

CAMILLE LEFOUR

✉ camille.lefour@u-bordeaux.fr



EDUCATION

Second year PhD student October 2024 - September 2027

Laboratoire d'Astrophysique de Bordeaux, France

Supervisor: Thibault Cavalié (thibault.cavalié@u-bordeaux.fr)

- Title: "Observations of the atmospheric chemistry in the polar and non polar regions of Jupiter to prepare the JUICE mission".
- mm and submm observations with ALMA of molecular lines in Jupiter's stratosphere.
- Radiative transfer modeling and inversion algorithm.
- Member of the Submillimetre Wave Instrument (SWI) team of the JUpiter ICy moons Explorer (JUICE) mission.

MSc degree in Physics and Astrophysics 2022 - 2024

Université de Bordeaux, France

Obtained with High Distinction

WORK EXPERIENCE

MSc internship January - July 2024

Laboratoire d'Astrophysique de Bordeaux, France

Supervisor: Thibault Cavalié (thibault.cavalié@u-bordeaux.fr)

- Title: "Temporal evolution of stratospheric water vapor during the last Great Storm of Saturn from 2011 to 2013".
- Submm observations with the Photodetector Array Camera and Spectrometer (PACS) instrument of the Herschel observatory of water lines in Saturn's stratosphere and radiative transfer modeling.

TEACHING EXPERIENCE

Assistant Lecturer (32h) December 2025 - January 2026

Institut Universitaire de Technologie - Mesures Physiques, Gradignan, France

Supervisor: Pierre Monneyron (pierre.monneyron@u-bordeaux.fr)

- Practical laboratory sessions for undergraduate first year students in thermodynamics.

Astronomy Outreach project in a primary school (32h) January - February 2025

Jean Moulin primary school (Grades 4–5), Bergerac, France

Organiser: Maison pour la Science en Aquitaine

- Interactive lessons and hands-on activities on Solar System objects, astronomical scales, and Moon phases.
- Communication of scientific concepts to students, teachers, and accompanying adults in an accessible way.

PUBLICATIONS

C. Lefour, T. Cavalié, R. Moreno, E. Lellouch, T. Fouchet, P. Hartogh, *A new derivation of the $^{12}\text{C}/^{13}\text{C}$ and $^{15}\text{N}/^{14}\text{N}$ isotopic ratios in the stratosphere of Jupiter revealed by ALMA*, EPSC-DPS Joint Meeting 2025, id: EPSC-DPS2025-248, doi: 10.5194/epsc-dps2025-248

C. Lefour, T. Cavalié, H. Feuchtgruber, R. Moreno, L. N. Fletcher, T. Fouchet, E. Lellouch, E. Barth, P. Hartogh, *Observations of the temporal evolution of Saturn's stratosphere following the Great Storm of 2010–2011: I. Temporal evolution of the water abundance in Saturn's hot vortex of 2011–2013*, *Astronomy & Astrophysics*, Volume 698, id.A66, 20 pp., 2025, doi: 10.1051/0004-6361/202453029

C. Lefour, T. Cavalié, H. Feuchtgruber, T. Fouchet, E. Lellouch, R. Moreno, P. Hartogh, L. N. Fletcher, E. Ducreux, M. Gurwell, F. Gueth *Saturn stratospheric composition and dynamics during its 2010–2013 Great Storm: I. Oxygen species*, *AAS Division for Planetary Sciences meeting #56*, id. 210.04., 2024

T. Cavalié, B. Benmahi, C. Lefour, R. Moreno, T. Fouchet, E. Lellouch, F. Gueth *Saturn stratospheric composition and dynamics during its 2010–2013 Great Storm: II. Direct wind measurements*, *AAS Division for Planetary Sciences meeting #56*, id. 210.05., 2024