

Amélie Gressier

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RESEARCH EXPERIENCE

Trottier Fellow — Trottier Institute for Research on Exoplanets (IREx) Montréal, Canada
Université de Montréal since Nov. 2025

Postdoctoral Researcher — Space Telescope Science Institute (STScI) Baltimore, USA
Jan. 2023 – Nov. 2025

EDUCATION

PhD in Astronomy and Astrophysics — Paris-Saclay University Paris, France
Université Versailles Saint-Quentin-en-Yvelines Oct. 2019 – Dec. 2022

Master's Degree in Astrophysics — Observatoire de Paris Paris, France
Oct. 2018 – Jun. 2019

Engineering Degree — École Nationale de l'Aviation Civile (ENAC) Toulouse, France
Sept. 2015 – Sept. 2018

FELLOWSHIPS AND AWARDS

Trottier Postdoctoral Fellowship Montréal, Canada
Three-year postdoctoral fellowship at IREx, Université de Montréal Nov. 2025

CNES Postdoctoral Fellowship Paris, France
Two-year postdoctoral fellowship, declined Sept. 2024

First Prize — PEGASUS Aerospace Conference Glasgow, UK
Apr. 2019

TEACHING EXPERIENCE

Graduate Course — Brown Dwarfs and Exoplanets PHY6710 Montréal, Canada
2-hour graduate lecture at the Université de Montréal Physics Department Feb. 2026

Teaching Assistant — Fluid Mechanics Versailles, France
64 hours of undergraduate teaching Sept. 2021 – Dec. 2021

Teaching Assistant — Optics Versailles, France
64 hours of undergraduate teaching Sept. 2020 – Dec. 2021

High School Tutoring in Mathematics, Physics, and Chemistry Toulouse, France
Sept. 2012 – Jun. 2015

STUDENT SUPERVISION

Supervisor — Mason Lau, Undergraduate Summer Internship Montréal, Canada
Atlas of Sub-Neptune atmospheres with JWST May 2026 – Aug. 2026

Supervisor — Ceiligh Cacheto-Negrete, STScI Summer Internship*Co-supervised with Dr. Néstor Espinoza*Baltimore, USA
Jun. 2024 – Aug. 2024**Workshop Organizer — JWST Data Reduction***STScI Spring Symposium: Planetary Systems and the Origins of Life in the Era of JWST*Baltimore, USA
May 2023**AWARDED OBSERVING TIME**

JWST Cycle 5 — Co-I, PID: 9825*What causes the infrared and optical variability of the hot rocky super-Earth 55 Cnc e?***JWST Cycle 4 — Co-I, PID: 7675***Confirming a Tentative Terrestrial Atmosphere Detection on LHS 1478 b with JWST/MIRI***JWST Cycle 3 — Co-I, PID: 6456***Using stellar contamination proxy TRAPPIST-1 b to search for an atmosphere on TRAPPIST-1 e***JWST Cycle 2 — Co-I, PID: 3730***The Hot-Rocks Survey: Testing 9 irradiated terrestrial exoplanets for atmospheres***JWST Cycle 2 — Co-I, PID: 3969***Hot-Jupiter atmospheric forecast: are mornings cloudier than evenings on other worlds?***JWST Cycle 2 — Co-I, PID: 4126***TOI-125 comparative atmospheric chemistry within one system***JWST Cycle 2 — Co-I, PID: 4195***Constraining the oxidation state of the Super-Earth TOI-1685 b***JWST Cycle 2 — Co-I, PID: 3279***Calibrating NIRISS SOSS order 3 for very bright time-series observations with JWST***CHEOPS AO3 — PI***Cloudiness of three warm Sub-Neptunes***HST Cycle 31 — Co-I, PID: 16457***Atmospheric characterization of a disintegrating planet in the hot Neptune desert***PUBLICATIONS**

[Link to NASA/ADS profile](#)

32 refereed publications

6 first-author publications

1 second-author publication

COLLABORATIONS

Canadian Ariel Science Team PI: N. Cowan

Canada

IREx PI: R. Doyon

Canada

JWST TST DREAMS GTO Team PI: N. Lewis

USA, UK

JWST GTO NIRSpec Team PI: S. Birkmann

USA, Germany

Hot Rocks MIRI F1500W Survey Team PI: H. Diamond-Lowe

USA

ARIEL Consortium PI: G. Tinetti

UK, France

CONFERENCE PRESENTATIONS

Oral Presentations (12+1 invited)

