A Catalogue of INTEGRAL Sources identified through optical and near-infrared spectroscopy

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1.1 *INTRODUCTION*

Since its launch in October 2002, the *INTEGRAL* satellite (Winkler et al. 2003) is boosting our knowledge of the hard X-ray sky above 20 keV in terms of both sensitivity and positional accuracy of the detected sources. Thanks to the capabilities of the IBIS instrument (Ubertini et al. 2003), *INTEGRAL* is effectively detecting hard X-ray objects at the mCrab level with a typical localization accuracy of 2-3 arcmin (Gros et al. 2003). This has made it possible, for the first time, to obtain all-sky maps in the 20-100 keV range with arcminute accuracy and down to mCrab sensitivities (e.g., Bird et al. 2007).

Most of the sources detected by *INTEGRAL* are known Galactic X-ray binaries (~35% of the total number of detected objects), plus a fraction of known Active Galactic Nuclei (AGNs; ~28%) and Cataclysmic Variables (CVs; ~5%). However, a large majority of the remaining objects (about 27% of all detections achieved with IBIS) has no obvious counterpart at other wavelengths and therefore cannot immediately be associated with any known class of high-energy emitting objects.

Recently, in order to fill this identification gap, several groups worldwide started observational campaigns aimed at identifying the nature of these still unknown sources through optical spectroscopy.

The general approach used in these searches comes in two steps (see e.g. Masetti et al. 2006b for details).

The first is the cross-correlation of the 90% confidence level IBIS error circles of the with catalogues of soft (<10 keV) X-ray sources. This is made using *ROSAT*, *Chandra*, *XMM-Newton* and/or *Swift* data with the aim of reducing the X-ray error box size to some (less than 10) arcseconds at most. This approach was chosen because Stephen et al. (2005, 2006) show that, from a statistical argument, the soft X-ray source found inside an IBIS error box is very likely the counterpart of the corresponding *INTEGRAL* source.

The second step is, of course, a detailed spectroscopic study of the optical and/or near-infrared source(s) inside the reduced error box thus obtained.

In some cases, optical sources are chosen as putative optical counterparts because of their peculiarities, even if they are not associated with soft X-ray sources within an IBIS error circle. We refer to Masetti et al. (2006a) for the caveats of choosing, within the IBIS error box, "peculiar" sources which are not readily associated with an arcsec-sized soft X-ray position.

1.2 *AIMS AND STRUCTURE OF THE CATALOGUE*

This cross-correlation plus optical/near-infrared spectroscopy procedure led to a conspicuous number of identifications of counterparts of unknown *INTEGRAL* sources, along with the determination of their nature. The objective of this catalogue is thus to collect all the available

information on each *INTEGRAL* source for which its nature has been unveiled through optical or near-infrared spectroscopy.

The structure of the catalogue is pretty straightforward: each *INTEGRAL* source identified through optical and/or near-infrared spectroscopy has a dedicated web page containing exact (to 1 arcsec or better) coordinates, a finding chart, an image of the spectrum, and the main properties of the source, together with individual notes and relevant bibliographic references. All coordinates are relative to the equinox J2000. In general, for the nomenclature of the sources, we follow that of Bird et al. (2007).

When not explicitly stated otherwise in the catalogue, finding charts are extracted from the *DSS-II-Red archive* (http://archive.eso.org/dss/dss) and have a size of 10x10 arcmin, with North at top and East to the left. Also, when not explicitly stated otherwise in the relevant reference, the X-ray flux estimates for each source assume a Crab-like spectrum. The Galactic absorption along the source line of sight for extragalactic objects is in general extracted from the work of Schlegel et al. (1998). To compute the distance to extragalactic objects, we here assumed a cosmology with $H_0 = 65$ km s^{-1} Mpc^{-1}, $\Omega_\Lambda = 0.7$ and $\Omega_m = 0.3$. For each source, values reported without accompanying citation were determined for the first time in the framework of this catalogue.

1.3 *NOTES AND WARNINGS*

As one can readily note, the structure of the present catalogue is very similar to that of *Jochen Greiner's catalogue of SuperSoft Sources (SSS)* (http://www.mpe.mpg.de/~jcg/sss/ssscat.html). Although some may immediately think of plagiarism, We would rather say that we found Greiner's SSS catalogue so well organized that it was a natural example to follow for the construction of ours.

As in the case of SSS catalogue, we would like to stress that every user of this catalogue should in any case check the original papers in order to avoid propagation of any error or omission of ours in the literature.

It is our intention to keep this catalogue updated; so, we would also appreciate to be informed on any errors/omissions users might discover and on any update concerning new identifications or the properties of already identified sources.

1.4 *AVAILABILITY AND CREDITS*

This catalogue is freely available for everybody, with the standard disclaimers applying concerning the intellectual property of it. That is, it would be very much appreciated to quote this web page whenever one uses this catalogue, in part or as a whole (in other words, it is always fair to respect and credit the work of your colleagues!).

1.5 *ACKNOWLEDGEMENTS*

We especially thank Loredana Bassani and Eliana Palazzi for their encouragement to produce this catalogue. Our most sincere apologies go to anyone whose papers slipped through the cracks of my literature search. This catalogue made extensive use of the NED, SIMBAD and Hyperleda databases, operated by the JPL at CalTech (USA) under NASA contract, the CDS at Strasbourg (France), and the Observatoire de Lyon (France), respectively. We also made use of data products from the Two Micron All Sky Survey (2MASS).

1.6 *REFERENCES*

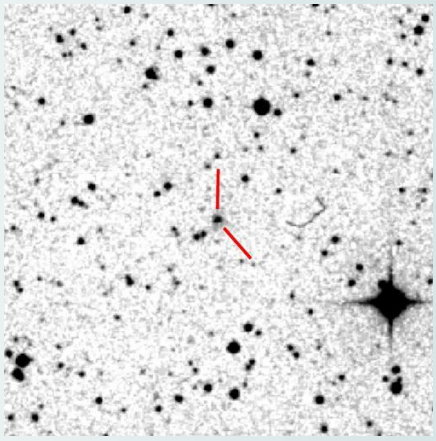
- Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
- Gros, A., Goldwurm, A., Cadolle-Bel, M., et al. 2003, A&A, 411, L179
- Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006a, A&A, 449, 1139
- Masetti N., Morelli, L., Palazzi, E., et al. 2006b, A&A, 459, 21
- Schlegel, D.J., Finkbeiner, D.P., Davis, M. 1998, ApJ, 500, 525
- Stephen, J.B., Bassani, L., Molina, M., et al. 2005, A&A, 432, L49
- Stephen, J.B., Bassani, L., Malizia, A., et al. 2006, A&A, 445, 869
- Ubertini, P., Lebrun, F., Di Cocco, G., et al. 2003, A&A, 411, L131
- Winkler, C., Courvoisier, T.J.-L., Di Cocco, G., et al. 2003, A&A, 411, L1

IGR J00040+7020

RA_{2000}: **00 04 01.92** [1]
DEC_{2000}: **+70 19 18.5** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **(NAKED?) SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **17.6** [5]	**B-R** [mag]: **+2.1** [5]	**z** = **0.096** [1]
F_X [erg/cm^2/s]: **4.2 10^{-12}** (2-10 keV) [2] **1.5 10^{-11}** (20-100 keV) [3]	F_{RADIO} [mJy]: **5.5** (1.4 GHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: **1.1 10^{44}** (2-10 keV) [1] **3.9 10^{44}** (20-100 keV) [1]	L_{RADIO} [erg/s]: **2.1 10^{39}** (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: **474.6** [1]	M_B [mag]: **-22.2**	A_V [mag]: **2.6** GALACTIC [1] **~0** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

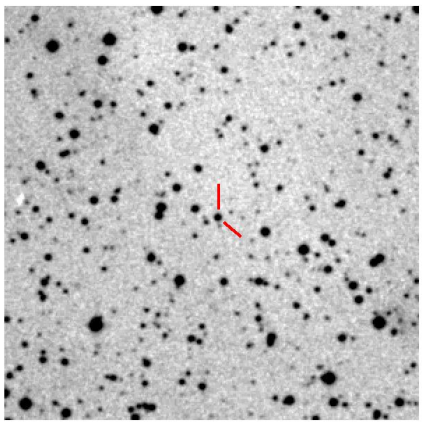
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J00234+6141

RA_{2000}: **00 22 57.6** [1]
DEC_{2000}: **+61 41 07.8** [1]

Class: **CATACLYSMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [3]



General Data		
m_B [mag]: **1 6.6** [2]	**B-R** [mag]: **+0. 3** [2]	**z** = **0** [1, 3, 5]
F_X [erg/cm^2/s]: **4.7 10^{-13}** (0.1-2.4 keV) [3] **7.2 10^{-12}** (20-50 keV) [5] **9.8 10^{-12}** (50-100 keV) [5]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **4.7 10^{30}** (0.1-2.4 keV) [3] **1.7 10^{32}** (20-100 keV) [3]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [pc]: **520** [4]	**M_V** [mag]: **+9** (ASSUMED) [1]	**A_V** [mag]: -
P_{orb} [days]: **0.168** [4]	**P_{spin}** [s]: **564** [4]	**M_{WD}** [M_{sun}]: -

Notes:

Field size of image: 5 x 5 arcmin.

References:

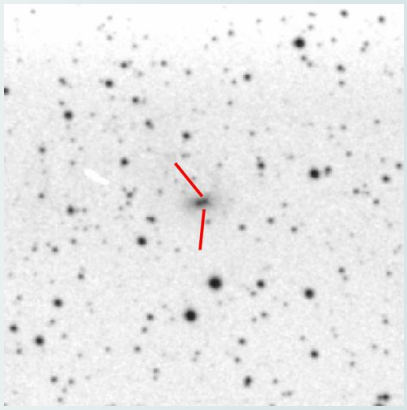
[1] Halpern J.P., & Mirabal, N. 2006, ATel 709
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Masetti N., Bassani L., Bazzano A., et al. 2006, A&A, 455, 11
[4] Bonnet-Bidaud, J.M., de Martino, D., Falanga, M., Mouchet, M., & Masetti, N. 2007, A&A, 473, 185
[5] den Hartog, P.R., Hermsen, W., Kuiper, L., et al. 2006, A&A, 451, 587

IGR J00256+6821

RA_{2000}: **00 25 32.5** [1]
DEC_{2000}: **+68 21 44** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **16.3** [5]	**B-V** [mag]: -	**z** = **0.012** [1]
F_X [erg/cm^2/s]: **5 10^{-13}** (2-10 keV) [2] **1.4 10^{-11}** (20-100 keV) [3]	F_{RADIO} [mJy]: **16.2** (1.4 GHz) [4]	F_{IR} [Jy]: **<0.381** (12 μm) [6] **0.205** (25 μm) [6] **<0.495** (60 μm) [6] **<9.2** (100 μm) [6]
L_X [erg/s]: **1.9 10^{41}** (2-10 keV) [1] **5.3 10^{42}** (20-100 keV) [1]	L_{RADIO} [erg/s]: **8.5 10^{37}** (1.4 GHz)	L_{IR} [erg/s]: **<3.6 10^{43}** (12 μm) **9.2 10^{42}** (25 μm) **<9.2 10^{42}** (60 μm) **<1.0 10^{44}** (100 μm)
D [Mpc]: **55.9** [1]	M_B [mag]: **<-24.2**	A_V [mag]: **3.2** GALACTIC [1] **>1.96** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

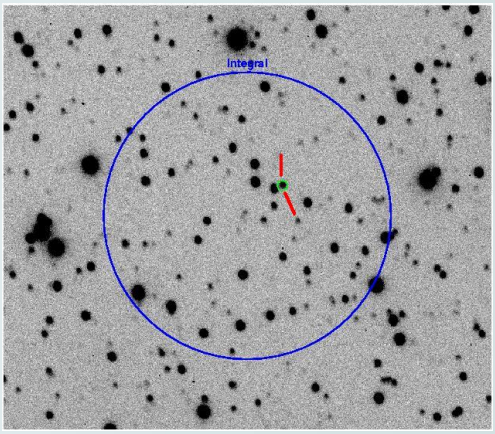
Notes:

Finding chart of size 5 x 5 arcmin; double-nucleus galaxy (the AGN is the western nucleus) [1]; the reported optical magnitudes are referring to the whole galaxy.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J00291+5934



RA_{2000}: **00 29 03.05** [8]
DEC_{2000}: **+59 34 18.9** [8]

Class: **LOW MASS X-RAY BINARY**
Type: **MILLISECOND X-RAY PULSAR**

Optical Spectrum [3900-4900 Å] [5700-6700 Å] [8]

General Data		
m_R [mag]: **17.4** PEAK [5] **23.1** QUIESCENCE [8]	**R-I** [mag]: **+0.75** MAXIMUM [8]	**z** = **0** [1]
F_X [erg/cm^2/s]: **8.5 10^{-10}** (5-100 keV) MAXIMUM [4] **~1 10^{-13}** (0.5-10 keV) QUIESCENCE [2]	F_{RADIO} [mJy]: **1.1** (15 GHz) PEAK [6]	F_{IR} [Jy]: -
L_X [erg/s]: **0.9 10^{36}** (5-100 keV) MAXIMUM [4]	L_{RADIO} [erg/s]: **~1.8 10^{29}** (15 GHz) PEAK	L_{IR} [erg/s]: -
D [kpc]: **2.6-3.6** [2]	M_V [mag]: -	A_V [mag]: **2.1-2.9** [8]
P_{orb} [days]: **0.102** [3]	P_{spin} [s]: **1.67 10^{-3}** [3]	M_{NS} [M_{sun}]: -

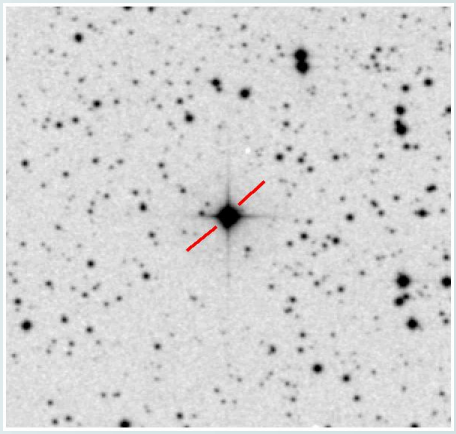
Note:

INTEGRAL error box reported as a circle in the figure; transient X-ray source [7]; finding chart of size 5x4 arcmin [5]; mass function of the secondary star: 2.81×10^{-5} M_{sun} [3].

References:

[1] Roelofs, G., Jonker, P.G., Steeghs, D., et al. 2004, ATel 356
[2] Jonker, P.G., Campana S., Steeghs, D., et al. 2005, MNRAS, 361, 511
[3] Galloway, D.K., Markwardt C.B., Morgan, E.H., et al. 2005, ApJ, 622, L45
[4] Shaw, S.E., Mowlavi, N., Rodriguez, J., et al. 2005, A&A, 432, L13
[5] Fox, D.B., & Kulkarni, S.R. 2004, ATel 354
[6] Pooley, G. 2004, ATel 355
[7] Eckert, D., Walter, R., Kretschmar, P., et al. 2004, ATel 352
[8] Torres, M.A.P., Jonker, P.G., Steeghs, D., et al. 2008, ApJ, 672, 1079

IGR J00370+6122



RA_{2000}: 00 37 09.6 [1]
DEC_{2000}: +61 21 36.5 [1]

Class: HIGH-MASS X-RAY BINARY
Type: SUPERGIANT X-RAY BINARY

Optical Spectrum [1]

General Data		
m_B [mag]: 1 0.2 [1]	**B-V** [mag]: +0. 56 [1]	**z** = 0 [1]
F_X [erg/cm^2/s]: 1.1 10^{-12} (0.1-2.4 keV) [3] 4.6 10^{-11} (20-50 keV) [2]	F_{RADIO} [mJy]: <7 (0.61 GHz) [5] <0.69 (1.4 GHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: 1.4 10^{33} (0.1-2.4 keV) 6.0 10^{34} (20-50 keV)	L_{RADIO} [erg/s]: <5.6 10^{28} (0.61 GHz) <1.3 10^{28} (1.4 GHz)	L_{IR} [erg/s]: -
D [kpc]: 3.3 [1]	M_V [mag]: -5.2 [1]	A_V [mag]: 2.4 [1]
P_{orb} [days]: 15.669 [2]	P_{spin} [s]: 346 [6]	M_{NS} [M_{sun}]: -

Notes:

Spectral type of secondary star: BN0.5 II-III [1]; variable X-ray source [2]; finding chart of size 5x5 arcmin.

References:

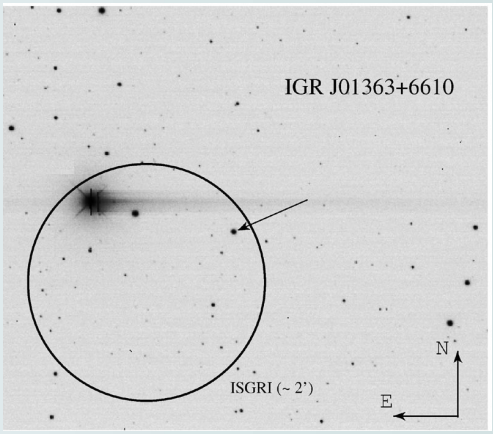
[1] Reig, P., Negueruela, I., Papamastorakis, G., Manousakis, A., & Kougentakis, T. 2005, A&A, 440, 637
[2] den Hartog, P. R., Hermsen, W., Kuiper, L., et al. 2005, A&A, 451, 587
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Cameron, P.B., Grcevich, J., Gugliucci, N. et al. 2004, ATel 312
[5] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[6] in 't Zand, J.J.M., Kuiper, L., den Hartog, P.R., Hermsen, W., & Corbet, R.H.D. 2007, A&A, 469, 1063

IGR J01363+6610

RA_{2000}: **01 35 50** [2]
DEC_{2000}: **+66 12 40** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [2]



General Data		
m_B [mag]: **14.67** [2]	**B-V** [mag]: **+1.38** [2]	**z** = **0** [2]
F_X [erg/cm^2/s]: **6.9 10^{-11}** (8-15 keV) [1] **1.8 10^{-10}** (17-45 keV) [1]	F_{RADIO} [mJy]: **<7** (0.61 GHz) [4] **<0.81** (15 GHz) [3]	F_{IR} [Jy]: -
L_X [erg/s]: **3.3 10^{34}** (8-15 keV) **8.6 10^{33}** (17-45 keV)	L_{RADIO} [erg/s]: **<5.8 10^{28}** **<2.0 10^{28}**	L_{IR} [erg/s]: -
D [kpc]: **2.0** [2]	M_V [mag]: **-3.2** [2]	A_V [mag]: **5.0** [2]
P_{orb} [days]: -	P_{spin} [s]: -	M_{obj} [M_{sun}]: -

Notes:

Transient X-ray source [1]; spectral type of secondary star: B1 V [2]; finding chart of size 8 x 6.5 arcmin [2].

References:

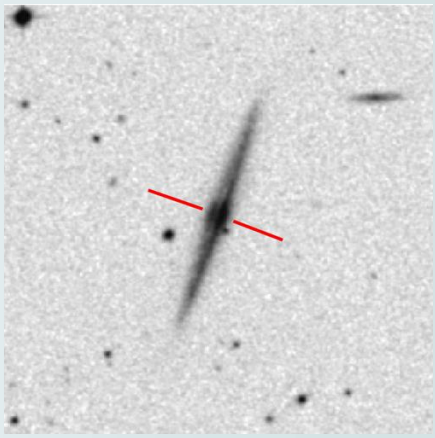
[1] Grebenev, S.A., Ubertini, P., & Chenevez, J. 2004, ATel 275
[2] Reig, P., Negueruela, I., Papamastorakis, G., Manousakis, A., & Kougentakis, T. 2005, A&A, 440, 637
[3] Pooley, G. 2004, ATel 276
[4] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

IGR J01528-0326

RA_{2000}: **01 52 49.00** [1]
DEC_{2000}: **-03 26 48.5** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **14.11** [5]	**B-V** [mag]: -	**z** = **0.0167** [1, 7, 8]
F_X [erg/cm^2/s]: **4 10^{-12}** (2- 10 keV) [2] **2.8 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **33.6** (1.4 GHz) [4]	**F_{IR}** [Jy]: **<0.250** (12 μm) [6] **<0.719** (25 μm) [6] **1.80** (60 μm) [6] **4.75** (100 μm) [6]
L_X [erg/s]: **3.0 10^{42}** (2-10 keV) [1] **2.1 10^{43}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **3.5 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: **<4.7 10^{43}** (12 μm) **<6.5 10^{43}** (25 μm) **6.8 10^{43}** (60 μm) **1.1 10^{44}** (100 μm)
D [Mpc]: **79.3** [1]	**M_B** [mag]: **-21.67** [5]	**A_V** [mag]: **0.09** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

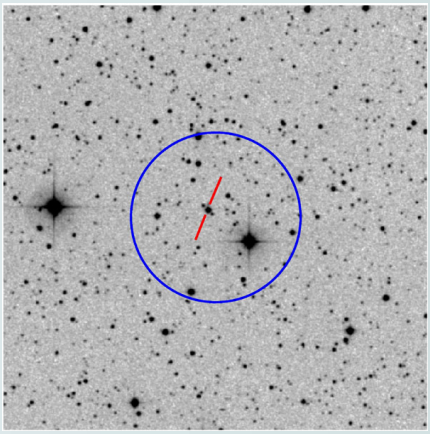
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)
[7] Jones, D.H., Saunders, W., Colless, M., et al. 2004, MNRAS, 355, 747
[8] Burenin, R.A., Mescheryakov, A.V., Revnivtsev, M.G., et al. 2008, Astron. Lett., in press (arXiv:0802.1791)

IGR J01583+6713



RA_{2000}: **01 58 18.44** [2]
DEC_{2000}: **+67 13 23.5** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]

General Data		
m_B [mag]: **14.98** [2]	**B-V** [mag]: **+1.74** [2]; **+1.22** [5]	**z** = **0** [1, 2]
F_X [erg/cm^2/s]: **8.3 10^{-11}** (20-40 keV) [3] **1.5 10^{-11}** (0.2-20 keV) [4]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **7.3 10^{34}** (0.2-10keV) [1] **5.2 10^{35}** (20-40 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **6.4** [1] or **4.0** [5]	**M_v** [mag]: **-4.5** [1]	**A_V** [mag]: **4.37** [1]
P_{orb} [days]: **216 - 561** [5]	**P_{spin}** [s]: **469.2** [5]	**M_{NS}** [M_{sun}]: -

Notes:

Spectral type O9 V [1] or B2 IVe [5]; transient [3]; INTEGRAL error box reported as a circle in the figure.

References:

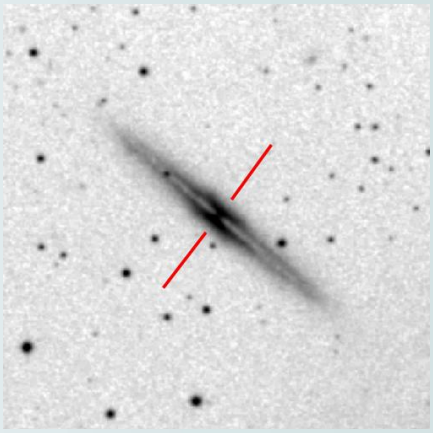
[1] Masetti, N., Bassani, L., Bazzano, A., et al. 2006, A&A, 455, 11
[2] Halpern, J.P., & Tyagi, S. 2005, ATel 681
[3] Steiner, C., Eckert, D., Mowlavi, N., et al. 2005, ATel 672
[4] Kennea, J.A., Racusin, J.L., Burrows, D.N., et al. 2005, ATel 673
[5] Kaur, R., Paul, B., Kumar, B., & Sagar, R. 2008, MNRAS, in press (arXiv:0803.1113)

IGR J02343+3229

RA_{2000}: 02 34 20.10 [1]
DEC_{2000}: +32 30 20.0 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2/LINER GALAXY

Optical Spectrum [1]



General Data		
m_B [mag]: 13.7 [2]	**B-V** [mag]: -	**z** = 0.016195 [6]
F_X [erg/cm^2/s]: 1.1 10^{-11} (2-10 keV) [7] 3.7 10^{-11} (17-60 keV) [3]	F_{RADIO} [mJy]: 21.8 (1.4 GHz) [4]	F_{IR} [Jy]: <0.250 (12 μm) [5] 0.313 (25 μm) [5] 1.68 (60 μm) [5] 3.70 (100 μm) [5]
L_X [erg/s]: 7.3 10^{42} (2-10 keV) 2.6 10^{43} (17-60 keV) [1]	L_{RADIO} [erg/s]: 2.0 10^{38} (1.4 GHz)	L_{IR} [erg/s]: <4.2 10^{43} (12 μm) 2.5 10^{43} (25 μm) 5.6 10^{43} (60 μm) 7.4 10^{43} (100 μm)
D [Mpc]: 74.7 [1]	M_B [mag]: -22.19 [2]	A_V [mag]: 0.31 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

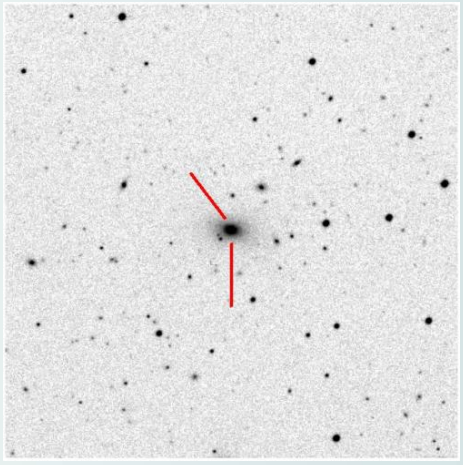
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[3] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)
[6] NASA/IPAC EXTRAGALACTIC DATABASE (http://nedwww.ipac.caltech.edu/)
[7] Rodriguez, J., Tomsick, J.A., & Chaty, S. 2008, A&A, 482, 731

IGR J02466-4222



RA_{2000}: **02 46 37.02** [1]

DEC_{2000}: **-42 22 01.7** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **X-RAY BRIGHT, OPTICALLY NORMAL GALAXY**

Optical Spectrum [3]

General Data		
m_B [mag]: **1 5.09** [1]	**B-V** [mag]: -	**z** = **0.0695** [1]
F_X [erg/cm^2/s]: **~7 10^{-14}** (0.5-8 keV) [2] **3.1 10^{-11}** (17-60 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **9.5 10^{41}** (0.5-8 keV) **4.2 10^{44}** (17-60 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: **337.4**	**M_B** [mag]: **-22.64** [1]	**A_V** [mag]: **0.056** GALACTIC
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Compton thick AGN [2].

