Erratum: Eccentricity evolution in hierarchical triple systems with eccentric outer binaries

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Key words: errata, addenda – stellar dynamics – celestial mechanics – binaries: general.

The paper 'Eccentricity evolution in hierarchical triple systems with eccentric outer binaries' was published in Mon. Not. R. Astron. Soc. 345, 340–348 (2003). We report the following corrections to that paper.

In section 2.3, equations (30) and (31) should read

\[ C_1 = -x_1(0) - \frac{C}{B - A} \cos\theta_{T_0}, \]  

\[ C_2 = y_1(0) + \frac{C}{B - A} \sin\theta_{T_0}. \]  

The expression for the averaged square inner eccentricity, given by equation (32), should read (the coefficients in the last line of the equation have been corrected)

\[ e_{2\text{in}}^2 = \frac{m_2^2}{M^2} \frac{1}{X^4(1 - e^2)^{3/2}} \left\{ \left( \frac{43}{8} + \frac{129}{8} e^2 + \frac{129}{64} e^4 + \frac{1}{(1 - e^2)^{3/2}} \left( \frac{43}{8} + \frac{645}{16} e^2 + \frac{1935}{64} e^4 + \frac{215}{128} e^6 \right) \right) + \frac{1}{X^2(1 - e^2)} \right\} 
\]

\[ \times \left[ \frac{365}{18} + \frac{44327}{144} e^2 + \frac{119435}{192} e^4 + \frac{256105}{1152} e^6 + \frac{68335}{9216} e^8 \right. 
\]

\[ + \frac{1}{(1 - e^2)^{3/2}} \left( \frac{365}{18} + \frac{7683}{16} e^2 + \frac{28231}{16} e^4 + \frac{295715}{192} e^6 + \frac{2415}{8} e^8 + \frac{12901}{2048} e^{10} \right) \right] 
\]

\[ + \frac{1}{X(1 - e^2)^{3/2}} \left[ \frac{61}{3} + \frac{305}{2} e^2 + \frac{915}{8} e^4 + \frac{305}{48} e^6 + \frac{1}{(1 - e^2)^{3/2}} \left( \frac{61}{3} + \frac{854}{3} e^2 + \frac{2135}{4} e^4 + \frac{2135}{12} e^6 + \frac{2135}{384} e^8 \right) \right] 
\]

\[ + m_2^2 X^{2/3} (1 - e^2) \left[ \frac{225}{256} + \frac{3375}{1024} e^2 + \frac{7625}{2048} e^4 + \frac{29225}{8192} e^6 + \frac{48425}{16384} e^8 + \frac{825}{2048} e^{10} \right. 
\]

\[ + \frac{1}{(1 - e^2)^{3/2}} \left( \frac{225}{256} + \frac{2925}{1024} e^2 + \frac{775}{256} e^4 + \frac{2225}{8192} e^6 + \frac{25}{512} e^8 \right) \right] 
\]

\[ + m_2^2 X^{4/3} (1 - e^2)^2 \left[ \frac{8361}{4096} + \frac{125415}{8192} e^2 + \frac{376245}{32768} e^4 + \frac{41805}{65536} e^6 \right. 
\]

\[ + \frac{1}{(1 - e^2)^{3/2}} \left( \frac{8361}{4096} + \frac{58527}{2048} e^2 + \frac{877905}{16384} e^4 + \frac{524288}{16384} e^6 \right) \right\} + 2 \left( \frac{C}{B - A} \right)^2. \]  

REFERENCES

Georgakarakos N., 2003, MNRAS, 345, 340

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