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Dynamical cores and climate modeling¹

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In this talk an overview of the development of next generation dynamical cores in climate modeling is given. Fluid flow solvers intended for coupled climate system models must be designed to respect important physical properties related to conservation and the physical realizability of the computed solution. Demands for increased complexity and higher resolution has forced the modeling community to go back to the drawing board and develop highly scalable solvers on non-traditional spherical grids. In this talk an overview of these topics will be given with specific examples from NCAR's (National Center for Atmospheric Research) Community Atmosphere Model (CAM).

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