Adrien Anthore

2nd year Master student in Space Science and Technology

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 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

since 2023 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: 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: statistical methods (MCMC), programming (Python), SLURM.

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: 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 in prep., web site.
- 05/2024 Al for Radioastronomy, Göteborg, mini-conference, web site.

Teaching

since 2023 **SPRINT Summer Camp**, *Sorbonne University*, Introduction to Astrophysics (2024 in prep.) - ~8h (volunteering).