CASCA 2026 Oral presentation <i>A Sub-Neptune Atmospheric Atlas: Toward Population-Level Trends with JWST</i>	Montréal, Canada Jun. 2026
SF2A 2025: Invited plenary talk <i>Exoplanet Atmospheres in the JWST Era</i>	Toulouse, France Jul. 2025
Exoclimes VII: Oral presentation <i>Insights from JWST Near-Infrared Phase Curve Observations of the Lava World K2-141 b</i>	Montréal, Canada Jul. 2025
Aspen Center for Physics Winter 2025 Conference: Oral presentation <i>Exploring the Atmosphere of the Ultra-Short-Period Lava World K2-141 b using thermal emission</i>	Aspen, USA Mar. 2025
245th AAS Winter Meeting: Oral presentation <i>The Hot Rocks Eclipse Survey with MIRI at 15 Microns: Does TOI-270 b Have an Atmosphere?</i>	Washington D.C., USA Jan. 2025
STScI HotSci Series 2024: Oral presentation <i>Exploring Exoplanet Atmospheres: from Hubble to JWST</i>	Baltimore, USA Jul. 2024
Extreme Solar Systems V: Oral presentation <i>JWST NIRISS SOSS emission spectrum: illuminating the day side of the hot Jupiter WASP-17b</i>	Christchurch, New Zealand Mar. 2024
243rd AAS Winter Meeting: Oral presentation <i>JWST NIRISS SOSS emission spectrum: illuminating the day side of the hot Jupiter WASP-17b</i>	New Orleans, USA Jan. 2024
SF2A 2022: Oral presentation <i>Investigating the unexpected methane depletion in close-in Sub-Neptunes: from HST to JWST</i>	Besançon, France Jun. 2022
Exoplanets IV: Not presented for personal reasons <i>Exploring the transition from Super-Earth to Sub-Neptune with a Hubble transmission survey</i>	Las Vegas, USA May 2022
Chianti International Topics: Oral presentation <i>Exploring the transition from Super-Earth to Sub-Neptune with a Hubble transmission survey</i>	Florence, Italy Apr. 2022
Ariel Day France: Oral presentation <i>Near-Infrared transmission spectrum of TRAPPIST-1 h using Hubble WFC3 G141</i>	Paris, France Jan. 2022
Exo-Systèmes II: Oral presentation <i>Exploring the transition from Super-Earth to Sub-Neptune with a Hubble transmission survey</i>	Toulouse, France Dec. 2021

Posters (5)

Exoplanets VI: Poster <i>Joint JWST Eclipse and Transit Constraints on TOI-270b</i>	Porto, Portugal Jun. 2026
Exoplanet Atmospheres: Poster (not presented) <i>Joint JWST Eclipse and Transit Constraints on TOI-270b</i>	Denver, USA Mar. 2026
Exo-Systèmes V: Poster <i>Joint JWST Eclipse and Transit Constraints on TOI-270b</i>	Paris, France Mar. 2026
Exoplanets V: Poster <i>First look at the thermal emission of the Lava World K2-141 b with JWST</i>	Leiden, Netherlands Jun. 2024
Exoplanets V: Poster <i>Detection of sulfur-bearing species in the atmosphere of L98-59 d</i>	Leiden, Netherlands Jun. 2024

Seminars, Workshops, Conferences, and Summer Schools (13)

