



One (1) Post Doc position in the project

“BOOTES”

Black hOle Optical-polarization TimE-domain Survey

(Call: ERC-2022-STG, Project Number 101076343)

Funded under HORIZON ERC Grants - European Research Council (ERC)



**Funded by
the European Union**

**Ref. 129992
Heraklion, 11.01.2024**

The Institute of Astrophysics (IA) of the Foundation for Research and Technology Hellas (FORTH), in the framework of the project BOOTES, (Call: ERC-Stg-2022, Proposal number: 101076343) funded under European Union’s Horizon Europe Framework Programme for Research and Innovation is seeking to recruit one (1) Postdoc position.

Title: Optical polarization observations and time series analysis of blazars.

Job Description

The Black hOle Optical-polarization TimE-domain Survey (BOOTES) aims to study the polarized light coming from supermassive black holes and understand the processes of accretion disk and jet formation. Specifically, it aims to deliver the first systematic high-cadence optical polarization monitoring of blazars, and the first systematic optical polarization follow-up of tidal disruption events (TDE). Towards that goal, it is also important to combine both polarization observations and variability modeling.

Within the framework of BOOTES, the postdoctoral researcher will be working on the acquisition, and data analysis of optical polarization observations at the Skinakas observatory for blazars, in combination with X-ray polarization observations from IXPE. They will also be using state of the art random walk and time

series analysis tools to model the observed polarization variations of the population. The results will be used to differentiate between competing theories for particle acceleration in jets.

Required qualifications

The successful candidate needs to have a Ph.D. degree in Astrophysics or related fields and good knowledge of polarimetric observations and data reduction, and experience in time series analysis methods and random walk simulations. The aforementioned required qualifications will be judged as follows:

- 1) Scientific publications in high-impact international journals (20%)
- 2) Strong background in optical polarization observations and data analysis (40%)
- 3) Strong background in random walk and time series analysis methods (30%)
- 4) Excellent knowledge of English (Proficiency level, 10%)

Location: IA - FORTH, Heraklion Crete GREECE

Start Date: March 1st, 2024

Project Duration: 12 months with possibility of extension according to the needs of the project and availability of funds

Monthly salary: 2250 euros (gross)

Application Submission

Interested candidates who meet the aforementioned requirements are kindly asked to submit their applications, no later than February 1, 2024, 00:00am local Greece time to the address (info@ia.forth.gr), with cc to Dr. Ioannis Liodakis (liodakis@ia.forth.gr).

In order to be considered, the application must include:

- 1) Application Form (please download file from the job announcement webpage <https://www.ia.forth.gr/employment-opportunities>)
- 2) Brief CV
- 3) Scanned copies of academic titles

Any application received after the deadline will not be considered for the selection

Contact

For information and questions regarding the application and selection procedure, candidates are asked to contact the secretariat (info@ia.forth.gr), tel. +30 2810-394200.

For information and questions about the advertised position and the research activity of the group or the institute, please contact Dr. Ioannis Liodakis (liodakis@ia.forth.gr).

Selection Announcement

The result of the selection will be announced on the website of IA - FORTH.

Candidates have the right to appeal the selection decision, by addressing their written objection to the IA secretariat within five (5) days since the results announcement on the web. They also have the right to access (a) the files of the candidates as well as (b) the table of candidates' scores (ranking of candidates results). All the above information related to the selection procedure will be available at the secretariat of IA - FORTH in line with the Hellenic Data Protection Authority.

GDPR

FORTH is compliant with all legal procedures for the processing of personal data as defined by the Regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data.

FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

We inform you that under the Regulation EU/2016/679 you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws.

We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at dpo@admin.forth.gr.

You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.