Publication Year	2016
Acceptance in OA@INAF	2020-05-12T13:55:33Z
Title	ERRATUM: "The variable spin-down rate of the transient magnetar XTE J1810-197"
Authors	Pintore, Fabio; BERNARDINI, Federico; MEREGHETTI, Sandro; Esposito, Paolo; Turolla, Roberto; et al.
DOI	10.1093/mnras/stw928
Handle	http://hdl.handle.net/20.500.12386/24743
Journal	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY
Number	459

Monthly Notices of the ROYAL ASTRONOMICAL SOCIETY

MNRAS **459,** 3620–3621 (2016) doi:10.1093/mnras/stw928
Advance Access publication 2016 April 21

ERRATUM: 'The variable spin-down rate of the transient magnetar XTE J1810-197'

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Key words: errata, addenda – magnetic fields – stars: magnetars – stars: neutron – pulsars: individual: XTE J1810-197 – X-rays: stars.

Prompted by the recent paper by Camilo et al. (2016), we re-examined our phase-connected timing solution for XTE J1810-197 (Pintore et al. 2016), and we found a flaw in the procedure to compute the errors during some steps of our analysis. Due to this mistake, the phase-connected solution on 3000 d of X-ray data (reported in table 2 and fig. 2 of Pintore et al. 2016) is wrong.

With the new analysis of the data, we can phase-connect 13 observations with a good fit [χ^2_ν (dof) = 0.9(9); solution 1 in Table 1 and fig. 1-left], from MJD 55079 to MJD 55814 (observations from 18 to 30 of Pintore et al. 2016). The inclusion of also the two observations at MJD 55976 and MJD 56071 (observations 31 and 32) yields best-fitting parameters (solution 2 in Table 1 and Fig. 1-right) consistent with those obtained by Camilo et al. (2016) for the same set of observations, but with a higher χ^2_ν with respect to solution 1.

The table and figures reported here supersede table 2 and fig. 2 of Pintore et al. (2016). We note that these changes do not affect the main conclusions of that paper.

Table 1. Best-fitting timing solutions for 13 (solution 1) and 15 (solution 2) *XMM–Newton* and *Chandra* observations. Errors are at 1σ.

Parameter	Solution 1	Solution 2
Time range (MJD)	55079–55814	55079–56071 MJD TDB
$T_0{}^a$ (MJD TDB)	55444.0	55444.0
ν_0 (Hz)	0.180 481 213 35(44)	0.180 481 215 99(27)
$\dot{\nu}$ (Hz s^{-1})	$-9.2059(16) \times 10^{-14}$	$-9.2085(16) \times 10^{-14}$
$\ddot{\nu}$ (Hz s^{-2})	$5.7(3) \times 10^{-23}$	$3.80(13) \times 10^{-23}$
P (s)	5.540 742 892(14)	5.540 742 811(8)
$\dot{P}$ (s s^{-1})	$2.8262(5) \times 10^{-12}$	$2.8270(5) \times 10^{-12}$
$\ddot{p}$ (s s^{-2})	$-1.75(9) \times 10^{-21}$	$-1.16(4) \times 10^{-21}$
χ^2_ν (dof)	0.9 (9)	5.0 (11)

Note. [a]Reference epoch.

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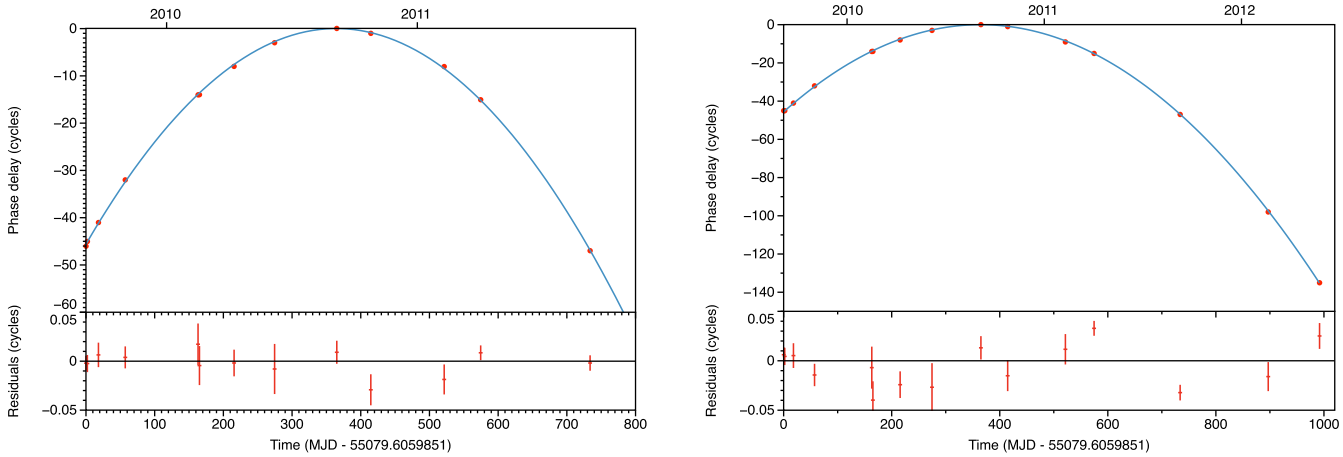

Figure 1. Phase-connection of ∼800 (left) and ∼1000 (right) days of *XMM–Newton* and *Chandra* data using a third-order polynomial function. Top panels: the red points are the measured phases, one for each observation, and the solid line is the best-fitting model; bottom panels: residuals with respect to the best-fitting model.

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