JWST Cycle 5 Exosystem Proposal Workshop: Invited seminar <i>Exploring Transiting Exoplanet Atmospheres: Insights from JWST Observations</i>	Marseille, France Jun. 2025
Trottier Institute for Research on Exoplanets: Invited seminar <i>Exploring Transiting Exoplanet Atmospheres: Insights from JWST Observations</i>	Montréal, Canada Mar. 2025
Max Planck Institute for Astronomy Exocoffee: Invited seminar <i>Hints of a sulfur-rich atmosphere around the Super-Earth L98-59 d from JWST NIRSpec G395H</i>	Virtual Nov. 2024
JWST Telescope Scientist Team Meeting: Oral presentation <i>Characterizing a Prototypical Warm Neptune HAT-P-26 b with JWST</i>	Virtual Aug. 2024
Paris Observatory Seminar (LIRA): Invited seminar <i>Time-Series Observations of Exoplanet Atmospheres with JWST</i>	Meudon, France Jun. 2024
CEA Seminar: Invited seminar <i>Time-Series Observations of Exoplanet Atmospheres with JWST</i>	Orsay, France Jun. 2024
JWST Cycle 3 Preparation Workshop (JEST): Participant	Leiden, Netherlands Jun. 2024
Spring Symposium: Workshop organizer <i>Planetary Systems and the Origins of Life in the Era of JWST: WASP-39b JWST data reduction</i>	Baltimore, USA May 2023
STScI JWST NIRISS SOSS Technical Meeting: Oral presentation <i>Failed GTO WASP-17b observations</i>	Baltimore, USA May 2023
JWST Cycle 2 Preparation Workshop (JEST): Participant	Munich, Germany Aug. 2022
Bay Area Exoplanet Meeting: Invited seminar <i>Small Planet Atmospheric Characterization with HST</i>	Virtual Mar. 2022
ARIEL Summer School II: Participant	Biarritz, France Oct. 2021
ARIEL Summer School I: Participant	Biarritz, France Oct. 2019

ACADEMIC SERVICE

Referee for MNRAS, AJ, APJL, AAS journals	since 2024
Member HST Cycle 34 Time Allocation Committee	Jun. 2026
SOC Member — Rocky Worlds DDT Data Challenge Workshop	Baltimore, USA 2026
IREx Social Committee <i>Organizer of social events within the IREx team</i>	Montréal, Canada since 2025
LOC and SOC — STScI/JHU ExoJamboree Meetings <i>2024 and 2025 Editions</i>	Baltimore, USA since 2024
Reviewer for DiRAC resource allocation proposals	United Kingdom since 2024
Co-organizer — STScI Exoplanet Group Biweekly Meetings	Baltimore, USA 2023–2024
Panel Support for the HST Cycle 31 Time Allocation Committee	Baltimore, USA Aug. 2023
External Reviewer — CFHT/SPIRou observing time allocation	since 2022

OTHER RESEARCH EXPERIENCE

Master's Thesis — Institut d'Astrophysique de Paris (IAP) <i>Supervised by Prof. Alain Lecavelier des Etangs</i> <i>Probing the upper atmospheres of hot Jupiters using Hubble/STIS near-ultraviolet observations</i> This work led to a first-author publication in A&A, Volume 672, Apr. 2023.	Paris, France May 2019 – Jul. 2019
Research Engineering Internship — ONERA <i>Supervised by Dr. K. Caillault</i> <i>Impact of aerosols on optical satellite LIDAR transmission</i> This work led to a first-author publication in Springer Nature, Volume 98, Jul. 2019, and to the first prize at the PEGASUS aerospace schools conference.	Palaiseau, France Mar. 2018 – Sept. 2018
Summer Internship — European Space Agency (ESA) <i>Supervised by Dr. B. Rosich</i> <i>Reduction and analysis of Sentinel-1 SAR observations for natural disaster monitoring</i>	Frascati, Italy Jun. 2017 – Aug. 2017

OUTREACH

Interview — Magazine Sciences et Vie par Benoît Rey <i>L98-59 d</i>	France 2026
Outreach talk for the welcoming day of Professor CEGEP UDEM <i>Observe other worlds skies</i>	Canada 2026

Podcast — <i>Growing Worlds</i>	virtual 2026
Invited Talk — Women and Girls in Science Talks <i>Embassy of France in the United States</i>	Washington D.C., USA Mar. 2025
Interview — Magazine <i>Epsilon</i> <i>Exploring rocky worlds with JWST</i>	virtual 2024
Public Outreach Talk <i>Nuit de l'Astronomie, Institut d'Astrophysique de Paris</i>	Paris, France May 2021
Invited Talk — Airbus Defence and Space <i>Exoplanets science with Ariel</i>	Toulouse, France Oct. 2020

ACTIVITIES AND PERSONAL ENGAGEMENT

United Airlines NYC Half Marathon — Running	New York City, USA Mar. 2026
TCS New York City Marathon Major — Running	New York City, USA Nov. 2025
5 km Race for Breast Cancer Awareness (Pink October) — Running	Paris, France Oct. 2021