References:

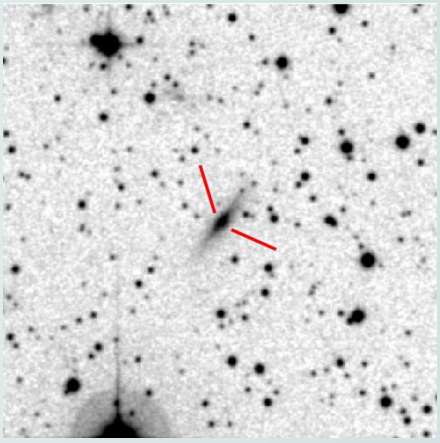
[1] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[2] Sazonov, S., Revnivtsev, M., Burenin, R., et al. 2008, A&A, submitted (arXiv:0802.0928)
[3] 6dF Redshift Galaxy Survey (http://www.aao.gov.au/local/www/6df/)

IGR J02504+5443

RA_{2000}: 02 50 42.59 [1]
DEC_{2000}: +54 42 17.7 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY

Optical Spectrum [1]



General Data		
m_R [mag]: 16.7 [5]	**B-V** [mag]: -	**z** = 0.015 [1, 5]
F_X [erg/cm^2/s]: 4.8 10^{-12} (2-10 keV) [2] 3.2 10^{-11} (20-100 keV) [3]	F_{RADIO} [mJy]: 8.5 (1.4 GHz) [4]	F_{IR} [Jy]: <0.291 (12 μm) [6] <0.205 (25 μm) [6] 1.17 (60 μm) [6] 2.72 (100 μm) [6]
L_X [erg/s]: 2.8 10^{42} (2-10 keV) [1] 1.9 10^{43} (20-100 keV) [1]	L_{RADIO} [erg/s]: 7.0 10^{37} (1.4 GHz)	L_{IR} [erg/s]: <4.3 10^{43} (12 μm) <1.4 10^{43} (25 μm) 3.4 10^{43} (60 μm) 4.8 10^{43} (100 μm)
D [Mpc]: 70.0 [1]	M_B [mag]: -21.5 [5]	A_V [mag]: 2.4 GALACTIC [1] 1.4 AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

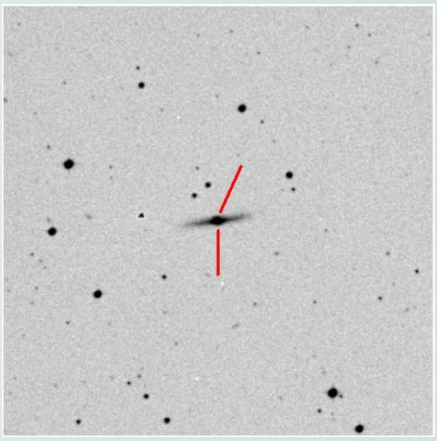
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J02524-0829



RA_{2000}: **02 52 23.39** [1]
DEC_{2000}: **-08 30 37.7** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **LIKELY SEYFERT 2 GALAXY**

Optical spectrum [4]

General Data		
m_B [mag]: **14.96** [1]	**B-V** [mag]: **+0.71** [3]	**z** = **0.0168** [1, 2, 3]
F_X [erg/cm^2/s]: **3.1 10^{-11}** (17-60 keV) [5]	**F_{RADIO}** [mJy]: **7.1** (1.4 GHz) [6]	**F_{IR}** [Jy]: **<0.0702** (12 μm) [7] **<0.147** (25 μm) [7] **0.298** (60 μm) [7] **0.635** (100 μm) [7]
L_X [erg/s]: **2.3 10^{43}** (17-60 keV)	**L_{RADIO}** [erg/s]: **7.3 10^{37}** (1.4 GHz)	**L_{IR}** [erg/s]: **<1.3 10^{43}** (12 μm) **<1.3 10^{43}** (25 μm) **1.1 10^{43}** (60 μm) **1.4 10^{43}** (100 μm)
D [Mpc]: **78.5**	**M_B** [mag]: **-20.22** [1]	**A_V** [mag]: **0.17** GALACTIC
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Field size of image: 5 x 5 arcmin; the reported B-V color is computed from the SDSS magnitudes using the conversion tables of Jester et al. (2005, AJ, 130, 873).

References:

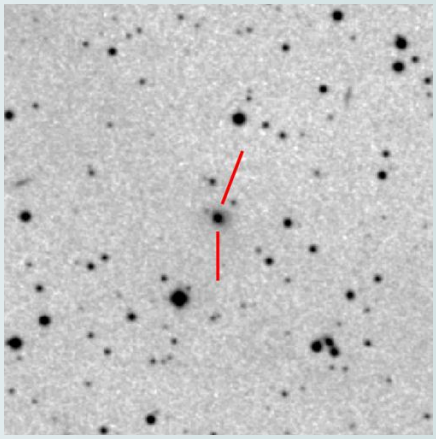
[1] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[2] Bikmaev, I., Revnivtsev, M., Burenin, R., et al. 2008, ATel 1363
[3] Adelman-McCarthy, J.K., Agüeros, M.A., Allam, S.S., et al. 2008, AJ, 175, 297
[4] Sloan Digitized Sky Survey (http://www.sdss.org)
[5] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[6] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[7] Moshir, M., Copan, G., Conrow, T., et al. 1989, IRAS Faint Source Catalog, |b| > 10º, Version 2.0

IGR J03334+3718

RA_{2000}: **03 33 18.79** [1]
DEC_{2000}: **+37 18 11.1** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.5 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.7** [2]	**B-R** [mag]: **+2.0** [2]	**z** = **0.055** [1, 6]
F_X [erg/cm^2/s]: **3.9 10^{-13}** (0.1-2.4 keV) [3] **2.0 10^{-11}** (17-60 keV) [4]	F_{RADIO} [mJy]: **6.0** (1.4 GHz) [5]	F_{IR} [Jy]: **<0.250** (12 μm) [7] **0.433** (25 μm) [7] **0.608** (60 μm) [7] **<8.08** (100 μm) [7]
L_X [erg/s]: **3.3 10^{42}** (0.1-2.4 keV) [1] **1.6 10^{44}** (17-60 keV) [1]	L_{RADIO} [erg/s]: **7.0 10^{38}** (1.4 GHz)	L_{IR} [erg/s]: **<5.2 10^{44}** (12 μm) **4.3 10^{44}** (25 μm) **2.5 10^{44}** (60 μm) **<2.0 10^{45}** (100 μm)
D [Mpc]: **264.3** [1]	M_B [mag]: **-22.1**	A_V [mag]: **1.7** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: **6.2 10^7** [1]

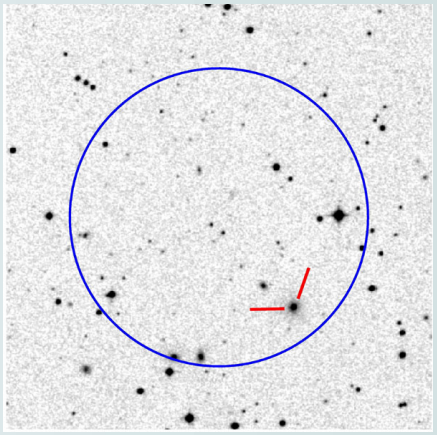
Notes:

Finding chart of size 5 x 5 arcmin; optical counterpart slightly outside of the *ROSAT* error box [1].

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[5] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1988, AJ, 115, 1693
[6] Burenin, R.A., Mescheryakov, A.V., Revnivtsev, M.G. et al., 2008, Astron. Lett., in press (arXiv:0802.1791)
[7] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J03532-6829



RA_{2000}: **03 52 57.00** [3]
DEC_{2000}: **-68 31 18.0** [3]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **BL LAC OBJECT**

Optical Spectrum [1]

General Data		
m_B [mag]: **13.6** [1]	**B-R** [mag]: **+1.1** [1]	**z** = **0.087** [2]
F_X [erg/cm^2/s]: **3.2 10^{-12}** (0.1-2.4 keV) [1] **9.0 10^{-12}** (0.16-3.5 keV) [1] **6.8 10^{-12}** (3-8 keV) [1] **4.6 10^{-12}** (20-40 keV) [4]	**F_{RADIO}** [mJy]: **390.8** (843 MHz) [2]	**F_{IR}** [Jy]: -
L_X [erg/s]: **7.0 10^{43}** (0.1-2.4 keV) [1] **2.0 10^{44}** (0.1-2.4 keV) [1] **1.5 10^{44}** (3-8 keV) [1] **1.0 10^{44}** (20-40 keV) [1]	**L_{RADIO}** [erg/s]: **7.2 10^{40}** (843 MHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **428** [1]	**M_B** [mag]: **-24.9** [1]	**A_V** [mag]: **0.29** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

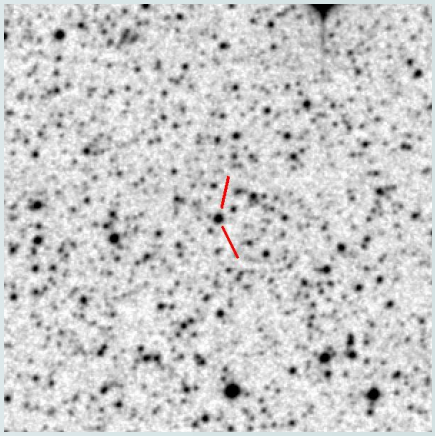
Notes:

INTEGRAL error box reported as a circle in the figure.

References:

[1] Masetti, N., Bassani, L., Bazzano, A., et al. 2006, A&A, 455, 11
[2] Fischer, J.-U., Hasinger, G., Schwope, A.D., et al. 1998, Astron. Nachr., 319, 347
[3] Mauch, T., Murphy, T., Buttery, H.J., et al. 2003, MNRAS, 342, 1117
[4] Götz, D., Mereghetti, S., Merlini, D., et al. 2006, A&A, 448, 873

IGR J05007-7047



RA_{2000}: **05 00 46.08** [1]
DEC_{2000}: **-70 44 36.0** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY?**

Optical Spectrum [2]

General Data		
m_V [mag]: **14.8** [3]	**B-V** [mag]: **-0.01** [3]	**z** = **0.001** [2]
F_X [erg/cm^2/s]: **3.0 10^{-12}** (0.5-8 keV) [1] **1.2 10^{-11}** (17-60 keV) [1]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **9.1 10^{35}** (0.5-8 keV) [2] **3.6 10^{36}** (17-60 keV) [2]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **50** (ASSUMED) [2]	**M_V** [mag]: **-4.1** [2]	**A_V** [mag]: **0.38** [2]
P_{orb} [days]: -	**P_{spin}** [s] : -	**M_{obj}** [M_{sun}]: -

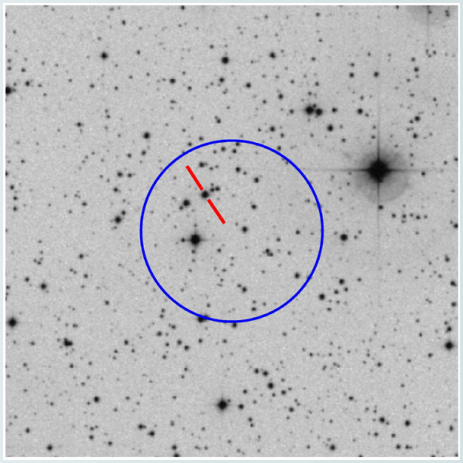
Notes:

In the Large Magellanic Cloud, Secondary star spectral type B2 III [2]; finding chart of size 5 x 5 arcmin.

References:

[1] Sazonov, S.Y., Churazov, E., Revnivtsev, M.G., et al. 2005, A&A, 444, L37
[2] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[3] Massey, P. 2002, ApJS, 141, 81

IGR J06074+2205



RA_{2000}: **06 07 26.6** [2]
DEC_{2000}: **+22 05 48** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]

General Data		
m_B [mag]: **1 2.70** [1]	**B-R** [mag]: **1.41** [1]	**z** = **0** [1, 2]
F_X [erg/cm^2/s]: **1.1 10^{-10}** (3-10 keV) [3] **1.3 10^{-10}** (10-20 keV) [3]	**F_{RADIO}** [mJy]: **<1.95** (0.61 GHz) [4] **<1.92** (1.28 GHz) [4]	**F_{IR}** [Jy]: -
L_X [erg/s] **: 2.5 10^{34}** (3-20 keV) [1]	**L_{RADIO}** [erg/s]: **<1.4 10^{27}** (0.61 GHz) **<2.9 10^{27}** (1.28 GHz)	**L_{IR}** [erg/s]: -
D [kpc]: **1.0** [1]	**M_V** [mag]: **-1.2** [1]	**A_V** [mag]: **3.1** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Spectral type of secondary star: B8 III [1]; transient X-ray source [3]**;** INTEGRAL error box reported as a circle in the figure.

References:

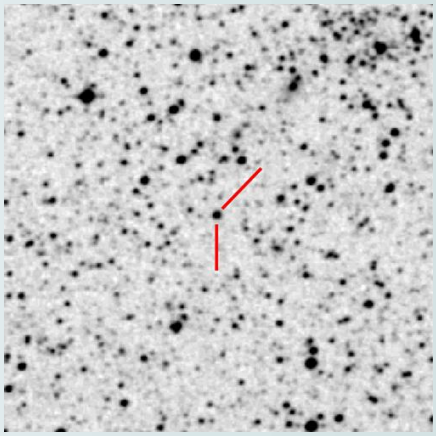
[1] Masetti, N., Bassani, L., Bazzano, A., et al. 2006, A&A, 455, 11
[2] Halpern, J.P., & Tyagi, S. 2005, ATel 682
[3] Chenevez, J., Budtz-Jorgensen, C., & Lund, N. 2004, ATel 223
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471

IGR J06117-6625

RA_{2000}: **06 11 48.34** [1]
DEC_{2000}: **-66 24 33.7** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.5 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.1** [2]	**B-R** [mag]: **+0.4** [2]	**z** = **0.230** [1]
F_X [erg/cm^2/s]: **1.1 10^{-12}** (0.1-2.4 keV) [3] **2.9 10^{-11}** (20-100 keV) [4]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **3.3 10^{42}** (0.1-2.4 keV) [1] **1.6 10^{44}** (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: **1234.8** [1]	M_B [mag]: **-24.3**	A_V [mag]: **0.20** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: **8.8 10^8** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

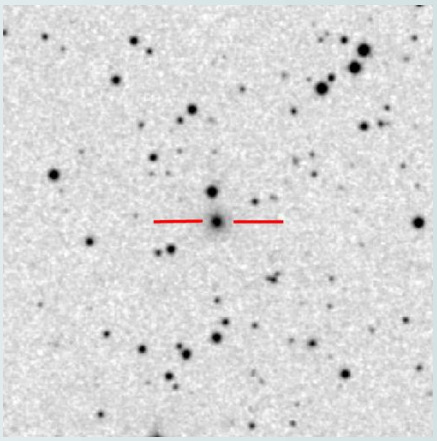
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J06292+4858

RA_{2000}: **06 29 13.57** [1]
DEC_{2000}: **+49 01 24.9** [1]

Class: **ACTIVE GALACTIC NUCLEUS?**
Type: **BL LAC OBJECT?**

Optical Spectrum [1]



General Data		
m_R [mag]: **15.3** [2]	**B-R** [mag]: **+1.8** [2]	**z** = **0.097** [1]
F_X [erg/cm^2/s]: **6.7 10^{-11}** (20-40 keV) [3] **<5.7 10^{-11}** (40-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.8 10^{45}** (20-40 keV) [1] **<1.6 10^{45}** (40-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: **479.9** [1]	**M_B** [mag]: **-21.9**	**A_V** [mag]: **0.47** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin; identification needing confirmation [1].

References:

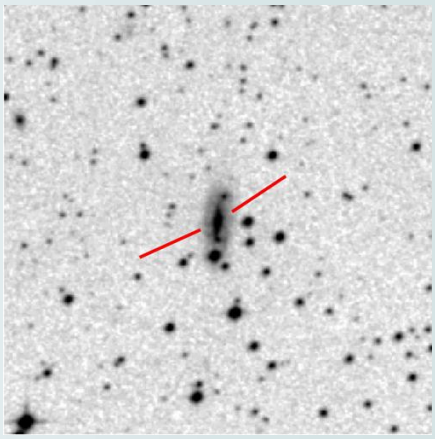
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J07437-5137

RA_{2000}: **07 43 31.71** [1]
DEC_{2000}: **-51 40 56.7** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **15.43** [2]	**B-V** [mag]: -	**z** = **0.025** [1]
F_X [erg/cm^2/s]: **9.1 10^{-12}** (20-40 keV) [3] **<6.6 10^{-12}** (40-100 keV) [3]	**F_{RADIO}** [mJy]: **28.4** (843 MHz) [4]	**F_{IR}** [Jy]: **<0.391** (12 μm) [5] **0.217** (25 μm) [5] **1.74** (60 μm) [5] **5.06** (100 μm) [5]
L_X [erg/s]: **1.5 10^{43}** (20-40 keV) [1] **<1.1 10^{43}** (40-100 keV) [1]	**L_{RADIO}** [erg/s]: **3.9 10^{38}** (843 MHz)	**L_{IR}** [erg/s]: **<1.6 10^{44}** (12 μm) **4.3 10^{43}** (25 μm) **1.4 10^{44}** (60 μm) **2.5 10^{44}** (100 μm)
D [Mpc]: **117.5** [1]	**M_B** [mag]: **-18.99** [2]	**A_V** [mag]: **0.93** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

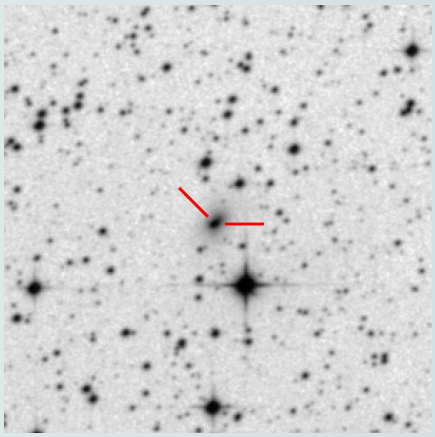
Notes:

Finding chart of size 5 x 5 arcmin; identification needing confirmation [1].

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Mauch, T., Murphy, T., Buttery, H.J., et al., 2003, MNRAS, 342, 1117
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J07565-4139



RA_{2000}: 07 56 19.62 [2]
DEC_{2000}: -41 37 42.1 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY

Optical Spectrum [1]

General Data		
m_B [mag]: -	**B-V** [mag]: -	**z** = 0.021 [1]
F_X [erg/cm^2/s]: 3.5 10^{-12} (0.5-8 keV) [2] 1.5 10^{-11} (17-60 keV) [2] 7.6 10^{-12} (20-40 keV) [3] <7.5 10^{-12} (40-100 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: 4.1 10^{42} (0.5-8 keV) [1] 1.7 10^{43} (17-60 keV) [1] 8.8 10^{42} (20-40 keV) [1] <8.7 10^{42} (40-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc] **:** 98.4 [1]	M_v [mag]: -	A_V [mag]: 2.39 GALACTIC [1] >4.3 AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Galactic star along line of sight [1].

References:

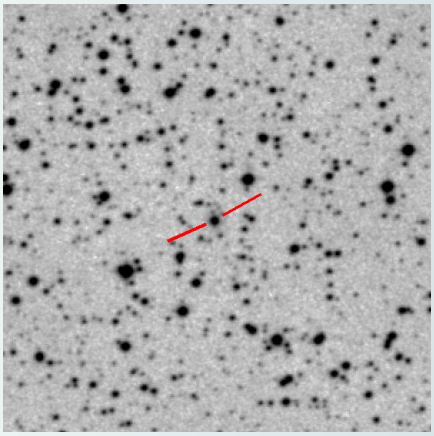
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Sazonov, S.Y., Churazov, E., Revnivtsev, M.G., et al. 2005, A&A, 444, L37
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765

IGR J07597-3842

RA_{2000}: **07 59 41.819** [1]
DEC_{2000}: **-38 43 56.03** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **1 6.6** [2]	**B-R** [mag]: **+2.4** [2]	**z** = **0.040** [1]
F_X [erg/cm^2/s]: **8.0 10^{-12}** (0.1-2 keV) [5] **1.7 10^{-11}** (20-40 keV) [6] **1.8 10^{-11}** (40-100 keV) [6]	**F_{RADIO}** [mJy]: **3.8** (1.4 GHz) [3]	**F_{IR}** [Jy]: **<0.250** (12 μm) [4] **0.241** (25 μm) [4] **<0.400** (60 μm) [4] **<2.15** (100 μm) [4]
L_X [erg/s]: **3.5 10^{43}** (0.1-2 keV) [1] **1.5 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **2.3 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: **<2.7 10^{44}** (12 μm) **1.3 10^{44}** (25 μm) **<8.6 10^{43}** (60 μm) **<2.8 10^{44}** (100 μm)
D [Mpc]: **190.1** [1]	**M_R** [mag]: **-24.3**	**A_V** [mag]: **2.51** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **2.0 10^8** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

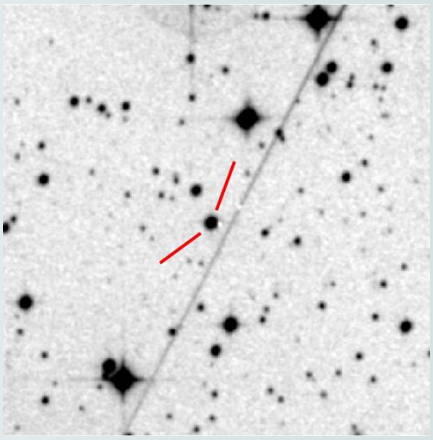
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[4] IRAS catalogue of Point Sources, Version 2.0 (1986)
[5] ROSAT team, 2000, ROSAT News No. 71, The ROSAT Source Catalog of Pointed Observations with the High Resolution Imager (1RXH; 3rd Release)
[6] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765

IGR J08023-6954

RA_{2000}: **08 02 41.64** [1]
DEC_{2000}: **-69 53 37.7** [1]

Class: **ACTIVE STAR?**
Type: **RS CVn?**

Optical Spectrum [1]



General Data		
m_B [mag]: **13.3** [2]	**B-R** [mag]: **+2.7** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **5.3 10^{-11}** (17-60 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: -	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: -	**M_B** [mag]: -	**A_V** [mag]: -
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{star}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin; identification needing confirmation [1].

References:

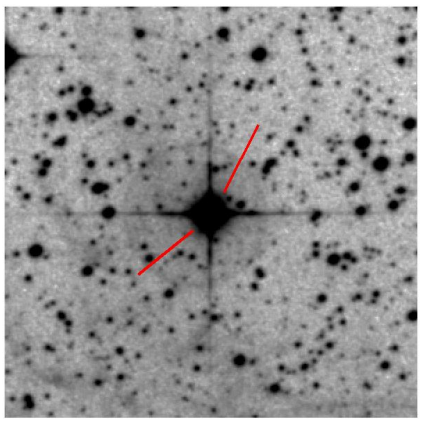
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775

IGR J08408-4503

RA_{2000}: **08 40 47.7923** [1]
DEC_{2000}: **-45 03 30.233** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT FAST X-RAY TRANSIENT**

Optical Spectrum [2]



General Data		
m_B [mag]: **7.77** [6]	**B-V** [mag]: **+0. 22** [6]	**z** = **0** [2]
F_X [erg/cm^2/s]: **0.5-6.0 10^{-9}** (0.1-100 keV) FLARE [4] **1.9 10^{-13}** (0.5-10 keV) QUIESCENCE [5]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **0.4-5.2 10^{36}** (0.1-100 keV) FLARE **1.7 10^{32}** (0.5-10 keV) QUIESCENCE	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [kpc]: **2.7** [2]	M_V [mag]: **-6.2** [2]	A_V [mag]: **1.57** [2]
P_{orb} [days]: **~550** [4]	P_{spin} [s]: -	M_{obj} [M_{sun}]: -

Notes:

Spectral type of secondary star: O8.5 Ib [3]; transient [2,4]; finding chart of size 5 x 5 arcmin.

