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22nd January 2014

Dear Sir/Madam

Further to your advertisement for the position of CIRES/CSD Atmospheric Research Associate, I would like to be considered for this vacancy.

I am currently studying for my PhD in ‘Optical Properties of Ensemble and Single Aerosol Particles’ at the University of Bristol under the supervision of Professor Jonathan Reid. My PhD has focussed on optical, hygroscopic and thermodynamic properties of spherical aerosol particles in the 0.2 to 4 micro-meter diameter range. I have studied hygroscopic properties of salt systems, vapour pressures of single component systems and phase separation of multicomponent systems using a multi-level optical approach. Whilst studying here I have gained significant experience building, improving and maintaining both ensemble and single particle cavity ring down systems. Data analysis and interpretation has featured as a very important part of my PhD and in particular I am very aware of the limitations of the ensemble cavity ring down technique (Mason et al, 2012). My studies have given me a well-rounded theoretical knowledge of the fundamental optics and thermodynamics of aerosol particles as well as the practical experience to make me very appropriate for this position.

Although it is still early in my research career I think I have the suitable expertise, communication skills, team working skills and practical experience to make me an excellent candidate. I am accomplished in LabVIEW programming language and have experience with written languages such as Python, MATLAB and Scilab.

CIRES an outstanding reputation for its field work and the quality of its research, and I would greatly welcome the opportunity to contribute to its research. In particular I am fascinated by measurements taken with the aircraft cavity ring down spectrometer (Langridge, 2011 and Lack, 2012) I look forward to the opportunity to meet with you and to discuss the project in greater depth.

Yours sincerely

Bernard J. Mason

