
PARALLEL CODE: DOMAIN DECOMPOSITION 2

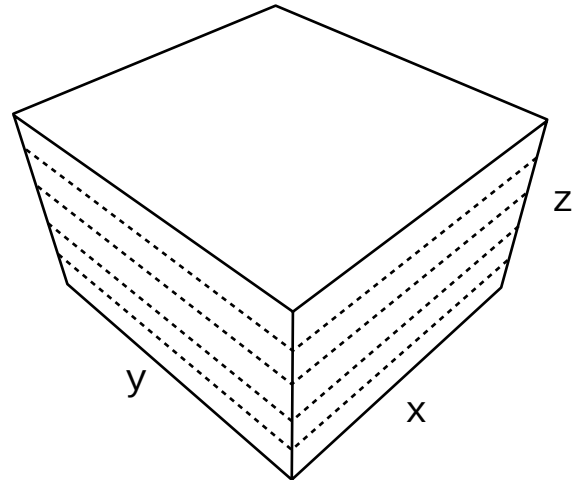
CO-ORDINATE (CONFIGURATION) SPACE:*Spatial fields, nonlinear terms, I/O, boundary conditions*

```
REAL :: field( nx, ny, nz )
field( x, y, my_z%min:my_z%max )
```

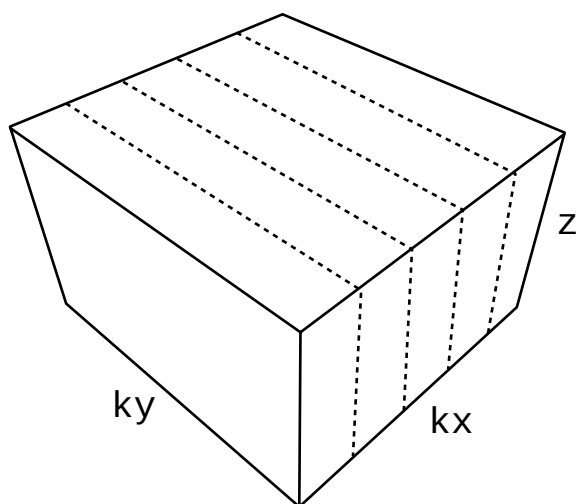
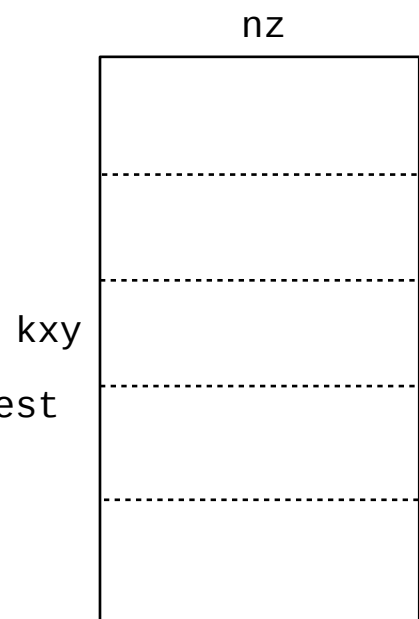
EXAMPLE:

```
v(:, :, 1) = 4./3 * ua(:, :, 1) - 1./3 * ua(:, :, 2)

Do k = my_z%min, my_z%max
  cwork1(:, :, k) = cwork1(:, :, k) + u(:, :, k)*mean_temperature(k)
End Do
```

**SPECTRAL (FOURIER/PHASE) SPACE:***Almost everything! Spectral fields, derivatives, linear terms, implicit solves, all updating.*

```
COMPLEX :: field( nz, nxy_dealias )
field( nz, my_k%min:my_k%max )
```

SCHEMATICALLY ...**ACTUALLY ...**

- ky fastest
- then kx

EXAMPLE:

```
density%rhs      = density%current + cc1*density%force

Do k = my_k%min, my_k%max
  poloidal%rhs(:nz,k) = poloidal%current(:nz,k) + fint1(k)*poloidal%force(:nz,k)
End Do
```