

Notes

Kerwann

January 13, 2021

1 Plummer model

Consider a Plummer model (Dejonghe, H.1987, MNRAS 224, 13) with potential with units r_s the Plummer scale radius (which sets the size of the cluster core), M the total mass of the cluster and $\bar{\tau}$ some unit time. Let ψ_s be defined by

$$\psi_s = \frac{GM}{r}, \quad (1)$$

for the central potential

$$\psi(r) = \frac{\psi_s}{\sqrt{1 + r^2}}. \quad (2)$$