

# Erasmus+ Traineeship Report

## Uppsala University, Sweden

██████████

December 2025

## 1 Preparation

After my first Erasmus+ study semester during my Bachelor's in Paris in 2022, I knew that I wanted to do a traineeship abroad as part of my Master's thesis. During discussions about possible thesis topics, I suggested this idea to my supervisor at Ruhr University Bochum. After considering different options, it became clear that a research stay in Uppsala, under the supervision of ██████████, would be particularly suitable for my project.

Once I had contacted ██████████ and we had a few discussions by e-mail and in online meetings, we agreed that a three-month stay in the autumn would be ideal. Until then, I started to prepare by reading the relevant literature and familiarising myself with the numerical



Figure 1: My working space at the Ångström Laboratory

tools and simulation frameworks I would need during the project. Additionally, I had the opportunity to attend a conference in Uppsala before the

actual stay. This allowed me to meet ██████ in person, get to know some members of the local group in advance, and already clarify many practical and scientific details.

Since I was already familiar with the Erasmus+ application procedure from my previous mobility, the administrative part went relatively smoothly. I took responsibility for submitting the grant application on time and for filling out all forms correctly. I also contacted the Erasmus coordinator in Uppsala to confirm technical details about the host department, the contact persons, and the formalities on the Swedish side. Afterwards, I prepared a draft Learning Agreement and sent it to both of my supervisors for approval. Once they had agreed on the tasks and learning outcomes, I uploaded the final version to the application portal.

Regarding accommodation, I researched different options for renting a room or an apartment for three months and rather quickly found a suitable place using *Blocket/Qasa*. There was also the option of renting a student room, but in the end I did not pursue this, as it would have been too last-minute for me and I preferred to have a quiet, fully furnished place from the very beginning. The accommodation I chose was within biking distance of the university and made it easy to combine work and everyday life.

## 2 Implementation

Since I had already met ██████ in person in May, I knew exactly where to go on my first day of the traineeship. After picking up the keys to the apartment, I went to the Ångström Laboratory, where I met the group for lunch. Afterwards, ██████ introduced me to the rest of the High-Energy division and showed me my office. We discussed the first steps of the project, and I received information about how to obtain my keys and campus card in order to access the university buildings and facilities.

During the traineeship I worked full-time on my project, usually spending around eight hours per day in the office. My work mainly consisted of writing and modifying simulation code and adapting several modules in order to implement the physical scenario we had agreed on. Whenever I had new results, I could stop by Rikard's office to discuss the progress and possible next steps. In parallel, I stayed in close contact with my supervisor in Bochum, so that the work in Uppsala was well integrated into my overall Master's thesis project.

An important part of my integration into the local research environment were the regular meetings. I was invited to take part in a local weekly IceCube meeting, where I could present my progress from a theoretical perspective and receive constructive



Figure 2: Main entrance to the Ångström Laboratory, where I spent most of my time

feedback from colleagues working on the experimental side. This helped me to better understand which observables are most relevant in practice and how my theoretical work could connect to actual data.

In addition, there was a weekly journal club on Fridays, where recent papers were discussed. Since my background is mainly in astroparticle and astrophysics, I could contribute my perspective to the discussions and, at the same time, learn more about accelerator physics and cosmoparticle physics. This broader view was very valuable for my project and for my general understanding of the field.

On a practical level, I also became familiar with the working culture at Uppsala University: regular coffee breaks, open-door policies, and a friendly, informal atmosphere in the group. English was the main working language, which made communication straightforward, but I also picked up some basic Swedish phrases in everyday life. Since Uppsala is a very bike-friendly city, I bought a bicycle shortly after arriving. This made commuting to the Ångström Laboratory easy and quick, and it also allowed me to explore the city and the surrounding nature. One Saturday I even managed to bike all the way to Stockholm, simply for the experience.

During the entire stay, there were no real conflicts or serious problems. The local group was very welcoming and helpful, and I always felt supported, both scientifically and personally. There was even a week of snow, which was particularly beautiful, as it stayed on the ground for several days and transformed the city into a winter landscape.

### 3 Evaluation

Overall, I can only recommend Uppsala as a place for a very productive traineeship or study period. The scientific atmosphere was encouraging, and people were genuinely interested in each other's projects. This created an environment in which it was easy to stay motivated and to make steady progress. From a professional point of view, I improved my skills in numerical simulations, data analysis and scientific communication, and I gained a clearer idea of how theoretical work can be connected to large-scale experiments such as IceCube.

The fact that most members of the group were PhD students or postdocs made it easy to integrate socially. I often joined them in the evenings to play cards, visit local pubs or attend student events. These informal contacts helped me understand everyday academic life in Sweden and gave me a realistic impression of what it is like to do a PhD there.

From a cultural perspective, the stay was equally enriching. Uppsala has a very active student life, with many nations (or colleges, you could say), pubs and events, but at the same time it remains a relatively small and calm city, which is ideal for concentrated research work. On the plus side, Stockholm is very close by: in about an hour by local train one can reach the capital and, for example, visit the Swedish parliament or explore the old town on a weekend.

The journey to Sweden by train was also a positive experience. There is a night train, Snälltåget, which runs on weekdays from Berlin via Hamburg to Stockholm. Travelling this way was comfortable and, at the same time, a more climate-friendly alternative to flying. My return journey was slightly less convenient, since the night train did not run on the weekend on which I



Figure 3: Uppsala Cathedral covered in snow, seen from the other bank of the river Fyris

travelled back. Instead, I used several local and regional trains to get from Uppsala to Bochum. Although the trip took longer, it still worked well and showed that it is entirely possible to plan such a traineeship with mostly train-based travel.

In summary, the Erasmus+ traineeship in Uppsala contributed significantly to my Master's thesis and to my academic development in general. It strengthened my interest in pursuing a PhD, expanded my international network, and gave me valuable insights into a different academic system and research culture. I would definitely recommend such a stay abroad to other students who are considering an Erasmus+ traineeship or semester in Uppsala.