



Canadian Centre for Climate Modelling and Analysis (CCCma)

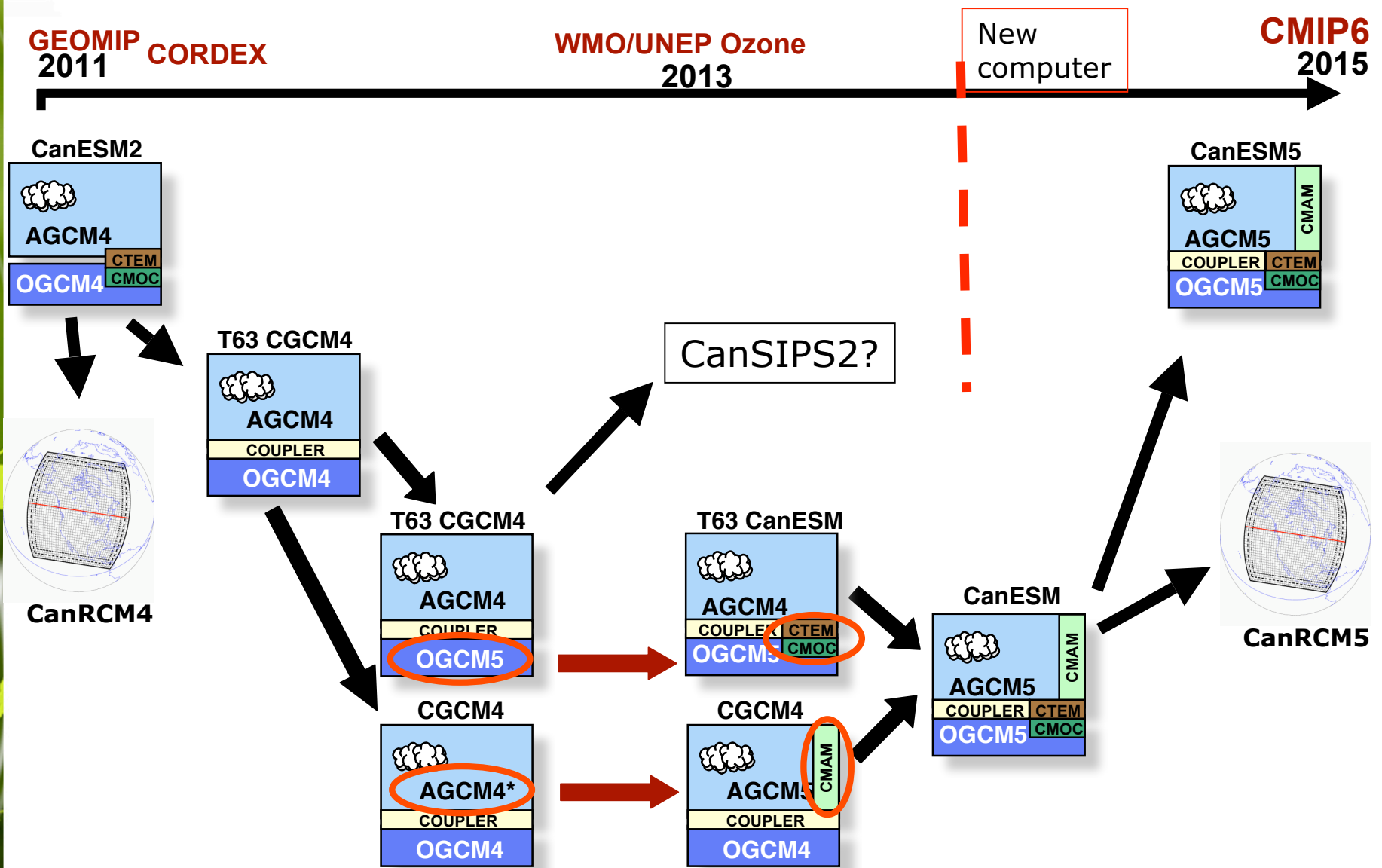
- CMIP5 experience
 - Had model frozen early, and simulations done early (aided by modest resolution – T63 – and stable computing)
 - CMOR conversion went reasonably smoothly via post-processing, once tables were stabilized
 - Setting up ESG server and publishing data was difficult and time consuming.
 - Metaphor questionnaire also difficult for us
 - CMIP helps us manage model development
 - We also built upon CMIP5 with many additional experiments for internal research
 - Have begun exploiting CMIP5 archive for analysis
 - Would like to see more discussion of idealized experiments

Current Status:

- CanESM2 (T63) used to undertake a large suite of historical simulations and future projections.
 - Core contribution to CMIP5
 - Used for GEOMIP, CFMIP, etc.
- CanCM3 and CanCM4 now running together (as of Dec, 2011) as 'CanSIPS' -- an operational seasonal to interannual prediction system.
 - Used for decadal prediction runs in CMIP5
- CanRCM4 (0.44° and 0.22°) is our new regional climate model being used to downscale historical simulations and future scenarios for 3 domains: N. America, Arctic and Africa.
 - Our contribution to CORDEX



CCCma model development: next 5 years (informed by, but not a slave to, CMIP/IPCC schedule)



