Extra reading for ICTP Summer School Isca Projects

'Climate' projects

Project 1. Climate sensitivity and climate variability

- O'Gorman and Schneider, 2008: The hydrological cycle over a wide range of climates simulated with an idealized GCM. *J. Climate,* **21,** 5797-5806.
- Vallis et al., 2015: Response of the large-scale structure of the atmosphere to global warming. *Q. J. R Met. Soc.,* **141,** 1479-1501.

Project 2. Hadley cell, moisture and eddies

- Frierson et al., 2007: A gray-radiation aquaplanet moist GCM. Part II: Energy transports in altered climates. *J. Atmos. Sci.,* **64,** 1680-1693.

Project 3. Storm tracks, continents and reversed rotation

- Brayshaw et al., 2009 : The Basic Ingredients of the North Atlantic Storm Track. Part I: Land–Sea Contrast and Orography. *J. Atmos. Sci.,* **66,** 9, 2539-2558.
- Saulière et al., 2012: Further investigation of the impact of idealized continents and SST distributions on the Northern Hemisphere storm tracks. *J. Atmos. Sci.,* **69,** 840-856.

Project 4. Seasonal cycle, hysteresis and mixed-layer depth

- Trenberth, K.E., 1983: What are the seasons? BAMS, **64**, 11, 1276-1282.

Project 5. Oceanic heat transport effects on atmospheric circulation

- Sections 5.2.7 and 5.2.8 of Bordoni, S, 2007: On the role of eddies in monsoonal circulations: Observations and theory https://search.proquest.com/docview/304880431/fulltextPDF/8B6AE01644B8462FPQ/1?accountid=10792

Project 6. Obliquity changes

- Ferreira et al., 2014: Climate at high obliquity. *Icarus,* **243,** 236-248.
- Mitchell et al., 2014: Effects of the seasonal cycle on superrotation in planetary atmospheres. *Astrophys. J.,* **787,** 23.

Project 7. Ice albedo feedback and snowball Earth

- Ishiwatari et al., 2007: Dependence of climate states of a gray atmosphere on solar constant: From the runaway greenhouse to the snowball states. *J. Geophys. Res.,* **112,** D13120.
- Ferreira et al., 2014: Climate at high obliquity. *Icarus,* **243,** 236-248.

‘Planetary’ projects

Project 1. Effects of rotation rate and size of planet

- Kaspi and Showman, 2015: Atmospheric dynamics of terrestrial exoplanets over a wide range of orbital and atmospheric parameters. *Astrophys. J.,* **804,** 60.
- Mitchell and Vallis, 2010: The transition to superrotation in terrestrial atmospheres. *J. Geophys. Res.,* **115,** E12008.

Project 2. Effects of gravity in dry and moist atmospheres

- Kilic et al., 2017: Impact of variations of gravitational acceleration on the general circulation of the planetary atmosphere. *Icarus,* **135,** 1-16.
- Heng and Vogt, 2011: Gliese 581g as a scaled-up version of Earth: atmospheric circulation simulations. *MNRAS,* **415,** 2145.
- Kaspi and Showman, 2015: Atmospheric dynamics of terrestrial exoplanets over a wide range of orbital and atmospheric parameters. *Astrophys. J.,* **804,** 60.