References:

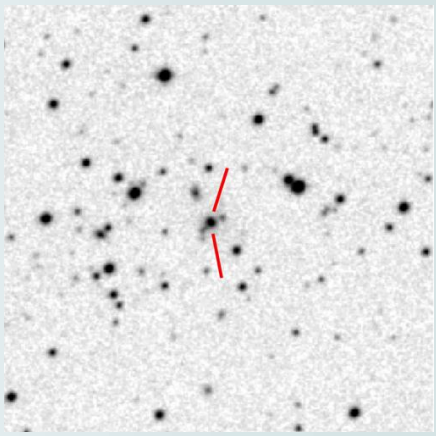
[1] Perryman, M.A.C., Lindgren, L., Kovalevsky, J., et al., 1997, A&A, 323, 249
[2] Leyder, J.-C., Walter, R., Lazos, M., Masetti, N., & Produit, N. 2007, A&A, 465, L35
[3] Walborn, N. R., 1973, Astron. J., 78, 1067
[4] Götz, D., Falanga, M., Senziani, F., et al. 2007, ApJ, 655, L101
[5] Kennea, J.A., & Campana, S. 2006, ATel 818
[6] Drilling, J.S. 1991, ApJS, 76, 1033

IGR J09446-2636

RA_{2000}: **09 44 37.02** [1]
DEC_{2000}: **-26 33 55.4** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.5 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.8** [2]	**B-R** [mag]: **-0.4** [2]	**z** = **0.1425** [1, 6]
F_X [erg/cm^2/s]: **1.6 10^{-12}** (0.1-2.4 keV) [3] **3.9 10^{-11}** (17-60 keV) [4]	**F_{RADIO}** [mJy]: **4.2** (1.4 GHz) [5]	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.0 10^{44}** (0.1-2.4 keV) [1] **2.5 10^{45}** (17-60 keV) [1]	**L_{RADIO}** [erg/s]: **3.7 10^{39}** (1.4 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **726.2** [1]	**M_B** [mag]: **-23.3**	**A_V** [mag]: **0.27** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **9.7 10^7** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

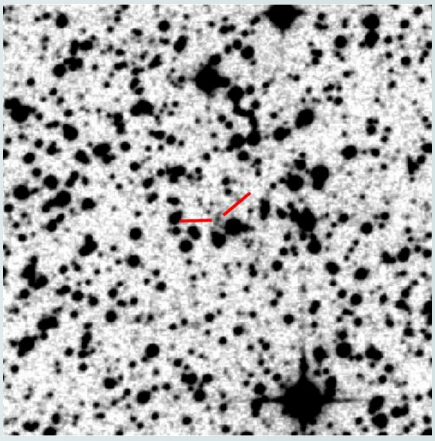
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[5] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1988, AJ, 115, 1693
[6] Jones, D.H., Saunders, W., Colless, M., et al. 2004, MNRAS, 355, 747

IGR J09523-6231

RA_{2000}: 09 52 20.7 [1]
DEC_{2000}: -62 32 37 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1.9 GALAXY

Optical Spectrum [1]



General Data		
m_R [mag]: 19.5	**B-V** [mag]: -	**z** = 0.252 [1]
F_X [erg/cm^2/s]: 1.9 10^{-12} (0.2-12 keV) [2] 1.2 10^{-11} (20-100 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: 4.2 10^{44} (0.2-12 keV) [1] 2.8 10^{45} (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: 1369.4 [1]	M_R [mag]: -22.0	A_V [mag]: 0.94 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

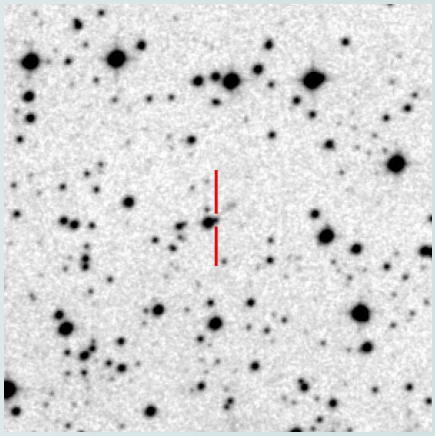
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Saxton, R.D., Read, A.M., Esquej, P., et al. 2008, A&A, 480, 611
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J10101-5654



RA_{2000}: **10 10 11.866** [1]
DEC_{2000}: **-56 55 32.06** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]

General Data		
m_B [mag]: -	**B-V** [mag]: -	**z** = **0** [1]
F_X [erg/cm^2/s]: **1.8 10^{-11}** (20-65 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: -	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: -	**M_V** [mag]: -	**A_V** [mag]: -
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Early giant comparion star [1]; finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Kuiper, L., Keek, S., Hermsen, W., et al. 2006, ATel 684

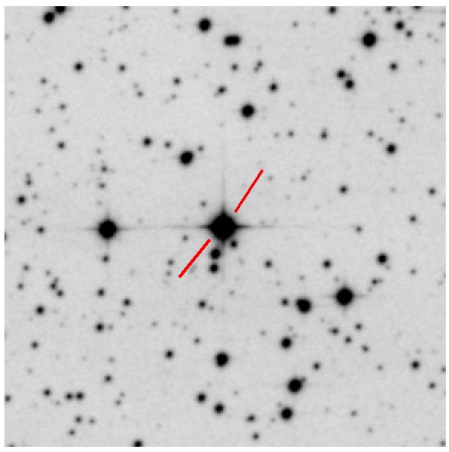
IGR J10109-5746

RA_{2000}: **10 11 02.946** [1]

DEC_{2000}: **-57 48 13.92** [1]

Class: **C ATACLYSMIC VARIABLE**
Type: **SYMBIOTIC BINARY**

Optical Spectrum [3100-5100 Å] [3600-7200 Å] [3]



General Data		
m_V [mag]: **~9.8** [2]	**B-V** [mag]: -	**z** = **0** [4]
F_X [erg/cm^2/s]: **8.5 10^{-12}** (2-10 keV) [7] **1.8 10^{-11}** (17-60 keV) [5]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: **1.52** (12 μm) [6] **<3.86** (25 μm) [6] **<81.7** (60 μm) [6] **<337** (100 μm) [6]
L_X [erg/s]: **1.5 10^{33}** (2-10 keV) **3.0 10^{33}** (17-60 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **6.5 10^{34}** (12 μm) **<7.8 10^{34}** (25 μm) **<7.0 10^{35}** (60 μm) **<1.7 10^{36}** (100 μm)
D [kpc]: **1.2**	**M_V** [mag]: **-0.6** (ASSUMED)	**A_V** [mag]: -
P_{orb} [days]: **577** [8]	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: -

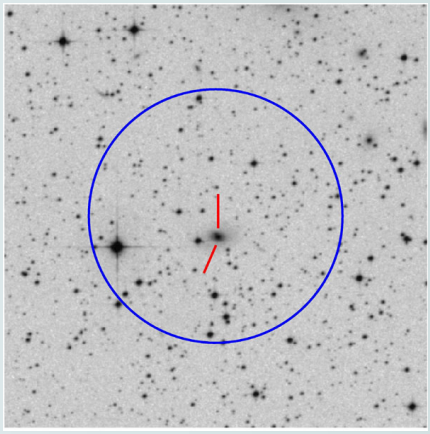
Notes:

Spectral type of secondary star: M3 [4]; finding chart of size 5 x 5 arcmin.

References:

[1] Zacharias, N., Urban, S.E., Zacharias, M.I., et al. 2004, AJ, 127, 3043
[2] Wils, P. 2003, IBVS 5457
[3] Cieslinski, D., Jablonski, F.J., & Steiner, J.E. 1997, A&AS, 124, 55
[4] Sanduleak, N., & Stephenson, C.B. 1973, ApJ, 185, 899
[5] Revnivtsev M.G., Sazonov, S.Y., Molkov, S.V., et al. 2006, Astron. Lett., 32, 145
[6] IRAS Catalogue of point sources, v2.0 (1986)
[7] Smith, R.K., Mushotzky, R., Mukai, K. et al. 2007, PASJ, 60S, 43
[8] Pojmanski, G. 2003, Acta Astron., 53, 341

IGR J10404-4625



RA_{2000}: **10 40 22.55** [5]
DEC_{2000}: **-46 25 25.7** [5]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: **14.11** [1]	**B-V** [mag]: **+0.56** [1]	**z** = **0.024** [1, 3]
F_X [erg/cm^2/s]: **2.2 10^{-11}** (20-40 keV) [4] **5.5 10^{-11}** (40-100 keV) [4]	F_{RADIO} [mJy]: **61.3** (843 MHz) [2]	F_{IR} [Jy]: **<0.250** (12 μm) [6] **0.315** (25 μm) [6] **0.866** (60 μm) [6] **<1.90** (100 μm) [6]
L_X [erg/s]: **1.1 10^{44}** (20-100 keV) [1]	L_{RADIO} [erg/s]: **7.6 10^{38}** (843 MHz)	L_{IR} [erg/s]: **<9.2 10^{43}** (12 μm) **5.6 10^{43}** (25 μm) **6.4 10^{43}** (60 μm) **<8.4 10^{43}** (100 μm)
D [Mpc]: **111** [1]	M_B [mag]: **-21.1** [1]	A_V [mag]: **0.50** GALACTIC [1] **>5.6** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

INTEGRAL error box reported as a circle in the figure.

References:

[1] Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006, A&A, 449, 1139
[2] Mauch, T., Murphy, T., Buttery, H.J., et al. 2003, MNRAS, 342, 1117
[3] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[4] Bird, A.J., Barlow, E.J., Bassani, L. et al. 2006, ApJ, 636, 765
[5] Stein, P. 1996, A&AS, 116, 203
[6] IRAS Catalogue of point sources, v2.0 (1986)

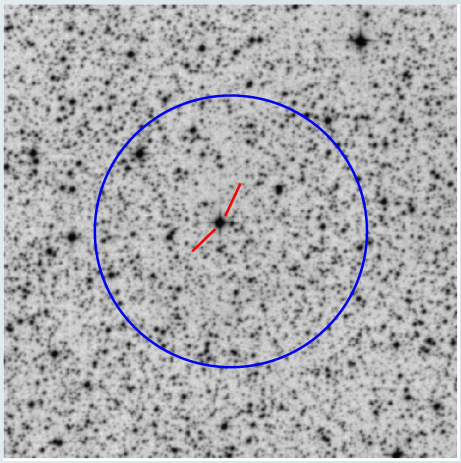
IGR J11215-5952

RA_{2000}: **11 21 46.807** [7]

DEC_{2000}: **-59 51 47.93** [7]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT FAST X-RAY TRANSIENT**

Optical Spectrum [1]



General Data		
m_B [mag]: **1 0.57** [4]	**B-V** [mag]: **+0.59** [4]	**z** = **0** [1, 3]
F_X [erg/cm^2/s]: **6.2 10^{-10}** (5-100 keV) PEAK [2] **~1 10^{-11}** (2-10 keV) QUIESCENCE [5]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.0 10^{36}** (5-100 keV) PEAK [2] **~5 10^{34}** (2-10 keV) QUIESCENCE	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~6.2** [1]	**M_V** [mag]: **-6.4** [1]	**A_V** [mag]: **2.42** [1]
P_{orb} [days]: **330** [2]	**P_{spin}** [s]: **195** [6]	**M_{NS}** [M_{sun}]: -

Notes:

Transient X-ray source [2]; spectral type of secondary star: B1 Ia [3]; INTEGRAL error box reported as a circle in the figure.

References:

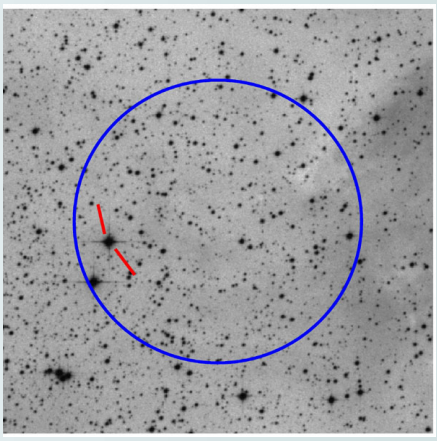
[1] Masetti, N., Pretorius, M.L., Palazzi, E. et al. 2006, A&A, 449, 1139
[2] Sidoli, L., Paizis, A., & Mereghetti, S. 2006, A&A, 450, 29
[3] Vijapurkar, J., & Drilling, J.S. 1993, ApJS, 89, 293
[4] Klare, G., & Neckel, T. 1977, A&AS, 27, 215
[5] Steeghs, D., & Torres, M.A.P. 2006, ATel 768
[6] Smith, D.M., Bezayiff, N., & Negueruela, I. 2006, ATel 773
[7] Høg, E., Kuzmin, A., Bastian, U., et al. 1998, A&A, 335, L65

IGR J11305-6256

RA_{2000}: **11 31 06.9111** [5]
DEC_{2000}: **-62 56 48.931** [5]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_B [mag]: **8.24** [4]	**B-V** [mag]: **+0.01** [4]	**z** = **0** [1, 3]
F_X [erg/cm^2/s]: **9.5 10^{-11}** (20-60 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1 10^{35}** (20-60 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~3** [1]	**M_V** [mag]: **-5.1** [1]	**A_V** [mag]: **0.96** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Transient X-ray source [2]; spectral type of secondary star: B0 III [3]; INTEGRAL error box reported as a circle in the figure.

References:

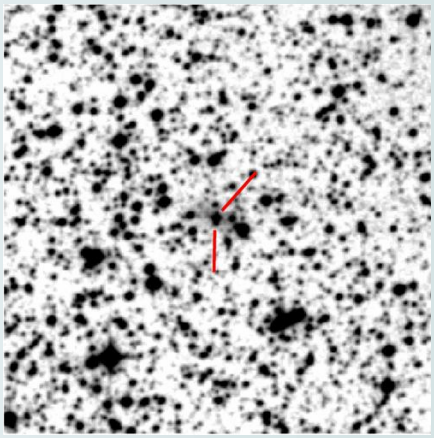
[1] Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006, A&A, 449, 1139
[2] Produit, N., Ballet, J., & Mowlavi, N. 2004, ATel 278
[3] Garrison, R.F., Hiltner, W.A., & Schild, R.E. 1977, ApJS, 35, 111
[4] Fernie, J. D. 1983, ApJS, 52, 7
[5] Perryman, M.A.C., Lindegren, L., Kovalevsky, J., et al. 1997, A&A, 323, L49

IGR J11366-6002

RA_{2000}: **11 36 42.04** [1]
DEC_{2000}: **-60 03 06.6** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY/LINER**

Optical Spectrum [1]



General Data		
m_R [mag]: **15.1** [4]	**B-R** [mag]: **+2.3** [4]	**z** = **0.014** [1]
F_X [erg/cm^2/s]: **4.6 10^{-12}** (2-10 keV) [2] **1.3 10^{-11}** (20-100 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **2.3 10^{42}** (2-10 keV) [1] **6.6 10^{42}** (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: **65.3** [1]	M_B [mag]: **-22.5**	A_V [mag]: **2.9** GALACTIC [1] **1.5** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

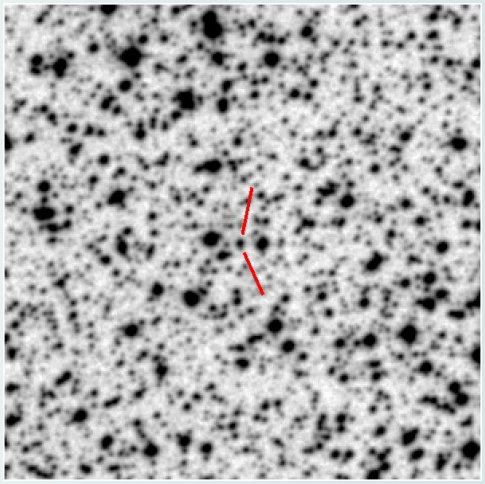
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Stephen, J.B., et al. 2007, ATel 1288
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J11435-6109

RA_{2000}: **11 44 00.31** [6]
DEC_{2000}: **-61 07 36.5** [6]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [4]



General Data		
m_B [mag]: **17.71** [4]	**B-V** [mag]: **+1.28** [4]	**z** = **0** [4]
F_X [erg/cm^2/s]: **1.8 10^{-10}** (18-45 keV) OUTBURST [4] **5.6 10^{-11}** (2-20 keV) QUIESCENCE [2] **4.8 10^{-12}** (0.3-10 keV) QUIESCENCE [6]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: -	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: -	**M_V** [mag]: -	**A_V** [mag]: -
P_{orb} [days]: **52.46** [5]	**P_{spin}** [s]: **161.76** [3]	**M_{NS}** [M_{sun}]: -

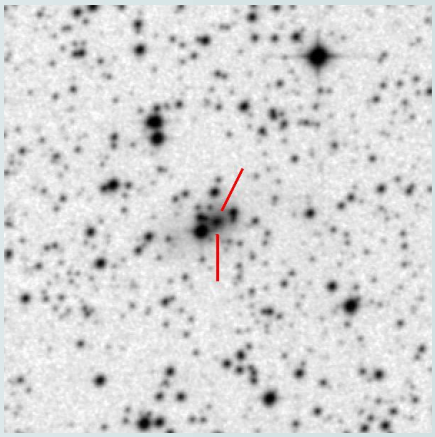
Notes:

Transient X-ray source [1]; finding chart of size 5 x 5 arcmin.

References:

[1] Grebenev, S.A., Ubertini, P., & Chenevez, J. 2004, ATel 350
[2] Swank, J.H., & Markwardt, C.B. 2004, ATel 358
[3] Swank, J.H., & Markwardt, C.B. 2004, ATel 359
[4] Negueruela, I., Torrejón, J.M., & McBride, V. 2007, ATel 1239
[5] Corbet, R.H.D., & Remillard, R. 2005, ATel 377
[6] Tomsick, J.A., Chaty, S., Rodriguez, J. et al. 2007, ATel 1231

IGR J12026-5349



RA_{2000}: 12 02 47.63 [2]
DEC_{2000}: -53 50 07.7 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY

Optical Spectrum [1]

General Data		
m_I [mag]: 1 2.42 [3]	**B-V** [mag]: -	**z** = 0.028 [1, 6]
F_X [erg/cm^2/s]: $6.7\ 10^{-12}$ (0.5-8 keV) [2] $3.3\ 10^{-11}$ (17-60 keV) [2]	F_{RADIO} [mJy]: 75.2 (843 MHz) [4]	F_{IR} [Jy]: 0.309 (12 µm) [5] 0.937 (25 µm) [5] 1.92 (60 µm) [5] 2.09 (100 µm) [5]
L_X [erg/s]: $1.4\ 10^{43}$ (0.5-8 keV) [1] $6.8\ 10^{43}$ (17-60 keV) [1]	L_{RADIO} [erg/s]: $1.3\ 10^{39}$ (843 MHz)	L_{IR} [erg/s]: $1.6\ 10^{44}$ (12 µm) $2.3\ 10^{44}$ (25 µm) $2.0\ 10^{44}$ (60 µm) $1.3\ 10^{44}$ (100 µm)
D [Mpc]: 131.4 [1]	M_I [mag]: -25.0	A_V [mag]: 0.65 GALACTIC [1] 3.1 AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Compton thick source [1]; finding chart of size 5 x 5 arcmin.

References:

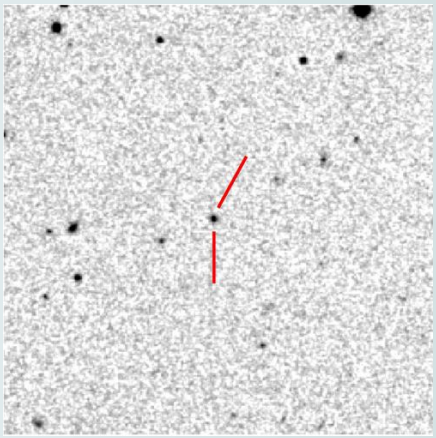
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Sazonov, S.Y., Churazov, E., Revnivtsev, M.G., et al. 2005, A&A, 444, L37
[3] Monet, D.G., Levine, S.E., Canzian, B., et al. 2003, AJ, 125, 984
[4] Mauch, T., Murphy, T., Buttery, H.J., et al. 2003, MNRAS, 342, 1117
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)
[6] Fisher, K.B., Huchra, J.P., Strauss, M.A., et al. 1995, ApJS, 100, 69

IGR J12131+0700

RA_{2000}: 12 12 49.81 [1]
DEC_{2000}: +06 59 45.1 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1.5/1.8 GALAXY

Optical Spectrum [1]



General Data		
m_B [mag]: 18.45 [5]	**B-V** [mag]: +0.53 [5]	**z** = 0.2095 [1]
F_X [erg/cm^2/s]: 1.5 10^{-13} (2-10 keV) [2] 2.0 10^{-11} (20-100 keV) [3]	F_{RADIO} [mJy]: 2.9 (1.4 GHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: 2.2 10^{43} (2-10 keV) [1] 2.9 10^{45} (20-100 keV) [1]	L_{RADIO} [erg/s]: 6.0 10^{39} (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: 1111.7 [1]	M_B [mag]: -21.8	A_V [mag]: 0.05 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 5.1 10^7 [1]

Notes:

Finding chart of size 5 x 5 arcmin; the reported Johnson magnitudes are computed from the SDSS values using the conversion tables of Jester et al. (2005, AJ, 130, 873).

References:

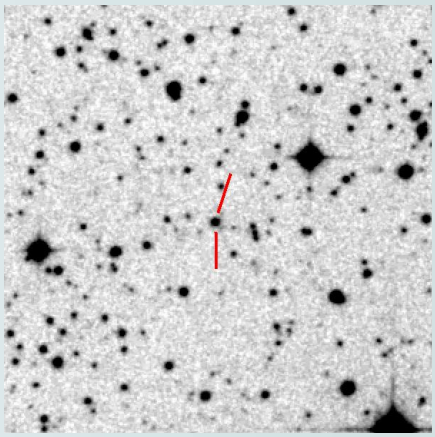
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Stephen, J.B., et al. 2007, ATel 1310
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Adelman-McCarthy, J.K., Agüeros, M.A., Allam, S.S., et al. 2008, AJ, 175, 297

XSS J12270-4859

RA_{2000}: 12 27 58.748 [1]
DEC_{2000}: -48 53 42.88 [1]

Class: CATACLYSMIC VARIABLE
Type: INTERMEDIATE POLAR

Optical Spectrum [1]



General Data		
m_B [mag]: 17.3 [2]	**B-R** [mag]: +1.6 [2]	**z** = 0 [1]
F_X [erg cm^{-2} s^{-1}]: 1.9 10^{-12} (0.1-2.4 keV) [4] 2.5 10^{-11} (17-60 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg s^{-1}]: 1.1 10^{31} (0.1-2.4 keV) 1.4 10^{32} (17-60 keV)	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [pc]: ~200 [1]	M_V [mag]: +9 (ASSUMED) [1]	A_V [mag]: 0 (ASSUMED) [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{WD} [M_{sun}]: -

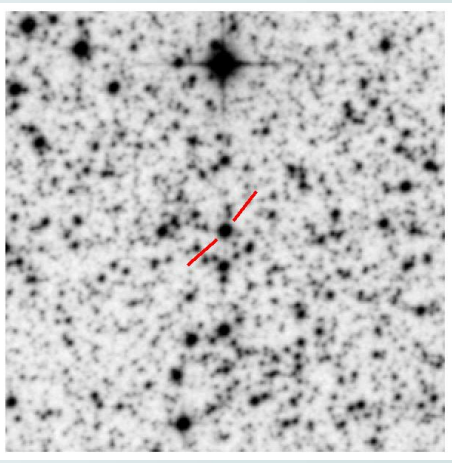
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Revnivtsev, M.G., Sazonov, S.Y., Molkov, S.V., et al. 2006, Astron. Lett., 32, 145
[4] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389

IGR J12349-6433



RA_{2000}: **12 34 53.74** [1]
DEC_{2000}: **-64 33 56.0** [1]

Class: **C ATACLYSMIC VARIABLE**
Type: **SYMBIOTIC BINARY**

Optical Spectrum [3]

General Data		
m_B [mag]: **14.25** [2]	**B-V** [mag]: **+1.72** [2]	**z** = **0** [3]
F_X [erg/cm^2/s]: **9.1 10^{-12}** (0.5-8 keV) [6] **3.0 10^{-11}** (0.5-10 keV) [5] **5.5 10^{-11}** (16-60 keV) [4]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.7 10^{34}** (0.5-8 keV) **5.7 10^{34}** (0.5-10 keV) **1.1 10^{35}** (16-60 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **4**	**M_V** [mag]: **-0.5** (ASSUMED)	**A_V** [mag]: -
P_{orb} [days]: **~450** [6]	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: **>1.3** [6]

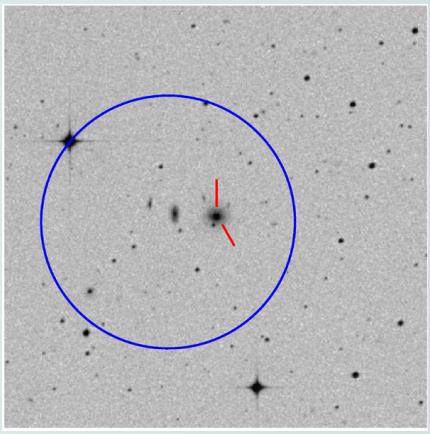
Notes:

Spectral type of secondary star: M4-M5 [3]; erupting variable [3]; finding chart of size 5 x 5 arcmin.

