

Errata in Binney and Tremaine, “Galactic Dynamics” 2nd Edition

- p. 131 “8 for CIC, 27 for CIC, etc.” should read “8 for CIC, 27 for TSC, etc.”
 p. 140 In equation (2.269), there should be hats on $\Phi_{\mathbf{k}}$ and $\rho_{\mathbf{k}}$.
 p. 149 After the 2nd equality of equation (3.31) replace a^2 by $2\pi a^2$
 p. 199 At the bottom of the page “through the energy” should read “though the energy”
 p. 200 In the last of equations (3.166a) for \mathbf{q} read $\mathbf{q}_{1/2}$; in the last of eqs (3.166b) for \mathbf{p} read $\mathbf{p}_{1/2}$.
 p. 221 Equation (3.225) should read

$$J_r = \frac{GM}{\sqrt{-2E}} - \frac{1}{2} \left(L + \sqrt{L^2 + 4GMb} \right).$$

- p. 223 $-d\theta$ is missing from the second line of eq. (3.233).
 p. 224 In equations (3.235) and (3.236) for

$$\left(\frac{\partial S_{\vartheta}}{\partial J_2} \right)_{J_3} \quad \text{read} \quad \left(\frac{\partial S_{\vartheta}}{\partial J_2} \right)_{J_1}$$

- p. 229 In eq. (3.251) the big bracket should have an additional term

$$+ \frac{\partial S_i}{\partial L_z}.$$

- p. 270 Problem 3.24: The vector $\hat{\mathbf{e}}_2$ should point towards $\ell = 270^\circ$, $b = 0^\circ$, not $b = 90^\circ$.
 p. 282 A bar is missing on v_{\parallel} in the following phrases: “the observable quantities v_{\parallel} and...”; “Notice that while v_{\parallel} depends only...”.
 p. 326 “the Japan” should read “Japan”.
 p. 495 line above equation (6.65): $|k| < k_{\text{crit}}$ should read $|k| > k_{\text{crit}}$. Similarly $\lambda > \lambda_{\text{crit}}$ should read $\lambda < \lambda_{\text{crit}}$.
 p. 682 in (8.110) for H_{ij} read D_{ij} .
 p. 788 in equation (C.36), $P_l^0(x)$ in the last expression should be replaced by $(x^2 - 1)^l$. Thus (C.36) should read

$$P_l^m(x) = (-1)^m (1-x^2)^{m/2} \frac{d^m P_l^0(x)}{dx^m} = (-1)^m \frac{(1-x^2)^{m/2}}{2^l l!} \frac{d^{l+m}(x^2-1)^l}{dx^{l+m}}.$$

- p. 789 in equation (C.37) there is a missing factorial sign in the denominator after $[\frac{1}{2}(l+m)]$, so the equation should read

$$P_l^m(0) = (-1)^{(l+m)/2} \frac{(l+m)!}{2^l [\frac{1}{2}(l-m)]! [\frac{1}{2}(l+m)]!} \quad (l-m \text{ even}),$$