

3272

Public Notice - International Selection Procedure

PhD Scientific Researcher Recruitment

FCiências.ID/2020/DL57/IA/10

FCiências.ID - Associação para a Investigação e Desenvolvimento de Ciências, through its Chairman of the Board of Directors, hereby announces the opening of an international call for the recruitment of a scientific researcher with a PhD degree, in the framework of the P-TUGA ref. 479, funded by Fundação para a Ciências e a Tecnologia in the form of an indefinite duration fixed-term employment contract on an exclusive regime, according to the Portuguese Labour Code and Decree-Law No. 57/2016, of August 29th, as amended by Law No. 57/2017, of July 19th.

I - Admission Requirements

Portuguese nationals, foreign and stateless persons may submit applications to this selection procedure, provided they hold a doctoral degree¹ in in Astronomy and Astrophysics, have specialised skills and/or expertise in the field of planetary atmospheres, and fully comply with the following requirements:

a) The PhD must have been granted at least 3 years ago.

b) Demonstrated scientific and/or professional experience: in the area of planetary sciences, especially Venus and Mars upper atmosphere, expertise in atmospheric modelling, including model development. A factor of preference will be given to candidates familiar to Global Circulation Models and simulations of planetary gravity waves in terrestrial planets.

c) The candidate must also have experience in exploring dataset acquired by space missions, capacity of leading scientific papers, and ability to deal with international projects.

¹ Please note that Degrees obtained in foreign countries need a Portuguese Recognition issued by a Portuguese high degree Institution, according to the [Decree-Law nr. 66/2018](#), of august 16th and the [Ministerial Order nr. 33/2019](#), of January 25th. The presentation of such Recognition is mandatory for contract signature. More information can be obtained in: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.

II. Applicable Law

1. Decree-Law No. 57/2016, of August 29th (RCD), in the wording conferred on it by Law No. 57/2017, of July 19th (RCD);
2. Portuguese Labour Code, as approved by Law No. 7/2009, of February 12th, in its current version (CT);
3. Regulatory Decree No. 11-A/2017, of December 29th;
4. Administrative Procedure Code, as published in Decree-Law No. 4/2015, of January 7th, in its current version (CPA).

III. Work Plan

The objectives of the work plan are:

- 1) Monitor large-scale circulation using 3D simulations and Dynamical tracers

-Use the improved version of the Venus GCM developed at the Laboratoire de Meteorologie Dynamique (LMD) (LMD-VGCM) [Lebonnois et al. 2016, Gilli et al. 2017], currently installed and operational at IA clusters, to compare 3D wind, temperature and density fields with published work from the mission Venus Express (VEx) [Soret et al. 2014, Gilli et al. 2015, Vandaele et al. 2016]. Notably, O₂ nightglow CO and O density are usually considered as sensitive tracers of transport in the upper atmosphere of Venus, since they can be used to monitor the large-scale circulation patterns above 70 km.

- Complement information by ground-based Venus observation on the cloud tops and below to understand the coupling between the lower and upper atmosphere.
- Use 3D modelling tools similar to the LMD Mars and Venus GCMs [Forget et al. 1999, Lebonnois et al. 2010] to perform detailed sensitivity studies to quantify the impact of gravity waves drag in the middle/upper atmosphere of Venus and Mars, following previous work in Gilli et al. 2017 and Gilli et al. 2018 focused on Venus and Mars, respectively.

2) First-step toward GCMs INTERCOMPARISON

Nowadays there are only two 3D models able to describe the middle/upper atmosphere of Venus: the LMD-VGCM and the Venus Thermospheric Global Circulation Model [Brecht et al. 2012] developed at the University of Michigan, USA. We will perform a detailed inter-comparison between the two models in order to better explain discrepancies and similarities and to go further toward the comprehension of physical and dynamical processes governing those upper layers. This would give more confidence and robustness to both GCMs and it is crucial in the perspective of an updated new version of the Venus International Reference Atmosphere (VIRA) [Limaye et al. 2017].

Expected results:

- suggest physical/dynamical processes responsible for the observed variability in the transition region
- use GCMs to extrapolate temperature/wind values between the more constrained regions and to fill dataset gaps.
- provide more context and global information for updating the Venus International Reference Atmosphere.
- provide valuable observational constrains to GCMs to perform a proper fine-tuning of GW parameters.
- help interpret the observed variability on Venus and Mars middle atmosphere.

IV. Composition of the Jury

In accordance to article 13 of the RCD, the members of the jury are:

- President – Pedro Machado
- 1st Member of the jury – Nuno Santos
- 2nd Member of the jury - Olivier Demangeon
- 1st Alternate Member of the jury – José Afonso
- 2nd Alternate Member of the jury – Ciro Pappalardo

V. Place of work

Work will be developed at the facilities of Research Center IA, in Instituto de Astrofísica e Ciências do Espaço, e será realizado nas suas instalações de Tapada da Ajuda - Edifício Leste - 2º Piso, 1349-018 Lisboa, Portugal.

VI. Contract Duration

The full-time indefinite duration fixed-term employment contract is expected to start on the 1st of September 2020, and will last until the Work Plan referred to in section III is completed. It will have an expected duration of 12 months, will not exceed the limits set in the RCD.

