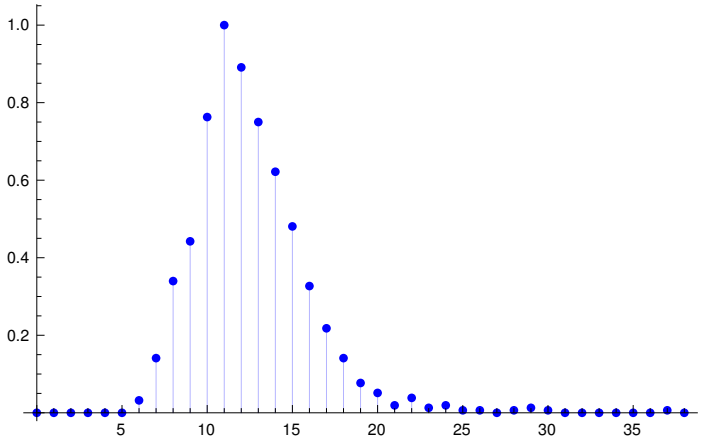
In[1]:=
```
rawData10 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range10width1.csv",
     "Data", "HeaderLines" → 1]];
value10 = rawData10[[3]];
counter10 = rawData10[[4]];
maxCounter = Max[counter10];
hist10 = Transpose[{value10, counter10 / maxCounter}];

rawData20 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range20width1.csv",
     "Data", "HeaderLines" → 1]];
value20 = rawData20[[3]];
counter20 = rawData20[[4]];
maxCounter20 = Max[counter20];
hist20 = Transpose[{value20, counter20 / maxCounter20}];

rawData30 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range30width1.csv",
     "Data", "HeaderLines" → 1]];
value30 = rawData30[[3]];
counter30 = rawData30[[4]];
maxCounter30 = Max[counter30];
hist30 = Transpose[{value30, counter30 / maxCounter30}];

rawData40 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range40width1.csv",
     "Data", "HeaderLines" → 1]];
value40 = rawData40[[3]];
counter40 = rawData40[[4]];
maxCounter40 = Max[counter40];
hist40 = Transpose[{value40, counter40 / maxCounter40}];
```

In[21]:=
```
rawData110 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range110width1.csv",
     "Data", "HeaderLines" → 1]];
value110 = rawData110[[3]];
counter110 = rawData110[[4]];
maxCounter110 = Max[counter110];
hist110 = Transpose[{value110, counter110 / maxCounter110}];

rawData120 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range120width1.csv",
     "Data", "HeaderLines" → 1]];
value120 = rawData120[[3]];
counter120 = rawData120[[4]];
maxCounter120 = Max[counter120];
hist120 = Transpose[{value120, counter120 / maxCounter120}];

rawData130 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range130width1.csv",
     "Data", "HeaderLines" → 1]];
value130 = rawData130[[3]];
counter130 = rawData130[[4]];
maxCounter130 = Max[counter130];
hist130 = Transpose[{value130, counter130 / maxCounter130}];

rawData140 = Transpose[
    Import[
     "/home/neofelia/Desktop/Bachelor/static lambda/histograms/n0l05range140width1.csv",
     "Data", "HeaderLines" → 1]];
value140 = rawData140[[3]];
counter140 = rawData140[[4]];
maxCounter140 = Max[counter140];
hist140 = Transpose[{value140, counter140 / maxCounter140}];
```

In[41]:=
```
ListPlot[{hist10}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

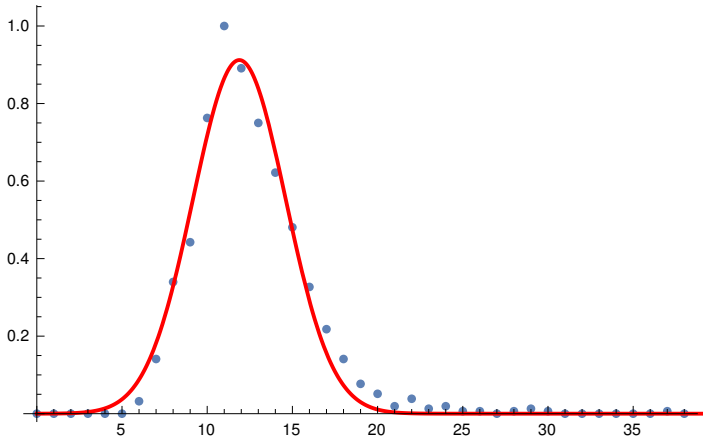
Out[41]=



In[42]:=
```
nlm10 = NonlinearModelFit[hist10,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 10}}, x];
Normal[nlm10];
 nlm10["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist10,  PlotRange → All],
  Plot[nlm10[x], {x, 0, 200} ,  PlotRange → {{0, 200}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

