



# Strategic Implementation Plan (SIP) for a Community-based Unified Modeling System

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## *Meso/CAM (Convection Allowing Models)*

*Presented by*

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# Meso/CAM WG *Membership*



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- Adam Clark (NOAA/NSSL)
- Geoff DiMego (NWS/NCEP)
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- William Putman (NASA/GMAO)
- Glen Romine (NCAR)
- *David Stensrud (Penn St. Univ) \*\**
- Louis Wicker (NOAA/NSSL)
- Ming Xue (OU/CAPS)
  
- *Co-Chair \*\**



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## *Initial Findings*

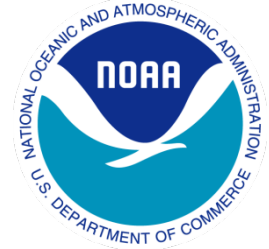


- Verification is critical for evidenced-based decisions (EBD).
  - Grand verification scorecard with resource tracking.
  - Forecaster input is critical via testbeds (e.g. CLUE), MEG-STI CAM.
- Unified modeling system must beat:
  - Multi-model, multi-physics systems for days 1-2 (SSEO/HREFv2).
  - Frequently-updated short-range forecasts (HRRR).
    - Likely to be regional CAM due to data latency issues (radar data).
    - WoF targeted for sub-CONUS domains beyond 3 years.
- Many want to run FV3 as a stand-alone limited-area model.
- Need documentation, Wiki page(s).
- Share results at FV3-based workshops.



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## *Key issues to resolve*



- **When** will a stand-alone limited-area FV3 be available?
  - Some want to make idealized FV3 runs, others want to conduct detailed analyses (e.g. with 5-min output).
    - Convective-scale evaluation is necessary for some.
    - The sooner this is done, the sooner the community will join.
  - Evaluate real-time & retrospective forecasts for a wide variety of weather events for all seasons (at least 2 dozen cases).
- Global nests vs stand-alone mixed core/physics for days 1-3 (outlooks).
- Better coordination across organizations with varying levels of “operational readiness” (across the O2R continuum).
- Allow community contributions to physics (including stochastic approaches) and ensemble-based data assimilation methods.
- V&V will be a huge effort, should there be a dedicated CAM V&V WG?