

Appendix H

KWW FITTING-RELAXATION TIME DISTRIBUTION FUNCTION

```
Clear["Global`*"];
SetDirectory["c:\disperrelax\acf"];
Off[General::spell, General::spell1];
k = InputString["Input name of the data file"]
"peinh215kbend215.txt"
l = ReadList[k, {Number, Number}];
yt = 0.367879;
Do[
  If[l[[i, 2]] >= yt, Continue[],
    (k2 = i; k1 = k2 - 1; Break[])],
  {i, 1, Length[l]};
logtau =
  (yt - l[[k2, 2]]) * (l[[k2, 1]] - l[[k1, 1]])
  / (l[[k1, 2]] - l[[k2, 2]]) +
  l[[k1, 1]];
taucent = N[10logtau];
m = Table[{}, {i, 1, Length[l]}, {j, 1, 2}];
Do[(m[[i, 1]] = N[Log[10] * (l[[i, 1]] - logtau)]);
  m[[i, 2]] = N[Log[-Log[l[[i, 2]]]]]),
  {i,
  1, Length[l]};
s1 = Fit[m, {0, x}, x]
slopeg = Coefficient[s1, x]
0.319473798709318534` x
0.319473798709318534`
Do[l[[i, 1]] = 10l[[i, 1]], {i, 1, Length[l]}]
<<Statistics`NonlinearFit`
ans = NonlinearFit[l,
  Exp[
  - (t / taucent)beta ], t, {beta, slopeg},
  ShowProgress -> True,
  AccuracyGoal -> 10,
  PrecisionGoal -> 10,
  MaxIterations -> 50,
  Method -> LevenbergMarquardt]
```