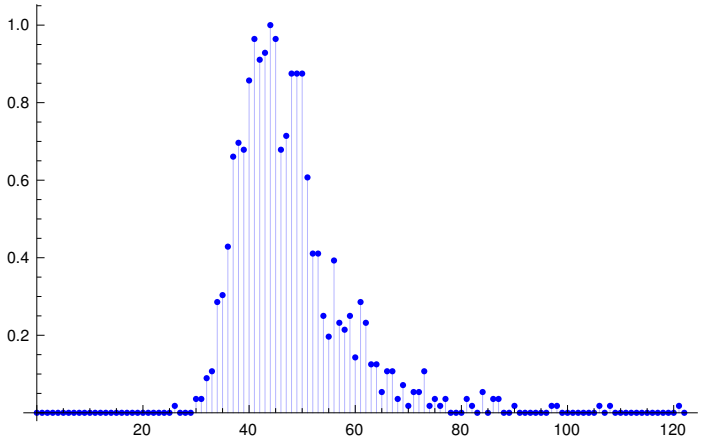
Out[44]= {A0 → 16.9351, σ → 7.40674, μ → 11.8866}

Out[45]=



In[46]:=
```
ListPlot[{hist20}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

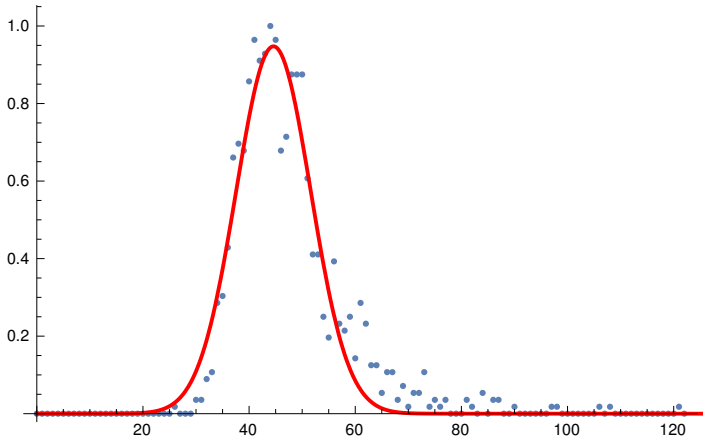
Out[46]=



In[47]:=
```
nlm20 = NonlinearModelFit[hist20,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 40}}, x];
Normal[nlm20];
 nlm10["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist20,  PlotRange → All],
  Plot[nlm20[x], {x, 0, 200} ,  PlotRange → {{0, 200}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

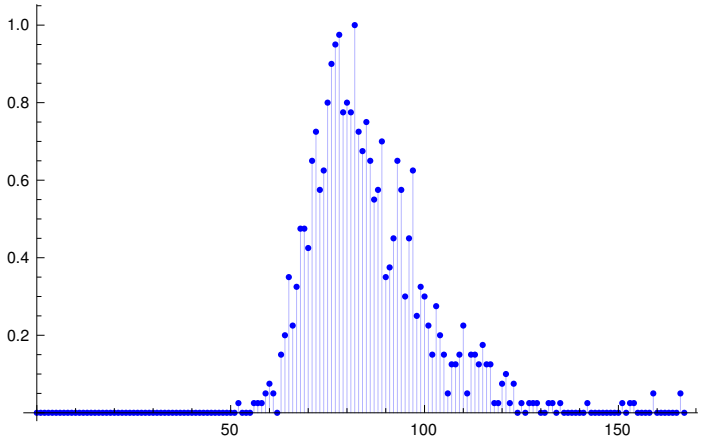
Out[49]= {A0 → 16.9351, σ → 7.40674, μ → 11.8866}

