

IFS Single Column Model at ECMWF

SCM uses:

1. Code development (efficient way to get new code working and bug-free)
2. Understanding parametrizations (efficient way to get diagnostics on processes/numerics)
3. Assessment against observations (realism, inform developments)

SCM cases:

- shallow Cu (BOMEX, RICO, CGILS6), Sc-Cu transition (Sandu), deep Cu (TWPICE, TOGA), mixed phase (MPACE), boundary layer (GABLS), various *ad hoc* cases from the IFS global model.
- Important to be able to test across a wide range of meteorological regimes
- netCDF3 input and output (IFS-like shortnames for variables, all can be time-varying)

SCM challenges:

- Keeping the SCM up to date with latest IFS Cycles
- SCM forcing – relaxation/tendencies/update frequency dependent on source