MAXI J1807+132 is fading in both X-rays and optical wavelengths

Published in:
The astronomer's telegram

Citation for published version (APA):

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: http://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.
MAXI J1807+132 is fading in both X-rays and optical wavelengths


Credential Certification: Rudy Wijnands (radwijnands@gmail.com)

Subjects: Optical, Ultra-Violet, X-ray, Request for Observations, Black Hole, Neutron Star, Transient

Referred to by ATel #: 10245

We have analyzed a new Swift observation (performed on 06:44UT on March 29, 2017) of the recently discovered X-ray transient MAXI J1807+132 [ATEL #10208, #10215, #10216, #10217, #10221, #10222,#10223].

The average spectrum obtained during this observation has been fitted with a power-law model affected by absorption. The hydrogen column has been fixed to the value of $N_H\sim2.3\times10^{21}$ cm$^{-2}$ obtained during the analysis of the previous Swift-XRT observation [ATEL #10216]. The photon index is $2.5\pm0.2$ and the resulting absorbed (unabsorbed) 0.3-10 keV flux is $(9.2\pm0.1)\times10^{-12}$ ($(1.9\pm0.1)\times10^{-11}$) ergs cm$^{-2}$ s$^{-1}$.

This represent a ~75% drop in X-ray flux (0.3 - 10 keV) with respect to the previous Swift-XRT observation (2 days ago; ATel #10216). Similarly, the UVOT data show also a flux drop (the below magnitudes are given in the AB system):

<table>
<thead>
<tr>
<th>March 27</th>
<th>March 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>v &gt; 17.56</td>
<td>v &gt; 18.02</td>
</tr>
<tr>
<td>b = 18.1 +/- 0.3</td>
<td>b = 18.6 +/- 0.2</td>
</tr>
<tr>
<td>u = 18.43 +/- 0.19</td>
<td>u = 18.76 +/- 0.16</td>
</tr>
<tr>
<td>uvw1 = 18.56 +/- 0.13</td>
<td>uvw1 = 19.10 +/- 0.13</td>
</tr>
<tr>
<td>uvm2 = 18.72 +/- 0.13</td>
<td>uvm2 = 19.61 +/- 0.14</td>
</tr>
<tr>
<td>uvw2 = 18.75 +/- 0.09</td>
<td>uvw2 = 19.59 +/- 0.11</td>
</tr>
</tbody>
</table>

The above results suggest that the source may be decaying to quiescence after a very short outburst. If confirmed this behavior is reminiscent of the X-ray transient MAXI J1957+032 (Mata