Out[50]=



In[51]:=
```
ListPlot[{hist30}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

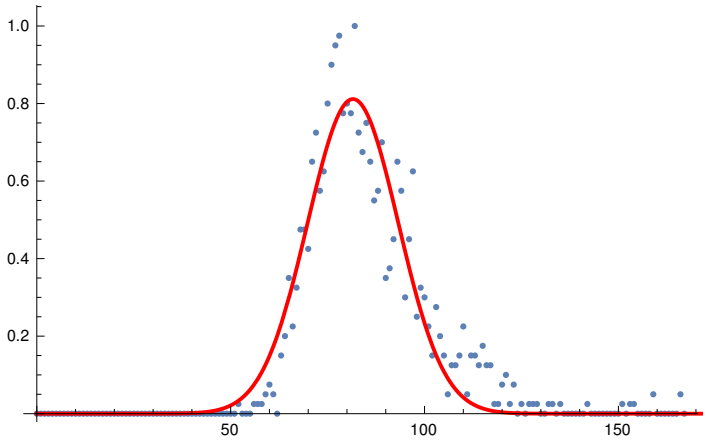
Out[51]=



In[52]:=
```
nlm30 = NonlinearModelFit[hist30,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ) ), {{A0}, {σ}, {μ, 70}}, x];
Normal[nlm30];
 nlm30["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist30,  PlotRange → All],
  Plot[nlm30[x], {x, 0, 200} ,  PlotRange → {{0, 200}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

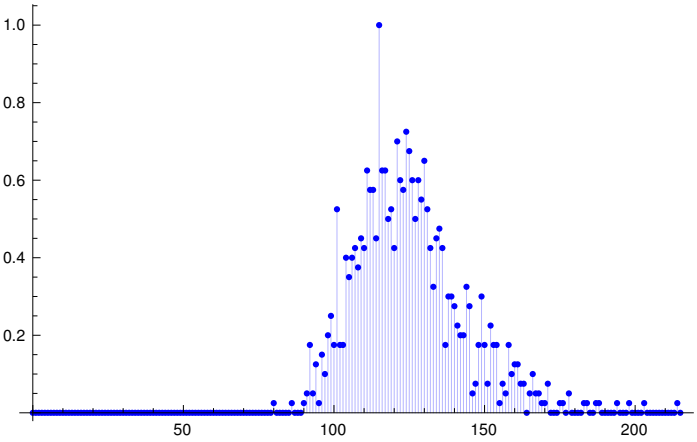
Out[54]= {A0 → 278.094, σ → 136.719, μ → 81.5479}

Out[55]=



In[56]:=
```
ListPlot[{hist40}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

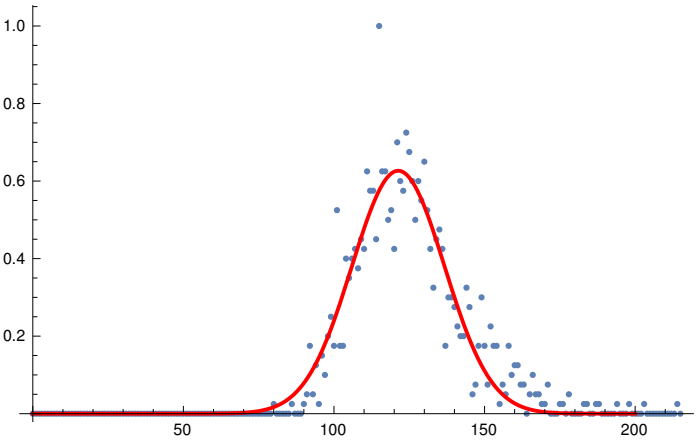
Out[56]=



In[57]:=
```
nlm40 = NonlinearModelFit[hist40,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 120}}, x];
Normal[nlm40];
 nlm40["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist40,  PlotRange → All],
 Plot[nlm40[x], {x, 0, 200} ,  PlotRange → {{0, 200}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

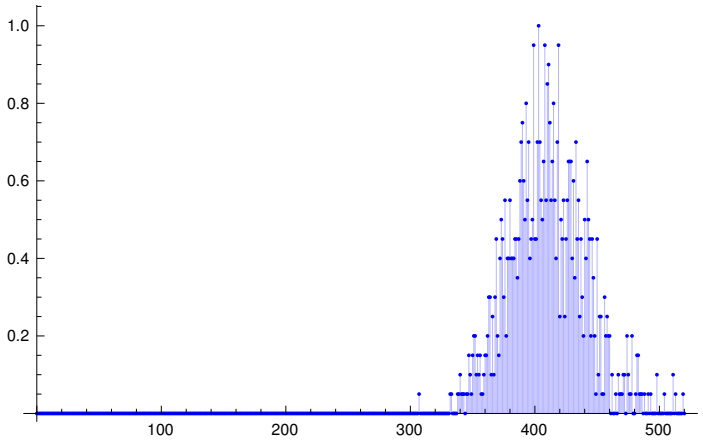
Out[59]= {A0 → 371.822, σ → 236.742, μ → 121.338}

