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


Publication date
2017

Document Version
Final published version

Published in
The astronomer's telegram

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Unspecified

Citation for published version (APA):

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


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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 \( N_H \approx 2.3 \times 10^{21} \) cm\(^{-2}\) obtained during the analysis of the previous Swift-XRT observation [ATEL #10216]. The photon index is 2.5 +/- 0.2 and the resulting absorbed (unabsorbed) 0.3-10 keV flux is \((9.2 +/- 0.1) \times 10^{-12}\) ((1.9 +/- 0.1) \times 10^{-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>uvw2 = 18.72 +/- 0.13</td>
<td>uvw2 = 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...