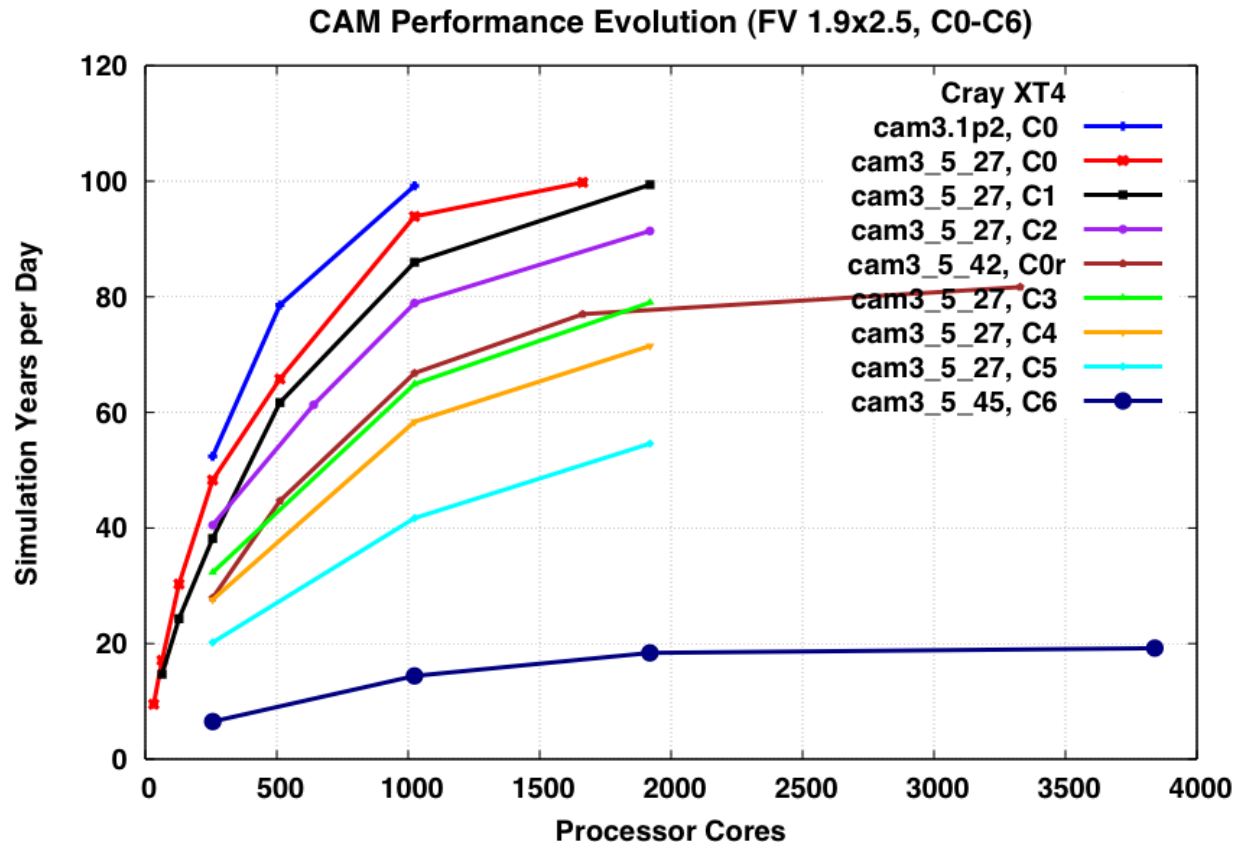


# Benchmark Suite

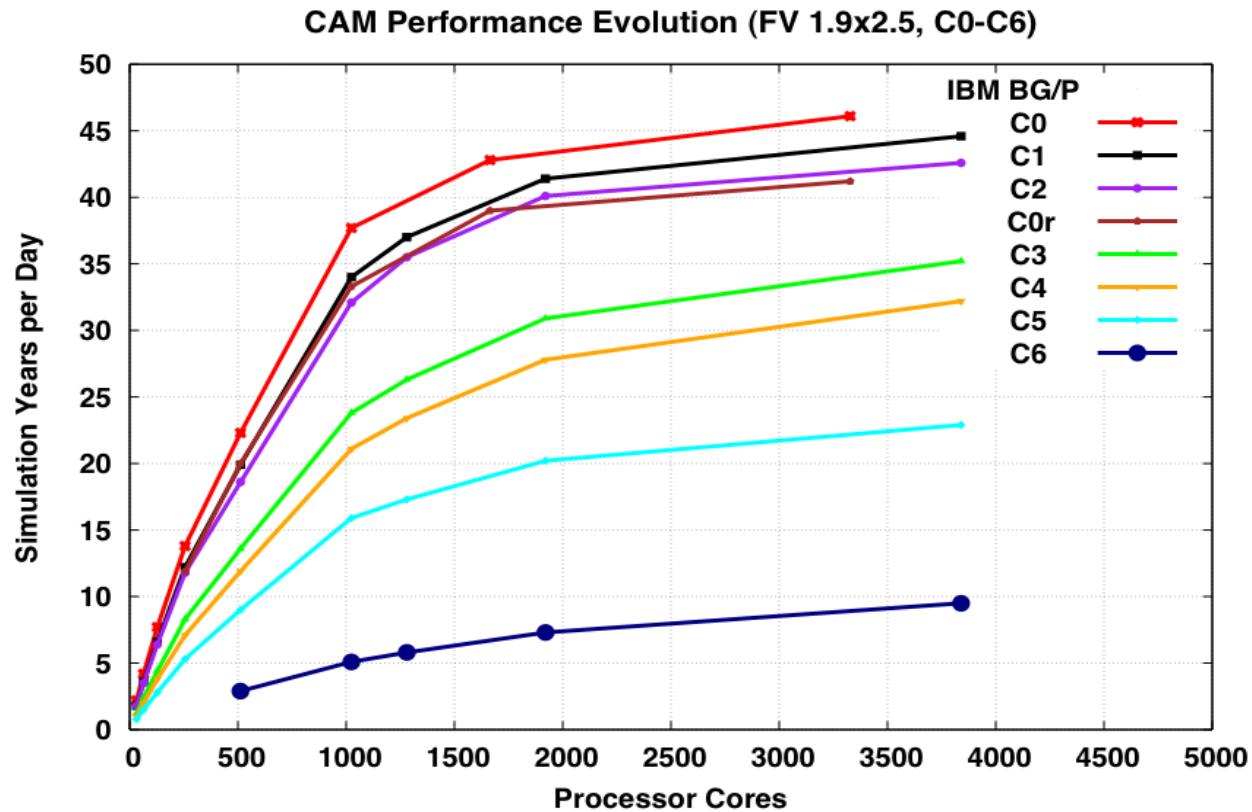
- cam3.1p2
  - default configuration C0: FV1.9x2.5 L26
- CAM from development trunk (cam3\_5\_27 and later)
  - C0: FV1.9x2.5 L26
  - C0r: C0 with RRTMG radiation package (FV1.9x2.5 L26 only; cam3\_5\_42)
  - C1: C0 with 30 levels and FV1.9x2.5 only
  - C2: C1 with “cam3.5” aerosols
  - C3: C2 with UW physics package
  - C4: C3 with Morrison Gettelman cloud parameterization
  - C5: C4 with predicted aerosol fields
  - C6: C4 with full tropospheric chemistry (cam3\_5\_45)

# XT4 FV: C0 vs. C1 vs. ... vs. C6



For 1024 processor cores, the normalized cost progression (C0 through C6) is .95 => 1.00 => 1.09 => 1.19 => 1.45 => 1.61 => 2.25 => 6.52. C0r is 1.41 times as expensive as C0.

# BGP FV: C0 vs. C1 vs. ... vs. C6



For 1024 processor cores, the normalized cost progression (C0 through C6) is 1.00 => 1.13 => 1.20 => 1.60 => 1.80 => 2.37 => 7.39, and C0r is 1.13 times as expensive as C0.