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Fast infrared photometry of the black-hole candidate MAXI J1820+070

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 on 20 Mar 2018; 13:28 UT

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Referred to by ATel #: [11458](#), [11478](#), [11481](#), [11510](#), [11574](#), [11723](#), [11833](#)

We report on near-infrared fast-photometry observations of the newly discovered X-ray transient MAXI J1820+070 (ATel #[11399](#), #[11400](#), #[11406](#), #[11418](#), #[11420](#), , #[11421](#), #[11423](#), #[11424](#), #[11425](#), #[11426](#), #[11427](#), #[11432](#), #[11437](#), #[11439](#), #[11440](#), #[11445](#)), carried out with HAWK-I at VLT/Paranal.

HAWK-I observed the target on Mar 19, 2018, between 08:27 and 09:09 UT, in Ks filter. We used the FastJitter mode, with 64-px windows and a DIT=250 milliseconds. The night was photometric, with a variable seeing between 0.5 and 1.0 arcseconds.

The source is clearly detected in each single DIT. Its position is consistent with a 2MASS object (K = 15.12 +/- 0.12), but appears to have brightened substantially.

Preliminary analysis shows the source is rather variable, with an average magnitude of Ks ~ 10.2 and a ~25% average rms variability.

The magnitude - not corrected for the Galactic extinction - was calibrated against a nearby field comparison star (2MASS 18202191+0711248, K = 12.029 +/- 0.027).

According to our photometry, the target has brightened by almost two orders of magnitude in Ks with respect to the 2MASS value, which likely corresponds to the quiescence of the object (ATel #[11418](#)).

Two additional epochs of fast IR photometry are planned for March 22nd and 27th, around the same UT range (end of 21st and 26th Chilean nights)â. Multi-wavelength coverage is highly encouraged, especially but not only at high high time resolution and/or at longer wavelengths than near-infrared. Interested people can contact the authors or sign up to SMARTNet (www.isdc.unige.ch/smartnet).

Related

- 12608** Optical spectroscopy and photometry of MAXI J1820+070 (ASASSN-18ey) during the large multi-wavelength re-brightening of March 2019
- 12596** Optical observations of MAXI J1820+070 confirm the rebrightening
- 12577** AMI-LA and Swift confirm the multi-wavelength rebrightening of MAXI J1820+070
- 12573** Swift observation of the rebrightening in MAXI J1820+070
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- 12068** MAXI J1820+070 continuing its rapid evolution toward the hard state
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