AY 250: Problem Set 2

Irina Ene

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Problem 1

I am not completely sure about units here, but I think (at least from what I've seen in the papers we've read) that m is supposed to be already unitless $m = \frac{M}{M_\odot}$, so that the formula Wikipedia gives for the Salpeter IMF shouldn't be divided by $M_\odot$ again. Unless they use m to actually mean M.

Also, the Wikipedia article says that Miller & Scalo suggests that the flattening of the IMF at low masses corresponds to $\alpha = 0$. But Miller & Scalo use the $\frac{dN}{d \log M}$ version, so then the index would be $\Gamma = 0$, which corresponds to $\alpha = 1$.