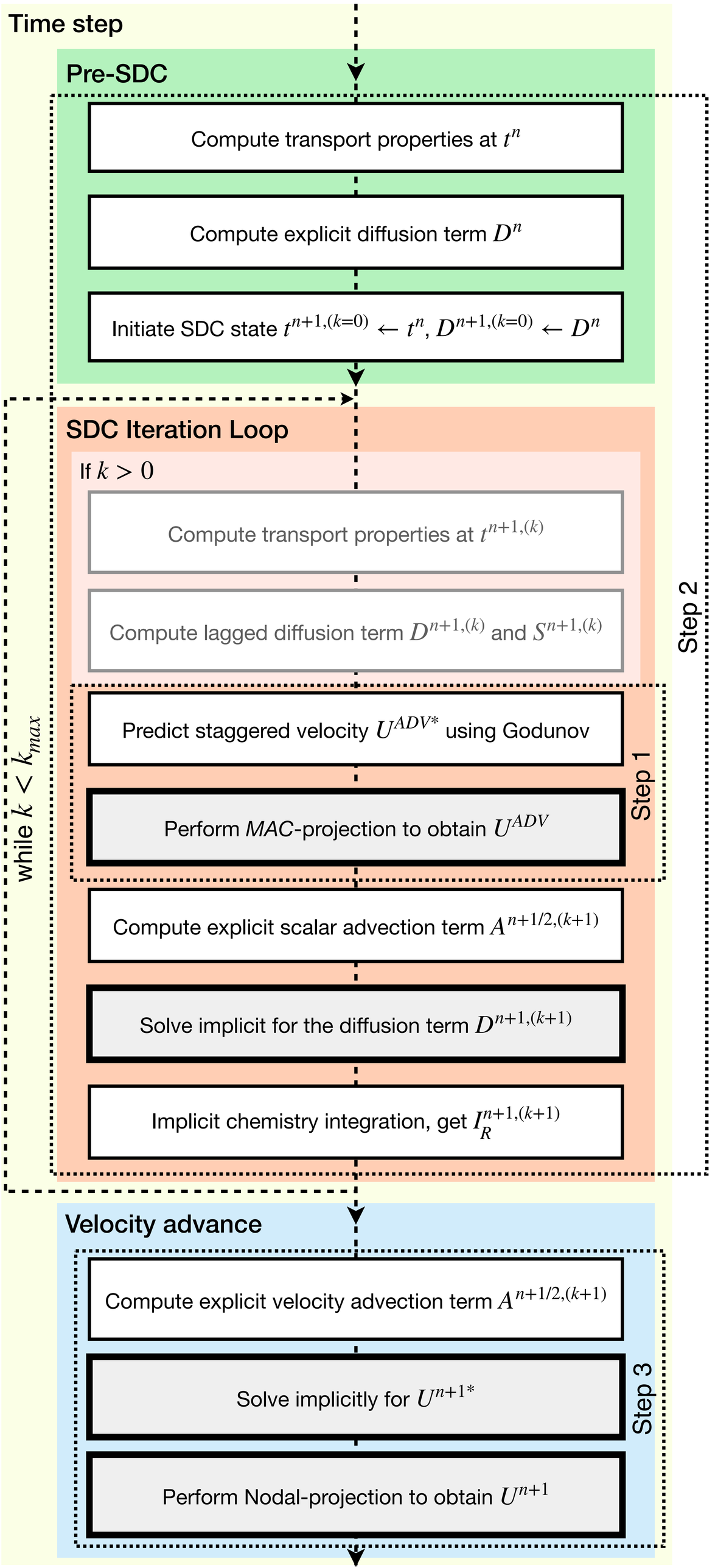
Time step
Pre-SDC
Compute transport properties at t^n
Compute explicit diffusion term D^n
Initiate SDC state $t^{n+1,(k=0)} \leftarrow t^n$, $D^{n+1,(k=0)} \leftarrow D^n$
SDC Iteration Loop
If $k > 0$
Compute transport properties at $t^{n+1,(k)}$
Compute lagged diffusion term $D^{n+1,(k)}$ and $S^{n+1,(k)}$
Predict staggered velocity U^{ADV*} using Godunov
Perform *MAC*-projection to obtain U^{ADV}
Step 1
Compute explicit scalar advection term $A^{n+1/2,(k+1)}$
Solve implicit for the diffusion term $D^{n+1,(k+1)}$
Implicit chemistry integration, get $I_R^{n+1,(k+1)}$
Step 2
while $k < k_{max}$
Velocity advance
Compute explicit velocity advection term $A^{n+1/2,(k+1)}$
Solve implicitly for U^{n+1*}
Perform Nodal-projection to obtain U^{n+1}
Step 3