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INTEGRAL detection of the on-going outbursts from 1RXS J180408.9-342058 and GRO J1750-27

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During the observations of the Galactic Center (from 2015 February 16 12:46 to February 17 at 4:25 UTC), INTEGRAL detected the two sources 1RXS J180408.9-342058 (Atel #6997, #7008, #7039) and GRO J1750-27 (Atel #1385, #1400, #6839) which were recently reported to undergo new outbursts.

1RXS J180408.9-342058 was observed in both the IBIS/ISGRI and the JEM-X FoV. A preliminary analysis of the ISGRI and JEM-X data revealed that the source broad-band spectrum (effective exposure time 34.2 ks for ISGRI and 9.3 ks for the two JEM-X) could be described by using a cut-off power-law model. We measured a power-law photon index of 1.4 ± 0.2 and a cut-off energy of 58 ± 9 keV. The estimated fluxes from the spectral analysis were 2.1×10^{-9} erg/cm²/s in the 3-20 keV energy band and 2.2×10^{-9} erg/cm²/s in the 20-100 keV energy band. No type-I X-ray bursts were found in the JEM-X data by scanning the 3-10 keV lightcurve of the source.

GRO J1750-27 was observed by IBIS/ISGRI for an effective exposure time 34.2 ks and by the two JEM-X for a total effective exposure time 9 ks. The ISGRI spectrum of the source could be roughly described with a soft power-law of photon index ~ 4 . The estimated source flux from the spectral fit is 7.4×10^{-10} erg/cm²/s in the 20-60 keV energy band. The 3-10 keV flux estimated from the JEM-X mosaic is of roughly 7×10^{-10} erg/cm²/s.

We also report on the continued detection of the outburst from IGR J17451-3022 (ATel #6451, ATel #7028). JEM-X confirms the detection of the source at 3.7 sigma for 20 ks effective exposure with a flux of 5.2 ± 1.6 mCrab between 3-10 keV (corresponding to roughly 7.3×10^{-11} erg/cm²/s). This is slightly below the flux (6.5 mCrab) the source had the last time INTEGRAL saw it at the end of October 2014. The source is still undetected above 10 keV at a 5-sigma upper limit of 2 mCrab between 10-20 keV (corresponding to roughly 1.8×10^{-11} erg/cm²/s).

Finally, we note that the INTEGRAL transient IGR J17454-2919 (ATels #6530, #6574, #6602) is not detected by the two JEM-X in the current observations of the Galactic Center (effective exposure time 19 ks). We estimated a 5-sigma upper limit on the source flux of 4 mCrab in the 3-10 keV energy band (corresponding to roughly 5.6×10^{-11} erg/cm²/s) and 2 mCrab in the 10-20 keV energy band (corresponding to roughly 1.8×10^{-11} erg/cm²/s).

Additional INTEGRAL observations of the Galactic Center are planned for the coming weeks.

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