References:

[1] Zacharias, N., Urban, S.E., Zacharias, M.I. et al. 2000, AJ, 120, 2131
[2] Cieslinski, D., Jablonski, F.J., & Steiner, J.E. 1997, A&AS, 124, 55
[3] Cieslinski, D., Elizalde, F., & Steiner J.E. 1994, A&AS, 106, 243
[4] Chernyakova, M., Courvoisier, T.J.-L., & Rodriguez, J. 2005, ATel 519
[5] Tueller J., Gehrels, N., Mushotzky R.F., et al. 2005, ATel 591
[6] Luna, G.J.M., & Sokoloski, J.L. 2007, ApJ, 671, 741

LEDA 170194



RA_{2000}: **12 39 06.32** [1]
DEC_{2000}: **-16 10 47.8** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [2]

General Data		
m_B [mag]: **15.1** [5]	**B-V** [mag]: -	**z** = **0.0367** [2, 3]
F_X [erg/cm^2/s]: **2.0 10^{-12}** (0.5-8 keV) [1] **6.2 10^{-11}** (20-100 keV) [7]	F_{RADIO} [mJy]: **39.4** (1.4 GHz) [4]	F_{IR} [Jy]: **<0.250** (12 μm) [6] **<0.374** (25 μm) [6] **0.43** (60 μm) [6] **1.38** (100 μm) [6]
L_X [erg/s]: **7.4 10^{42}** (0.5-8 keV) [2] **2.2 10^{44}** (20-100 keV)	L_{RADIO} [erg/s]: **2.0 10^{39}** (1.4 GHz)	L_{IR} [erg/s]: **<2.3 10^{44}** (12 μm) **<1.6 10^{44}** (25 μm) **7.8 10^{43}** (60 μm) **1.5 10^{44}** (100 μm)
D [Mpc]: **174** [2]	M_B [mag]: **-21.27** [5]	A_V [mag]: **0.14** GALACTIC [2] **2.48** AGN [2]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

INTEGRAL error box reported as a circle in the figure.

References:

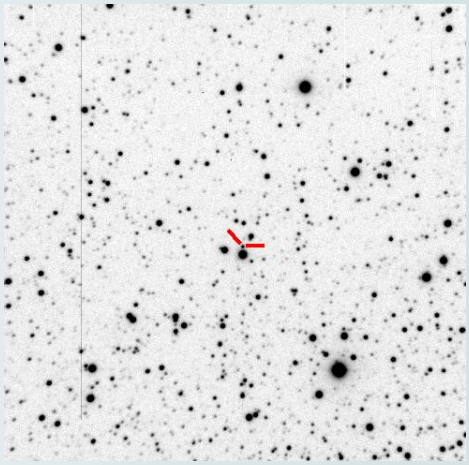
[1] Sazonov, S., Churazov, E., Revnivtsev, M., et al. 2005, A&A, 444, L37
[2] Masetti, N., Mason, E., Bassani, L., et al. 2006, A&A, 448, 547
[3] da Costa, L.N., Willmer, C.N.A., Pellegrini, P.S., et al. 1998, AJ, 116, 1
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115,1693
[5] Hyperleda Catalogue, (http://leda.univ-lyon1.fr/)
[6] IRAS Catalogue of point souces, Version 2.0 (1986)
[7] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J13020-6359

RA_{2000}: **13 01 58.8** [2]
DEC_{2000}: **-63 58 10** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_V [mag]: **19.67** [1]	**V-R** [mag]: **1.97** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **1-10 10^{-11}** (2-10 keV) [2] **1.6 10^{-11}** (20-40 keV) [3] **1.2 10^{-11}** (40-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **0.6-6 10^{35}** (2-10 keV) **1.6 10^{35}** (20-100 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~7** [1, 3]	**M_V** [mag]: **-4.5** [1]	**A_V** [mag]: **~10** [1]
P_{orb} [days]: -	**P_{spin}** [s]: **700** [2]	**M_{NS}** [M_{sun}]: -

Notes:

Spectral type B1 III or B9 V [1]; finding chart of size 5 x 5 arcmin.

References:

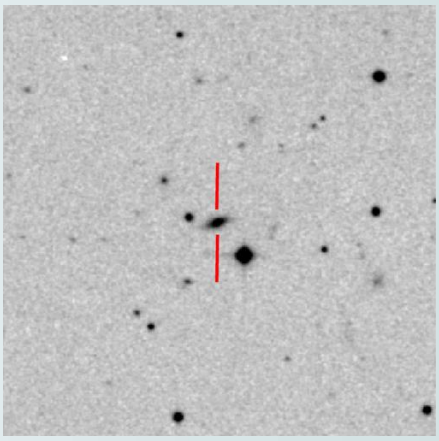
[1] Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006, A&A, 449, 1139
[2] Chernyakova, M., Lutovinov, A., Rodrí-guez, J., et al. 2005, MNRAS, 364, 455
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765

IGR J13038+5348

RA_{2000}: **13 03 59.43** [1]
DEC_{2000}: **+53 47 30.1** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **16.2** [5]	**B-V** [mag]: -	**z** = **0.030** [1, 6]
F_X [erg/cm^2/s]: **3.3 10^{-13}** (0.1-2.4 keV) [2] **3.1 10^{-11}** (17-60 keV) [3]	F_{RADIO} [mJy]: **2.7** (1.4 GHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: **7.9 10^{41}** (0.1-2.4 keV) [1] **7.5 10^{43}** (17-60 keV) [1]	L_{RADIO} [erg/s]: **9.0 10^{37}** (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: **141.5** [1]	M_B [mag]: **-19.7**	A_V [mag]: **0.06** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: **5.4 10^7** [1]

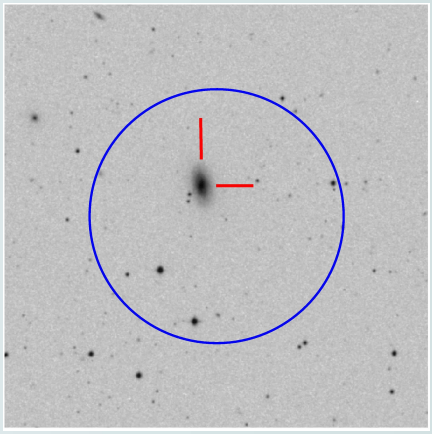
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[4] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] Burenin, R.A., Mescheryakov, A.V., Revnivtsev, M.G. et al., 2008, Astron. Lett., in press (arXiv:0802.1791)

IGR J13091+1137



RA_{2000}: 13 09 05.65 [3]
DEC_{2000}: +11 38 01.8 [3]

Class: ACTIVE GALACTIC NUCLEUS
Type: X-RAY BRIGHT, OPTICALLY NORMAL GALAXY

Optical Spectrum [4]

General Data		
m_B [mag]: 14.5 [1]	**B-V** [mag]: -	**z** = 0.0291 [1, 4]
F_X [erg/cm^2/s]: 1.2 10^{-12} (0.5-8 keV) [3] 3.4 10^{-11} (17-60 keV) [3]	F_{RADIO} [mJy]: 2.01 (1.4 GHz) [2]	F_{IR} [erg/cm^2/s]: -
L_X [erg/s]: 2.0 10^{42} (0.5-8 keV) [4] 5.7 10^{43} (17-60 keV) [4]	L_{RADIO} [erg/s]: 4.7 10^{37} (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: 118 [4]	M_B [mag]: -21.19 [1]	A_V [mag]: 0.08 GALACTIC [4]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

INTEGRAL error box reported as a circle in the figure.

References:

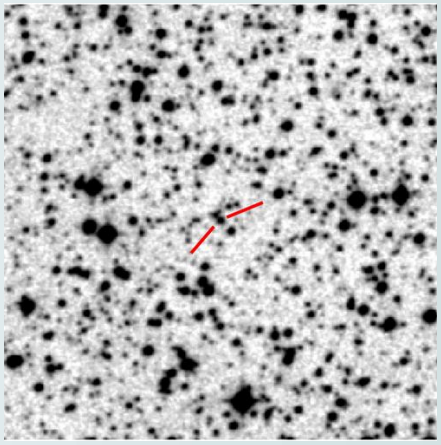
[1] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[2] White, R.L., Becker, R.H., Helfand, D.J., & Gregg, M.D. 1997, ApJ, 475, 479
[3] Sazonov, S., Churazov, E., Revnivtsev, M. et al. 2005, A&A, 444, L37
[4] Masetti, N., Bassani, L., Bazzano, A., et al. 2006, A&A, 455, 11

IGR J13109-5552

RA_{2000}: **13 10 43.35** [1]
DEC_{2000}: **-55 52 11.4** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.6**	**B-V** [mag]: -	**z** = **0.104** [1]
F_X [erg/cm^2/s]: **5.7 10^{-12}** (0.2-12 keV) [2] **2.4 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **613.7** (843 MHz) [4] **355** (4.85 GHz) [5]	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.8 10^{44}** (0.2-12 keV) [1] **7.7 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **1.7 10^{41}** (843 MHz) **5.5 10^{41}** (4.85 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **516.9** [1]	**M_R** [mag]: **-22.8**	**A_V** [mag]: **1.0** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

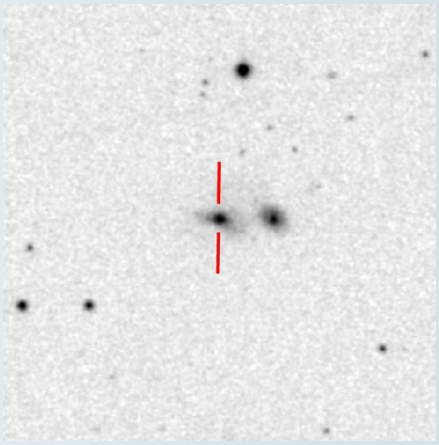
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Saxton, R.D., Read, A.M., Esquej, P., et al. 2008, A&A, 480, 611
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Murphy, T., Mauch, T., Green, A., et al. 2007, MNRAS, 382, 382
[5] Wright, A.E., Griffith, M.R., Burke, B.F., & Ekers, R.D. 1994, ApJS, 91, 111

IGR J13149+4422



RA_{2000}: 13 15 17.25 [1]
DEC_{2000}: +44 24 25.9 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY/LINER

Optical Spectrum [1]

General Data		
m_B [mag]: 15.1 [5]	**B-V** [mag]: +0.64 [6]	**z** = 0.0353 [1, 6]
F_X [erg/cm^2/s]: 2.9 10^{-12} (0.2-12 keV) [2] 2.1 10^{-11} (17-60 keV) [3]	F_{RADIO} [mJy]: 14.3 (1.4 GHz) [4]	F_{IR} [Jy]: <0.250 (12 μm) [7] 0.373 (25 μm) [7] 1.68 (60 μm) [7] 1.97 (100 μm) [7]
L_X [erg/s]: 9.7 10^{43} (0.2-12 keV) [1] 7.2 10^{43} (17-60 keV) [1]	L_{RADIO} [erg/s]: 6.7 10^{38} (1.4 GHz)	L_{IR} [erg/s]: <2.1 10^{44} (12 μm) 1.5 10^{44} (25 μm) 2.8 10^{44} (60 μm) 2.0 10^{44} (100 μm)
D [Mpc]: 167.2 [1]	M_B [mag]: -21.23 [5]	A_V [mag]: 0.059 GALACTIC [1] 1.62 AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

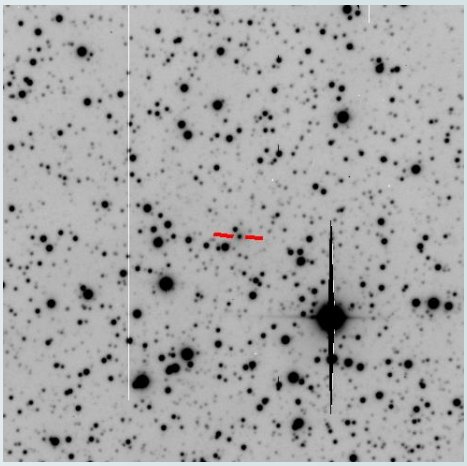
Notes:

Finding chart of size 5 x 5 arcmin; the reported B-V color is computed from the SDSS magnitudes using the conversion tables of Jester et al. (2005, AJ, 130, 873); radio position at 4 arcsec from the optical counterpart.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Saxton, R.D., Read, A.M., Esquej, P., et al. 2008, A&A, 480, 611
[3] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[4] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] Adelman-McCarthy, J.K., Agüeros, M.A., Allam, S.S., et al. 2008, AJ, 175, 297
[7] IRAS catalogue of Point Sources, Version 2.0 (1986)

4U 1344-60



RA_{2000}: **13 47 36.01** [4]
DEC_{2000}: **-60 37 03.8** [4]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.5 GALAXY**

Optical Spectrum [1]

General Data		
m_R [mag]: **18.73** [1]	**B-V** [mag]: -	**z** = **0.013** [1]
F_X [erg/cm^2/s]: **2.0 10^{-12}** (0.16-3.5 keV) [1] **2.3 10^{-11}** (2-6 keV) [1] **3.6 10^{-11}** (2-10 keV) [4] **3.0 10^{-11}** (20-40 keV) [2] **4.4 10^{-11}** (40-100 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: **0.365** (12 μm) [3] **0.883** (25 μm) [3] **3.70** (60 μm) [3] **18.2** (100 μm) [3]
L_X [erg/s]: **3.2 10^{43}** (2-6 keV) [1] **1.0 10^{43}** (20-100 keV) [1] **1.5 10^{43}** (2-10 keV) [4]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **4.0 10^{43}** (12 μm) **4.7 10^{43}** (25 μm) **8.1 10^{43}** (60 μm) **2.4 10^{44}** (100 μm)
D [Mpc]: **60.6** [1]	**M_R** [mag]: **-22.5**	**A_V** [mag]: **8.99** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5x5 arcmin.

References:

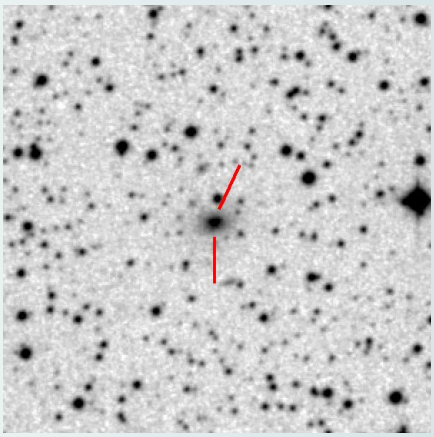
[1] Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006, A&A, 455, 11
[2] Bird, A.J., Barlow, E.J., Bassani, L. et al. 2006, ApJ, 636, 765
[3] IRAS Point source catalogue, Version 2.0 (1986)
[4] Piconcelli, E., Sánchez-Portal, M., Guainazzi, M., et al. 2006, A&A, 453, 839

IGR J14175-4641

RA_{2000}: **14 17 03.662** [1]
DEC_{2000}: **-46 41 41.19** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **15.0** [2]	**B-R** [mag]: **+2.5** [2]	**z** = **0.076** [1]
F_X [erg/cm^2/s]: **5.8 10^{-14}** (2-10 keV) [5] **1.6 10^{-11}** (17-60 keV) [3]	F_{RADIO} [mJy]: **358.6** (843 MHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: **9.5 10^{41}** (2-10 keV) **2.7 10^{44}** (17-60 keV) [1]	L_{RADIO} [erg/s]: **5.0 10^{40}** (843 MHz)	L_{IR} [erg/s]: -
D [Mpc]: **370.6** [1]	M_R [mag]: **< -23.1**	A_V [mag]: **0.35** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

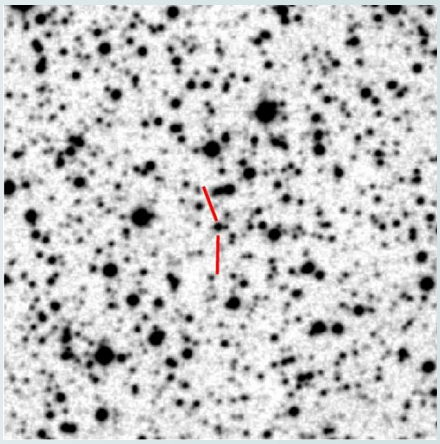
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Revnivtsev, M.G., Sazonov, S.Y., Molkov, S.V., et al. 2006, Astron. Lett., 32, 145
[4] Mauch, T., Murphy, T., Buttery, H.J., et al. 2003, MNRAS, 342, 1117
[5] Landi, R., Masetti, N., Gehrels, N., et al. 2006, ATel 990

IGR J14298-6715

RA_{2000}: **14 29 59.81** [1]
DEC_{2000}: **-67 14 44.8** [1]

Class: **LOW-MASS X-RAY BINARY**
Type: **N/A**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.4** [4]	**B-R** [mag]: **+0.1** [4]	**z** = **0** [1]
F_X [erg/cm^2/s]: **2.6 10^{-12}** (2-10 keV) [2] **1.3 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.1 10^{34}** (2-10 keV) [1] **1.5 10^{35}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~10** [1]	**M_R** [mag]: **0** (ASSUMED)	**A_V** [mag]: **1.60** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

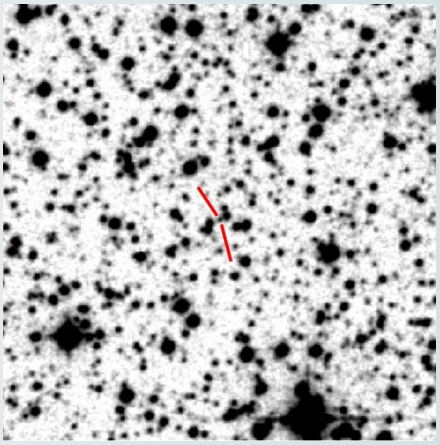
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Bassani, L., et al. 2007, ATel 1273
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J14331-6112

RA_{2000}: **14 33 08.33** [1]
DEC_{2000}: **-61 15 39.7** [1]

Class: **HIGH-MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_R [mag]: **18.1** [1]	**B-R** [mag]: -	**z** = **0** [1]
F_X [erg/cm^2/s]: **4.5 10^{-12}** (2-10 keV) [2] **1.3 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **5.4 10^{34}** (2-10 keV) [1] **1.5 10^{35}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~10** [1]	**M_R** [mag]: **-2.5**	**A_V** [mag]: **2.1** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin; companion star is not a supergiant but rather of spectral type early B III or mid B V [1].

References:

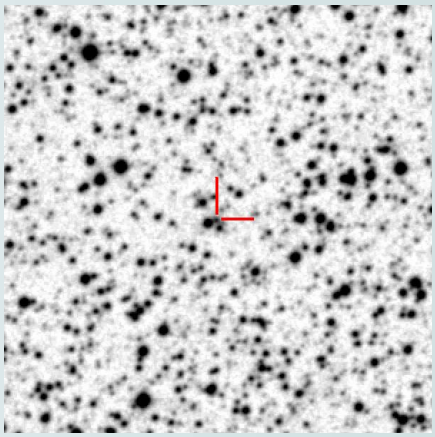
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Bassani, L., et al. 2007, ATel 1273
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J14471-6319

RA_{2000}: **14 47 14.881** [1]
DEC_{2000}: **-63 17 19.24** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **18.7** [2]	**B-R** [mag]: **+3.7** [2]	**z** = **0.038** [1]
F_X [erg/cm^2/s]: **1.1 10^{-13}** (0.1-2.4 keV) [3] **1.2 10^{-11}** (17-60 keV) [4]	F_{RADIO} [mJy]: **33.3** (843 MHz) [5]	F_{IR} [erg/cm^2/s]: -
L_X [erg/s]: **4.4 10^{41}** (0.1-2.4 keV) [1] **4.4 10^{43}** (17-60 keV) [1]	L_{RADIO} [erg/s]: **1.1 10^{39}** (843 GHz)	L_{IR} [erg/s]: -
D [Mpc]: **180.4** [1]	M_R [mag]: **< -24.6**	A_V [mag]: **4.06** GALACTIC [1] **>1.80** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

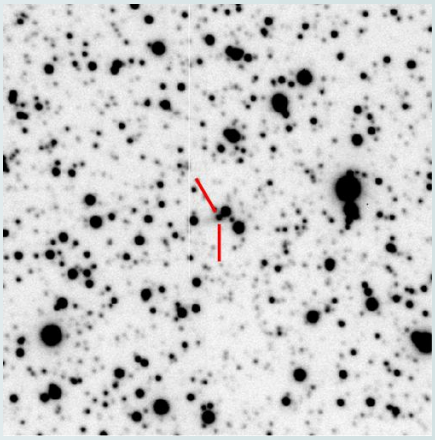
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Revnivtsev, M.G., Sazonov, S.Y., Molkov, S.V., et al. 2006, Astron. Lett., 32, 145
[5] Murphy, T., Mauch, T., Green, A., et al. 2007, MNRAS, 382, 382

IGR J14471-6414

RA_{2000}: 14 46 28.26 [1]
DEC_{2000}: -64 16 24.3 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1.2 GALAXY

Optical Spectrum [1]



General Data		
m_R [mag]: 17.1	**B-V** [mag]: -	**z** = 0.053 [1]
F_X [erg/cm^2/s]: 4.8 10^{-12} (2-10 keV) [2] 1.2 10^{-11} (20-100 keV) [3]	F_{RADIO} [mJy]: 24.5 (843 MHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: 3.7 10^{43} (2-10 keV) [1] 9.3 10^{43} (20-100 keV) [1]	L_{RADIO} [erg/s]: 1.6 10^{39} (843 MHz)	L_{IR} [erg/s]: -
D [Mpc]: 254.3 [1]	M_R [mag]: -22.0	A_V [mag]: 2.52 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 2.4 10^7 [1]

Notes:

Finding chart of size 3 x 3 arcmin obtained from R-band imaging at the ESO 3.6m telescope [1].

