

Call for research positions at the
Nuclear and Astroparticle Physics Group – Universidad de Zaragoza
1 postdoc position

Job description:

The host group at the University of Zaragoza has a leading role in the International Axion Observatory (IAXO) experiment, whose primary aim is the detection of axions emitted by the Sun. Axions are particles hypothesized to solve the strong-CP problem of the Standard Model of Particle Physics. They are also very motivated candidates to compose the missing Dark Matter of the Universe. IAXO will follow the *axion helioscope* concept, and will search for solar axions with unprecedented sensitivity.

The near-term goal of the collaboration is the construction and operation of BabyIAXO, an intermediate stage to serve as prototype of the final IAXO systems, but already with a relevant physics program in itself. This is the specific goal of the ERC-AdG project *Towards the detection of the axion with the International Axion Observatory (IAXO+)*. The five years duration of the project should encompass the construction, commissioning and first physics results of BabyIAXO.

The positions here offered are intended to reinforce the activities of the Zaragoza group for the preparation of the BabyIAXO experiment, which are focused in the development, preparation and characterization of a new low-background Micromegas-based x-ray detector for the focal point of BabyIAXO. Activity in other areas of the experiment, like software, physics analysis/simulations, or the study of interfaces of detectors with the other experimental systems (x-ray optics or magnet) are also possible. For this particular position, we particularly stress the studies framed within the RADES project aiming to implement axion haloscope setups in the BabyIAXO magnet. The work will be done in close connection with the rest of members of the IAXO international collaboration, at the moment composed by 20 institutions, including CERN and DESY.

Candidates:

We seek excellent and motivated candidates with experimental particle physics background. We will value previous experience in astroparticle physics experiments, as well as interest and expertise in instrumental developments and software knowledge.

The post-doc candidate will be expected to take important responsibilities in IAXO and RADES, manage work packages, supervise the work of students and technicians. For these we will value proof of independence, team work, and presentation skills.

Positions:

The post-doc positions is two-year Unizar postdoctoral research contracts (N1 level), with salary equivalent to *Ramón y Cajal* senior researcher figure in Spain. The candidates will count with resources to perform visits and attend conferences and meetings related with their work. They will be allowed to reserve a small fraction of their worktime (about 20%) to develop research topics of their own initiative in relation with wider research portfolio of the host group.

The candidates are expected to engage in central aspects of the IAXO experiment, take important responsibilities, and in doing so enjoy high visibility in the collaboration. They will have the opportunity to lead particular research tasks, and present their work and represent the collaboration in international conferences. In addition, they will have the opportunity to participate in outreach and teaching activities of the department, the latter within the University rules for the involvement of researchers in teaching duties, and always with sufficiently low intensity so that not to endanger the main research activity.

The Universidad de Zaragoza is committed to the “European Charter for Researchers” and the “Code of Conduct for the Recruitment of Researchers”, and has been recognized by the European Commission with the Human Resources Strategy for Researchers (HRS4R) award. <https://hrs4r.unizar.es/en/hrs4r/human-resources-strategy-researchers>

Application:

Interested candidates should send their CV, a letter of motivation to:

iaxorecruitment@unizar.es.

In addition, they should arrange for two letters of recommendation to be send to the same address.

Deadline:

The starting time of the contracts can be negotiated with the selected candidates and are expected to be fixed before end 2022. The selection process is expected to take place by

15th July 2022, although candidacies may be accepted before or after that date, if satisfactory candidates are found.

More info:


More details on the research performed in our group can be found here:

<http://gifna.unizar.es/iaxo/>

<http://gifna.unizar.es/trex/>

Please contact Igor.Irastorza@cern.ch or luzon@unizar.es for any addition information.

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|  <p>European Research Council Established by the European Commission</p> | <p>Project title: “Towards the detection of the axion with the International Axion Observatory (IAXO+)”</p> <p>Ref: ERC Advanced Grant (no 788781)</p> <p>Funding: European Research Council</p> <p>Programme: European Union's Horizon 2020 research and innovation programme</p> <p>Host institution: Universidad de Zaragoza</p> |
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