Out[60]=



In[61]:=
```
ListPlot[{hist110}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

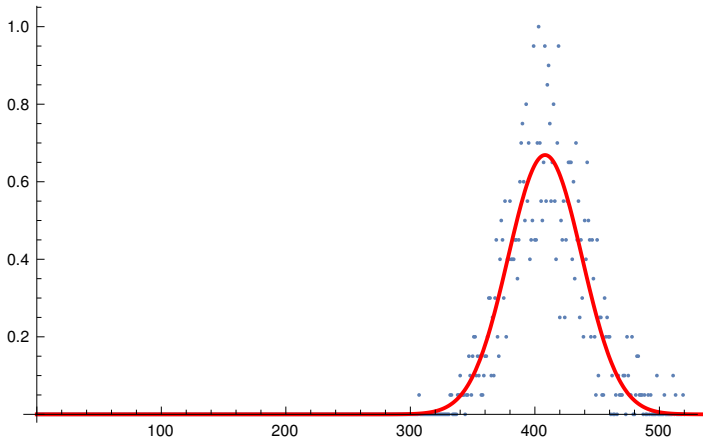
Out[61]=



In[62]:=
```
nlm110 = NonlinearModelFit[hist110,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 420}}, x];
Normal[nlm110];
 nlm110["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist110,  PlotRange → All],
 Plot[nlm110[x], {x, 0, 600} ,  PlotRange → {{0, 600}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

Out[64]= {A0 → 1473.81, σ → 879.093, μ → 408.196}

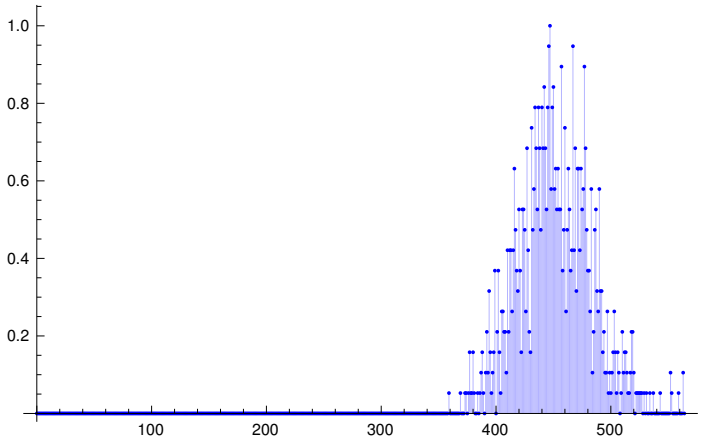
Out[65]=



In[66]:=

```
ListPlot[{hist120}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

Out[66]=

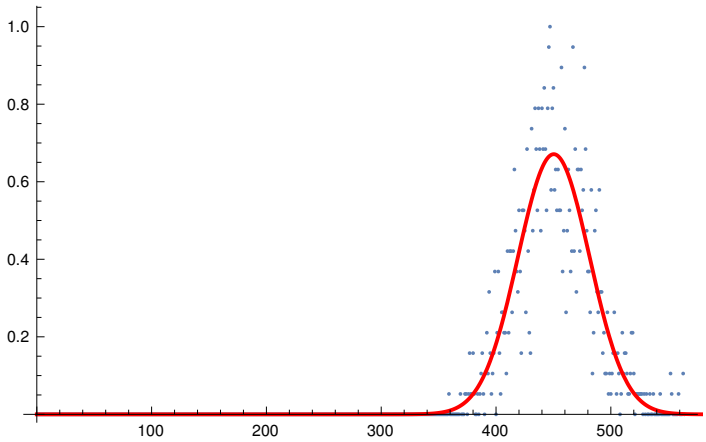


In[67]:=

```
nlm120 = NonlinearModelFit[hist120,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 450}}, x];
Normal[nlm120];
 nlm120["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist120,  PlotRange → All],
 Plot[nlm120[x], {x, 0, 600} ,  PlotRange → {{0, 600}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

