a)
Start
time = 0
call observer
before time-stepping
time < t_final?
false
true
call observer
after time-stepping
End
1.
t_next = min(next observation step, next coupling step)
2.
on coupling time-step?
false
true
receive dynamics
3.
on observation time-step?
false
true
call observer
at start of time-step
4.
time-step dynamics solver
5.
time-step SDM
via sub-time-stepping routine
6.
on coupling time-step?
false
true
send dynamics
7.
time = t_next
b)
t_sdm = time
get observer's monitor
t_sdm < t_next?
false
true
run microphysical process step
run superdroplet motion step
t_sdm = min(next step for microphysical process, next step for superdroplet motion)