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Erratum: New SX Phe variables in the globular cluster NGC 288★

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Key words: errata, addenda – methods: data analysis – blue stragglers – stars: distances – stars: Population II – globular clusters: individual: NGC 288.

This is an erratum to the paper 'New SX Phe variables in the globular cluster NGC 288' published in MNRAS 447, 2235 (2015).

1 LOOKING FOR NEW VARIABLES – SECTION 5

Corrected version of Table 2.

2 SX PHOENICIS STARS – SECTION 6

In fig. 9 of Martinazzi et al. (2015), the period–brightness relations are indicated by the dashed lines. The brightness is given in terms of the average magnitude in the V band and the periods in days. We use Arellano Ferro et al. (2013), who adopted the SX Phe PL relation derived by Arellano Ferro et al. (2011) in M 53. Using the periods of V4–V8 identified in Table 2 as fundamental periods and the five identified as harmonics in V4 and V7 [using $P_k/(k+1)$] we obtain the period–brightness relations:

equation (3):

$$V = (-2.59 \pm 0.18) \log P_0 + (14.38 \pm 0.23).$$

The period–brightness relations for the first three overtones are directly derived from the above equation, replacing P_0 with $P_k/(k+1)$:

equation (4):

$$V = (-2.59 \pm 0.18) \log P_1 + (13.56 \pm 0.24),$$

equation (5):

$$V = (-2.59 \pm 0.18) \log P_2 + (13.18 \pm 0.25)$$

and equation (6):

$$V = (-2.59 \pm 0.18) \log P_3 + (12.89 \pm 0.25).$$

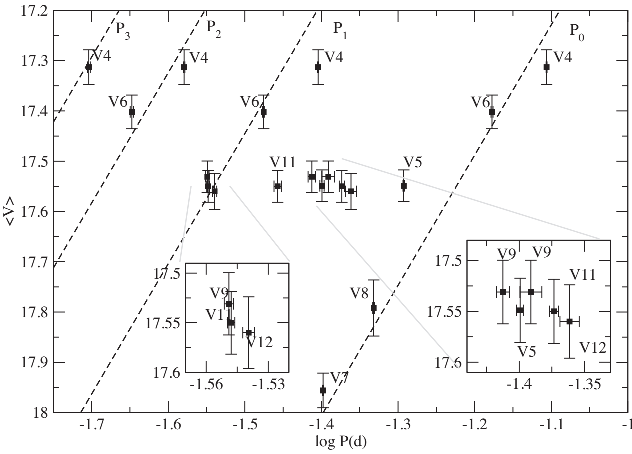

Figure 1. Corrected version of fig. 9 in Martinazzi et al. (2015). Period–brightness relations (dashed lines) for NGC 288 SX Phe stars for the fundamental mode (P_0) and the three first harmonics P_1, P_2 and P_3.

Using distance modulus $(m - M)_o = 14.57 \pm 0.08$ (see Section 3), we obtain the period–luminosity relation:

equation (7):

$$M_V = (-2.59 \pm 0.18) \log P_0 + (-0.19 \pm 0.23)$$

and equation (8):

$$M_V = (-2.59 \pm 0.18) \log P_1 + (0.50 \pm 0.25).$$

We made a mistake in setting the dashed lines and the error bars in Fig. 9.

3 SUMMARY AND DISCUSSIONS – SECTION 7

The average distance we determine by the P–L relation is 8.71 ± 0.20 kpc. Through a weighted average of the distances (P–L relations and isochrones results), we determine the best distance for the globular cluster NGC 288 as 8.8 ± 0.3 kpc, which is similar to that of Arellano Ferro et al. (2013) of 8.9 ± 0.3 kpc, also using a SX Phe P–L relation.

★ Based on observations obtained at the Southern Astrophysical Research (SOAR) telescope, which is a joint project of the Ministério da Ciência, Tecnologia, e Inovação (MCTI) da República Federativa do Brasil, the U.S. National Optical Astronomy Observatory (NOAO), the University of North Carolina at Chapel Hill (UNC), and Michigan State University (MSU).

