Numerical Aspects of Nonhydrostatic Global Modeling

- Scaling and efficiency on massively parallel computers
- Suitability across broad range of scales (cloud to global)
- Spatial discretization on the sphere
- Vertical coordinate and treatment of terrain
- Order of accuracy for model numerics
- Time integration strategies (explicit vs semi-implicit)
- Capability for local grid refinement and regional domains
- Conservation properties (mass, scalars, + ???)
- Scale independence of parameterized physics
- Discriminating test cases for nonhydrostatic regime (moist convection)