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Bassani, L., et al. 2007, ATel 1273
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Murphy, T., Mauch, T., Green, A., et al. 2007, MNRAS, 382, 382

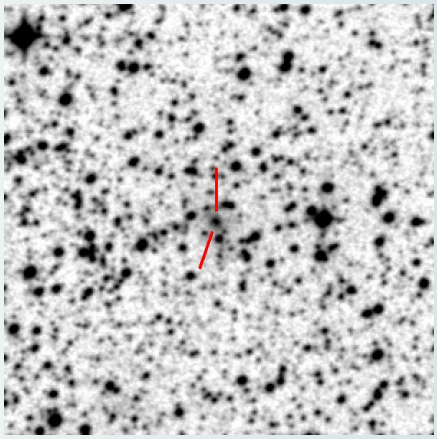
IGR J14515-5542

RA_{2000}: **14 51 33.131** [1]

DEC_{2000}: **-55 40 38.40** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **16.5** [2]	**B-R** [mag]: **+2.1** [2]	**z** = **0.018** [1]
F_X [erg/cm^2/s]: **1.1 10^{-12}** (0.1-2.4 keV) [3] **2.1 10^{-11}** (20-65 keV) [4]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.1 10^{42}** (0.1-2.4 keV) [1] **1.8 10^{43}** (20-65 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: **84.2** [1]	**M_R** [mag]: **< -23.1**	**A_V** [mag]: **3.50** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

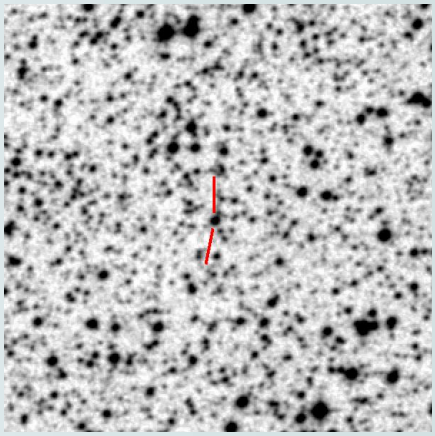
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Kuiper, L., Keek, S., Hermsen, W., et al. 2006, ATel 684

IGR J14536-5522

RA_{2000}: **14 53 41.055** [1]
DEC_{2000}: **-55 21 38.74** [1]

Class: **CATACLYSMIC VARIABLE**
Type: **(INTERMEDIATE?) POLAR**

Optical Spectrum [1]



General Data		
m_B [mag]: **15.6** [2]	**B-R** [mag]: **+0.2** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **3.4 10^{-12}** (0.1-2.4 keV) [3] **2.9 10^{-11}** (20-65 keV) [4]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **1.5 10^{31}** (0.1-2.4 keV) [1] **1.3 10^{32}** (20-65 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [pc]: **~190** [1]	M_V [mag]: **+9.0** (ASSUMED) [1]	A_V [mag]: **0** (ASSUMED) [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{WD} [M_{sun}]: -

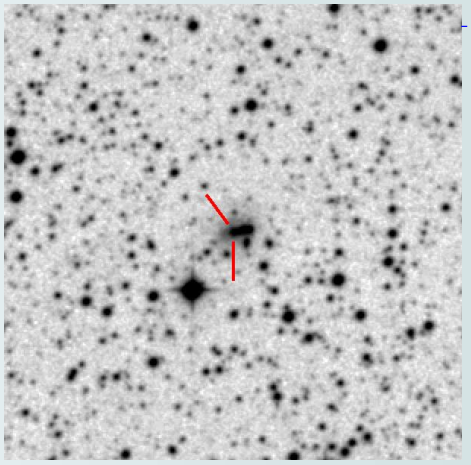
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Kuiper, L., Keek, S., Hermsen, W., et al. 2006, ATel 684

IGR J14552-5133



RA_{2000}: **14 55 17.8** [1]

DEC_{2000}: **-51 34 17** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **NARROW LINE SEYFERT 1 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: -	**B-V** [mag]: -	z = **0.016** [1]
F_X [erg/cm^2/s]: **1.2 10^{-12}** (0.1-2.4 keV) [3] **9.0 10^{-12}** (2-10 keV) [5] **1.4 10^{-11}** (17-60 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy] : **<0.250** (12 μm) [4] **0.293** (25 μm) [4] **0.762** (60 μm) [4] **<12.8** (100 μm) [4]
L_X [erg/s]: **7.9 10^{41}** (0.1-2.4 keV) [1] **6.0 10^{42}** (2-10 keV) **9.2 10^{42}** (17-60 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **<4.2 10^{43}** (12 μm) **2.3 10^{43}** (25 μm) **2.5 10^{43}** (60 μm) **<2.6 10^{44}** (100 μm)
D [Mpc]: **74.7** [1]	**M_V** [mag]: -	**A_V** [mag]: **2.08** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **2.0 10^6** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

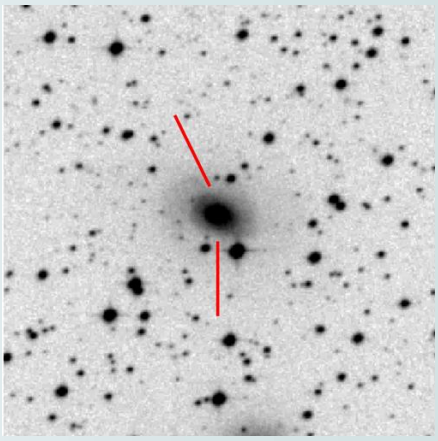
[1] Masetti N., Morelli L., Palazzi, E. et al. 2006, A&A, 459, 21
[2] Revnivtsev, M., Sazonov, S.Y., Molkov, S.V., et al. 2006a, Astron. Lett., 32, 145
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] IRAS catalogue of Point Sources, Version 2.0 (1986)
[5] Landi, R., Masetti, N., Gehrels, N., et al. 2006, ATel 990

IGR J14561-3738

RA_{2000}: **14 56 08.43** [1]
DEC_{2000}: **-37 38 52.4** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **LIKELY SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **13.73** [5]	**B-V** [mag]: -	**z** = **0.024** [1, 5]
F_X [erg/cm^2/s]: **4.1 10^{-12}** (3-8 keV) [2] **5.8 10^{-12}** (8-20 keV) [2] **1.4 10^{-11}** (17-60 keV) [3]	**F_{RADIO}** [mJy]: **3.9** (1.4 GHz) [4]	**F_{IR}** [Jy]: **<0.341** (12 μm) [6] **<0.250** (25 μm) [6] **0.757** (60 μm) [6] **<1.25** (100 μm) [6]
L_X [erg/s]: **6.2 10^{42}** (3-8 keV) [1] **8.8 10^{42}** (8-20 keV) [1] **2.1 10^{43}** (17-60 keV) [1]	**L_{RADIO}** [erg/s]: **8.3 10^{37}** (1.4 GHz)	**L_{IR}** [erg/s]: **<1.3 10^{44}** (12 μm) **<4.6 10^{43}** (25 μm) **5.7 10^{43}** (60 μm) **<5.7 10^{43}** (100 μm)
D [Mpc]: **112.7** [1]	**M_B** [mag]: **-21.93** [5]	**A_V** [mag]: **2.52** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin; identification needing confirmation [1].

References:

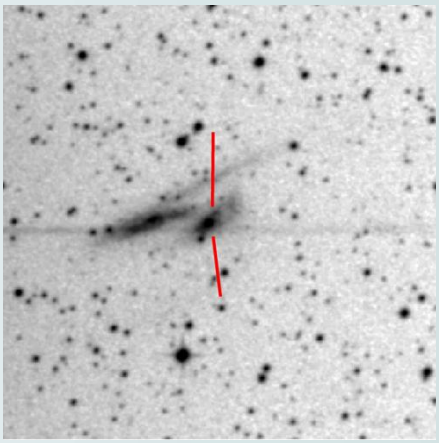
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Revnivtsev, M., Sazonov, S., Jahoda, K., & Gilfanov, M. 2004, A&A, 418, 927
[3] Krivonos, R., Revnivtsev, M., Lutovinov, A., et al. 2007, A&A, 475, 775
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)

IC 4518a

RA_{2000}: **14 57 41.16** [1]
DEC_{2000}: **-43 07 55.2** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_I [mag]: **13.02** [3]	**B-V** [mag]: -	**z** = **0.016** [1, 3]
F_X [erg/cm^2/s]: **~2 10^{-14}** (0.5-8 keV) [6] **2.2 10^{-11}** (20-100 keV) [2]	**F_{RADIO}** [mJy]: **245.3** (843 MHz) [4]	**F_{IR}** [Jy]: **0.340** (12 μm) [5] **1.32** (25 μm) [5] **7.77** (60 μm) [5] **14.0** (100 μm) [5]
L_X [erg/s]: **1.4 10^{40}** (0.5-8 keV) **1.5 10^{43}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **1.4 10^{39}** (843 MHz)	**L_{IR}** [erg/s]: **5.9 10^{43}** (12 μm) **1.1 10^{44}** (25 μm) **2.7 10^{44}** (60 μm) **2.9 10^{44}** (100 μm)
D [Mpc]: **75.9** [1]	**M_I** [mag]: **-22.5**	**A_V** [mag]: **0.49** GALACTIC [1] **1.37** AGN [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

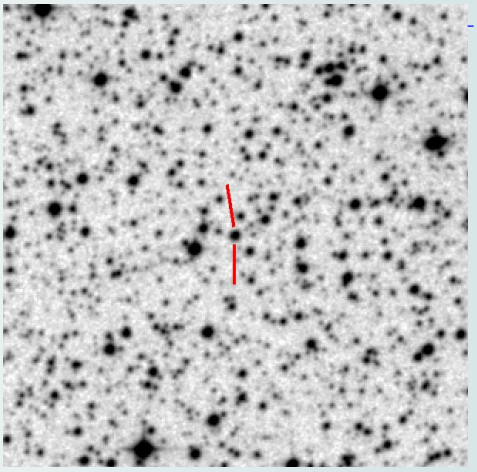
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[3] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[4] Mauch, T., Murphy, T., Buttery, H.J., et al., 2003, MNRAS, 342, 1117
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)
[6] Sazonov, S., Revnivtsev, M., Burenin, R., et al. 2008, A&A, submitted (arXiv:0802.0928)

IGR J15094-6649

RA_{2000}: **15 09 26.013** [1]
DEC_{2000}: **-66 49 23.29** [1]

Class: **CATACLISMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [1]



General Data		
m_B [mag]: **15.2** [2]	**B-R** [mag]: **+0.5** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **1.2 10^{-12}** (0.1-2.4 keV) [3] **1.5 10^{-11}** (17-60 keV) [4]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **2.7 10^{30}** (0.1-2.4 keV) [1] **3.5 10^{31}** (17-60 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [pc]: **~140** [1]	**M_R** [mag]: **+9** (ASSUMED) [1]	**A_V** [mag]: **0** (ASSUMED) [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: -

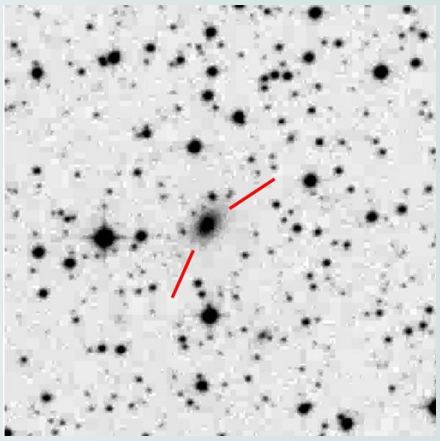
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti N., Morelli L., Palazzi, E. et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Revnivtsev, M., Sazonov, S.Y., Molkov, S.V., et al. 2006a, Astron. Lett., 32, 145

IGR J15161-3827



RA_{2000}: **15 15 59.70** [1]
DEC_{2000}: **-38 25 46.8** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: **15.6** [4]	**B-V** [mag]: -	**z** = **0.0365** [1, 7]
F_X [erg/cm^2/s]: **2.4 10^{-12}** (3-8 keV) [2] **<3.5 10^{-12}** (8-20 keV) [2] **1.5 10^{-11}** (20-100 keV) [3]	F_{RADIO} [mJy]: **11.5** (1.4 GHz) [5]	F_{IR} [Jy]: **<0.259** (12 μm) [6] **<0.474** (25 μm) [6] **1.14** (60 μm) [6] **2.40** (100 μm) [6]
L_X [erg/s]: **8.6 10^{42}** (3-8 keV) [1] **<1.3 10^{43}** (8-20 keV) [1] **5.4 10^{43}** (20-100 keV) [1]	L_{RADIO} [erg/s]: **5.8 10^{38}** (1.4 GHz)	L_{IR} [erg/s]: **<2.3 10^{44}** (12 μm) **<2.0 10^{44}** (25 μm) **2.0 10^{44}** (60 μm) **2.6 10^{44}** (100 μm)
D [Mpc]: **173.0** [1]	M_B [mag]: **-21.08** [4]	A_V [mag]: **0.31** GALACTIC [1] **1.17** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

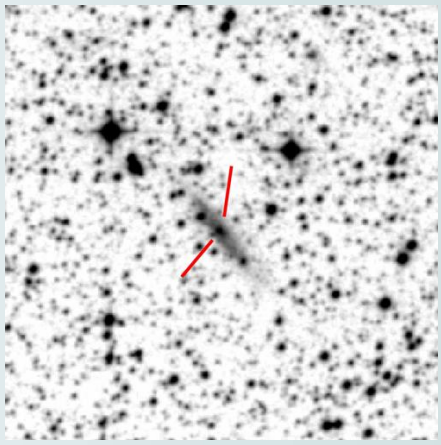
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Revnivtsev, M., Sazonov, S., Jahoda, K., & Gilfanov, M. 2004, A&A, 418, 927
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[5] Mauch, T., Murphy, T., Buttery, H.J., et al., 2003, MNRAS, 342, 1117
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)
[7] Jones, D.H., Saunders, W., Colless, M., et al. 2004, MNRAS, 355, 747

IGR J15539-6142

RA_{2000}: 15 53 35.28 [1]
DEC_{2000}: -61 40 58.4 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY

Optical Spectrum [1]



General Data		
m_B [mag]: 15.6 [4]	**B-V** [mag]: -	**z** = 0.015 [1, 3]
F_X [erg/cm²/s]: 2.1 10^{-11} (20-100 keV) [2]	F_{RADIO} [mJy]: 14.8 (843 MHz) [5]	F_{IR} [Jy]: <0.391 (12 μm) [6] <0.250 (25 μm) [6] 1.62 (60 μm) [6] <12.6 (100 μm) [6]
L_X [erg/s]: 1.2 10^{43} (20-100 keV) [1]	L_{RADIO} [erg/s]: 7.2 10^{37} (843 MHz)	L_{IR} [erg/s]: <5.7 10^{43} (12 μm) <1.7 10^{43} (25 μm) 4.7 10^{43} (60 μm) <2.2 10^{44} (100 μm)
D [Mpc]: 69.6 [1]	M_B [mag]: < -25.6	A_V [mag]: 1.1 GALACTIC [1] >4.6 AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

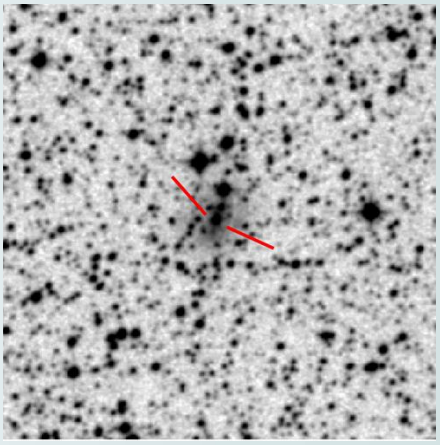
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[3] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[4] Woudt, P.A., & Kraan-Korteweg, R.C. 2001, A&A, 380, 441
[5] Murphy, T., Mauch, T., Green, A., et al. 2007, MNRAS, 382, 382
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J16024-6107

RA_{2000}: **16 01 48.23** [1]
DEC_{2000}: **-61 08 54.7** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **14.7** [6]	**B-V** [mag]: -	**z** = **0.011** [1, 5]
F_X [erg/cm^2/s]: **3.7 10^{-13}** (0.1-2.4 keV) [2] **1.8 10^{-12}** (2-10 keV) [3] **6.8 10^{-12}** (20-40 keV) [4] **<4.7 10^{-12}** (40-100 keV) [4]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: **0.353** (12 μm) [7] **0.403** (25 μm) [7] **1.82** (60 μm) [7] **6.16** (100 μm) [7]
L_X [erg/s]: **1.2 10^{41}** (0.1-2.4 keV) [1] **6.0 10^{41}** (2-10 keV) [1] **2.3 10^{42}** (20-40 keV) [1] **<1.6 10^{42}** (40-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **3.0 10^{43}** (12 μm) **1.6 10^{43}** (25 μm) **3.0 10^{43}** (60 μm) **6.2 10^{43}** (100 μm)
D [Mpc]: **52.9** [1]	**M_B** [mag]: **-20.9**	**A_V** [mag]: **1.0** GALACTIC [1] **0.45** AGN [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

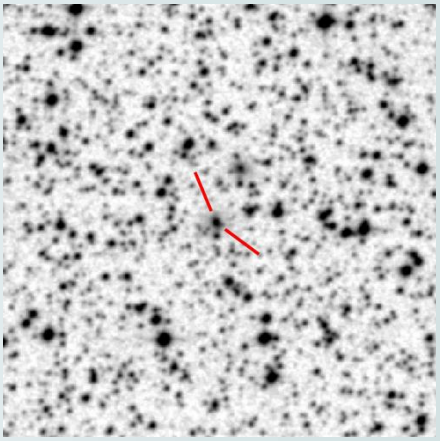
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Landi, R., Masetti, N., Stephen, J.B., et al. 2007, ATel 1288
[4] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[5] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[6] Woudt, P.A., & Kraan-Korteweg, R.C. 2001, A&A, 380, 441
[7] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J16056-6110

RA_{2000}: **16 05 51.17** [1]
DEC_{2000}: **-61 11 44.0** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.5 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **14.7** [5]	**B-V** [mag]: -	**z** = **0.052** [1]
F_X [erg/cm^2/s]: **7.0 10^{-13}** (0.1-2.4 keV) [2] **1.4 10^{-12}** (2-10 keV) [3] **1.6 10^{-11}** (20-100 keV) [4]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **5.2 10^{42}** (0.1-2.4 keV) [1] **1.0 10^{43}** (2-10 keV) [1] **1.2 10^{44}** (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: **249.3** [1]	M_B [mag]: **-21.0**	A_V [mag]: **0.80** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: **1.9 10^7** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

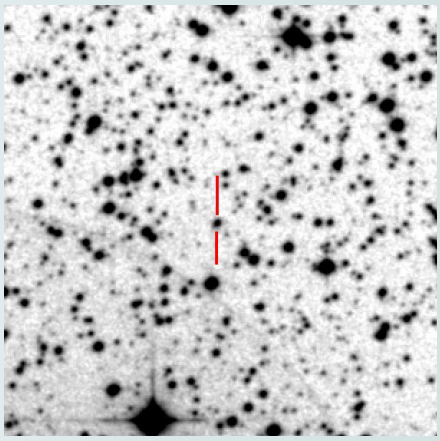
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[4] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[5] Woudt, P.A., & Kraan-Korteweg, R.C. 2001, A&A, 380, 441

IGR J16167-4957

RA_{2000}: **16 16 37.74** [2]
DEC_{2000}: **-49 58 44.5** [2]

Class: **CATACLISMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [1]



General Data		
m_B [mag]: **16.8** [3]	**B-R** [mag]: **+0.6** [3]	**z** = **0** [1]
F_X [erg/cm^2/s]: **6.2 10^{-13}** (0.3-10 keV) [2] **1.6 10^{-11}** (20-40 keV) [4] **<9.4 10^{-12}** (40-100 keV) [4]	**F_{RADIO}** [mJy]: **<8.7** (0.61 GHz) [5]	**F_{IR}** [Jy]: **1.79** (3.6 μm) [2] **1.40** (4.5 μm) [2]
L_X [erg/s]: **1.5 10^{32}** (0.3-10 keV) [1] **5.5 10^{31}** (20-40 keV) [1] **<3.3 10^{31}** (40-100 keV) [1]	**L_{RADIO}** [erg/s]: **<1.8 10^{26}** (0.61 GHz)	**L_{IR}** [erg/s]: **5.2 10^{33}** (3.6 μm) **3.2 10^{33}** (4.5 μm)
D [pc]: **~170** [1]	**M_V** [mag]: **+9** (ASSUMED) [1]	**A_V** [mag]: **1.3** [2]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

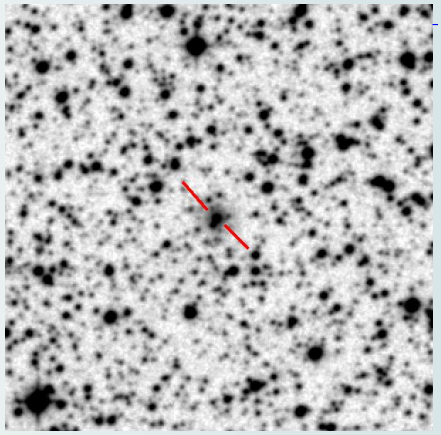
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Tomsick, J.A., Chaty, S., Rodriguez, J., et al. 2006, ApJ, 647, 1309
[3] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[4] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[5] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

IGR J16185-5928

RA_{2000}: **16 18 36.441** [1]
DEC_{2000}: **-59 27 17.36** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **NARROW LINE SEYFERT 1 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **11.6** [2]	**B-R** [mag]: **-0.5** [2]	**z** = **0.035** [1]
F_X [erg/cm^2/s]: **1.5 10^{-12}** (0.1-2.4 keV) [3] **1.6 10^{-11}** (17-60 keV) [4]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **5.0 10^{42}** (0.1-2.4 keV) [1] **5.4 10^{43}** (17-60 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: **165.8** [1]	M_R [mag]: **-26.5**	A_V [mag]: **1.0** GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: **2.8 10^7** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

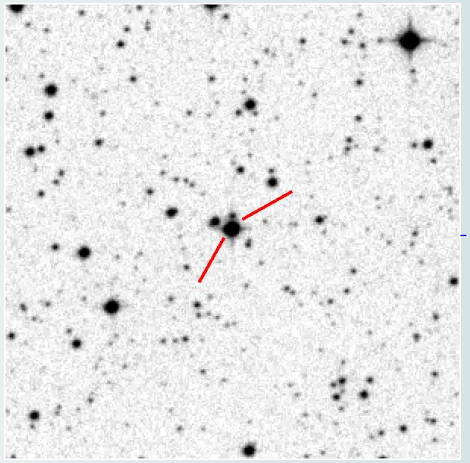
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Revnivtsev, M., Sazonov, S.Y., Molkov, S.V., et al. 2006a, Astron. Lett., 32, 145

IGR J16194-2810

RA_{2000}: **16 19 33.363** [2]
DEC_{2000}: **-28 07 39.02** [2]

Class: **LOW MASS X-RAY BINARY**
Type: **SYMBIOTIC X-RAY BINARY**

Optical Spectrum [1]



General Data		
m_R [mag]: **11.0** [2]	**B-R** [mag]: **+2.2** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **7.7 10^{-12}** (0.5-2 keV) [1] **4.4 10^{-11}** (2-10 keV) [1] **1.6 10^{-11}** (20-100 keV) [1] **8.8 10^{-11}** (0.5-200 keV) [1]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.4 10^{35}** (0.5-200 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **3.7** [1]	**M_V** [mag]: **-0.6** [1]	**A_V** [mag]: **~0** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Secondary star of spectral type M2 III [1]; field size is 5 x 5 arcmin.

References:

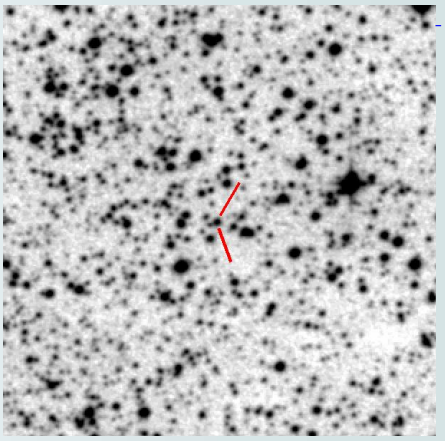
[1] Masetti, N., Landi, R., Pretorius, M.L., et al. 2007, A&A, 470, 331
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J16207-5129

RA_{2000}: **16 20 46.26** [2]
DEC_{2000}: **-51 30 06.0** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Optical Spectrum [1]



General Data		
m_B [mag]: **19.8** [2]	**B-V** [mag]: **+2.06** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **4.2 10^{-11}** (0.3-10 keV) [2] **4.8 10^{-11}** (20-100 keV) [4]	**F_{RADIO}** [mJy]: **<2.3** (0.61 GHz) [6]	**F_{IR}** [Jy]: **0.100** (3.6 μm) [2] **0.061** (4.5 μm) [2] **0.046** (5.8 μm) [2] **0.0284** (8 μm) [2] **0.0217** (8.59 μm) [3] **0.0094** (11.25 μm) [3] **<0.0534** (18.72 μm) [3]
L_X [erg/s]: **1.1 10^{35}** (0.3-10 keV) [1] **1.2 10^{35}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **<3.6 10^{28}** (0.61 GHz)	**L_{IR}** [erg/s]: **2.1 10^{35}** (3.6 μm) **1.0 10^{35}** (4.5 μm) **6.0 10^{34}** (5.8 μm) **2.7 10^{34}** (8 μm) **1.9 10^{34}** (8.59 μm) **6.3 10^{33}** (11.25 μm) **<2.2 10^{34}** (18.72 μm)
D [kpc]: **~4.6** [1]; **1.8 - 4.1** [3]	**M_V** [mag]: **-6.4** (ASSUMED) [1]	**A_V** [mag]: **~10.8** [2, 3]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

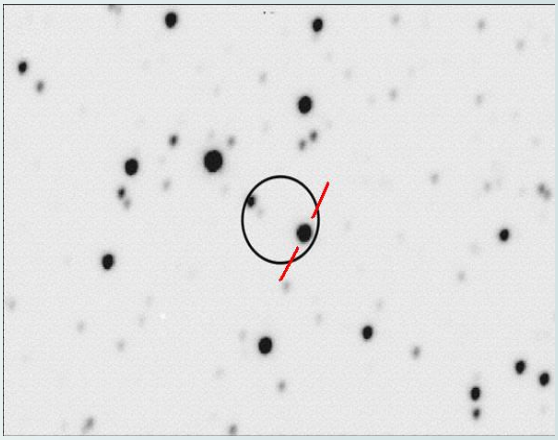
Notes:

Supergiant companion star of spectral type B0 I [1, 5]; finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Tomsick, J.A., Chaty, S., Rodriguez, J., et al. 2006, ApJ, 647, 1309
[3] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[4] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[5] Negueruela, I., & Schurch, M.P.E. 2007, A&A, 461, 631
[6] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

IGR J16318-4848



RA_{2000}: **16 31 48.31** [1]
DEC_{2000}: **-48 49 00.7** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT B[e]/X BINARY**

Near-Infrared Spectrum [1]

General Data		
m_R [mag]: **17.72** [1]	**B-R** [mag]: **> +7.68** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **1.9 10^{-10}** (2-10 keV) [2] **3.0 10^{-10}** (10-60 keV) [4] **1.6 10^{-10}** (20-100 keV) [5]	**F_{RADIO}** [mJy]: **<6.5** (0.61 GHz) [6] **<0.1** (4.8 GHz) [5] **<0.1** (8.6 GHz) [5]	**F_{IR}** [Jy]: **1.17** (3.6 μm) [3] **1.07** (4.5 μm) [3] **0.814** (5.8 μm) [3] **0.64** (8 μm) [3] **0.426** (8.59 μm) [7] **0.317** (11.25 μm) [7] **0.181** (18.72 μm) [7]
L_X [erg/s]: **5.8 10^{34}** (2-10 keV) **9.2 10^{34}** (10-60 keV) **4.9 10^{34}** (20-100 keV)	**L_{RADIO}** [erg/s]: **<1.2 10^{28}** (0.61 GHz) [6] **<1.5 10^{27}** (4.8 GHz) [5] **<2.6 10^{27}** (8.6 GHz) [5]	**L_{IR}** [erg/s]: **2.3 10^{35}** (3.6 μm) **2.2 10^{35}** (4.5 μm) **1.3 10^{35}** (5.8 μm) **7.3 10^{34}** (8 μm) **4.6 10^{34}** (8.59 μm) **2.6 10^{34}** (11.25 μm) **8.9 10^{33}** (18.72 μm)
D [kpc]: **~1.6** [7]	**M_R** [mag]: **-7.6**	**A_V** [mag]: **17.4** [1, 7]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Spectral type of secondary star: B[e] supergiant [1]; finding chart of size 60 x 40 arcsec.

