P67 Facilitating easier comparison of physical parameterization advancements using the GMTB SCM.

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As part of the DTC's Global Model Test Bed (GMTB), a "test harness" for physical parameterizations is actively being developed to aid more efficient transfer of promising advancements from the research community to operations. The test harness takes the form of a hierarchy, with
increasingly complex testing tiers from individual parameterization simulators, to a single column model (SCM), to limited global simulations. Use of the test harness depends on operability with a new Interoperable Physics Driver (IPD), which connects potentially any physical parameterization (or suite of parameterizations) with a dycore configured to work with it. Although initial operability of the IPD focuses on
NOAA's GSM, future operability with the WRF is foreseen. Leveraging the generality of the IPD, the new SCM has the ability to test a broad range of physical parameterizations and suites in a unified way for easier like-to-like performance comparison. The SCM is driven using initialization
and forcing data from idealized test cases from the GASS and EUCLIPSE programs. Comparison to IOP data, high-resolution 3D modeling output, and the baseline GFS operational physics suite is possible through this framework. A demonstration of the SCM usefulness within the context of the
GMTB test harness will be presented.