

Coding in advance of the Mar 12, 2018 class

Please perform the analysis described in detail in Lecture 7 on the whole data set of 118 points (data given on website; it's the same as we had for the March 5 class). For this analysis, you should include the uncertainty in both the log of the baryonic mass and the log of the rotation speed. Some of your possible analyses include getting the $\Delta\chi^2 < 2.3$ and $\Delta\chi^2 < 6.18$ regions in $\theta - b$ space, integrating in those regions to determine whether they contain the expected fractions of the total probability, producing the marginalized one-parameter posteriors $P(\theta)$ and $P(b)$, determining how the two-dimensional peak values of θ and b compare with the peaks in the one-dimensional distributions, and determining the minimum χ^2 and comparing it with the number of degrees of freedom.

Good luck!