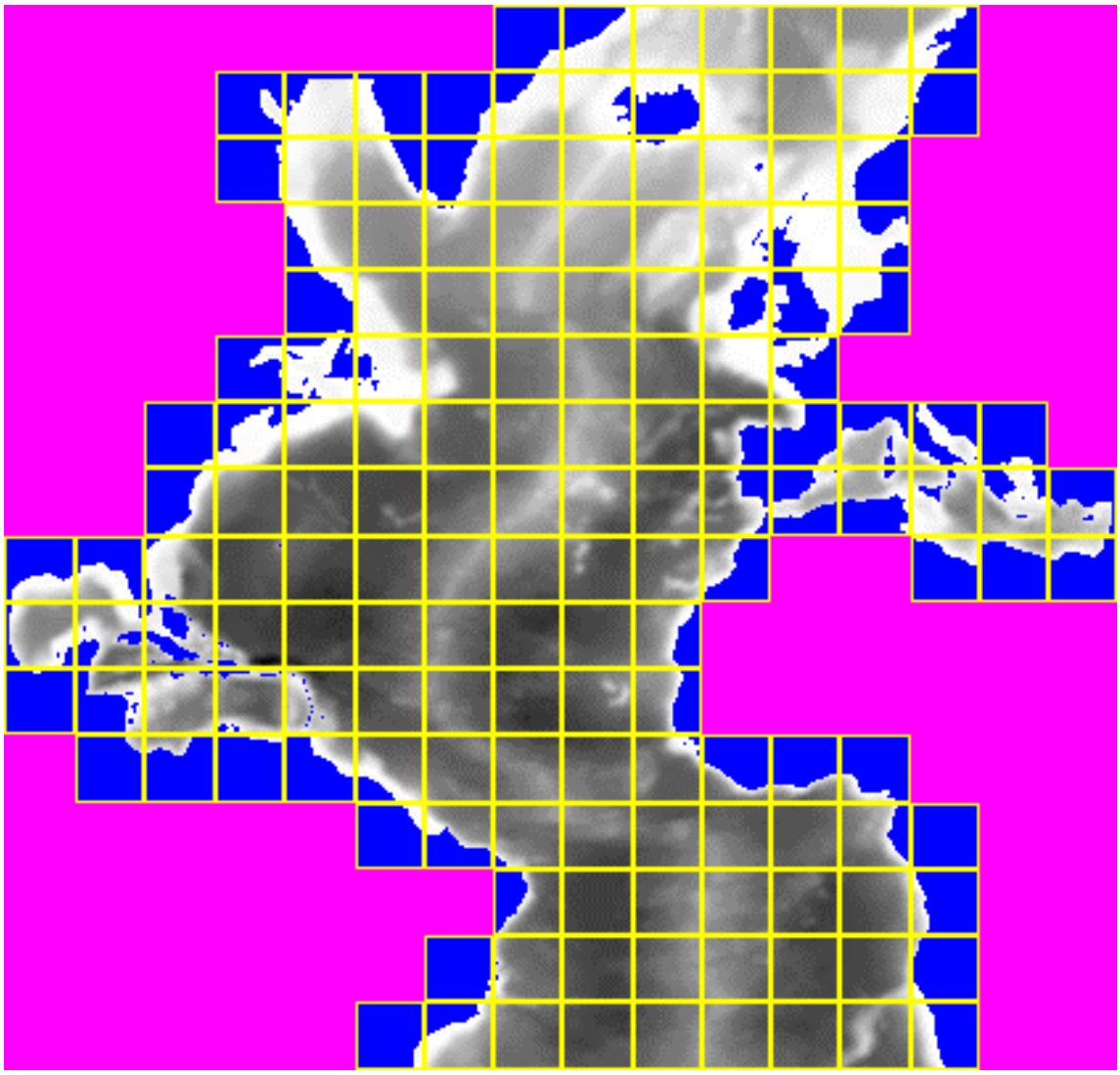
MICOM 2-D DOMAIN DECOMPOSITION

2-D Equal-Sized Tiles for MPI



Each Tile has 4 neighbors

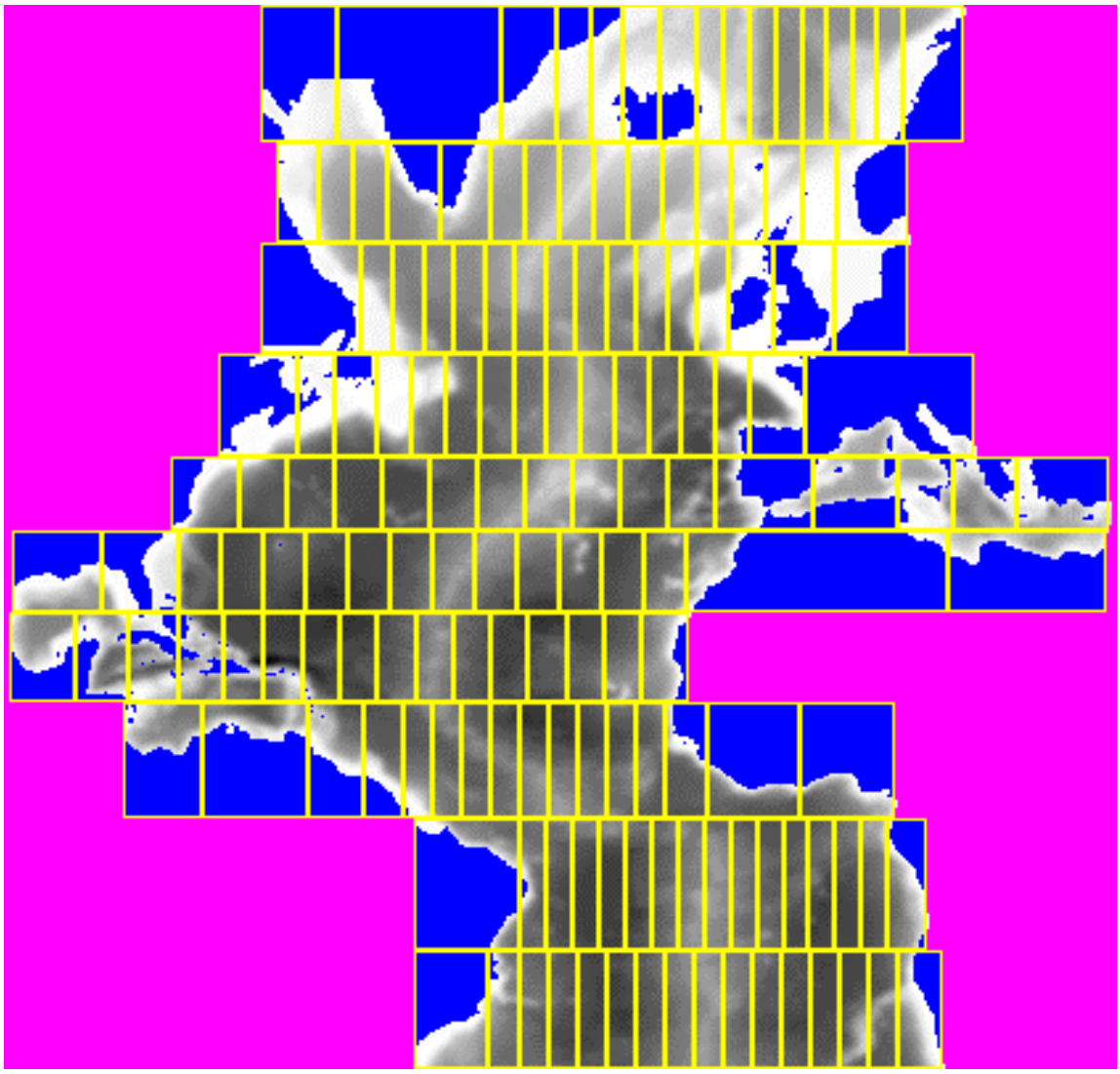
Discard “All-Land” Tiles

16x16 = 256 Tiles but only 161 active

Still have significant load imbalance

HYCOM 2-D DOMAIN DECOMPOSITION

2-D “Equal Ocean” Tiles for MPI



Each tile has 2 E-W neighbors, but many N-S neighbors

Compared to 16 x 16 “equal – size” decomposition:

30% less work on “worst” tile

larger memory requirement