A brief, duly signed curriculum vitae covering studies and scientific activities, including any previous fellowships and/or research grants received, specifying the periods;
3. Documentation related to any relevant professional experience, eventually including the PhD;
4. A list of publications: copies of those relevant to the research program of the fellowship may be attached;
5. Any other works the candidate considers useful to present in order to better qualify their professional curriculum, description of research interests, and any letters of reference;
6. A list of submitted qualifications;
7. A declaration according to the template in Annex 2 (serving as a cumulative self-certification for Italian and European Union citizens).

The aforementioned qualifications may be submitted in copy, accompanied by a declaration from the applicant (Annex 2, point 1) certifying their conformity to the original, along with a photocopy of an identity

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document.

When using self-certification, the candidate must provide all necessary data to allow any verification of the qualifications by the Administration of the Observatory.

Applications, qualifications, and documents submitted to INAF – Astronomical Observatory of Padua after the application deadline, or found to be lacking the required documentation at the deadline, will not be considered; after the deadline, it will not be permitted to replace the qualifications and documents already submitted.

Art. 5

Selection Committee and selection procedure

The selection of eligible candidates will be carried out by a Selection Committee appointed by the Director of INAF-OAPD.

The Selection Committee has a total of **100 points** available: **70 for titles and qualifications and 30 for the possible interview**. The selection is based on qualifications, possibly integrated with an interview.

The Commission may preliminarily establish the minimum score that candidates must achieve in the evaluation of qualifications, both for inclusion in the ranking in case it decides not to hold an interview, and for subsequent admission to the possible supplementary evaluation interview.

At its first meeting, the Commission will define the criteria for the evaluation of titles and qualifications.

If deemed necessary, the Commission may summon selected candidates for an in-depth interview. Admission to the possible interview will be notified to the candidates with sufficient advance notice. Such notification will be sent via certified email (PEC) or ordinary email with acknowledgment of receipt. To be admitted to the interview, candidates must present a valid identity document.

The Commission will predetermine and record the criteria for evaluating the interview.

At the conclusion of its work, the Commission will deliver the competition documents and the report containing the assessment of each candidate and the related merit ranking to the Director.

The ranking of eligible candidates and the winner will be approved by a decree of the Director of the Astronomical Observatory of Padua. The results will be made public by posting on the Official Notice Board “Albo” of INAF – Astronomical Observatory of Padua.

Art.6

Awarding of the fellowship

Subject to verification of the actual availability of funds in the budget, the Administration of INAF – Astronomical Observatory of Padua will formally notify the winner of the award of the fellowship. Within a strict deadline of five days from the date of receipt of the notification, the recipient must send to the Observatory a declaration of unconditional acceptance of the fellowship under the conditions specified, as well as any requested documents.

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The fellowship holder also agrees to promptly provide the Administration of the Structure with the bank/postal account details of a valid account held at an Italian banking or postal institution, registered personally and exclusively in the name of the fellowship winner, and intended for payment of the fellowship in monthly deferred instalments. Without this information, the Administration cannot technically guarantee simultaneous payment along with other fellowships disbursed by the Structure. This operation is not in any way supported by the granting entity.

In the declaration, the fellowship holder must also explicitly assure, under their own personal responsibility, that during the entire duration of the fellowship they will not benefit from other fellowships, grants, or similar awards, and will not receive any salaries or remuneration of any kind derived from public or private employment relationships, nor from coordinated and continuous collaboration contracts.

Receiving this fellowship does not entail, under any circumstances, an obligation of employment at INAF – Astronomical Observatory of Padua.

The fellowship does not constitute an employment relationship and does not entitle the recipient to social security or welfare benefits. The fellowship holder is responsible for obtaining their own health insurance as well as insurance against risks from accidents at work, without any charge for the INAF – Astronomical Observatory of Padua.

In case of withdrawal or forfeiture by the winner, the fellowship may be awarded to the next candidates in the ranking.

Art. 7

Person in charge of the procedure

In accordance with the provisions of Art. 5 of Law no. 241 of August 7, 1990 and subsequent amendments and additions, the person in charge of the selection procedure for this call is Dr. Busato Andrea, staff member at INAF – Astronomical Observatory of Padua.

Art. 8

Publicity

The full text of this call for applications is published electronically by transmission to the astronomical and astrophysical observatories and relevant scientific institutions in general, posted on the INAF website (www.inaf.it) and on the website of the Astronomical Observatory of Padua (www.oapd.inaf.it), and displayed on the Official Notice Board of the Observatory.

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Art. 9

Rules of Reference and Final Provisions

To the extent applicable to the fellowship awarding procedure, the Observatory ensures compliance with current regulations regarding equal opportunities between men and women, and the protection of privacy in the processing of personal data.

Pursuant to Article 13, paragraph 1, of Legislative Decree no. 196/2003 and subsequent amendments, the personal data provided by candidates will be collected at INAF – Astronomical Observatory of Padua for the purposes of managing this public selection and the related relationships. The provision of such data is essential for the evaluation of eligibility requirements for admission to the selection, under penalty of exclusion.

The same information may be communicated to Public Administrations directly concerned with the legal, economic, and social security status of the contract holder.

Candidates enjoy the rights referred to in Article 7 of Legislative Decree no. 196/2003, which include the right to access their personal data, as well as certain complementary rights, such as the right to rectify, update, complete, or delete data that are incorrect, incomplete, or collected unlawfully, as well as the right to object to their processing for legitimate reasons.

Padua, January 13, 2026

THE DIRECTOR

(Dr. Bianca Maria Poggianti)

INAF - Osservatorio Astronomico di Padova

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