In[1]:=
```
SetDirectory["/Users/danikaluntz-martin/Desktop/Advanced Lab/DoubleSlit-ED"];
countsnear2 = Import["20141122_single_slit_near2.csv"];
countsnear2;
ListPlot[countsnear2, AxesLabel → {Distance (mm), Counts}];
```

In[5]:=
```
θ = (x - x0) / R;
α = π * a * Sin[θ] / λ;
β = π * d * Sin[θ] / λ;

i2 = i0/4 * (Sinc[α])^2 ;

x0 = 6.6;
a = 0.085;
d = 0.343;
R = 500;
λ = .000546;
```

In[14]:=
```
fitnear2 = NonlinearModelFit[countsnear2, i2, {i0}, x];
Normal[fitnear2];
```

In[16]:=
```
plotnear2 = Plot[57.037926753383644` Sinc[489.0757794050044` Sin[1/500 (-6.6` + x)]]^2,
   {x, 0, 10}, PlotStyle → Red];
Show[ListPlot[countsnear2], plotnear2, AxesLabel → {Distance [mm], Counts}]
```

Out[17]=