

2 year post-doctoral position starting January 2026 at the University of Toulouse

Modeling windstorms observed during the NAWDIC field campaign

Deadline for applications: 26 October 2025

For more information and to apply please contact: florian.pantillon@cnrs.fr

Research activities

The French-German project DICHOTOMI (<https://nawdic.aeris-data.fr/>) will contribute to the NAWDIC international field campaign (<https://www.nawdic.kit.edu/>) on extratropical cyclones in the North Atlantic in February 2026. The aim of the DICHOTOMI project is to gain a better understanding of the formation of strong winds and gusts in cyclones, as well as the respective roles of atmospheric and surface conditions. Your mission will be to study fine-scale processes in cyclones sampled during the NAWDIC campaign using observations and numerical simulations with the Meso-NH atmospheric model (<http://mesonh.aero.obs-mip.fr/>).

Your activities will include:

1. Participation in the NAWDIC airborne measurement campaign
2. Performing numerical simulations with the Meso-NH model
3. Comparing simulation outputs with airborne observations
4. Analyzing and interpreting results in light of the scientific literature
5. Presenting your work at conferences and writing scientific articles

About us

The University of Toulouse (formerly Université Toulouse III Paul Sabatier; <http://www.univ-tlse3.fr>) is ranked among the top French universities for its scientific influence, the diversity of its laboratories, and the courses it offers in science, health, sports, technology, and engineering. With a budget of €430 million, five components, and one component institution, the Purpan School of Engineering, it has more than 4,300 staff, including 2,500 teaching and/or research staff, 69 research structures (including 42 joint research units), and more than 35,000 students. It is located in four departments and eight cities, spread over 11 sites covering an area of 264 hectares.

Within the University of Toulouse, the scientific activity of LAERO (<https://www.aero.obs-mip.fr/>) aims to observe, model, and understand the dynamic and physicochemical processes that govern the evolution of the atmosphere and coastal oceans. The postdoctoral research will be carried out within the MECANO team, benefiting from the scientific expertise and technical support of its researchers and engineers, and in collaboration with members of the French-German ANR-DFG DICHOTOMI project (<https://nawdic.aeris-data.fr/>).

Your profile

Required qualifications:

- PhD in atmospheric sciences

Desired experience:

- Running numerical simulations
- Analysis of remote sensing data
- Publications in international journals

Scientific knowledge:

- Dynamic meteorology in mid-latitudes
- Mixed phase cloud microphysics
- Atmospheric boundary layer processes

Technical knowledge:

- Programming (python and fortran)
- High-performance computing (slurm)

Soft skills:

- Motivation
- Synthesis and communication
- Ability to work independently