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A numerical model of Venus

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A Venus general circulation model is being developed at Oxford. The model has global coverage and extends from the surface to 90km (5 decades of pressure) in the vertical. Results from the model with linearized cooling and friction are presented, where the model atmosphere exhibits significant super–rotation. Wave modes in the model atmosphere are analysed and compared with observations from Pioneer Venus. Atmospheric tracers are used to show possible cloud patterns resulting from the simulated atmospheric state. Future development and use of the model to analyze and to interpret data from missions to Venus, such as Venus Express, will be discussed.