## Notes

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## 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  $\psi_{\rm S}$  be defined by

$$\psi_{\rm s} = \frac{GM}{r_s},\tag{1}$$

for the central potential

$$\psi(r) = \frac{\psi_{\rm s}}{\sqrt{1+r^2}}.\tag{2}$$