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Making a fundamental climate model accessible.

Sally Dacie

Max-Planck-Institut für Meteorologie, Hamburg, Germany (sally.dacie@mpimet.mpg.de)

One-dimensional radiative-convective equilibrium (1D RCE) models were first developed more than 50 years ago (eg. Manabe and Wetherald 1967) and provide a base for how scientists think about the climate, how the temperature responds to radiative forcing, and the importance of water vapour feedback. Despite their long history, 1D RCE models continue to be used and to provide new insights into the tropical atmosphere (eg. Birner and Charlesworth 2017).

I am developing a website based on konrad, a modern 1D RCE model. The website is aimed at the level of secondary school students. Some background information about the model, the structure of the atmosphere and greenhouse gases is provided, as well as about the current research being performed with konrad. Moreover, the website is interactive and users can select certain properties of the atmosphere and see how the equilibrium temperature of konrad changes. This could be used as a resource for teachers to set exercises for their students. It could also provide a starting point for users, who are interested in programming, to download the model and perform some simulations themselves. However, the general idea is simply to share some knowledge about atmospheric processes, climate change, what climate models are and what climate scientists do.