

```

__global__ void cmpFhD(float* rPhi, iPhi, phiMag,
    kx, ky, kz, x, y, z, rMu, iMu, int M) {

int n = blockIdx.x * FHD_THREADS_PER_BLOCK + threadIdx.x;

float xn_r = x[n]; float yn_r = y[n]; float zn_r = z[n];
float rFhDn_r = rFhD[n]; float iFhDn_r = iFhD[n];

for (n = 0; n < M; n++) {
    float expFhD = 2*PI*(kx[n]*xn_r+ky[n]*yn_r+kz[n]*zn_r);

    float cArg = cos(expFhD);
    float sArg = sin(expFhD);

    rFhDn_r += rMu[n]*cArg - iMu[n]*sArg;
    iFhDn_r += iMu[n]*cArg + rMu[n]*sArg;
}
rFhD[n] = rFhDn_r; iFhD[n] = iFhDn_r;
}

```