VII. Monthly Allowance

The gross monthly salary is stipulated in clause 1 a) of article 15 of the RCD, corresponding to level 33 of the Single Remuneratory Table, as approved by Government Order No. 1553-C/2008, of December 31st, updated by the decree-law nr. 10-B/2020, of March 20th, being 2,134,73 Euros, plus holiday and Christmas allowances, as well as food allowance in the amount and conditions set out for workers with a legal employment relationship under the Labour Code.

VIII. Evaluation of applications

1. Failure to comply with the Admission Requirements implies the non-admission of candidates in absolute merit.



2. According to article 5 of the RCD, the selection of the candidates approved in absolute merit will rely on the evaluation of their scientific and curricular achievements in the last five years, taking into consideration the quality and relevance of the scientific production, and the professional activity indicated as more relevant by the candidate, for the project P-TUGA.
3. The final classification of candidates is given on a scale of 0 to 100%.
4. Evaluation of the relative merit of candidates, will rely on the following criteria:
 - a) Participation in relevant scientific projects in the area of Planetary Atmospheres- Planetary Systems- 30%;
 - b) Scientific publications in the area of Planetary Atmosphere- 40 %;
 - c) Pedagogical and outreach activities, in particular in the context of promoting scientific practices, organization of courses, seminars and conferences, in the area of Planetary Atmospheres - Planetary Systems - 10 %;
 - d) Assessment of the references provided by the candidate - 10 %;
 - e) Interview, if deemed necessary by the jury - 10%.
5. The jury may decide to interview the three best ranked [in criteria a) to d)] of paragraph 4)] candidates, for clarifications and improved explanations of curricular elements.
6. The jury shall deliberate by means of a roll-call vote based on the evaluation criteria.
7. Minutes of the jury meetings are drawn up, summarizing all relevant elements considered by jury members, as well as their individual votes and justifications.
8. After completion of the evaluation process, the jury will draw up a ranking of successful candidates with their classifications.
9. Hiring will be decided by the Chairman of the Board of Directors of FCIências.ID, based on the final jury recommendation.
10. The evaluation results will be published on the website of the FCIências.ID ("Concursos" tab). The candidates will be individually notified of the evaluation results by e-mail sent to the address indicated in the "Personal Data" section of the submitted form.
11. With the notification referred to in paragraph 10, the hearing phase of interested parties referred to in Article 121 *et seq.* of the CPA will begin, and last for ten working days.
12. The possible pronouncement of the candidate in a prior hearing must be addressed to the President of the jury and submitted in writing to fciencias.id@fciencias-id.pt. The President of the jury will convene a jury's meeting to produce the final decision, within thirty working days.
13. Within five working days of the final jury decision, the Chairman of the Board of Directors of FCIências.ID will approve it and the candidates will be notified.
14. The communication between FCIências.ID and the candidates will be electronic and will comply with the following rules:
 - a) At the time of electronic submission of any document - namely in the case of paragraph no 11 - the candidates must generate proof of "sent message".
 - b) FCIências.ID will send an email message acknowledging documents received to the email address used by the candidates, within two working days.
 - c) In case of absence of a confirmation receipt by FCIências.ID – showing the possibility of technical problems that should neither be the responsibility of the candidate nor FCIências.ID - the candidates should contact FCIências.ID, with the

proof referred to in point (a), to ensure delivery and proper receipt of the documents concerned.

IX. Compliance with public policies

1. FCIências.ID actively promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, disadvantaged or deprived of any right or exempt from any duty due to, inter alia, ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological beliefs and trade union membership.
2. Under the terms of D.L. No. 29/2001, of February 3, a disabled candidate has a preference in equal classification, which prevails over any other legal preference. Candidates must declare their respective degree of disability, the type of disability and the means of communication / expression to be used in the selection process, under the terms of the above-mentioned diploma.

X. Submission of Applications

1. The present call will be open from 15/06/2020 to 08/07/2020.
2. The application and all the required documents may be submitted in Portuguese or English.
3. Applications will be submitted online, through the electronic platform of FCIências.ID (<http://concursos.fciencias-id.pt>).
4. On the electronic platform, applicants will complete a *mandatory* section on Personal Data [name, address, date of birth, contact email, nationality and scientific identifiers] and upload files with the documents listed below:
 - i. Detailed curriculum vitae - *mandatory*;
 - ii. A motivation letter clearly demonstrating that the candidate has an adequate profile for the position and fully complies with the Admission Requirements - *mandatory*;
 - iii. Up to five publications relevant for the objectives of the Work Plan - *mandatory*;
 - iv. Digital copies of documents proving formal academic degrees (PhD) and/or other scientific and professional qualifications - original documents must be provided in case of actual recruitment- *mandatory*;
 - v. Other documents that candidates consider relevant for the assessment of their scientific merit, or to declare the personal situation in the cases covered in section IX-2 of this Notice - *optional*.
5. By decision of the Chairman of the Board of Directors of FCIências.ID, candidates who do not submit the documents identified in paragraph 4 will not be admitted to the call. In case of doubts, the Chairman may also invite candidates to substantiate specific data or statements with official supporting documents, before accepting the candidates' submission.

This Public Note was approved by the jury on 12th June 2020