



Call for contributions to a special issue “Modelling and Simulation in Modern Atmospheric and Climate Sciences” in the journal *Studies in History and Philosophy of Modern Physics*.

DEPARTMENT OF SCIENCE STUDIES

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Date: August 27, 2008

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Dear Colleague,

the editors of the journal *Studies in History and Philosophy of Modern Physics* have stated an interest in the history and philosophy of “Modelling and Simulation in Modern Atmospheric and Climate Sciences” and asked us to prepare a special issue on this topic. We gladly accepted the honour of this task. With this letter we would like to invite you to contribute to this special issue. You have shown a strong interest in this field and done outstanding research on it. Therefore, we would be very happy, if you seriously consider this invitation. The journal *Studies in History and Philosophy of Modern Physics* is one of the eminent journals in the history and philosophy of science with a very high impact factor of 0,661 (2007).

The topic “Modelling and Simulation in Modern Atmospheric and Climate Sciences” is highly relevant to the history and philosophy of science, among other reasons because of the massive public and political interest in climate research and related sciences. It involves a

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number of pertinent epistemic and methodological issues, such as the “plastic” nature of computer models and the new forms of uncertainty that such models have to face. Some scholars have regarded computer simulation as a new “third way” in scientific methodology, complementing (and perhaps sometimes contrasting) theory and experiment. Furthermore, the large number of actors and interests involved in model development and use adds to the complexity that has to be grasped for a historical and philosophical understanding.

For the special issue mentioned above we would like to invite authors to propose papers, which present new research results and provide substantial new contributions to the current state of the history and philosophy of atmospheric and climate modelling. Proposals may cover historical and philosophical research on any field in or closely related to atmospheric and climate modelling. It may focus on modelling and simulation activities and practices as well as on contexts of model development and use. Among the questions of interest that may be considered are the following: Which practices have been developed in modelling and simulation in the atmospheric and climate sciences? How do these practices relate to more traditional methods of physics (or to modelling in, say, particle physics and astronomy)? How has the quality or validity of models in fields of atmospheric and climate sciences been established? Which interests (scientific, political or other) affected model development and use?



If you are interested in providing a contribution, we would like to ask you to send us an abstract before **30 November 2008**. Abstracts should be sent to Matthias Heymann (matthias.heymann@ivs.au.dk) or Helge Kragh (helge.kragh@ivs.au.dk). The abstract should summarize the topic and argument of your contribution and highlight in which regard the argument, the results or the approach of your contribution are substantial and new.

Before 31 December 2008 we will inform you whether your proposal has been accepted. Full papers will be due by 31 December 2009, but this date can be negotiated. If you consider this date unfeasible, please let us know, at which date you will be able to submit a fully prepared paper. All submitted papers will be reviewed individually within three months time. The number of articles published in the special issue will be about 10. The envisaged year of publication is 2010.

You are welcome to spread this call for contributions to other relevant researchers. It is also envisaged to publish a call for contributions on suited websites. If you have any questions, please don't hesitate to contact us. Thank you very much for your time and consideration!

Yours sincerely

Matthias Heymann and Helge Kragh