References:

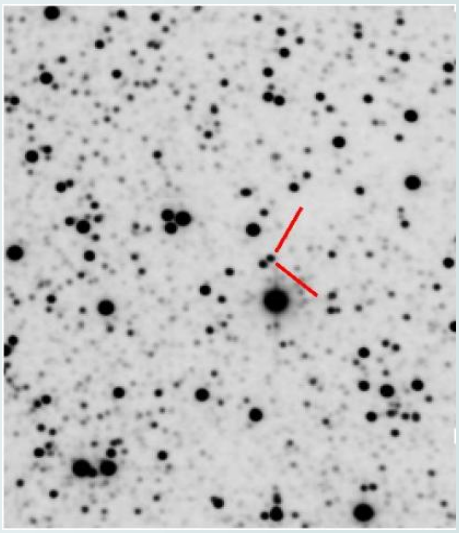
[1] Filliatre P., & Chaty, S. 2004, ApJ, 616, 469
[2] de Plaa, J., den Hartog, P.R, Kaastra, J.S., et al. 2003, ATel 119
[3] Kaplan, D.L., Moon, D.-S., & Reach, W.T. 2006, ApJ, 649, L107
[4] Boyd, P., & Still, M. 2004, ATel 228
[5] Walter, R., Rodriguez, J., Foschini, L., et al. 2003, A&A, 411, 427
[6] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[7] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)

AX J1631.9-4752

RA_{2000}: **16 32 02.15** [3]
DEC_{2000}: **-47 52 28.9** [3]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Near-Infrared Spectrum [1]



General Data		
m_K [mag]: **11.21** [1]	**J-K** [mag]: **+6.03** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **9.2 10^{-11}** (2-10 keV) [5] **2.3 10^{-10}** (20-100 keV) [5]	F_{RADIO} [mJy]: **<4.0** (0.61 GHz) [4] **<3.0** (1.28 GHz) [4]	F_{IR} [Jy]: **0.0482** (3.6 μm) [2] **0.0443** (4.5 μm) [2] **0.0360** (5.8 μm) [2] **0.0173** (8 μm) [2] **0.0217** (8.59 μm) [2] **0.0094** (11.25 μm) [2] **<0.0534** (18.72 μm) [2]
L_X [erg/s]: **1.3 10^{35}** (2-10 keV) **3.4 10^{35}** (20-100 keV)	L_{RADIO} [erg/s]: **<3.6 10^{28}** (0.61 GHz) **<5.6 10^{28}** (1.28 GHz)	L_{IR} [erg/s]: **5.9 10^{34}** (3.6 μm) **4.3 10^{34}** (4.5 μm) **2.7 10^{34}** (5.8 μm) **9.5 10^{33}** (8 μm) **1.1 10^{34}** (8.59 μm) **3.7 10^{33}** (11.25 μm) **<1.3 10^{34}** (18.72 μm)
D [kpc]: **~3.5** [2]	M_V [mag]: **-6.4** (ASSUMED)	A_V [mag]: **35.4** [2]
P_{orb} [days]: **8.96** [6]	P_{spin} [s]: **1303** [5, 6]	M_{NS} [M_{sun}]: -

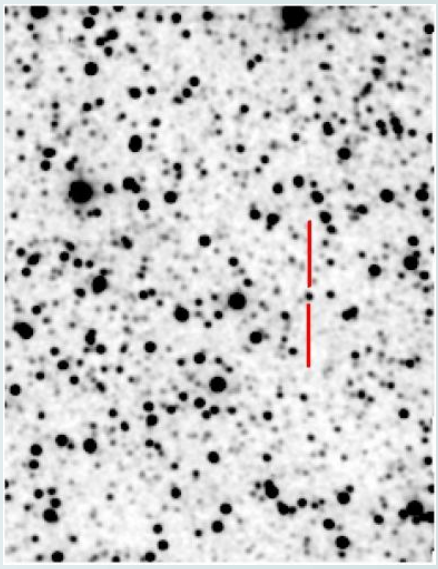
Notes:

Secondary star spectral type: O8 I [2]; field size: 4 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

[1] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[2] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[3] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[5] Rodriguez, J., Bodaghee, A., Kaaret, P., et al., 2006, MNRAS, 366, 274
[6] Lutovinov, A.A., Rodriguez, J., Revnivtsev, M., Shtykovskiy, P. 2005, A&A, 433, L41
[7] Corbet, R.H.D., Barbier, L., Barthelmy, S., et al. 2005, ATel 649

IGR J16358-4726



RA_{2000}: **16 35 53.69** [3]
DEC_{2000}: **-47 25 39.8** [3]

Class: **HIGH MASS X-RAY BINARY?**
Type: **SUPERGIANT B[e]/X BINARY?**

Near-Infrared Spectrum [1]

General Data		
m_R [mag]: **23.75** [1]	**R-K** [mag]: **+11.15** [1]	**z** = **0** [1, 2]
F_X [erg/cm²/s]: **~1.7 10^{-10}** (2-10 keV) [6] **2.6 10^{-11}** (20-100 keV) [7]	**F_{RADIO}** [mJy]: **<7.5** (0.61 GHz) [4]	**F_{IR}** [Jy]: **0.0059** (3.6 μm) [5] **0.0056** (4.5 μm) [5] **0.0053** (5.8 μm) [5] **<0.0069** (8.59 μm) [5]
L_X [erg/s]: **7.0 10^{36}** (2-10 keV) **1.1 10^{36}** (20-100 keV)	**L_{RADIO}** [erg/s]: **<1.9 10^{30}** (0.61 GHz)	**L_{IR}** [erg/s]: **2.0 10^{35}** (3.6 μm) **1.5 10^{35}** (4.5 μm) **1.1 10^{35}** (5.8 μm) **<9.9 10^{34}** (8.59 μm)
D [kpc]: **~18.5** [5]	**M_R** [mag]: **-7.0**	**A_V** [mag]: **17.6** [5]
P_{orb} [days]: -	**P_{spin}** [s]: **5880** [6]	**M_{NS}** [M_{sun}]: -

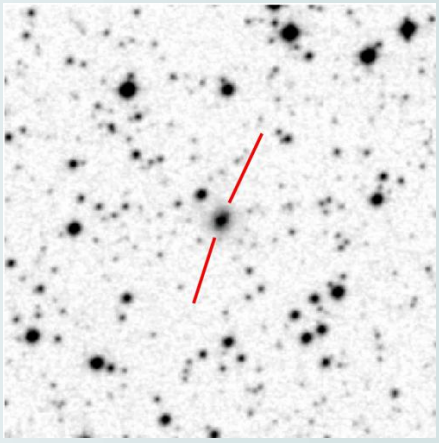
Notes:

Debated if a Low Mass X-ray Binary or a High Mass X-ray Binary [1, 2]; if a High Mass X-ray Binary, the secondary star is a B[e] supergiant [2]; the accreting object is possibly a magnetar [6]; field size: 3.8 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

[1] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[2] Nespoli, E., Fabregat, J., & Mennickent, R.E. 2008, ATel 1450
[3] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[5] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[6] Patel, S.K., Zurita J., Del Santo, M., et al. 2007, ApJ, 657, 994
[7] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175

IGR J16385-2057



RA_{2000}: **16 38 30.91** [1]
DEC_{2000}: **-20 55 24.6** [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: NARROW LINE SEYFERT 1 GALAXY

Optical Spectrum [1]

General Data		
m_B [mag]: **16.55** [4]	**B-V** [mag]: -	**z** = **0.0269** [1, 4, 5]
F_X [erg/cm^2/s]: **2.8 10^{-12}** (0.1-2.4 keV) [2] **7.7 10^{-12}** (2-10 keV) [8] **1.6 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **6.8** (1.4 GHz) [6]	**F_{IR}** [Jy]: **<0.265** (12 μm) [7] **0.635** (25 μm) [7] **1.05** (60 μm) [7] **<4.83** (100 μm) [7]
L_X [erg/s]: **5.3 10^{42}** (0.1-2.4 keV) [1] **1.5 10^{43}** (2-10 keV) **3.1 10^{43}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **1.8 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: **<1.3 10^{44}** (12 μm) **1.5 10^{44}** (25 μm) **1.0 10^{44}** (60 μm) **<2.8 10^{44}** (100 μm)
D [Mpc]: **126.6** [1]	**M_B** [mag]: **-21.01** [4]	**A_V** [mag]: **1.55** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **6.8 10^6** [1]

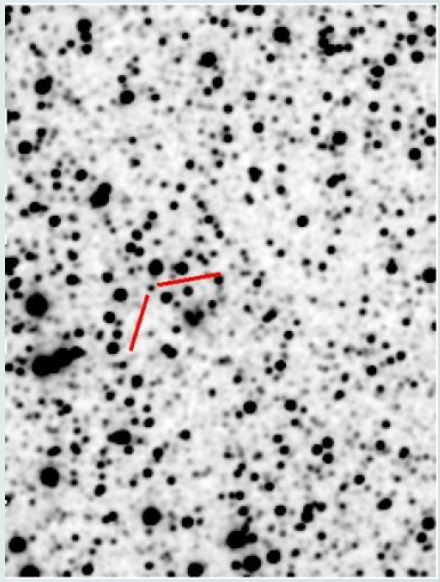
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[5] Adelman-McCarthy, J.K., Agüeros, M.A., Allam, S.S., et al. 2008, AJ, 175, 297
[6] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[7] IRAS catalogue of Point Sources, Version 2.0 (1986)
[8] Rodriguez, J., Tomsick, J.A., & Chaty, S. 2008, A&A, 482, 731

AX J1639.0-4642



RA_{2000}: **16 39 05.35** [3]
DEC_{2000}: **-46 42 13.7** [3]

Class: **HIGH MASS X-RAY BINARY?**
Type: **Be/X BINARY?**

Near-Infrared Spectrum [2]

General Data		
m_V [mag]: **21.53** [1]	**V-K** [mag]: **+8.86** [1]	**z** = **0** [2]
F_X [erg/cm^2/s]: **9.2 10^{-11}** (2-10 keV) [6] **5.1 10^{-11}** (20-60 keV) [6] **2.1 10^{-10}** (2-100 keV) [7]	**F_{RADIO}** [mJy]: **<4.9** (0.61 GHz) [4]	**F_{IR}** [Jy]: **0.00353** (3.6 μm) [1] **0.00289** (4.5 μm) [1]
L_X [erg/s]: **1.2 10^{36}** (2-10 keV) **6.8 10^{35}** (20-60 keV) **2.8 10^{36}** (2-100 keV)	**L_{RADIO}** [erg/s]: **<4.0 10^{29}** (0.61 GHz)	**L_{IR}** [erg/s]: **4.0 10^{34}** (3.6 μm) **2.6 10^{34}** (4.5 μm)
D [kpc]: **10.6** [1]	**M_V** [mag]: **-5.1**	**A_V** [mag]: **11.5** [1]
P_{orb} [days]: **3.688** [5]	**P_{spin}** [s]: **912** [5, 6]	**M_{NS}** [M_{sun}]: -

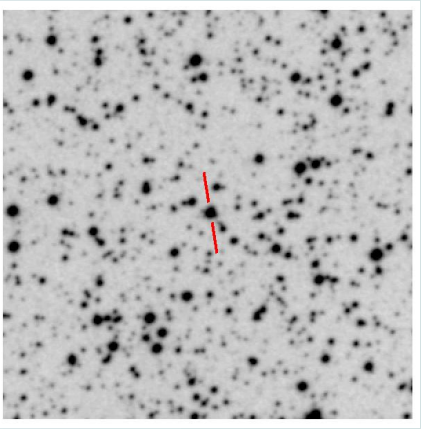
Notes:

Debated if a Low Mass X-ray Binary or a High Mass X-ray Binary [1, 2]; if a High Mass X-ray Binary, the secondary star spectral type is B IV-V [2]; mass function of secondary star: 6.5 M_{sun} [5]; field size: 3.8 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

[1] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[2] Nespoli, E., Fabregat, J., & Mennickent, R.E. 2008, ATel 1450
[3] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[5] Thompson, T.W.J., Tomsick, J.A., Rothschild, R.E., in 't Zand, J.J.M., & Walter, R. 2006, ApJ, 649, 373
[6] Bodaghee, A., Walter, R., Zurita Heras, J.A., et al. 2006, A&A, 447, 1027
[7] Walter, R., Zurita Heras, J., Bassani L., et al. 2006, A&A, 453, 143

IGR J16465-4507



RA_{2000}: **16 46 35.26** [4]
DEC_{2000}: **-45 07 04.5** [4]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT FAST X-RAY TRANSIENT**

Optical Spectrum [4200-4900 Å] [5600-7100 Å] [6]

General Data		
m_B [mag]: **15.1** [7]	**B-R** [mag]: **+2.4** [7]	**z** = **0** [4]
F_X [erg/cm^2/s]: **3.7 10^{-10}** (18-60 keV) OUTBURST [1] **3 10^{-12}** (4-10 keV) QUIESCENCE [2]	**F_{RADIO}** [erg/cm^2/s]: -	**F_{IR}** [erg/cm^2/s]: **0.0450** (3.6 μm) [8] **0.0326** (4.5 μm) [8] **0.0220** (5.8 μm) [8] **0.0137** (8 μm) [8] **0.0069** (8.59 μm) [8] **<0.0050** (11.25 μm) [8]
L_X [erg/s]: **3.8 10^{36}** (18-60 keV) OUTBURST **3.1 10^{34}** (4-10 keV) QUIESCENCE	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **4.0 10^{35}** (3.6 μm) **2.3 10^{35}** (4.5 μm) **1.2 10^{35}** (5.8 μm) **5.4 10^{34}** (8 μm) **2.5 10^{34}** (8.59 μm) **<1.4 10^{34}** (11.25 μm)
D [kpc]: **~9.4** [8]	**M_V** [mag]: **-6.4** (ASSUMED)	**A_V** [mag]: **5.9** [8]
P_{orb} [days]: -	**P_{spin}** [s]: **227** [5]	**M_{NS}** [M_{sun}]: -

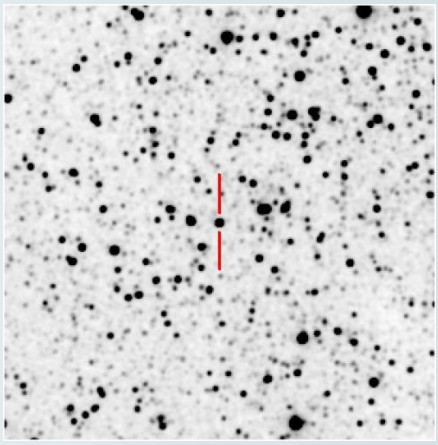
Notes:

Transient X-Ray source [1]; spectral type: B0.5 I [4], finding chart of size 5x4 arcmin.

References:

[1] Lutovinov, A., Rodriguez, J., Budtz-Jorgensen, C., et al. 2004, ATel 329
[2] Zurita Heras, J., & Walter, R. 2004, ATel 336
[3] Smith, D.M. 2004, ATel 338
[4] Negueruela, I., Smith, D.M., & Chaty, S. 2005, ATel 429
[5] Walter, R., Zurita Heras, J., Bassani, L., et al. 2006, A&A, 453, 133
[6] Negueruela, I., Smith, D.M., Reig, P. Chaty, S.; Torrejón, J. M. 2006, Supergiant Fast X-ray Transients: a new class of high mass X-ray binaries unveiled by INTEGRAL. In: Wilson, A. (ed.) "The X-ray Universe 2005", ESA SP-604, Vol. 1, p. 165 (Noordwijk: ESA Publications Division)
[7] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[8] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)

IGR J16479-4514



RA_{2000}: **16 48 06.56** [3]
DEC_{2000}: **-45 12 06.8** [3]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT FAST X-RAY TRANSIENT**

Near-Infrared Spectrum [1]

General Data

m_K [mag]: **9.79** [1]	**J-K** [mag]: **+3.27** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **6.7 10^{-9}** (20-60 keV) PEAK [5] **2.0 10^{-11}** (2-10 keV) LOW STATE [8] **~2 10^{-12}** (1-9 keV) QUIESCENCE [6] **1.8 10^{-10}** (2-100 keV) [7]	F_{RADIO} [mJy]: **<3.7** (0.61 GHz) [4]	F_{IR} [Jy]: **0.0686** (3.6 μm) [2] **0.0496** (4.5 μm) [2] **0.0412** (5.8 μm) [2] **0.0194** (8 μm) [2] **0.0109** (8.59 μm) [2] **0.0070** (11.25 μm) [2]
L_X [erg/s]: **1.9 10^{37}** (20-60 keV) PEAK **8.7 10^{34}** (2-10 keV) LOW STATE [8] **5.7 10^{33}** (1-9 keV) QUIESCENCE **5.2 10^{35}** (2-100 keV)	L_{RADIO} [erg/s]: **<6.5 10^{28}** (0.61 GHz)	L_{IR} [erg/s]: **1.6 10^{35}** (3.6 μm) **9.5 10^{34}** (4.5 μm) **6.1 10^{34}** (5.8 μm) **2.1 10^{34}** (8 μm) **1.1 10^{34}** (8.59 μm) **5.4 10^{33}** (11.25 μm)
D [kpc]: **~4.9** [2]	M_V [mag]: **-6.4** (ASSUMED)	A_V [mag]: **18.5** [2]
P_{orb} [days]: -	P_{spin} [s]: -	M_{obj} [M_{sun}]: -

Notes:

Secondary star spectral type: O8.5 I [2]; field size: 5 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

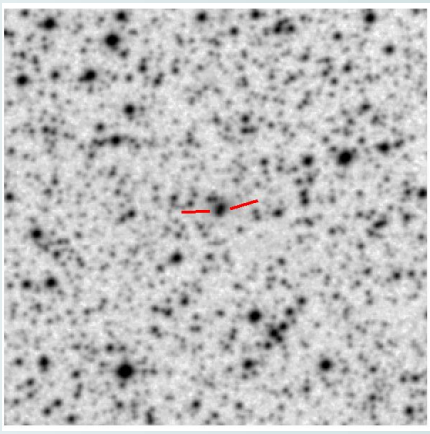
[1] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[2] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[3] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[5] Sguera, V., Barlow, E.J., Bird, A.J., et al. 2005, A&A, 444, 221
[6] Sguera, V., Bassani, L., Landi, R., et al. 2008, A&A, in press (arXiv:0805.0496)
[7] Walter, R., Zurita Heras, J., Bassani L., et al. 2006, A&A, 453, 143
[8] Sidoli, L., Romano, P., Mangano, V., et al. 2008, ApJ, in press (arXiv:0805.1808)

IGR J16482-3036

RA_{2000}: 16 48 15.2 [2]
DEC_{2000}: -30 35 03.7 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1 GALAXY

Optical Spectrum [1]



General Data		
m_B [mag]: 1 5.8 [2]	**B-R** [mag]: +2.4 [2]	**z** = 0.0313 [1]
F_X [erg/cm^2/s]: 8.3 10^{-13} (0.1-2.4 keV) [1] 1.2 10^{-11} (20-40 keV) [3] 1.5 10^{-11} (40-100 keV) [3]	F_{RADIO} [mJy]: 3.5 (1.4 GHz) [4]	F_{IR} [Jy]: -
L_X [erg/s]: 2.1 10^{42} (0.1-2.4 keV) [1] 6.9 10^{43} (20-100 keV) [1]	L_{RADIO} [erg/s]: 1.2 10^{38} (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: 146 [1]	M_B [mag]: -20.0 [1]	A_V [mag]: 1.05 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 1.4 10^8 [1]

Notes:

Finding chart of size 5x5 arcmin.

References:

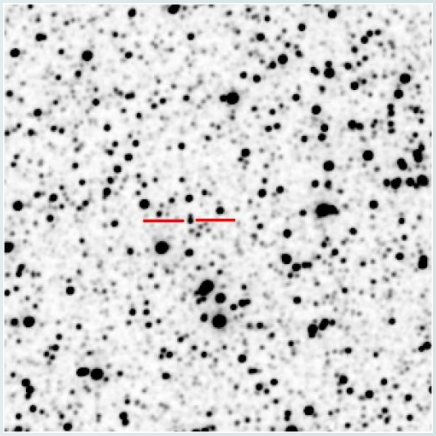
[1] Masetti, N., Pretorius, M.L., Palazzi, E., et al. 2006, A&A, 449, 1139
[2] Monet, D.G., Levine, S.E., Canzian, B., et al. 2003, AJ, 125, 984
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963

IGR J16493-4348

RA_{2000}: **16 49 26.95** [1]
DEC_{2000}: **-43 49 09.0** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Optical Spectrum [2]



General Data		
m_K [mag]: **11.94** [1, 3]	**J-K** [mag]: **+2.65** [1]	**z** = **0** [2]
F_X [erg/cm^2/s]: **1.0 10^{-11}** (2-10 keV) [4] **1.3 10^{-11}** (10-20 keV) [4] **3.2 10^{-11}** (20-100 keV) [5] **1.1 10^{-10}** (1-100 keV) [6]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: **0.00885** (3.6 ∝m) [7] **0.00687** (4.5 μm) [7] **0.00508** (5.8 μm) [7] **0.00273** (8 μm) [7]
L_X [erg/s]: **3.1 10^{35}** (2-10 keV) **4.0 10^{35}** (10-20 keV) **1.0 10^{36}** (20-100 keV) **3.4 10^{36}** (1-100 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: **2.2 10^{35}** (3.6 μm) **1.4 10^{35}** (4.5 μm) **8.0 10^{34}** (5.8 μm) **3.1 10^{34}** (8 μm)
D [kpc]: **16.0**	**M_V** [mag]: **-6.4** (ASSUMED)	**A_V** [mag]: **16.3**
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Spectral type of secondary star: B0.5 Ib [2]; finding chart of size 5 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

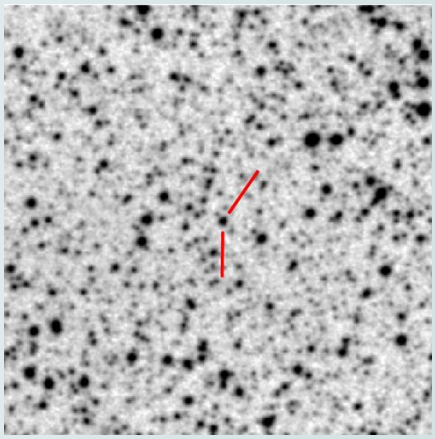
[1] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[2] Nespoli, E., Fabregat, J., & Mennickent, R.E. 2008, ATel 1396
[3] Kuiper, L., Jonker, P., Hermsen, W., & O'Brien, K. 2005, ATel 654
[4] Markwardt, C.B., Swank, J.H., & Smith, E. 2005, ATel 465
[5] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[6] Hill, A.B., Dean, A.J., Landi, R. et al. 2008, MNRAS, 385, 423
[7] Benjamin, R.A., Churchwell, E.B., Babler, B., et al. 2003, PASP, 115, 953

IGR J16500-3307

RA_{2000}: **16 49 55.64** [1]
DEC_{2000}: **-33 07 02.0** [1]

Class: **CATACLYSMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.0** [4]	**B-R** [mag]: **+0.9** [4]	**z** = **0** [1]
F_X [erg/cm^2/s]: **4.5 10^{-13}** (0.1-2.4 keV) [2] **1.8 10^{-11}** (20-100 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **2.2 10^{30}** (0.1-2.4 keV) [1] **1.0 10^{32}** (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [pc]: **210** [4]	M_V [mag]: **+9** ASSUMED [1]	A_V [mag]: **0.53** [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{WD} [M_{sun}]: -

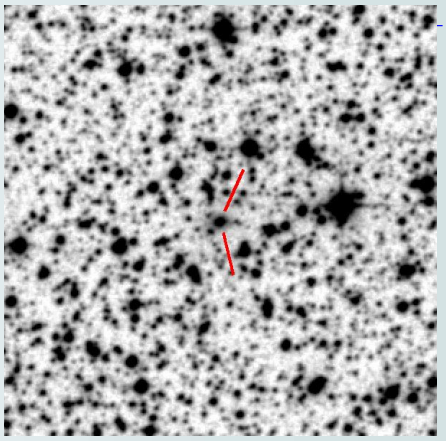
Notes:

Field size of image: 5x5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J16558-5203



RA_{2000}: **16 56 05.618** [1]
DEC_{2000}: **-52 03 40.87** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.2 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: **14.6** [2]	**B-R** [mag]: **+2.4** [2]	**z** = **0.054** [1]
F_X [erg/cm^2/s]: **3.7 10^{-12}** (0.1-2.4 keV) [3] **3.4 10^{-11}** (20-100 keV) [4]	**F_{RADIO}** [mJy]: **<2.3** (0.61 GHz) [5]	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.0 10^{43}** (0.1-2.4 keV) [1] **2.7 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **<1.1 10^{38}** (0.61 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **259.3** [1]	**M_R** [mag]: **-26.0**	**A_V** [mag]: **1.36** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **7.8 10^7** [1]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

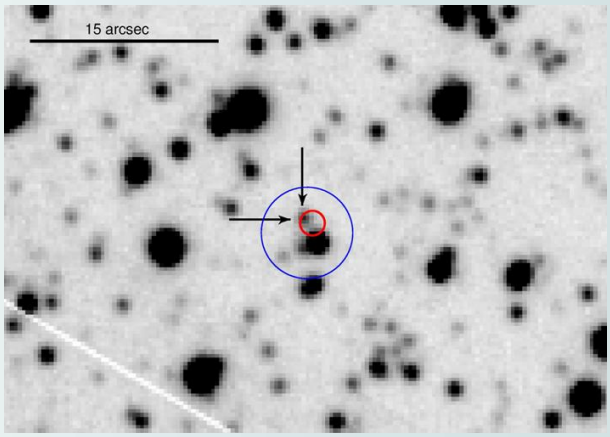
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[5] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

SWIFT J1656.3-3302

RA_{2000}: **16 56 16.853** [1]
DEC_{2000}: **-33 02 11.08** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **BLAZAR**

Optical Spectrum [1]



General Data		
m_R [mag]: **19.1** [1]	**B-V** [mag]: -	**z** = **2.40** [1]
F_X [erg/cm^2/s]: **4.6 10^{-12}** (2-10 keV) [1] **2.0 10^{-11}** (20-100 keV) [1]	**F_{RADIO}** [mJy]: **410.7** (1.4 GHz) [2]	**F_{IR}** [Jy]: -
L_X [erg/s]: **2.1 10^{47}** (2-10 keV) [1] **9.9 10^{47}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **2.6 10^{44}** (1.4 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **19400** [1]	**M_B** [mag]: -	**A_V** [mag]: **1.93** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 45 x 35 arcsec; the optical counterpart is indicated with the arrows; the larger and smaller circles indicate the *Swift*/XRT (X-ray) and the VLA/NVSS (radio) error boxes, respectively.

