

REQUEST FOR ADDITIONAL RESOURCES IN THE CURRENT YEAR FOR AN EXISTING SPECIAL PROJECT

MEMBER STATE:	UK
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Other researchers:	Will Hewson, Tim Keslake, Martyn Chipperfield, Ken Carslaw
Project title:	Development and testing of a microphysical aerosol scheme in the IFS
Project account:	SPGBWOOD

Additional computer resources requested for	Current Year
High Performance Computing Facility/(units)	1,500,000
Data storage capacity (total)(Gbytes)	None

Continue overleaf

¹ The Principal Investigator is the contact person for this Special Project

Technical reasons and scientific justifications why additional resources are needed

The “spgbwood” Special Project was set up in 2012 with an initial request for 500,000 SBUs per year. This relatively modest resource allocation was requested as only basic implementation and checking of the IFS-GLOMAP scheme was still being carried out.

However, the GLOMAP aerosol scheme is now operating well to simulate the size-resolved evolution of each of the main aerosol components, with a preliminary evaluation of the global dust distribution now being carried out.

We will be also soon be carrying out runs which explore the impact of simulating dust emissions fully interactively with the wind and surface properties and contrasting to prescribed daily dust emissions or slowing varying CTM prescribed winds.

We are now wishing to routinely assess the seasonal variation of simulated aerosol properties, examining the impact of more complete treatment of aerosol sources including improved biomass burning emissions, biogenic sulphate from DMS and biogenic secondary organic aerosol from monoterpenes.

Even before these planned experiments, we have already used 566605 SBUs, with just this week using 165048 SBUs.

We also now have two Leeds users able to run IFS-GLOMAP experiments (Will Hewson and Tim Keslake) whereas previously there was only one.

In summary, due to our needing to run scientific experiment over longer simulation periods, and due to the increase in users, we therefore request this year’s 500,000 SBU limit to be increased to 2,000,000 SBUs (an increase of 1,500,000 SBUs)..

A progress report for this special project will be submitted and a further increased SBU will be requested for next year as the scope of the science gets wider.