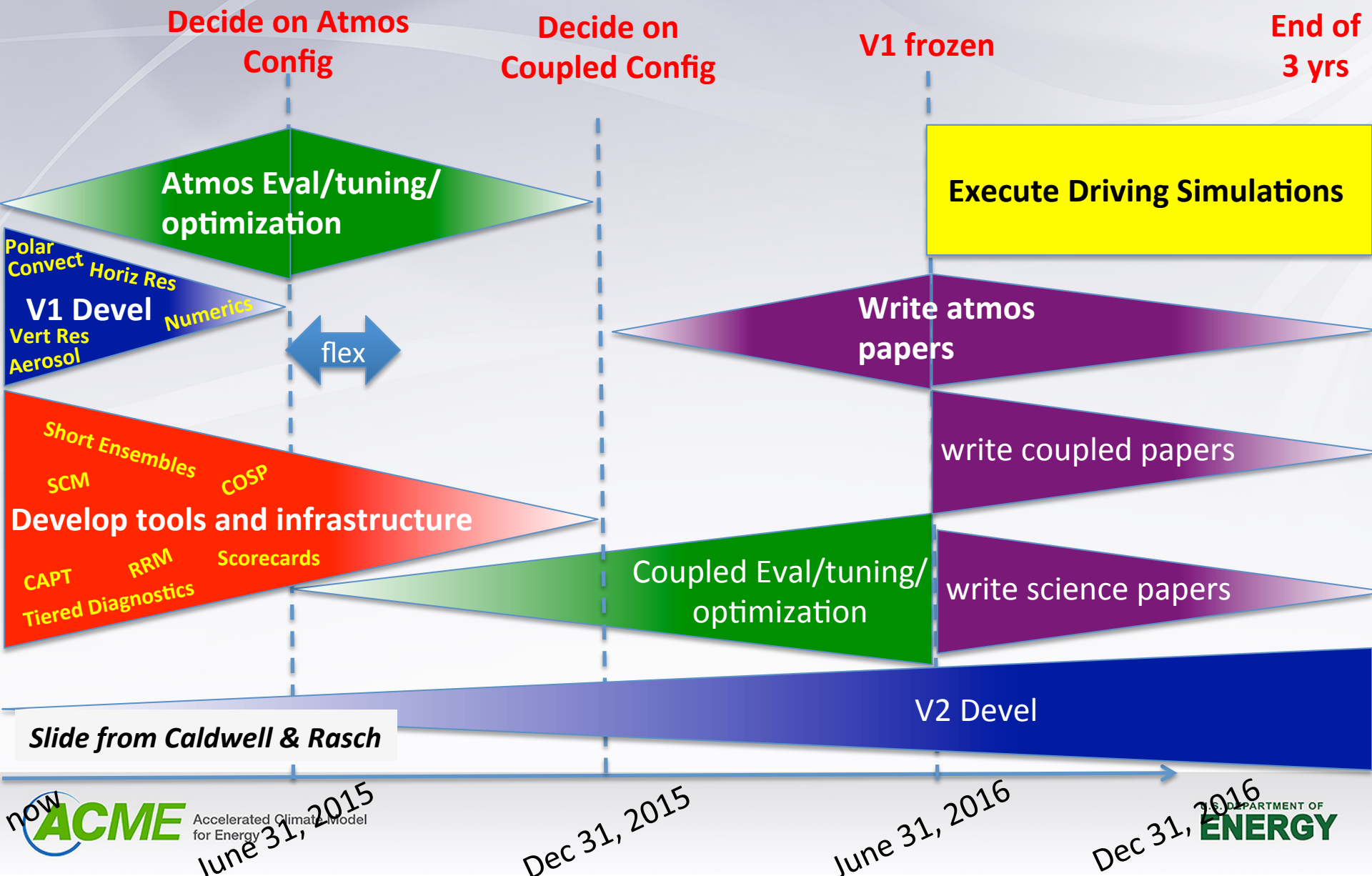
ACME Atmos Timeline

Height of box indicates effort level for given time



ACME Accelerated Climate Model for Energy

U.S. DEPARTMENT OF ENERGY

Steps needed for a tier 1b collection

1. Identify fields (e.g. temperature), & strategy for features (e.g. an EOF, or ENSO correlations)
2. Acquire Observational datasets for those fields and features → convert to a useful form for ACME
3. Create UV-CDAT scripts to produce plots comparing these fields/features to observations or another model simulation
4. Define in amwgmaster.py so collection available from command line argument to metadiags.py
5. Make scripts invokable from the UV-CDAT gui
6. Scripts produce both plots (a visual display + objective mean, RMS, min and max deviations
7. Sample output presented to the atmosphere group
8. documentation (what is plotted, what is the methodology, what are the observational datasets being used) on confluence
9. Code propagated to the UV-CDAT devel branch

- Collections
  - Global Cloud diagnostic, Yuying Zhang
  - Surface radiation budget ?
  - Amazon watershed, Jin-Ho
  - US watershed, Steve Ghan
  - Asian watershed, Po-Lun
  - Southern Ocean Met, Susannah
  - Dominant modes of Variability, Rich
  - Extratrop. modes (e.g. blocking), Tianyu
  - Global Watercycle, Chris

What has & has-not been happening

- Lots of model development:
  - Buried inside the development has been some testing/evaluation/
- Some evaluation
  - Continued work on collections
  - Observational Datasets
  - No scorecards yet
- Production run scripts are not yet robust
- Tuning. This task will need to start by Q5.
- Workflow is evolving. Currently many things are still taking place via “sneakernet”
- Bugtracking?
  - Bugs are being fixed on CESM that we care about but are not grabbing
- Combining parameterizations, e.g.
  - probably have not turned on polar mods with convection
  - Probably have not run high vertical res with polar mods
- Testing?
  - (COSP failure on MIRA is a recent example of a problem)
  - Need to define procedures for making innovations the default
- Performance
- Need:
  - A schedule
  - People to volunteer for some of the tasks that are not currently covered, or Shaocheng and I will start searching for solutions (this means reprioritizing activities to make sure the critical issues are covered).