

```
...for (atomid=0; atomid<numatoms; atomid++) {
```

```
float dy = coory - atominfo[atomid].y;
```

```
float dysqpdzsq = (dy * dy) + atominfo[atomid].z;
```

```
float x = atominfo[atomid].x;
```

```
float dx1 = coorx1 - x;
```

```
float dx2 = coorx2 - x;
```

```
float dx3 = coorx3 - x;
```

```
float dx4 = coorx4 - x;
```

```
float charge = atominfo[atomid].w;
```

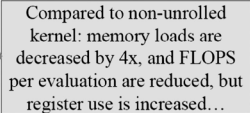
```
energyvalx1 += charge * rsqrtf(dx1*dx1 + dysqpdzsq);
```

```
energyvalx2 += charge * rsqrtf(dx2*dx2 + dysqpdzsq);
```

```
energyvalx3 += charge * rsqrtf(dx3*dx3 + dysqpdzsq);
```

```
energyvalx4 += charge * rsqrtf(dx4*dx4 + dysqpdzsq);
```

```
}
```



Compared to non-unrolled kernel: memory loads are decreased by 4x, and FLOPS per evaluation are reduced, but register use is increased...