THE ELEMENTS OF V714 CYGNI: ERRATUM

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Abstract

In Volume 18 of this Journal, page 134, there are two errors in the new parabolic elements given for V714 Cygni. For 2442092.035 read 2442092.127. For 1.8874572 read 1.8874081. The coefficient of the parabolic term is correct as printed: 4.2×10^{-9}.

Clay Holroyd (1989) has shown that the O-C diagram of V714 Cygni is reasonably well satisfied by a parabola, as shown in his Figure 1. It has come to my attention that the parabolic elements in his paper are not consistent with the plotted parabola. One or the other must be in error.

Unpublished material at the Maria Mitchell Observatory shows that his Figure 1 is correct. The plotted points correctly show deviations of observations from the linear elements specified in the caption. The plotted curve is, as stated, the least-squares parabola through the observed points. The error was in the way the parabolic elements were derived from the parabola. Equation (1) in Holroyd's paper should be replaced by:

$$JD_{max} = \underset{\pm 0.004}{2442092.127} + \underset{\pm 0.0000022}{1.8874081\,E} + \underset{\pm 0.6 \times 10^{-9}}{4.2 \times 10^{-9}\,E^2}. \qquad (1)$$

Although the deviations of the observed values from the parabola do not seem to be entirely random, these elements provide an excellent representation of the average behavior. The standard deviation of an observation of highest weight (shortest error bar) is only $\pm$ 0.004 based on the deviations from the parabola.

The coefficient of E^2 is the same as in Holroyd's equation. It corresponds to an increase in period at the rate of 1.6 $\pm$ 0.25 days per million years, as he stated. None of his discussion of the evolution of V714 Cygni needs to be changed.

References

Holroyd, C. 1989, *J. Amer. Assoc. Var. Star Obs.*, **18**, 134.