```
for (blocki = 0; blocki < patch1_size; blocki += BLOCK_SIZE*TILE_WIDTH_1){
  for (__ii = 0; __ii < TILE_WIDTH_1; __ii++){
    load one patch 1 atom into register;
  }
  for (blockj = 0; blockj < patch2_size; blockj += SHARED_SIZE*TILE_WIDTH_2){
    __syncthreads();
    for (__jj = 0; __jj < TILE_WIDTH_2; __jj++){
      load patch 2 atoms into shared memory;
    }
    __syncthreads();
    for (__ii = 0; __ii < TILE_WIDTH_1; __ii++) {
      for (__jj = 0; __jj < TILE_WIDTH_2; __jj++) {
        USE_PAIRLIST;
        if (r2 < cutoff) calculate force on patch 1 atom;
      }
    }
  }
  write force result back to global memory;
  GENERATE_PAIRLIST;
}
```