

Radiography in high mass X-ray binaries

Micro-structure of the stellar wind through variability of the column density (*Corrigendum*)

I. El Mellah^{1,3}, V. Grinberg², J. O. Sundqvist³, F. A. Driessen³, and M. A. Leutenegger⁴

¹ Centre for mathematical Plasma Astrophysics, Department of Mathematics, KU Leuven, Celestijnenlaan 200B, 3001 Leuven, Belgium
e-mail: ileyk.elmellah@kuleuven.be

² Institut für Astronomie und Astrophysik, Universität Tübingen, Sand 1, 72076 Tübingen, Germany

³ Institute of Astronomy, KU Leuven, Celestijnenlaan 200D, 3001 Leuven, Belgium

⁴ NASA Goddard Space Flight Center, 8800 Greenbelt Rd., Greenbelt, MD 20771, USA

A&A, 643, A9 (2020), <https://doi.org/10.1051/0004-6361/202038791>

Key words. stars: mass-loss – stars: massive – stars: winds, outflows – X-rays: binaries – radiative transfer – errata, addenda

Equation (14) for the duration d of an eclipse with respect to the orbital period P is wrong. If we assume a spherical donor star of radius R and a circular orbit of the compact object around the donor star with orbital separation a , the right formula is:

$$\frac{d}{P} = \frac{1}{\pi} \arcsin \left(\frac{\sqrt{R^2 - a^2 \cos^2 i}}{a \sin i} \right), \quad (1)$$

where i is the orbital inclination ($i = 90^\circ$ for an edge-on configuration). We retrieve the condition $R < a \cos i$ to have an eclipse of the X-ray point source by the donor star. This equation did not directly intervene in the other computations performed in the paper so it does not change the conclusions, neither qualitatively nor quantitatively.