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Publication date

2013

Document Version

Final published version

Published in

The astronomer's telegram

[Link to publication](#)

Citation for published version (APA):

Altamirano, D., Wijnands, R., & Belloni, T. (2013). Low-level X-ray variability observed from the black hole candidate IGR J17091-3624. *The astronomer's telegram*, 5192. <http://www.astronomerstelegam.org/?read=5192>

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Low-level X-ray variability observed from the black hole candidate IGR J17091-3624

ATel #5192; *D. Altamirano (UvA), R. Wijnands (UvA) & T. Belloni (INAF)*
on 4 Jul 2013; 15:50 UTCredential Certification: *Diego Altamirano (d.altamirano@uva.nl)*

Subjects: X-ray, Black Hole, Transient



Recently we reported (ATEL #5112) on preliminary results of our continuing Swift/XRT monitoring observations of the black hole candidate IGR J17091-3624. In a Swift/XRT observation performed on 2 June 2013, we found that the source flux had dropped by a factor of ~40, to flux values of only 5-9 times higher than that measured with XMM-Newton when the source was in quiescence ($\sim(10-18)E-14$ ergs/cm²/s, see Wijnands et. al., 2012, MNRAS, 422, 91).

During that 2 June 2013 observation we could not conclusively determine whether or not the source was detected due to contamination from the bright neutron-star X-ray binary GX 349+2. Since this observation, we have obtained four additional Swift/XRT observations. During the observation performed on 30 June 2013 (ObsID: 00035096087) we could again conclusively detect IGR J17091-3624, with a 0.5-10 keV count rate of (1.67E-02 ct/s) which is almost a factor ~2 higher than that detected one month before ($\sim 9E-03$ ct/s).

The number of background photons (as estimated from different regions in the CCD) is consistent between observations, and therefore we discard the possibility that the difference in flux measurements is due to a difference in (contaminating) background photons from GX 349+2. We instead consider this results as clear evidence of low-level X-ray variability suggesting residual accretion, and therefore implying that IGR J17091--3624 has not yet reached its quiescence state.

We will keep monitoring IGR J17091-3624 with Swift. We thank the Swift/team for scheduling our observations.

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