References:

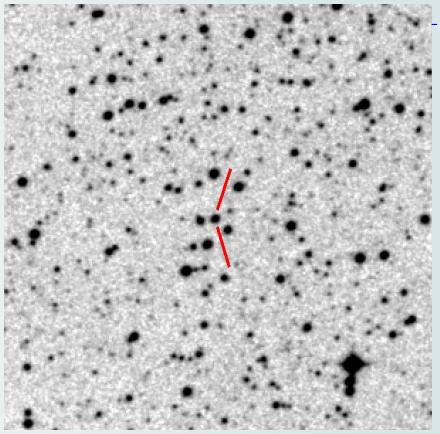
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 480, 715
[2] Condon, J.J., Cotton, W.D., Greisen, E.W., et al., 1998, AJ, 115, 1693
[3] IRAS catalogue of Point Sources, Version 2.0 (1986)
[4] NASA/IPAC EXTRAGALACTIC DATABASE (http://nedwww.ipac.caltech.edu/)

IGR J17195-4100

RA_{2000}: **17 19 35.88** [2]
DEC_{2000}: **-41 00 53.6** [2]

Class: **CATACLISMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [1]



General Data		
m_B [mag]: **15.2** [3]	**B-R** [mag]: **+0.9** [3]	**z** = **0** [1]
F_X [erg/cm^2/s]: **2.5 10^{-11}** (0.3-10 keV) [2] **3.8 10^{-11}** (20-100 keV) [4]	**F_{RADIO}** [mJy]: **<1.7** (0.61 GHz) [5]	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.6 10^{31}** (0.3-10 keV) [1] **5.5 10^{31}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **<1.5 10^{25}** (0.61 GHz)	**L_{IR}** [erg/s]: -
D [pc]: **~110** [1]	**M_R** [mag]: **+9** (ASSUMED) [1]	**A_V** [mag]: **~0** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

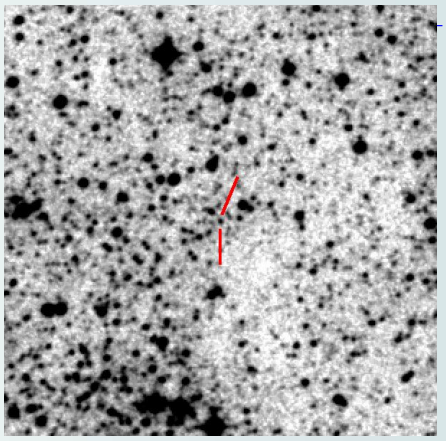
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Tomsick, J.A., Chaty, S., Rodriguez, J., et al. 2006, ApJ, 647, 1309
[3] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[4] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[5] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux, P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

IGR J17200-3116

RA_{2000}: **17 20 05.913** [1]
DEC_{2000}: **-31 16 59.65** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **N/A**

Optical Spectrum [1]



General Data		
m_B [mag]: -	**B-V** [mag]: -	**z** = **0** [1]
F_X [erg/cm^2/s]: **4.4 10^{-13}** (0.1-2.4 keV) [2] **4.4 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **<1.5** (0.61 GHz) [4]	**F_{IR}** [Jy]: -
L_X [erg/s]: -	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: -	**M_V** [mag]: -	**A_V** [mag]: -
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

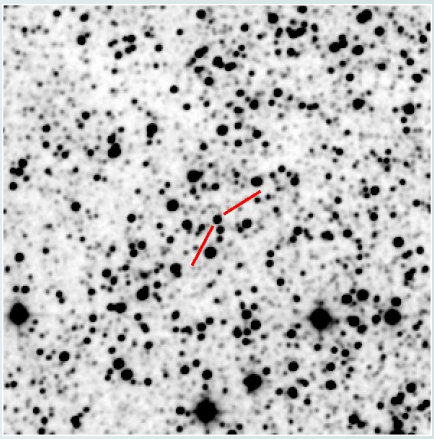
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[4] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux, P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

EXO 1722-363

RA_{2000}: **17 25 11.39** [3]
DEC_{2000}: **-36 16 57.5** [3]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Near-Infrared Spectrum [1]



General Data		
m_K [mag]: **10.67** [1]	**J-K** [mag]: **+3.52** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **1.7 10^{-10}** (2-12 keV) [6] **4.8 10^{-10}** (13-100 keV) [6]	F_{RADIO} [mJy]: **<5.6** (0.61 GHz) [4]	F_{IR} [Jy]: **0.0326** (3.6 μm) [2] **0.0247** (4.5 μm) [2] **0.0218** (5.8 μm) [2] **0.0096** (8 μm) [2] **0.0061** (8.59 μm) [2] **<0.0050** (11.25 μm) [2]
L_X [erg/s]: **7.6 10^{35}** (2-12 keV) **2.1 10^{36}** (13-100 keV)	L_{RADIO} [erg/s]: **<1.5 10^{29}** (0.61 GHz)	L_{IR} [erg/s]: **1.2 10^{35}** (3.6 μm) **7.3 10^{34}** (4.5 μm) **5.0 10^{34}** (5.8 μm) **1.6 10^{34}** (8 μm) **9.5 10^{33}** (8.59 μm) **<5.9 10^{33}** (11.25 μm)
D [kpc]: **~6.1** [1]	M_V [mag]: **-6.4** (ASSUMED)	A_V [mag]: **20.8** [2]
P_{orb} [days]: **9.74** [5]	P_{spin} [s]: **415** [5, 6]	M_{NS} [M_{sun}]: -

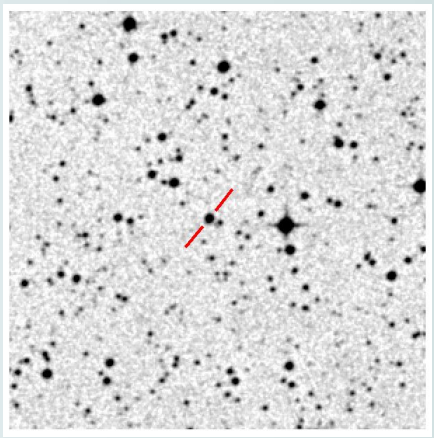
Notes:

Secondary star spectral type: O8.5 I [2]; mass function of secondary star: 11.2 M_{sun} [5]; field size: 5 x 5 arcmin (K-band image extracted from the 2MASS archive) [3].

References:

[1] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[2] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[3] Skrutskie, M.F., Cutri, R.M., Stiening, R., et al. 2006, AJ, 131, 1163
[4] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[5] Thompson, T.W.J., Tomsick, J.A., Rothschild, R.E., in 't Zand, J.J.M., & Walter, R. 2007, ApJ, 661, 447
[6] Zurita Heras, J.A., De Cesare, G., Walter, R., et al. 2006, A&A, 448, 261

IGR J17303-0601



RA_{2000}: **17 30 21.9** [2]

DEC_{2000}: **-05 59 31** [2]

Class: **CATACLYSMIC VARIABLE**
Type: **INTERMEDIATE POLAR**

Optical Spectrum [1]

General Data		
m_R [mag]: **16.5** [2]	**B-R** [mag]: **+0.7** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **3.3 10^{-12}** (0.1-2.4 keV) [3] **1.1 10^{-11}** (0.5-25 keV) [4] **2.8 10^{-11}** (20-40 keV) [8] **1.3 10^{-11}** (40-100 keV) [8]	F_{RADIO} [mJy]: **<6.0** (0.61 GHz) [7]	F_{IR} [Jy]: -
L_X [erg/s]: **>3.9 10^{34}** (0.1-2.4 keV) **>1.3 10^{33}** (0.5-25 keV) **>3.3 10^{33}** (20-40 keV) **>1.6 10^{33}** (40-100 keV)	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [kpc]: **>1** [9]	M_V [mag]: -	A_V [mag]: **1.40** [1]
P_{orb} [days]: **0.643** [5]	P_{spin} [s]: **128** [5]	M_{WD} [M_{sun}]: **0.89-1.02** [9]

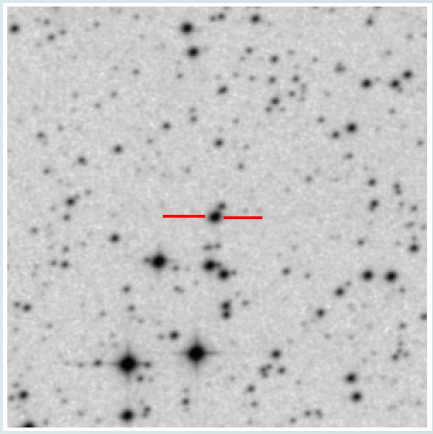
Notes:

Debated if Low Mass X-ray Binary [1, 6, 9]; finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Palazzi, E., Bassani, L., et al. 2004, A&A, 426, L41
[2] USNO-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller T., et al. 1999, A&A, 349, 389
[4] Wood, K.S., Meekins, J.F., Yentis, D.J., et al. 1984, ApJS, 56, 507
[5] Gänsicke, B.T., Marsh, T.R., Edge, A., et al. 2005, MNRAS, 361, 141
[6] Masetti, N. 2006, ChJAA, 6, 143
[7] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux, P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[8] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[9] de Martino, D., Matt, G., Mukai, K., et al. 2008, A&A, 481, 149

IGR J17391-3021



RA_{2000}: 17 39 11.5 [1]
DEC_{2000}: -30 20 37.6 [1]

Class: HIGH MASS X-RAY BINARY
Type: SUPERGIANT FAST X-RAY TRANSIENT

Optical Spectrum [4000-4900 Å] [5000-6000 Å] [6450-6750 Å] [1]

Near-Infrared Spectrum [7]

General Data		
m_B [mag]: 17.86 [1]	**B-V** [mag]: +2.97 [1]	**z** = 0 [1]
F_X [erg/cm²/s]: 2.6 10^{-9} (2-10 keV) OUTBURST [2] 1.7 10^{-9} (18-50 keV) OUTBURST [3] 3.5 10^{-10} (50-100 keV) OUTBURST [3] 3.7 10^{-12} (2-10 keV) LOW STATE [8] <9 10^{-13} (2-10 keV) QUIESCENCE [4]	F_{RADIO} [mJy]: <1.04 (1.28 GHz) [5]	F_{IR} [Jy]: 0.376 (3.6 μm) [6] 0.297 (4.5 μm) [6] 0.205 (5.8 μm) [6] 0.111 (8 μm) [6] 0.0702 (8.59 μm) [6] 0.0465 (11.25 μm) [6]
L_X [erg/s]: 1.9 10^{36} (2-10 keV) OUTBURST 1.5 10^{36} (18-100 keV) OUTBURST 3.3 10^{33} (2-10 keV) LOW STATE <6.7 10^{32} (2-10 keV) QUIESCENCE	L_{RADIO} [erg/s]: <9.5 10^{27} (1.28 GHz)	L_{IR} [erg/s]: 2.1 10^{35} (3.6 μm) 1.0 10^{35} (4.5 μm) 6.0 10^{34} (5.8 μm) 2.7 10^{34} (8 μm) 1.9 10^{34} (8.59 μm) 6.3 10^{33} (11.25 μm)
D [kpc]: ~2.5 [1, 6]	M_V [mag]: -6.3 [1]	A_V [mag]: 10.14 [1] or 9.2 [6]
P_{orb} [days]: -	P_{spin} [s]: -	M_{obj} [M_{sun}]: -

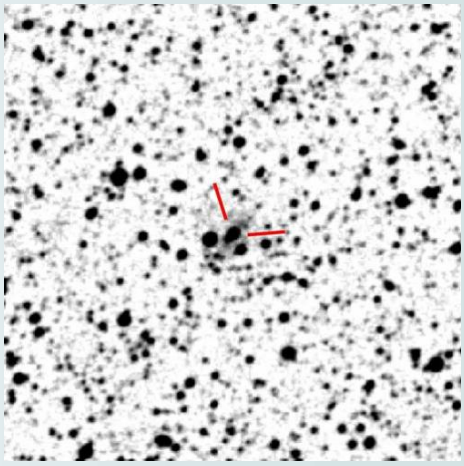
Notes:

Spectral type of secondary star: O8 Iab(f) [1]; finding chart of size 5 x 5 arcmin.

References:

[1] Negueruela, I., Smith, D.M., Harrison, T.E., et al. 2006, ApJ, 638, 982
[2] Smith, D.M., Heindl, W.A., Markwardt, C.B., et al. 2006, ApJ, 638, 974
[3] Sunyaev, R., Lutovinov, A., Molkov, S., et al. 2003, ATel 181
[4] Sakano, M., Koyama, K., Murakami, S. et al. 2002, ApJS, 138, 19
[5] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[6] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[7] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[8] Sidoli, L., Romano, P., Mangano, V., et al. 2008, ApJ, in press (arXiv:0805.1808)

1E 1739.1-1210



RA_{2000}: 17 41 55.25 [7]
DEC_{2000}: -12 11 56.6 [7]

Class: ACTIVE GALACTIC NECLEUS
Type: SEYFERT 1.2 GALAXY

Optical Spectrum [7]

General Data		
m_B [mag]: 16.3 [2]	**B-R** [mag]: +1.4 [2]	**z** = 0.0372 [1, 7]
F_X [erg/cm^2/s]: 1.6 10^{-12} (0.1-2.4 keV) [3] 1.0 10^{-11} (0.4-4 keV) [8] 2.8 10^{-11} (20-100 keV) [5]	F_{RADIO} [mJy]: 3.5 (1.4 GHz) [4]	F_{IR} [Jy]: <0.361 (12 μm) [6] <0.349 (25 μm) [6] 0.529 (60 μm) [6] <3.34 (100 μm) [6]
L_X [erg/s]: 5.9 10^{42} (0.1-2.4 keV) [1] 3.7 10^{43} (0.4-4 keV) [1] 1.0 10^{44} (20-100 keV) [1]	L_{RADIO} [erg/s]: 1.8 10^{38} (1.4 GHz)	L_{IR} [erg/s]: <3.4 10^{44} (12 μm) <1.5 10^{44} (25 μm) 9.7 10^{43} (60 μm) <3.7 10^{44} (100 μm)
D [Mpc]: 175.5 [7]	M_B [mag]: -22.3	A_V [mag]: 1.78 GALACTIC [7]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 1.7 10^8 [7]

Notes:

Finding chart of size 5 x 5 arcmin.

References:

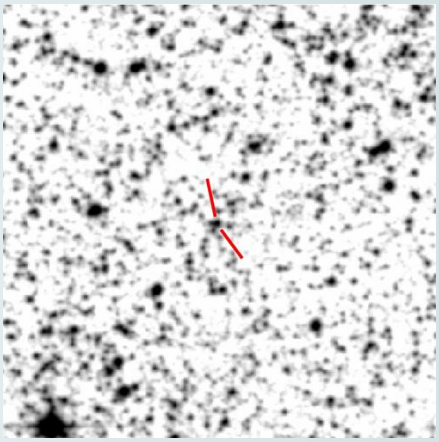
[1] Torres, M.A.P., Garcia, M.R., McClintock, J.E., et al. 2004, ATel 264
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[5] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[6] IRAS catalogue of Point Sources, Version 2.0 (1986)
[7] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[8] Harris, D.E., Forman, W., Gioia, I.M., et al. 1994, SAO HEAD CD-ROM Series I (Einstein), Nos. 18-36

1RXS J174607.8-213333

RA_{2000}: **17 46 03.16** [1]
DEC_{2000}: **-21 33 27.1** [1]

Class: **C ATACLYSMIC VARIABLE**
Type: **SYMBIOTIC BINARY**

Optical Spectrum [1]



General Data		
m_B [mag]: **16.5** [2]	**B-R** [mag]: **+1.8** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **1.8 10^{-11}** (18-60 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **<1.1 10^{36}** (18-60 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **<22** [1]	**M_V** [mag]: **-0.6** (ASSUMED) [1]	**A_V** [mag]: **>0** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{WD}** [M_{sun}]: -

Notes:

Spectral type of secondary star: M2-4 III [1]; finding chart of size 5 x 5 arcmin.

References:

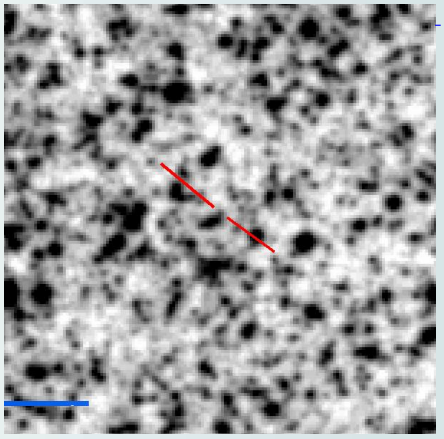
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Revnivtsev, M., Sunyaev, R.A., Varshalovich, D.A., et al. 2004, Astron. Lett., 30, 382

IGR J17488-3253

RA_{2000}: 17 48 55.129 [1]
DEC_{2000}: -32 54 52.15 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1 GALAXY

Optical Spectrum [1]



General Data		
m_B [mag]: -	**B-R** [mag]: -	**z** = 0.020 [1]
F_X [erg/cm²/s]: 9.3 10^{-13} (0.1-2.4 keV) [2] 4.8 10^{-11} (20-100 keV) [3]	**F_{RADIO}** [mJy]: <2.1 (0.61 GHz) [4]	**F_{IR}** [Jy]: -
L_X [erg/s]: 9.8 10^{41} (0.1-2.4 keV) [1] 5.1 10^{43} (20-100 keV) [1]	**L_{RADIO}** [erg/s]: <1.3 10^{37} (0.61 GHz) [4]	**L_{IR}** [erg/s]: -
D [Mpc]: 93.7 [1]	**M_V** [mag]: -	**A_V** [mag]: 5.1 GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Galactic star along line of sight [1]; finding chart of size 2.5 x 2.5 arcmin.

References:

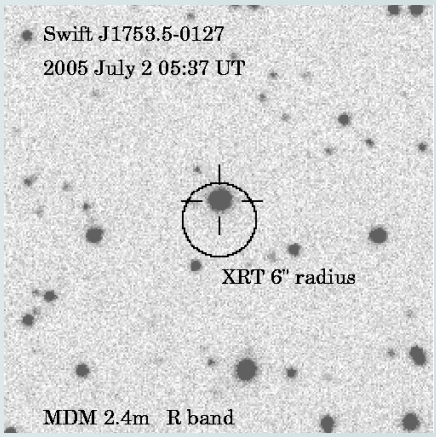
[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[4] Pandey, M., Rao, A.P., Manchanda, R., Durouchounx, P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

SWIFT 1753.5-0127

RA_{2000}: **17 53 28.3** [1]
DEC_{2000}: **-01 27 06** [1]

Class: **LOW MASS X-RAY BINARY**
Type: **X-RAY NOVA, BLACK HOLE CANDIDATE?**

Optical Spectrum [7]



General Data

m_R [mag]: **15.8** MAXIMUM [1]	**B-V** [mag]: **+0. 3** [5]	**z** = **0** [4, 7]
F_X [erg/cm^2/s]: **7.2 10^{-9}** (3-25 keV) MAXIMUM [9] **1.3 10^{-9}** (20-40 keV) MAXIMUM [2] **1.4 10^{-9}** (40-80 keV) MAXIMUM [2] **2.2 10^{-9}** (80-200 keV) MAXIMUM [2]	**F_{RADIO}** [mJy]: **0.65** (1.4 GHz) OUTBURST [7] **2.1** (1.7 GHz) OUTBURST [6] **0.65** (4.9 GHz) OUTBURST [6] **0.7** (8.5 GHz) OUTBURST [6] **<0.6** (15 GHz) OUTBURST [6]	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.1 10^{37}** (3-25 keV) MAXIMUM **5.6 10^{36}** (20-40 keV) MAXIMUM **6.0 10^{36}** (40-80 keV) MAXIMUM **9.5 10^{36}** (80-200 keV) MAXIMUM	**L_{RADIO}** [erg/s]: **3.9 10^{28}** (1.4 GHz) OUTBURST **1.5 10^{29}** (1.7 GHz) OUTBURST **1.4 10^{29}** (4.9 GHz) OUTBURST **2.6 10^{29}** (8.5 GHz) OUTBURST **<3.9 10^{29}** (15 GHz) OUTBURST	**L_{IR}** [erg/s]: -
D [kpc]: **~6** [7]	**M_R** [mag]: **+0.7** MAXIMUM	**A_V** [mag]: **~1.1** [7]
P_{orb} [days]: **0.13** [8]	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Transient X-ray source [3]; X-ray QPOs [7, 9, 10]; finding chart of size 40 x 40 arcsec.

