JOB OFFER

Two Postdoctoral Positions (M/F/X)

Location: Laboratoire d'Astrophysique de Marseille (LAM), Marseille, France
Contract type: 2-year fixed-term contract
Application deadline: March 20st, 2026
Start date: As early as May 1st, 2026

Position Context

We are opening two postdoctoral positions in the framework of the **ESCAPE ERC project** (2022–2028, PI E. Choquet), which aims to develop advanced observing strategies and post-processing techniques for the direct detection of exoplanets in reflected light with future space telescopes.
The **Roman Space Telescope** is scheduled for launch on September 28th, 2026 and will begin scientific observations with the Coronagraph Instrument in February 2027. The Laboratoire d'Astrophysique de Marseille (LAM) is an international partner of the Roman Space Telescope and a member of the Coronagraph Instrument Community Participation Program (CPP).
The **Habitable Worlds Observatory (HWO)** has been recommended by the US 2020 Decadal Survey as the next NASA flagship mission for the 2040s and is currently undergoing a technology maturation phase to refine its science goals, architecture, and key technologies.

Jobs Description

We invite applications for two postdoctoral positions in **high-contrast imaging of exoplanetary systems**, focusing on two broad topics. Applicants may express interest in one or both.

- **Image processing techniques and observations for the Roman mission**: The postdoctoral researcher will primarily work on simulations and lab demonstrations of advanced observing strategies and post-processing methods for the Roman Coronagraph, notably the high-order dithering strategy developed within our team. The successful candidate will join the Coronagraph instrument CPP team and may contribute, depending on interest and expertise, to the hardware working group to help implement this strategy in the observing plan, and/or the observation planning working group to contribute to the planning and analysis of the first observations.
- **Science program simulations for the HWO mission**: The postdoctoral researcher will primarily develop simulations of exoplanetary system observations with the HWO coronagraphic instrument, in support of advanced observing strategies and image processing techniques adapted to this mission. A primary objective for the successful candidate will be to produce a simulated dataset representative of HWO coronagraphic observations of an exoplanetary system, and lead a data challenge for the community to test and optimize post-processing techniques and accurate identification of astrophysical source.

Candidate Profile

Applicants must hold a **PhD in Astronomy, Astrophysics, Physics**, or equivalent field.
Experience in one or more of the following areas will be given primary consideration:

- Direct imaging observations of exoplanetary systems,
- High-contrast imaging techniques,
- Wavefront Sensing and Control,
- Excellent programming skills (Python, Git)

Commitment to Diversity and Inclusion

We value diversity of backgrounds and perspectives as essential drivers for innovation and collective success. We strongly encourage applications from individuals from underrepresented communities, including but not limited to women, people from ethnic minorities, people with disabilities, and any person wishing to bring unique perspectives to our team. We are committed to fostering an inclusive environment where everyone feels valued and supported in their professional development.

Benefits and Work Environment

- A stimulating scientific environment at LAM in the instrumentation group, combining innovative R&D with cutting-edge technologies.
- Integration into the ESCAPE team (1 PhD student, 2 postdocs, 1 software engineer) developing high-contrast post-processing techniques and observing programs with space telescopes.
- Collaboration with international partners (NASA, CNES, ESA, JAXA, Max Planck Institute).
- Occasional travels (USA, Europe) for collaboration meetings and conferences.
- Health insurance, meal vouchers, employee benefits program.
- Salary: between €34,000 and €55,000 gross per year, depending on experience.

How to Apply

Applications should include:

- a CV,
- a publication list,
- a 2-page research statement developing the candidate's research interests, past work, projects.

Applications should be sent in PDF format to elodie.choquet@lam.fr by **March 20st**, 2026
Two letters of recommendation should also be sent to the same address by the application deadline.