```
: ClearAll["Global'*"]
lambda = 500 * 10^{(-9)}; d = 10^{(-3)};
yscale = 0.0008; dy = 0.000005;
x = Table[Y, {Y, -yscale, yscale, dy}];
yresult[\textit{D}\_] := Table[(Abs[NIntegrate[Exp[I(2Pi/lambda)Sqrt[(Y-y)^2 + \textit{D}^2]], \{y, -d/2, d/2\}]])^2, \{Y, -yscale, yscale, dy\}];
result = yresult[10 * 10^ (-3)];
 dataOne = Transpose@{x, result};
ListLinePlot[dataOne, PlotRange \rightarrow {0, 0.8 * 10^ (-8)}]
                                                                                                                   8. × 10<sup>-8</sup>
                              6. × 10<sup>-9</sup>
                                                                                                                   6. ×
                             2. × 10<sup>-9</sup>
                                                                                                                       10<sup>-8</sup>
                                                                                                                   2.
          -0.0005
                                    0.0000
                                                             0.0005
                                                                                         -0.002
                                                                                                         -0.001
                                                                                                                          0.000
                                                                                                                                          0.001
                                                                                                                                                           0.002
                                                                                                                    6. × 10<sup>-7</sup>
                             3. \times 10^{-7}
                                                                                                                    5. × 10<sup>-1</sup>
                           2.5 × 10<sup>-1</sup>
                                                                                                                    4. × 10
                             2. × 10<sup>-7</sup>
                                                                                                                    3. × 10<sup>-1</sup>
                            1.5 × 10<sup>-1</sup>
                                                                                                                    2. × 10
                             1. x 10
                                                                                                                        10
                                                                                    -0.003
                                                                                                -0.002
                                                                                                             -0.001
                                                                                                                          0.000
                                                                                                                                       0.001
                                                                                                                                                    0.002
                                                                                                                                                                 0.003
   -0.004
                   -0.002
                                    0.000
                                                    0.002
                                                                     0.004
```

