The physics of atmospheres is discussed, followed by descriptions of terrestrial planet climate models

**Chairs:** Sanjay Limaye
                Jeffery Hollingsworth

8:30 a.m.  Schubert G. *  Mitchell J.
*Planetary Atmospheres as Heat Engines* [#8032]
We review the workings of Earth’s atmospheric heat engine and describe the energy exchanges that support the atmospheric circulation. We apply these concepts to Venus, Mars, and Titan.

9:00 a.m.  Covey C. *  Haberle R. M.  McKay C. P.  Titov D. V.
*The Greenhouse Effect and Climate Feedbacks* [#8026]
We review the theory of the greenhouse effect and climate feedback. We also compare the theory with observations, using examples taken from all four known terrestrial worlds with substantial atmospheres: Venus, Earth, Mars, and Titan.

9:30 a.m.  Schmidt G. A. *
*Issues in Building a Coherent Terrestrial Planet Climate Model* [#8088]
Given the conceptual similarity in many aspects of terrestrial planet climatology, there may be much to be gained from building and using a consistent climate model framework. What would be the costs and benefits of such an approach?

10:00 a.m.  Read P. L. *  Lewis S. R.  Mendonca J.  Montabone L.  Mulholland D. P.  Ruan T.  Wang Y.
*Climate Regimes on Terrestrial Planets Within a Hierarchy of Dynamical Models* [#8048]
We present an overview of the circulation regimes that may be exhibited in simplified and full-physics GCMs. These include cases that correspond to Earth, Mars, Titan, and Venus, classified by dimensionless numbers such as the thermal Rossby number.

10:30 a.m.  BREAK