E3SM All-hands meeting

Efficient Configurations: Single Column and Standalone Cloud Resolving Models

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This presentation will provide an overview of two modeling frameworks designed to produce rapid feedback for the E3SM and SCREAM models; namely the single column model (SCM) and the capability to run a limited-area doubly-periodic cloud resolving model (CRM) with periodic boundary conditions. Both of these frameworks are driven by intensive observation period (IOP) forcing files from field campaigns that span a diversity of cloud and climatological regimes. An overview of SCM updates for E3SMv2 will be provided in addition to a brief scientific description for the limited-area doubly-periodic CRM of SCREAM. In addition, we will discuss under what scenarios these modeling frameworks are most beneficial, the library of IOP cases available, and how users can quickly get up and running.