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Table 1. Corrected version of table 2 in Martinazzi et al. (2015). Detected frequencies in the Fourier transformes for the variables in NGC 288.

Variable	Type	E_B	Frequencies (μHz)		Periods (h)	Amplitudes (mma)	$T_{\mathrm{max_i}}$ (s)
V3	RR Lyr	14.7	$f_0 = 23.7 \pm 0.6$		$P_0 = 11.688 \pm 0.280$	15.9 ± 0.2	$3\,479 \pm 505$
			$f_1 = 174.1 \pm 3.9$		$P_1 = 1.596 \pm 0.037$	1.0 ± 0.2	$5\,509 \pm 456$
V4	SX Phe	11.8	$f_0 = 147.8 \pm 0.2$		$P_0 = 1.880 \pm 0.003$	9.3 ± 0.1	$4\,492 \pm 18$
			$f_1 = 293.6 \pm 0.5$	$(2f_0)$	$P_1 = 0.946 \pm 0.002$	3.8 ± 0.1	$2\,402 \pm 23$
			$f_2 = 439.3 \pm 1.0$	$(3f_0)$	$P_2 = 0.632 \pm 0.002$	1.8 ± 0.1	$1\,708 \pm 34$
			$f_3 = 585.0 \pm 2.5$	$(4f_0)$	$P_3 = 0.475 \pm 0.002$	0.7 ± 0.1	$1\,314 \pm 62$
V5	SX Phe	25.8	$f_0 = 227.0 \pm 0.5$		$P_0 = 1.224 \pm 0.003$	12.8 ± 0.2	$2\,434 \pm 25$
			$f_1 = 290.3 \pm 1.8$		$P_1 = 0.957 \pm 0.006$	3.5 ± 0.2	$2\,086 \pm 72$
V6	SX Phe	9.1	$f_0 = 174.1 \pm 0.6$		$P_0 = 1.595 \pm 0.005$	11.9 ± 0.3	$3\,642 \pm 38$
			$f_1 = 345.8 \pm 1.1$	$(2f_0)$	$P_1 = 0.803 \pm 0.003$	5.1 ± 0.3	$1\,898 \pm 45$
			$f_2 = 513.9 \pm 2.7$	$(3f_0)$	$P_2 = 0.540 \pm 0.003$	2.2 ± 0.3	$1\,273 \pm 73$
V7	SX Phe	4.5	$f_0 = 289.3 \pm 0.4$		$P_0 = 0.960 \pm 0.001$	2.4 ± 0.1	$2\,271 \pm 20$
V8	SX Phe	3.6	$f_0 = 248.5 \pm 0.7$		$P_0 = 1.118 \pm 0.003$	1.8 ± 0.1	$2\,972 \pm 39$
V9	SX Phe	3.5	$f_0 = 284.8 \pm 5.5$		$P_0 = 0.975 \pm 0.019$	0.9 ± 0.4	$2\,715 \pm 191$
			$f_1 = 409.7 \pm 2.1$		$P_1 = 0.678 \pm 0.004$	0.5 ± 0.1	$2\,084 \pm 72$
			$f_2 = 299.2 \pm 3.4$		$P_2 = 0.9283 \pm 0.011$	1.1 ± 0.3	979 ± 126
V11	SX Phe	2.8	$f_0 = 273.4 \pm 1.7$		$P_0 = 1.016 \pm 0.008$	1.7 ± 0.1	454 ± 79
			$f_1 = 408.7 \pm 1.6$		$P_1 = 0.680 \pm 0.003$	1.2 ± 0.1	$1\,271 \pm 57$
			$f_2 = 331.7 \pm 3.2$		$P_2 = 0.838 \pm 0.009$	0.6 ± 0.1	$1\,712 \pm 137$
V12	SX Phe	3.2	$f_0 = 266.0 \pm 3.3$		$P_0 = 1.044 \pm 0.018$	0.7 ± 0.1	$1\,959 \pm 213$
			$f_1 = 400.8 \pm 2.1$		$P_1 = 0.693 \pm 0.005$	0.4 ± 0.1	730 ± 84

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