



**FIGURE 3.15.** Contour plots for the RSS values as a function of the parameters  $\beta$  for various regressions involving the **Credit** data set. In each plot, the black dots represent the coefficient values corresponding to the minimum RSS. Left: A contour plot of RSS for the regression of **balance** onto **age** and **limit**. The minimum value is well defined. Right: A contour plot of RSS for the regression of **balance** onto **rating** and **limit**. Because of the collinearity, there are many pairs  $(\beta_{\text{Limit}}, \beta_{\text{Rating}})$  with a similar value for RSS.