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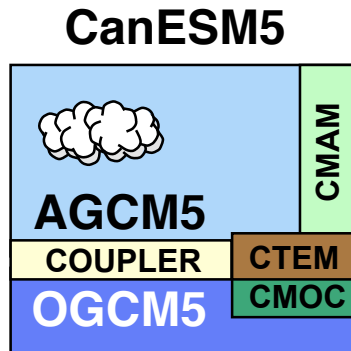
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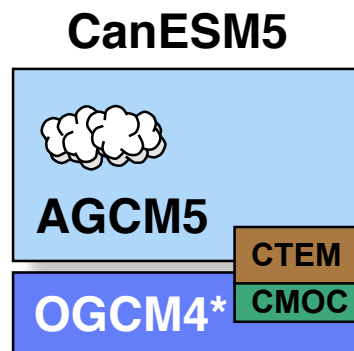
Next milestone ~2015

Target:



- AGCM5 – updated phys + new dynamical core
- OGCM5 – new ocean model (OPA/NEMO)
- CTEM/CMOC – new/updated carbon packages
- CLASS3.7 – allowing sub-grid tiling and landmask
- COUPLER – new generalized coupler: relax coincident grid requirement
- trop and strat chemistry included
- T127 (equivalent) or higher

Backup:



- AGCM5 – updated phys + spectral dynamics
- OGCM4* – old ocean model + improvements
- CTEM/CMOC – new/updated carbon packages
- CLASS3.7 – allowing sub-grid tiling / landmask

- Will also have corresponding CanRCM5



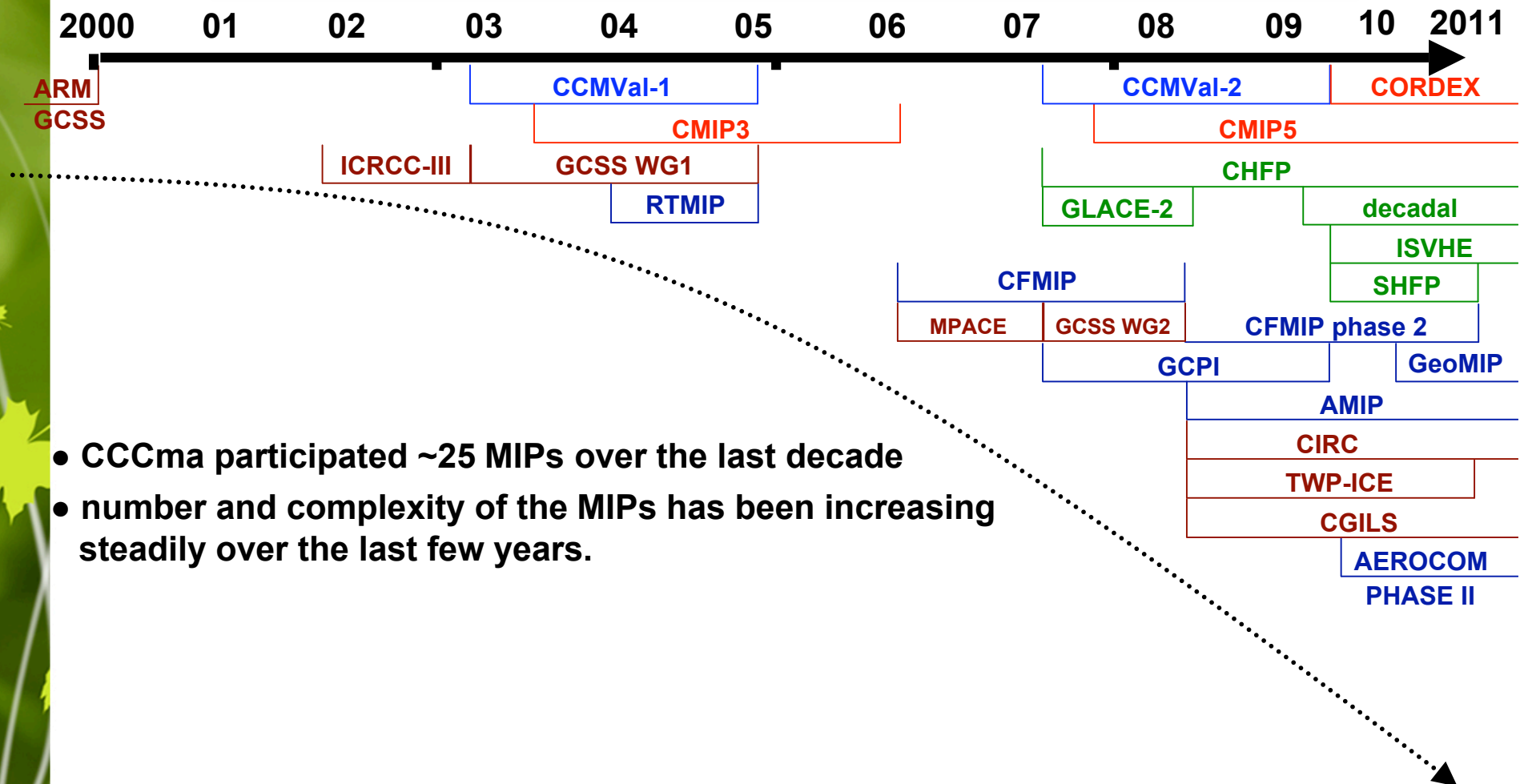
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Model Intercomparison Projects (MIPs)



- CCCma participated ~25 MIPs over the last decade
- number and complexity of the MIPs has been increasing steadily over the last few years.



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