```
for (blocki = 0; blocki < patch1_size; blocki += BLOCK_SIZE){

    load one patch 1 atom into register;

    for (blockj = 0; blockj < patch2_size; blockj += SHARED_SIZE){

        __syncthreads();

        load patch 2 atoms into shared memory;

        __syncthreads();

        USE_PAIRLIST;

        if (r2 < cutoff) calculate force on patch 1 atom;
    }
    write force result back to global memory;

    GENERATE_PAIRLIST;

}
```