

My name is Alanna Power, and I am currently completing an MSc in Atmosphere, Ocean and Climate at the University of Reading. I am very interested in attending the Summer School on Effective HPC for Climate and Weather, as I am keen to learn new skills in this area and I believe that it will further prepare me for my PhD project “Improving convective storm simulations through scale-adaptive and flow-adaptive sub-grid methods”, supervised by Professor Robert Plant. I have previously carried out a research project into the effect of resolution on storm prediction, and I will be completing my Masters Dissertation in an area of NWP also. I am particularly interested in the code development and extreme-scale computation topics in this course. I hope to find new and more efficient ways to run numerical weather predictions, and I believe that gaining a deeper understanding of both these topics would help me achieve this.

Therefore I propose a project which would focus on determining the effectiveness of implementing a code that would recognise atmospheric depressions as the form, and create a nested domain around the area of the low centre as the NWP model runs. I believe that this could potentially improve storm forecasts, and this project may then contribute to the wider NWP field. Should our group’s findings prove useful, I would hope we could carry out a peer review and publish the findings in order to circulate the information gathered.

I feel that partaking in this course would allow me to encounter different scientific research techniques which I believe would prove invaluable to me throughout my PhD.