

Open Position @ IAP
Post-doctoral Positions at IAP Paris

Organization: Institut d'Astrophysique de Paris / CNRS

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Attention To: Pierre Guillard, Yohan Dubois, Philippe Salomé

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The IAP is seeking candidates for a 2+1 year post-doctoral position in hydrodynamics simulations of Cool Core Galaxy Clusters, starting at the earliest in spring 2026 (later is possible).

The successful candidate will carry out research within the ANR project VIEWS (Voyage Into the Engine with the Webb teleScope). The project aims to explore the interplay between Black-Hole feeding and AGN-feedback (star formation regulation by Active Galactic Nuclei) mechanisms in the core of massive galaxies. VIEWS leverages the capabilities of the James Webb Space Telescope (JWST) cycle 3 project GO5018 to provide high-resolution imaging and spectroscopy of six selected Brightest Cluster Galaxies.

During the course of this position, it is expected that simulations of BCG-like galaxies will be carried out, with an emphasis on the formation and surviving of dusty filaments as well as disk formation. Post-processing of simulations and computational development will also have to be carried out during the course of this position. The applicant is expected to develop new zoom-in techniques to follow the gas at high resolution coupled with the new dust implementation in RAMSES which will allow us to model the dust seen with JWST/MIRI. We will study the overcooling problem in the core-region and the processes that lead to central disks. We will implement new super-zoom techniques to follow the cold accretion at high resolution.

Physical modeling and applications to JWST observations of cool core clusters will also be performed by the rest of the ANR team (i.e. coupling to photoionisation codes like Meudon-PDR, CLOUDY or shock models).

Applicants should have a PhD in physics, astronomy or related subject by the time of the appointment. We encourage applications from candidates with strong expertise in numerical simulations, modeling and post-processing. Experience with manipulating multi-wavelength data will also be considered. Knowledge of extragalactic astrophysics is preferred. Skills in one or several programming languages (e.g. Python, Fortran, C++) are necessary.

The IAP maintains a lively visitor program and hosts regular workshops and conferences throughout the year. The successful candidate will be immersed in an internationally visible research environment in the Paris Campus, with rich intellectual and computational resources.

The appointment is for 2+1 years with a salary including French social security benefits. Funding will also be allocated for travel.

Applicants should submit a CV (max. 2 pages), a publication list, a short review of previous works (2 pages) and a statement of research interests (2 pages). Applications should be sent via email to philippe.salome@obspm.fr.

For full consideration materials must be received before February 16th, 2026.

Included Benefits:

French national medical insurance, Maternity/Paternity leave, Lunch subsidies, Family supplement for children, Participation to public transport fees, Pension contributions