Project 5 - FYS3150 Computational Physics

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Abstract

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1 Introduction

At equalibrium, we know that the distribution of the money is given by the Gibbs distribution,

$$w_m = \beta \exp(-\beta m)$$

where $\beta = \langle m \rangle^{-1} = m_0^{-1}$. The variance of the Gibbs distribution is $\sigma_m^2 = \beta^{-2} = m_0^2$, so we can compare the variance of the distribution with this "equalibrium variance" and use that as a criterion for being at equalibrium.