Adrien Anthore

2nd year Masters student
in Space Science and Technology

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Web Page *Linkedin* *Github*

Research interests: Galaxy: general - Radio lines: galaxies
Radio continuum: galaxies - Instrumentation: interferometers
Methods: observational - Methods: data analysis - Deep Learning.

Education

2022 – 2024 **Master in Space Sciences and Technologies**, *Observatoire de Paris - PSL*, Paris.
International Research Track, major in Observational Astrophysics. General astrophysical training with a focus on Observational techniques, data analysis, instrumentation, HPC, and Machine Learning.

2019 – 2022 **Bachelor of physics**, *Sorbonne Université*, Paris.
General physics, intensive track focused on theoretical and mathematical aspects.

Research Experience

Internships

2023 – 2024 ***Master 1 & 2 internships***, *LERMA (Observatoire de Paris)*, 14 & 20 weeks.
Supervised by **D. Cornu**. Subject: Detection and characterization of sources in radio astronomical datasets using Deep Learning. Skill developed: data analysis, Machine Learning (CNN), programming (Python), GPU computing, SLURM.

2022 ***3rd year Bachelor Internship***, *Institut d'Astrophysique de Paris*, $\sim$ 5 weeks.
Supervised by **D. Leborgne**. Subject: Determination of galaxy evolution scenarios with statistical methods. Skill developed: galaxy physics, statistical methods (MCMC), programming (Python).

Lab Insertion

2023 ***Master 2 Lab Insertion Unit***, *LERMA (Observatoire de Paris)*, 20 days.
Supervised by **D. Cornu**. Subject: Deep Learning for galaxy detection on radio-astronomical surveys. Skill developed: Machine Learning (CNN), programming (Python), GPU computing, SLURM.

2022 ***Master 1 Lab Insertion Unit***, *GEPI (Observatoire de Paris)*, 12 days.
Supervised by **W. Van Driel** & **J.-M. Martin**. Subject: HI line observations of galaxies with the Nançay Radio Telescope. Skill developed: observational techniques, data reduction and analysis, programming (Python).

Programming skills & Scientific Computation

Languages

Python, C, C#, advanced.

High-Performance Computing (HPC)

MPI, CUDA, intermediate.

Statistical Learning

Frameworks: **CIANNA, Scikit-Learn, Tensorflow**, advanced.

Allocations on calculators

Minerva server, MesoPSL server, Tycho cluster, GPU computing, SLURM.

Observationnal Projects

Research project

2022 **Nançay Radio Telescope 100m**, observation of 8 edge-on late-type galaxies, data product send to EDD database, $\sim$20 hours.

Other projects

2023 **Meudon's observatory T-60 & T-45**, *Master 1 training*, multi-band observation of M42 and bright stars, ∼8 hours.

2022 **Paris' observatory 3m single dish antenna**, *3rd year bachelor training*, HI observation of clouds in the Milky-way, ∼8 hours.

since 2020 **Amateur optics & Electronically-Assisted devices**, I perform my own observation and introduce amateurs to sky observations.

Scientific animation and outreach

Student organisation involvment

2024 President of "BDE de l'Observatoire de Paris" (Student Council).

2022 Head of the communication department at Top Aéro, *web site*.

2021 Head of the events department at Top Aéro, *list of the events*.

2020 – 2022 Participation in the experimental rocket project Zéphyr at Top Aéro, launched in 2022, *project page*.

Popularization involvment

since 2021 **L'Observatoire d'Adrien**, Popularization program on the internet, scientific content focusing on astrophysics, astronomy, and research, YouTube, TikTok, and Instragram.

since 2023 **Fête de la Science**, *Observatoire de Paris, Meudon*, activities around astronomy and astrophysics, (2024 in prep.), 3 days/year, web site.

10/2022 **Fête de la Science**, *Sorbonne Université, Paris*, activities around aeronautics and aerospace, 2 days, web site.

10/2021 **Festival Explor'Espace**, *Montrouge*, activities around aeronautics and aerospace, 3 days, web site.

Conferences and workshops

07/2024 **EAS 2024 - SS31: The Square Kilometre Array Observatory: pathway to science operations**, *Padova*, ePoster, web site.

05/2024 **AI for Radioastronomy**, *Göteborg*, conference, web site.

Teaching

since 2023 **SPRINT Summer Camp**, *Sorbonne University*, Introduction to Astrophysics - ∼8h (volunteering).