

```

__global__
void csrml_kernel(unsigned int *Ap, unsigned int *Aj,
                  float *Av, unsigned int num_rows,
                  float *x, float *y)
{
    unsigned int row = blockIdx.x*blockDim.x + threadIdx.x;

    if( row < num_rows )
    {
        unsigned int row_begin = Ap[row];
        unsigned int row_end   = Ap[row+1];

        y[row] = multiply_row(row_end-row_begin, Aj+row_begin,
                              Av+row_begin, x);
    }
}

```

FIGURE C.8.4 CUDA version of sparse matrix-vector multiply.