



General Circulation Modeling of Extrasolar Planet Atmospheres.

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The fast-growing population of extrasolar planets show great diversity. To characterize the conditions possible on these planets, and to help interpret current observations, we have performed an extensive set of three-dimensional simulations using a global, atmospheric general circulation model. In this presentation, we focus on synchronously rotating planets that transit their host stars, since they offer opportunities to observationally constrain some of the crucial model parameters. In our simulations, several robust features are observed under a large range of conditions: coherent jets and vortices, fairly uniform temperature distributions, and spatio-temporal variability.