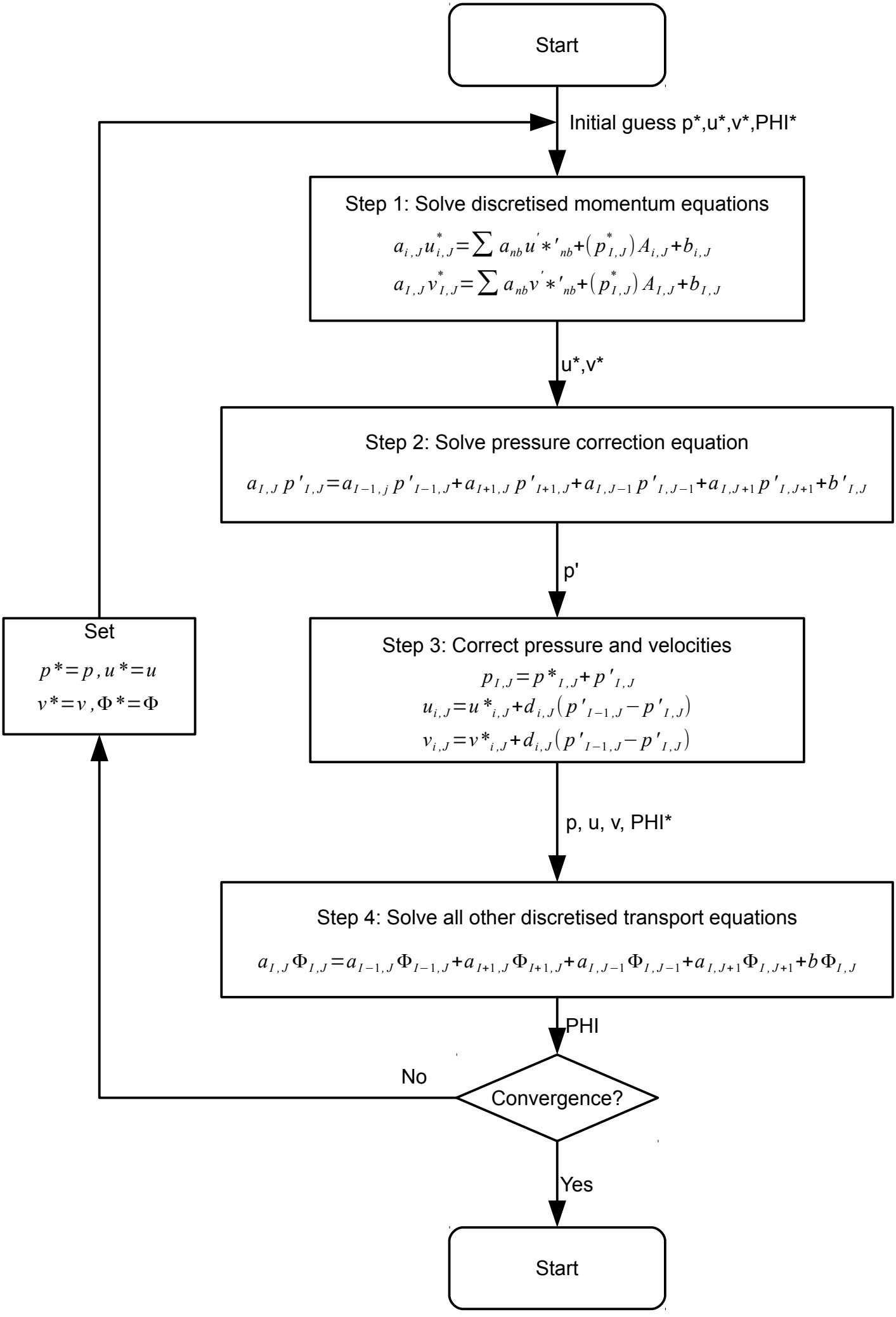
Start
Initial guess p*,u*,v*,PHI*
Step 1: Solve discretised momentum equations
$a_{i,J}u^{*}_{i,J}=\sum a_{nb}u'^{*}_{nb}+(p^{*}_{I,J})A_{i,J}+b_{i,J}$
$a_{I,J}v^{*}_{I,J}=\sum a_{nb}v'^{*}_{nb}+(p^{*}_{I,J})A_{I,J}+b_{I,J}$
u*,v*
Step 2: Solve pressure correction equation
$a_{I,J}p'_{I,J}=a_{I-1,j}p'_{I-1,J}+a_{I+1,J}p'_{I+1,J}+a_{I,J-1}p'_{I,J-1}+a_{I,J+1}p'_{I,J+1}+b'_{I,J}$
p'
Step 3: Correct pressure and velocities
$p_{I,J}=p^{*}_{I,J}+p'_{I,J}$
$u_{i,J}=u^{*}_{i,J}+d_{i,J}(p'_{I-1,J}-p'_{I,J})$
$v_{i,J}=v^{*}_{i,J}+d_{i,J}(p'_{I-1,J}-p'_{I,J})$
p, u, v, PHI*
Step 4: Solve all other discretised transport equations
$a_{I,J}\Phi_{I,J}=a_{I-1,J}\Phi_{I-1,J}+a_{I+1,J}\Phi_{I+1,J}+a_{I,J-1}\Phi_{I,J-1}+a_{I,J+1}\Phi_{I,J+1}+b\Phi_{I,J}$
PHI
Convergence?
No
Yes
Set
$p^{*}=p, u^{*}=u$
$v^{*}=v, \Phi^{*}=\Phi$
Start