

Job ID: HEPHY059PD124

The Institute of High Energy Physics (HEPHY) of the Austrian Academy of Sciences (OeAW), solicits applications for a

**POSTDOC POSITION (F/M/X)**  
*in Experimental Detection of Gravitational Waves*

(full-time, 40h per week)

for an initial appointment of three years, renewable once, upon excellent performance and mutual agreement. Our tentative starting date is January 01<sup>st</sup>, 2025. We are looking for a young, excellent, and motivated researcher at the postdoc level to join and take an active role in the newly formed gravitational waves research group led by Dr. Gianluca Inguglia.

For this position you will be affiliated to the Virgo Collaboration and work in the context of black hole coalescence, participating in the analysis of the data of the LIGO-Virgo-KAGRA gravitational waves observatories network. We have an interest in the search for intermediate-mass black holes and you are expected to contribute to this area of research, although alternative possibilities will be considered as well.

**Your tasks:**

- You will lead the main aspects of the experimental search for gravitational waves
- You will contribute to the Virgo experiment, take shifts, contribute to analysis software maintenance, participate in regular meetings and report your findings in conferences and journal papers
- You will contribute to the studies for the Einstein Telescope, assessing the sensitivity of the experiment to a variety of phenomena as well as identifying strategies aimed at improving data taking and alert generations
- You will participate in a young and dynamic team and contribute the supervision of PhD and undergraduate students

**Your profile:**

- You completed (or are about to complete) a PhD in Physics/Astrophysics with focus on data analysis, preferably of gravitational waves data
- You have experience and in-depth understanding of machine learning methods for data analysis
- You understand the different processes that lead to the formation of gravitational waves in the Universe, especially those deriving from compact binary coalescence of neutron stars and/or black holes
- You understand fast analyses (FPGA knowledge will be considered as an advantage) and the generation of gravitational waves alerts
- You are willing to take a leading role in the analysis of the LIGO-Virgo-KAGRA data and contribute to the development of Einstein Telescope
- You are willing to participate in the daily life of the experiments by participating in meetings remotely or in person and by contributing to the operation of the experiment
- You are willing to work in an international environment which value diversity

**We offer:**

- A position funded by the Austrian Academy of Sciences and available for an initial appointment of three years, renewable once, upon excellent performance and mutual agreement.
- An annual gross salary of € 66.501,40
- A dynamic, young, and diverse research environment in one of the world's most livable cities

Please send your application including a cover letter detailing the motivation for joining the project and how your profile fits with the requirements of the job, a recent copy of your CV (3 pages maximum), reference to up to three scientific papers highlighting your contribution, two letters of recommendation to be sent directly by two contactable referees and a tentative starting date in a single PDF to [HEPHY-office@oeaw.ac.at](mailto:HEPHY-office@oeaw.ac.at), (mentioning Job ID: HEPHY059PD124) **no later than June 15<sup>th</sup>, 2024**. Any questions about the position offered can be addressed to [gianluca.inguglia@oeaw.ac.at](mailto:gianluca.inguglia@oeaw.ac.at).

Job interviews will follow shortly after the deadline. Applications received before the deadline and containing all the required material will be considered until the position is filled

*The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. Individuals from underrepresented groups are particularly encouraged to apply.*