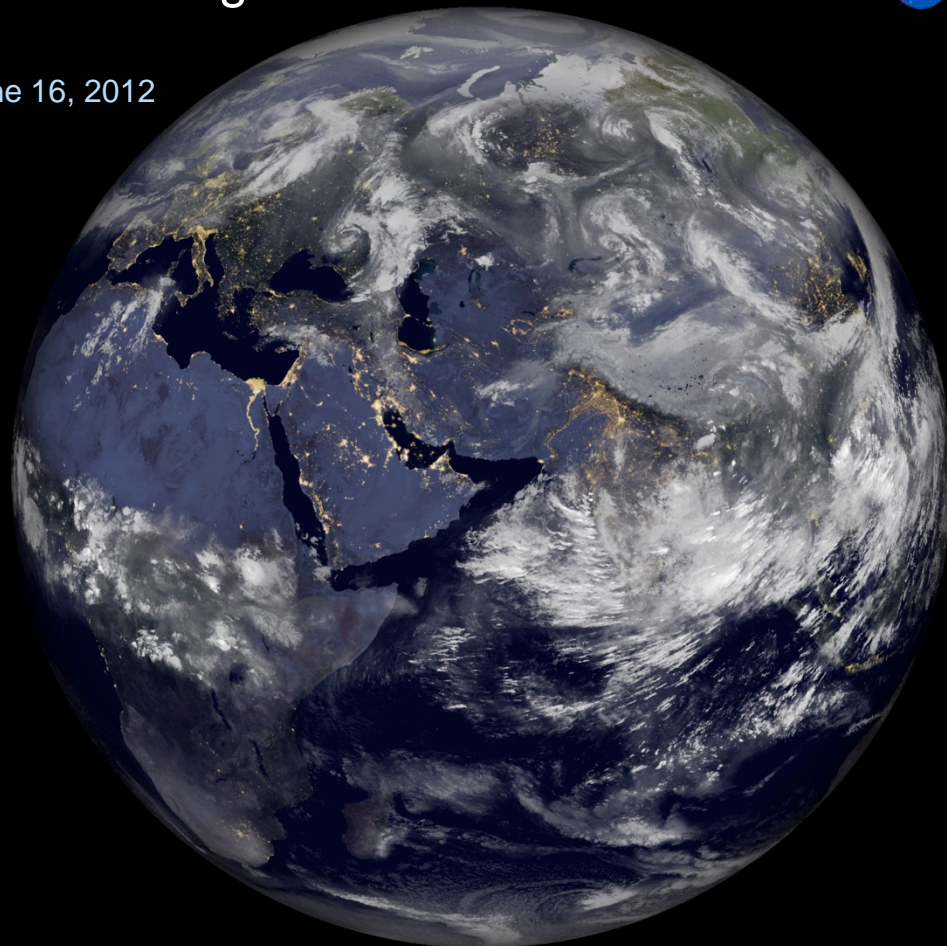
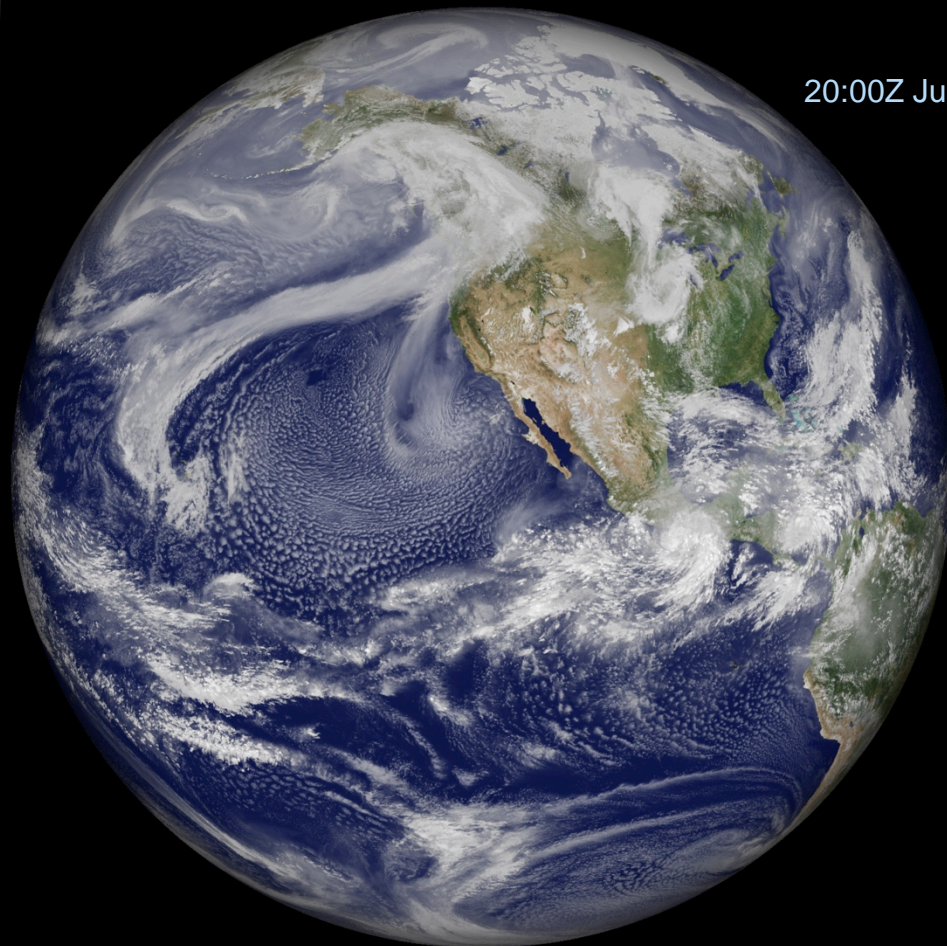


## 1.5-km Global Cloud-Resolving Simulations with GEOS-5



20:00Z June 16, 2012



1.5-km is the highest resolution simulation performed with any US global model

- This non-hydrostatic simulation incorporated a new two-moment microphysics scheme, interactive aerosols, reactive CO, CO<sub>2</sub> and SO<sub>2</sub> gases
- Explicit cloud resolving simulations provide valuable insight on the 'grey-zone' of physics parameterizations where sub-grid scale processes are partially resolved
- This engineering demonstration led to rapid development of the infrastructure of GEOS-5 to support high-resolution global downscaling applications for climate and weather