



UvA-DARE (Digital Academic Repository)

A large spin-up glitch detected in the 70.5 ms pulsar AX J1838.0-0655 associated with HESS J1837-069

Kuiper, L.; Hermsen, W.

Publication date

2010

Document Version

Final published version

Published in

The astronomer's telegram

[Link to publication](#)

Citation for published version (APA):

Kuiper, L., & Hermsen, W. (2010). A large spin-up glitch detected in the 70.5 ms pulsar AX J1838.0-0655 associated with HESS J1837-069. *The astronomer's telegram*, 2446. <http://www.astronomerstelegam.org/?read=2446>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Outside
[GCN](#)
[IAUCs](#)

Other
 MacOS: [Dashboard Widget](#)
 Follow ATel on [Twitter](#)

The Astronomer's Telegram

[Post a New Telegram](#) | [Search](#) | [Information](#)
[Telegram Index](#)
[Obtain Credential To Post](#) | [RSS Feeds](#) | [Email Settings](#)

Present Time: 14 Mar 2011; 12:36 UT

ATel News
[New things at ATel](#)

[[Previous](#) | [Next](#) | [ADS](#)]

A large spin-up glitch detected in the 70.5 ms pulsar AX J1838.0-0655 associated with HESS J1837-069

ATel #2446; [L. Kuiper \(SRON\), W. Hermsen \(SRON, UvA\)](#)
 on 18 Feb 2010; 15:41 UT
 Credential Certification: [Lucien Kuiper \(L.M.Kuiper@sron.nl\)](mailto:L.M.Kuiper@sron.nl)

Related

2446 [A large spin-up glitch detected in the 70.5 ms pulsar AX J1838.0-0655 associated with HESS J1837-069](#)

1405 [The spin-down rate, energetics and spectrum of the 70.5 ms pulsar in AX J1838.0-0655](#)

1392 [Discovery of a 70.5 ms Pulsar in AX J1838.0-0655 Associated with HESS J1837-069](#)

Subjects: X-ray, Gamma Ray, >GeV, Neutron Star, Pulsar

Monitoring observations of AX J1838.0-0655 with the PCA instrument (2-60 keV) aboard the Rossi X-ray timing Explorer performed since its discovery (see ATEL #[1392](#)) as fast rotation-powered pulsar on 2008, February 17 up to and including 2010, January 26, have been used to study its rotation characteristics (see e.g. ATEL #[1405](#)). The timing analysis revealed the presence of a large spin-up glitch, occurring somewhere between MJD 55002 and MJD 55018 (2009, June 20 - July 6), with a fractional frequency jump size of $1.55(7)E-6$. The size of this value is near the upper end of the histogram showing the distribution of the fractional frequency glitch sizes of both rotation-powered pulsars and anomalous X-ray pulsars (see e.g. Fig. 15a of Dib et al. 2008, ApJ 673, 1044). The pre-glitch ephemeris, covering the range MJD 54513-55002, is specified by a frequency of 14.184758189(1) Hz, a first order time derivative of $-9.9295(1)E-12$ Hz/s and a second order time derivative of $1.95(6)E-22$ Hz/s², all evaluated at epoch 54513.0 MJD (TDB; DE200). The post-glitch ephemeris, covering the range MJD 55018-55222, is given by a frequency of 14.1842449881(7) Hz, a first order time derivative of $-9.9910(1)E-12$ Hz/s and a second order time derivative of $1.0(4)E-21$ Hz/s², all evaluated at epoch 55136.0 MJD (TDB; DE200). The latter ephemeris can be improved in future once more monitoring observations come available.

0
[Recommend](#)

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief
 Derek Fox, Editor

rrutledge@astronomersteam.org
dfox@astronomersteam.org