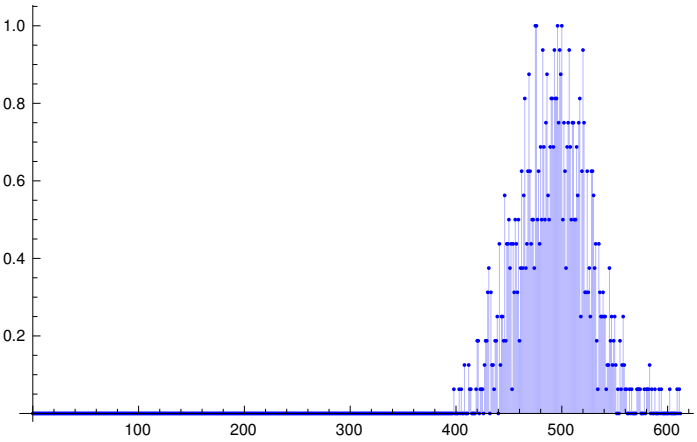
Out[69]= {A0 → 1628.99, σ → 968.488, μ → 450.294}

Out[70]=



In[71]:=
```
ListPlot[{hist130}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

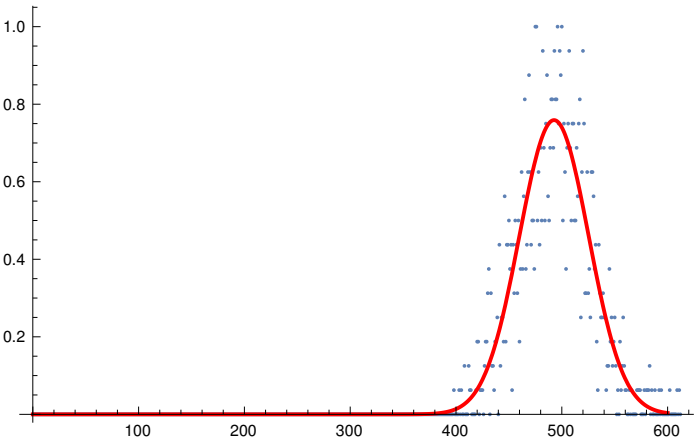
Out[71]=



In[72]:=
```
nlm130 = NonlinearModelFit[hist130,
   A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 500}}, x];
Normal[nlm130];
 nlm130["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist130,  PlotRange → All],
 Plot[nlm130[x], {x, 0, 600} ,  PlotRange → {{0, 600}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

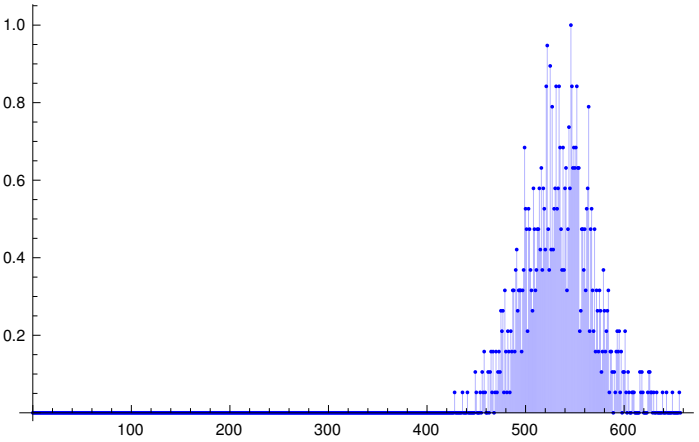
Out[74]= {A0 → 2036.98, σ → 1070.78, μ → 492.672}

Out[75]=



In[76]:=
```
ListPlot[{hist140}, Filling -> Axis, PlotRange → All, PlotStyle → Blue]
```

Out[76]=



In[77]:=
```
nlm140 = NonlinearModelFit[hist140,
    A0 / Sqrt[2 * π * σ ^ 2] * e ^ (- (x - μ) ^ 2 / (2 * σ)), {{A0}, {σ}, {μ, 550}}, x];
Normal[nlm140];
 nlm140["BestFitParameters"]
(*nlm["FitResiduals"] ;  *)
Show[ ListPlot[hist140,  PlotRange → All],
 Plot[nlm140[x], {x, 0, 800} ,  PlotRange → {{0, 800}, {0, 100}},  PlotStyle → {Thick,  Red} ]]
```

Out[79]= {A0 → 1729.82, σ → 1097.54, μ → 533.825}

Out[80]=