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### Swift observations of the accreting millisecond pulsar IGR J17498-2921: from outburst to quiescence

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**Publication date**

2011

**Document Version**

Final published version

**Published in**

The astronomer's telegram

**License**

Unspecified

[Link to publication](#)

**Citation for published version (APA):**

Linares Alegret, M., Bozzo, E., Altamirano, D., Degenaar, N. D., Wijnands, R., Soleri, P., Belloni, T., di Salvo, T., D'Ai, A., Papitto, A., Riggio, A., & Burderi, L. (2011). Swift observations of the accreting millisecond pulsar IGR J17498-2921: from outburst to quiescence. *The astronomer's telegram*, 3661. <https://www.astronomerstelegram.org/?read=3661>

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## Swift observations of the accreting millisecond pulsar IGR J17498-2921: from outburst to quiescence

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on 26 Sep 2011; 15:17 UT

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Subjects: X-ray, Binary, Neutron Star, Transient, Pulsar

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Swift has been monitoring the accreting millisecond pulsar IGR J17498-2921 since the start of its outburst in 2011 August 12 (ATels #3551, #3555, #3556). We detected two X-ray bursts on Aug. 18 and 28. During the first ~12 days the average persistent XRT count rate remained approximately constant at 3-7 c/s. Around Aug. 24 the source count rate started to decrease slowly, down to ~1 c/s on Sep. 11.

The source continued to decay and was detected by the Swift-XRT until Sep. 18. During two observations taken on Sep. 17 and 18, for a total exposure of 3.8ksec, the source spectrum was soft, and could be fitted with an absorbed blackbody model with temperature  $0.6 \pm 0.1$  keV (or an absorbed power law model with photon index  $3.2 \pm 0.3$ ; for a column density fixed at  $3e22$  cm<sup>-2</sup>, ATel #3555). The corresponding 0.5-10 keV absorbed flux was  $(1.7 \pm 0.2)E-12$  erg/cm<sup>2</sup>/s, and the luminosity about  $3E34$  erg/s (at a distance of 7.6kpc; ATel #3568).

IGR J17498-2921 was not detected during five Swift-XRT observations on Sep. 19, 20, 22, 24 and 26, for a total exposure of 10.6ksec. Combining the five observations we estimate a 95% upper limit on the 0.5-10 keV luminosity of  $3.6E33$  erg/s (at 7.6 kpc, and using a  $kT=0.3$  keV blackbody model). This is consistent with quiescent luminosities of other accreting millisecond pulsars, and we conclude that IGR J17498-2921 has returned to quiescence after a ~40 days long outburst.

We thank Neil Gehrels, Caryl Gronwall and the full Swift team for their help in promptly scheduling the observations. This work made use of data supplied by the UK Swift Science Data Centre at the University of Leicester.

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