



Student: Alexander Jones, University of Hertfordshire

Placement: NPL

Role: Scientific Researcher

“I would thoroughly recommend carrying out a summer placement as it looks great on the CV and provides an opportunity to be in a real place of work.”

What is the subject of your PhD?

Investigating the evolution of planetary nebulae through observation and simulation.

Describe a typical day on placement

NPL is the UK’s metrology institute – the science of measurement. My role within the Earth Observation group was to research into the field of altimetry. This primarily involves using satellite data to measure the rate of change of sea surface heights which is an important indicator of climate change. My main tasks included informing the team of the most important aspects of altimetry, highlighting the areas that need to be explored further and performing some preliminary waveform modelling analysis.

What skills and knowledge have you gained during the placement?

I have learnt how to effectively work in a team; for example, many meetings took place with both colleagues within the department and externally via video conferencing. This encouraged me to push forward my ideas, even when working with experts in the field. More technically, I developed MCMC (Markov-Chain Monte-Carlo) simulations in order to model echo waveforms from real satellite data – a technique I have always wanted to learn.

How do you think doing a placement has benefited you for the future?

I now have a wider base of knowledge and experience which will hopefully make me more employable for a career within either science or industry.

Employer Perspective: Satellite altimetry was a new area for my group and I wanted someone who could review and summarise the literature and write software to process raw waveforms. Alex was a real benefit to the team: he was able to give an intelligent review of a complex field, summarise that in presentations which he gave both internally and to our external partners and he prepared some software for us that has been built on by others since he left. I recommend this summer programme as a way of doing some “blue sky research”, developing junior team members’ supervision skills and building links with new researchers and university departments.

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