



**Figure 21: Representative deflection profiles** of some niobium clusters at three temperatures. Dashed lines at zero field, continuous lines at 80 kV/cm. At 300 K deflections are small and consistent with normal metal clusters. At 50 K some clusters develop tails that extend several millimeters. At 20 K some clusters are deflected beyond the detector limits yielding loss of detected intensity. The fraction  $R$  of the clusters that show anomalous deflections, either detected in the tail or deflected beyond the detection limits is a function of the temperature and electric field intensity.