Diablo - Discrete Grid

Grid Label: GYF   GY

NY — Ghost Cells (NY)
NY-1
NY-1
NY-2
NY-2

GY(j+1) ↑ U2(j+1)

GX(i) →
U1(i)

GXF(i)
GYF(j)
●
U3,p,θ (i,j)

GX(i+1) →
U1(i+1)

GY(j) ↑ U2(j)

j+1
j+1
j
j
j-1
j-1
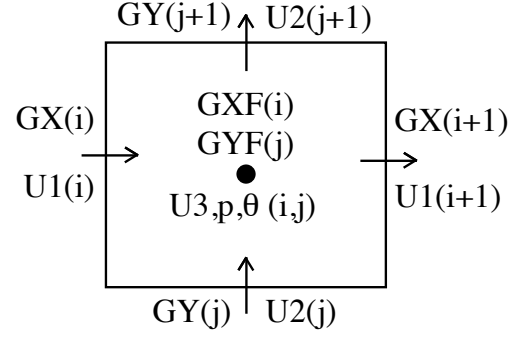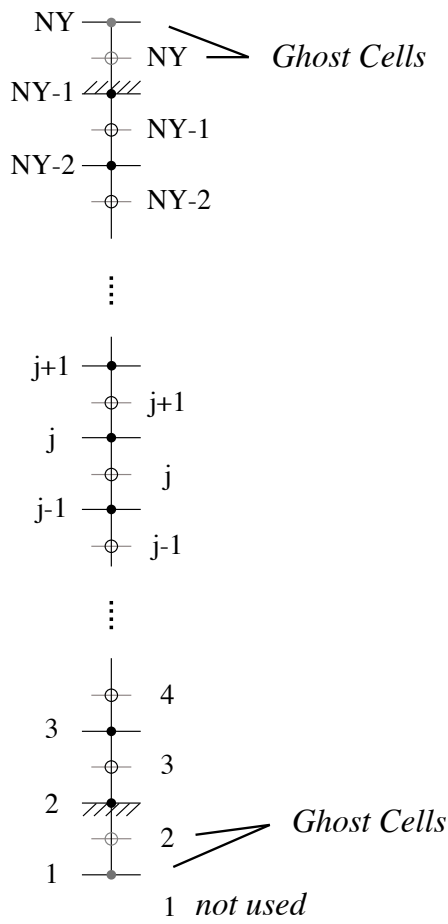
○ Wall-normal velocity defined at G points

● All other variables defined at GF points

//// Wall locations

4
3
3
2 Ghost Cells
2
1
1 *not used*

By definition, the fractional grid is halfway between neighboring base grid points, i.e.

$$GYF_j = \frac{GY_{j+1} + GY_j}{2}$$

Grid Label:

GXF   1   2   3   i-1   i   i+1   NX-2 NX-1 NX

....

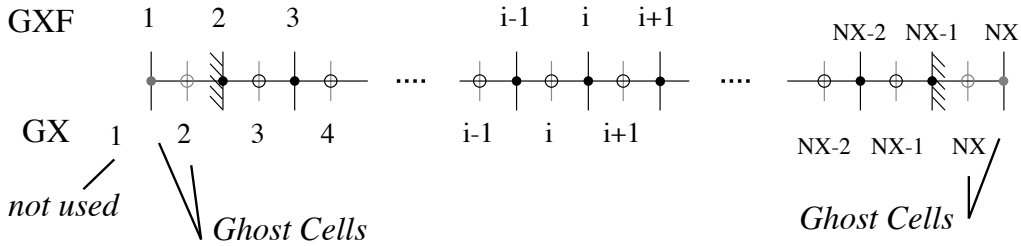GX   1   2   3   4   i-1   i   i+1   NX-2 NX-1 NX

not used

Ghost Cells

Ghost Cells

FIG. 1: Grid layout of Diablo