References:

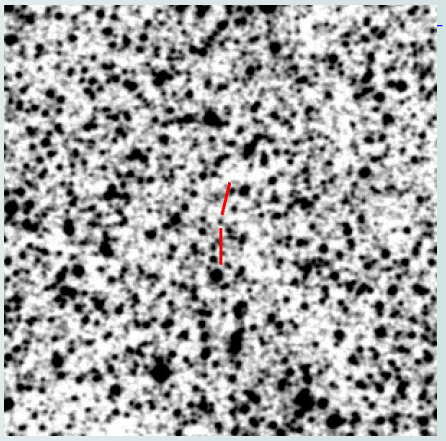
[1] Halpern, J.P. 2005, ATel 549
[2] Cadolle Bel, M., Rodriguez, J., Goldwurm, A., et al. 2005, ATel 574
[3] Palmer, D.M., Barthelmy, S.D., Cummings, J.R., et al. 2005, ATel 546
[4] Torres, M.A.P., Steeghs, D., Garcia, M.R., et al. 2005, ATel 551
[5] Still, M., Roming, P., Brocksopp, C., et al. 2005, ATel 553
[6] Fender, R., Garrington, S., Muxlow, T., 2005, ATel 558
[7] Cadolle Bel, M., Ribó, M., Rodriguez, J., et al. 2007, ApJ, 659, 549
[8] Zurita, C., Durant, M., Torres, M.A.P., et al. 2008, ApJ, in press (arXiv:0803.2524)
[9] Ramadevi, M.C., Seetha, S. 2007, MNRAS, 378, 182
[10] Zhang, G.B., Qu, J.L., Zhang, S., et al. 2007, ApJ, 659, 1511

IGR J17513-2011

RA_{2000}: **17 51 13.623** [1]
DEC_{2000}: **-20 12 14.58** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.9 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: -	**B-V** [mag]: -	**z** = **0.047** [1]
F_X [erg/cm^2/s]: **4.0 10^{-13}** (0.1-2.4 keV) [2] **3.9 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **2.4 10^{42}** (0.1-2.4 keV) [1] **2.3 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: **224.5** [1]	**M_V** [mag]: -	**A_V** [mag]: **4.0** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **1 10^6** [1]

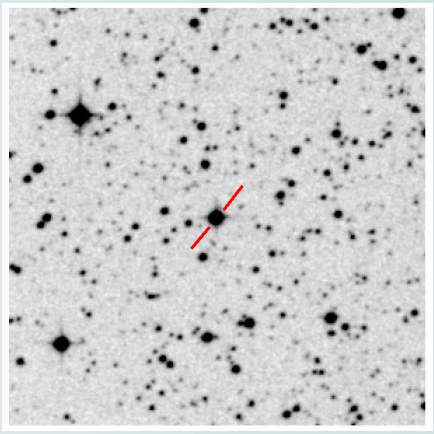
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765

IGR J17544-2619



RA_{2000}: 17 54 25.27 [1]
DEC_{2000}: -26 19 52.7 [1]

Class: HIGH MASS X-RAY BINARY
Type: SUPERGIANT FAST X-RAY TRANSIENT

Optical Spectrum [1]

General Data

m_B [mag]: 14.44 [1]	**B-V** [mag]: +1.79 [1]	**z** = 0 [1]
F_X [erg/cm^2/s]: 2.3 10^{-10} (0.5-10 keV) PEAK [3] 6.0 10^{-10} (18-25 keV) FLARE [4] 4.5 10^{-10} (25-50 keV) OUTBURST [4] 3.2 10^{-12} (2-10 keV) LOW STATE [6] 1.9 10^{-13} (0.5-10 keV) QUIESCENCE [3]	F_{RADIO} [mJy]: <7.35 (0.61 GHz) [2]	F_{IR} [Jy]: 0.214 (3.6 μm) [6] 0.137 (4.5 μm) [6] 0.0996 (5.8 μm) [6] 0.0665 (8 μm) [6] 0.0461 (8.59 μm) [6] 0.0202 (11.25 μm) [6]
L_X [erg/s]: 3.6 10^{35} (0.5-10 keV) PEAK 9.3 10^{35} (18-25 keV) FLARE 7.0 10^{35} (25-50 keV) OUTBURST 6.3 10^{33} (2-10 keV) LOW STATE [6] 2.9 10^{32} (0.5-10 keV) QUIESCENCE	L_{RADIO} [erg/s]: <6.9 10^{28} (0.61 GHz)	L_{IR} [erg/s]: 2.8 10^{35} (3.6 μm) 1.4 10^{35} (4.5 μm) 8.0 10^{34} (5.8 μm) 3.9 10^{34} (8 μm) 2.5 10^{34} (8.59 μm) 8.3 10^{33} (11.25 μm)
D [kpc]: ~3.6 [5]	M_V [mag]: -6.33	A_V [mag]: 6.2 [1, 5]
P_{orb} [days]: -	P_{spin} [s]: -	M_{obj} [M_{sun}]: -

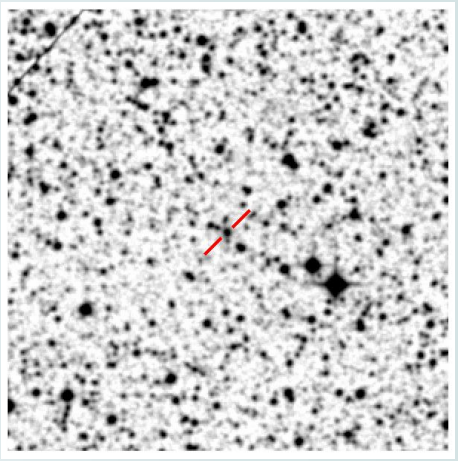
Notes:

Transient X-ray source [4]; spectral type of secondary star: O9 Ib [1]; possibly hosting an accreting neutron star [3]; finding chart of size 5 x 5 arcmin.

References:

[1] Pellizza, L.J., Chaty, S., & Negueruela, I. 2006, A&A, 455, 653
[2] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[3] in't Zand, J. J. M. 2005, A&A, 441, L1
[4] Bodaghee, A., Mowlavi, N., & Ballet, J. 2004, ATel 290
[5] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)
[6] Sidoli, L., Romano, P., Mangano, V., et al. 2008, ApJ, in press (arXiv:0805.1808)

IGR J18027-1455



RA_{2000}: **18 02 47.37** [2]
DEC_{2000}: **-14 54 54.8** [2]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: **1 9.3** [2]	**B-R** [mag]: **+2.75**	**z** = **0.035** [1]
F_X [erg/cm^2/s]: **1.8 10^{-13}** (0.1-2.4 keV) [4] **2.3 10^{-11}** (20-40 keV) [5] **3.1 10^{-11}** (40-100 keV) [5]	**F_{RADIO}** [mJy]: **<6.96** (0.61 GHz) [6] **10.5** (1.4 GHz) [3]	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.0 10^{42}** (0.1-2.4 keV) [1] **1.7 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **<1.4 10^{38}** (0.61 GHz) **4.8 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **166** [1]	**M_B** [mag]: **-22**	**A_V** [mag]: **3.91** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

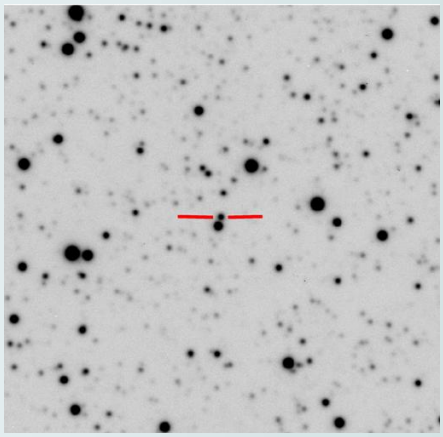
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Palazzi, E., Bassani, L. et al. 2004, A&A, 426, L41
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[4] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[5] Bird, A.J., Barlow, E.J., Bassani, L., et al. ApJ, 2006, 636, 765
[6] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471

SAX J1802.7-2017



RA_{2000}: **18 02 41.94** [1]
DEC_{2000}: **-20 17 17.2** [1]

Class: **HIGH-MASS X-RAY BINARY**
Type: **Be/X BINARY OR SUPERGIANT X-RAY BINARY**

Optical Spectrum [1]

Near-Infrared Spectrum [6]

General Data		
m_R [mag]: **16.9** [1]	**R-K** [mag]: **+5.4** [1, 6]	**z** = **0** [1, 6]
F_X [erg/cm^2/s]: **3.6 10^{-11}** (0.1-10 keV) [4] **8.9 10^{-11}** (2-10 keV) [2] **6.2 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **<7.0** (0.61 GHz) [5]	**F_{IR}** [Jy]: **0.0107** (3.6 μm) [6] **0.0074** (4.5 μm) [6] **0.0053** (5.8 μm) [6] **0.0025** (8 μm) [6]
L_X [erg/s]: **4.3 10^{35}** (0.1-10 keV) **1.1 10^{36}** (2-10 keV) [2] **7.5 10^{35}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **<5.1 10^{29}** (0.61 GHz)	**L_{IR}** [erg/s]: **1.1 10^{35}** (3.6 μm) **5.9 10^{34}** (4.5 μm) **3.3 10^{34}** (5.8 μm) **1.1 10^{34}** (8 μm)
D [kpc]: **~10** [1] or **11.9** [6]	**M_R** [mag]: **~ -5.0**	**A_V** [mag]: **~8.5** [1, 6]
P_{orb} [days]: **4.57** [2, 4]	**P_{spin}** [s]: **139.612** [4]	**M_{NS}** [M_{sun}]: -

Notes:

Finding chart of size 3 x 3 arcmin obtained from R-band imaging at the ESO 3.6m telescope [1]; companion star of spectral type early B III [1] or B I [6].

References:

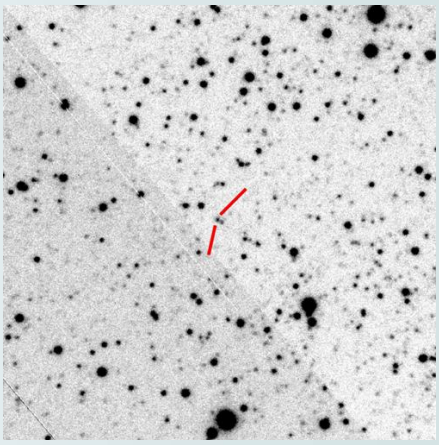
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Hill, A.B., Walter, R., Knigge, C. et al. 2005, A&A, 439, 255
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Augello, G., Iaria, R., Robba, N.R., et al. 2003, ApJ, 596, L63
[5] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[6] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)

IGR J18048-1455

RA_{2000}: **18 04 38.92** [1]
DEC_{2000}: **-14 56 47.4** [1]

Class: **LOW-MASS X-RAY BINARY**
Type: **N/A**

Optical Spectrum [1]



General Data		
m_R [mag]: **18.7** [1]	**B-V** [mag]: -	**z** = **0** [1, 3]
F_X [erg/cm^2/s]: **1.2 10^{-11}** (20-100 keV) [2]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **7.2 10^{34}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~7** [1]	**M_R** [mag]: **0** (ASSUMED) [1]	**A_V** [mag]: **5.5** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Finding chart of size 3 x 3 arcmin obtained from R-band imaging at the ESO 3.6m telescope [1].

References:

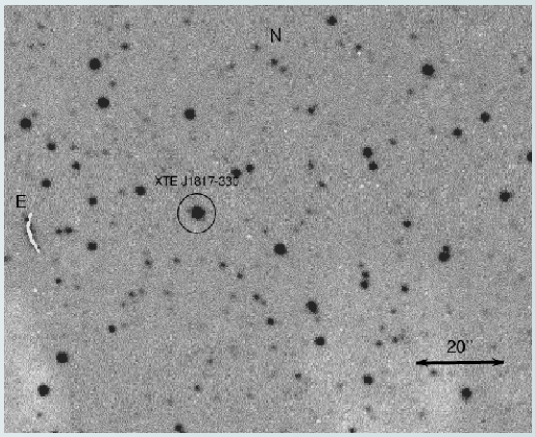
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[3] Burenin, R., Mescheryakov, A., Revnivtsev, M., Bikmaev, I., & Sunyaev, R. 2006, ATel 880

XTE J1817-330

RA_{2000}: **18 17 43.54** [3]
DEC_{2000}: **-33 01 06.7** [3]

Class: **LOW MASS X-RAY BINARY**
Type: **X-RAY NOVA, BLACK HOLE CANDIDATE**

Optical Spectrum [7]



General Data		
m_B [mag]: **15.7** OUTBURST [5] **m_V** [mag]: **11.3** PEAK [9]	**B-V** [mag]: **+0.5** OUTBURST [5]	**z** = **0** [7]
F_X [erg/cm^2/s]: **2.2 10^{-8}** (2-12 keV) OUTBURST [1] **2.8 10^{-8}** (2-20 keV) OUTBURST [1] **2.8 10^{-10}** (10-30 keV) OUTBURST [1] **9.4 10^{-10}** (20-60 keV) OUTBURST [4] **5.4 10^{-10}** (60-150 keV) OUTBURST [4] **4.4 10^{-8}** (0.5-10 keV) OUTBURST [6] **1.3 10^{-8}** (3-200 keV) OUTBURST [6] **4.6 10^{-8}** (0.5-200 keV) OUTBURST [6] **4.4 10^{-11}** (0.3-10 keV) DECAY [5]	**F_{RADIO}** [mJy]: **2.1** (1.4 GHz) OUTBURST [2] **0.83** (4.86 GHz) OUTBURST [2] **0.58** (8.46 GHz) OUTBURST [2] **<1.5** (1.4 GHz) QUIESCENCE [2]	**F_{IR}** [Jy]: -
L_X [erg/s]: -	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **1-4** [8]	**M_V** [mag]: -	**A_V** [mag]: **0.56-1.68** [7]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: **<6.0** [9]

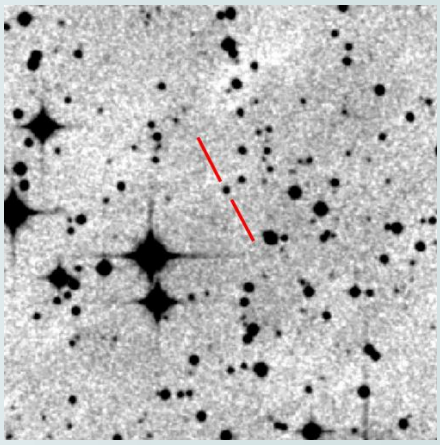
Notes:

Transient X-ray source [1]; finding chart of size 1.9 x 1.6 arcmin.

References:

[1] Remillard, R., Levine, A.M, Morgan, E.H., et al. 2006, ATel 714
[2] Rupen, M.P., Dhawan, V., Mioduszewski, A.J., 2006, ATel 717
[3] D'Avanzo, P., Goldoni, P., Covino, S., et al. 2006, ATel 724
[4] Kuulkers, K., Goldoni, P., Shaw, S.E., et al. 2006, ATel 738
[5] Rykoff, E.S., Miler, J.M., Steeghs, D., & Torres, M.A.P. 2006, ApJ, 666, 1129
[6] Miller, J.M., Homan, J., Steeghs, D., et al. 2006, ATel 743
[7] Torres, M.A.P., Steeghs, D., McClintock, J., et al. 2006, ATel 749
[8] Sala, G., & Greiner, J., 2006, ATel 791
[9] Sala, G., Greiner, J., Ajello, M., Bottacini, E., & Haberl, F., 2007, A&A, 473, 561

SAX J1818.6-1703



RA_{2000}: **18 18 37.90** [1]
DEC_{2000}: **-17 02 47.09** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Optical Spectrum [1]

General Data		
m_R [mag]: **17.4** [1, 6]	**R-K** [mag]: **+9.6**	**z** = **0** [1, 6]
F_X [erg/cm^2/s]: **2.0 10^{-9}** (2-9 keV) HIGH STATE [4] **4.8 10^{-9}** (9-25 keV) HIGH STATE [4] **2.3 10^{-9}** (18-45 keV) HIGH STATE [2] **7.8 10^{-10}** (45-70 keV) HIGH STATE [2] **7.5 10^{-12}** (0.5-10 keV) LOW STATE [5] **<6.5 10^{-11}** (18-60 keV) LOW STATE [3] **2.4 10^{-11}** (20-100 keV) LOW STATE [7] **<1.1 10^{-13}** (0.5-10 keV) QUIESCENCE [8]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.5 10^{36}** (2-9 keV) HIGH STATE **3.6 10^{36}** (9-25 keV) HIGH STATE **1.7 10^{36}** (18-45 keV) HIGH STATE **5.8 10^{35}** (45-70 keV) HIGH STATE **5.6 10^{33}** (0.5-10 keV) LOW STATE [6] **<4.9 10^{34}** (18-60 keV) LOW STATE **1.8 10^{34}** (20-100 keV) LOW STATE [6] **<8.2 10^{31}** (0.5-10 keV) QUIESCENCE	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~2.5** [6]	**M_V** [mag]: **-6.5** (ASSUMED) [6]	**A_V** [mag]: **~14** [6]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Transient [2]; OB supergiant [1]; finding chart of size 5 x 5 arcmin; possible double-peaked H-alpha line [6].

References:

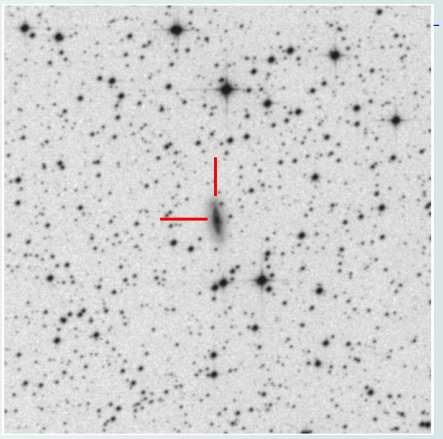
[1] Negueruela, I. & Smith, D.M. 2006, ATel 831
[2] Grebenev, S.A. & Sunyaev, R.A. 2005, Astron. Lett. 31, 672
[3] Revnivtsev, M.G., Sunyaev, R.A., Varshalovich, D.A., et al. 2004, Astron. Lett., 30, 382
[4] in 't Zand, J.J.M., Heise, J., Smith, M., et al. 1998, IAU Circ. 6840
[5] in 't Zand, J.J.M., Jonker, P., Mendez, M., & Markwardt, C.B. 2006, ATel 915
[6] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[7] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[8] Bozzo, E., Campana, S., Stella, L. et al., 2008, ATel 1493

IGR J18244-5622

RA_{2000}: **18 24 19.39** [2]
DEC_{2000}: **-56 22 09.1** [2]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **14.57** [2]	**B-V** [mag]: -	**z** = **0.017** [1, 3]
F_X [erg/cm^2/s]: **1.1 10^{-11}** (2-10 keV) [6] **1.3 10^{-11}** (20-40 keV) [4] **<1.2 10^{-11}** (40-100 keV) [4]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: **<0.270** (12 μm) [5] **0.257** (25 μm) [5] **0.701** (60 μm) [5] **<1.22** (100 μm) [5]
L_X [erg/s]: **8.3 10^{42}** (2-10 keV) [1] **9.8 10^{42}** (20-40 keV) **<9.1 10^{42}** (40-100 keV)	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: **<5.1 10^{43}** (12 μm) **2.3 10^{43}** (25 μm) **2.6 10^{43}** (60 μm) **<2.8 10^{43}** (100 μm)
D [Mpc]: **79.4** [1]	M_B [mag]: **-20.48** [2]	A_V [mag]: **0.28** GALACTIC [1] **3.6** AGN [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{WD} [M_{sun}]: -

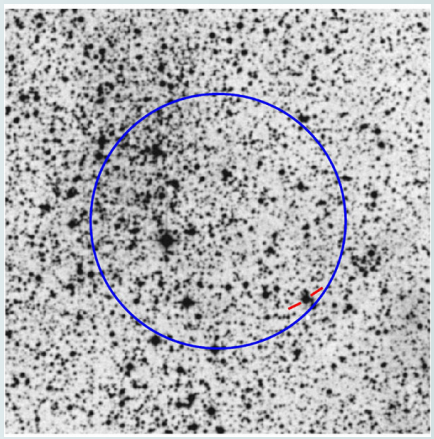
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Morelli, L., Palazzi, E., et al. 2006, A&A, 459, 21
[2] Hyperleda Catalogue, (http://leda.univ-lyon1.fr/)
[3] Fouqué, P., Proust, D., Quintana, H., & Ramirez, A. 1993, A&A, 100, 493
[4] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)
[6] Revnivtsev, M., Sazonov, S.Y., Churazov, E.M., & Trudolyubov, S. 2006, A&A, 448, L49

IGR J18406-0539



RA_{2000}: **18 40 47.0** [2]
DEC_{2000}: **-05 40 51** [2]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]

General Data		
m_B [mag]: **1 2.64** [1]	**B-V** [mag]: **+0. 76** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **2.7 10^{-11}** (18-60 keV) [4]	**F_{RADIO}** [mJy]: **<2.3** (0.61 GHz) [3]	**F_{IR}** [Jy]: -
L_X [erg/s]: **4 10^{33}** (18-60 keV) [1]	**L_{RADIO}** [erg/s]: **<2.0 10^{27}** (0.61 GHz)	**L_{IR}** [erg/s]: -
D [kpc]: **1.1** [1]	**M_V** [mag]: **-1.2** [1]	**A_V** [mag]: **2.82** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Secondary star spectral type: B5V [1]; INTEGRAL error box reported as a circle in the figure.

References:

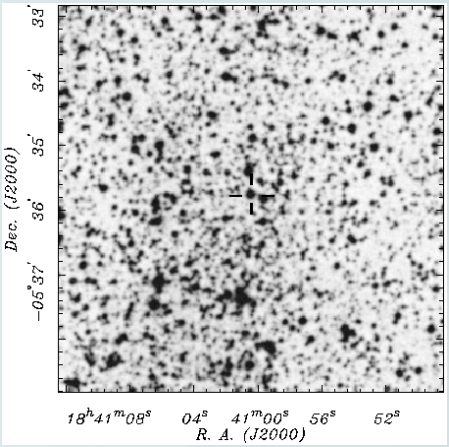
[1] Masetti, N., Mason, E., Bassani, L., et al. 2006, A&A, 448, 547
[2] Stephenson, C.B., & Sanduleak, N. 1977, ApJS, 33, 459
[3] Pandey, M., Rao, A.P., Manchanda, R., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83
[4] Molkov, S.V., Cherepashchuk, A.M., Lutovinov, A.A., et al. 2004, Astron. Lett., 30, 534

IGR J18410-0535

RA_{2000}: **18 41 00.54** [1]
DEC_{2000}: **-05 35 46.8** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_B [mag]: **1 5.91** [1]	**B-R** [mag]: **+3.13** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **9.5 10^{-11}** (2-10 keV) PEAK [2] **8.3 10^{-10}** (20-60 keV) PEAK [3] **2.3 10^{-11}** (60-200 keV) PEAK [3] **3.5 10^{-12}** (2-10 keV) LOW STATE [5] **4.2 10^{-12}** (0.5-10 keV) QUIESCENCE [1]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: **2.4 10^{35}** (2-10 keV) PEAK **2.1 10^{36}** (20-60 keV) PEAK **5.7 10^{34}** (60-200 keV) PEAK **8.8 10^{33}** (2-10 keV) LOW STATE **1.0 10^{34}** (0.5-10 keV) QUIESCENCE	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [kpc]: **4.6**	M_V [mag]: **-6.4**	A_V [mag]: **7.0**
P_{orb} [days]: -	P_{spin} [s]: **4.74** [2]	M_{NS} [M_{sun}]: -

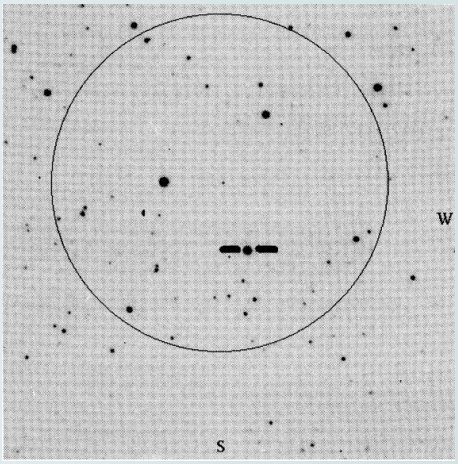
Notes:

Transient X-ray source [3]; secondary star spectral type: B0 I [4]; finding chart of size 5 x 5 arcmin.

References:

[1] Halpern, J.P., Gotthelf, E.V., Helfand, D.J., et al. 2004, ATel 289
[2] Bamba, A., Yokogawa, J., Ueno, M. 2001, PASJ, 53, 1179
[3] Rodriguez, J., Domingo Garau, A., Grebenev, S. et al. 2004, ATel 340
[4] Nespoli, E., Fabregat, J., & Mennickent, R. 2007, ATel 983
[5] Sidoli, L., Romano, P., Mangano, V., et al. 2008, ApJ, in press (arXiv:0805.1808)

IGR J18450-0435



RA_{2000}: **18 45 01.5** [1]
DEC_{2000}: **-04 33 55.5** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT FAST X-RAY TRANSIENT**

Optical Spectrum [4000-5000 Å] [6200-6800 Å] [1]

General Data		
m_B [mag]: **1 6.16** [1]	**B-V** [mag]: **+2.20** [1]	**z** = **0** [1]
F_X [erg/cm^2/s]: **8 10^{-12}** (20-40 keV) [2] **1 10^{-9}** (0.7-10 keV) PEAK [4] **3 10^{-12}** (0.7-10 keV) QUIESCENCE [4]	**F_{RADIO}** [mJy]: **<2.3** (0.61 GHz) [5]	**F_{IR}** [erg/cm^2/s]: -
L_X [erg/s]: **1 10^{34}** (20-40 keV) [3] **5 10^{35}** (0.7-10 keV) PEAK [4] **6 10^{33}** (0.7-10 keV) QUIESCENCE [4]	**L_{RADIO}** [erg/s]: **<2.2 10^{28}** (0.61 GHz)	**L_{IR}** [erg/s]: -
D [kpc]: **3.6** [1]	**M_V** [mag]: **-6.4**	**A_V** [mag]: **7.60** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Transient X-ray source [4]; secondary star spectral type: O9 I [1]; finding chart of size 2.5 x 2.5 arcmin.

References:

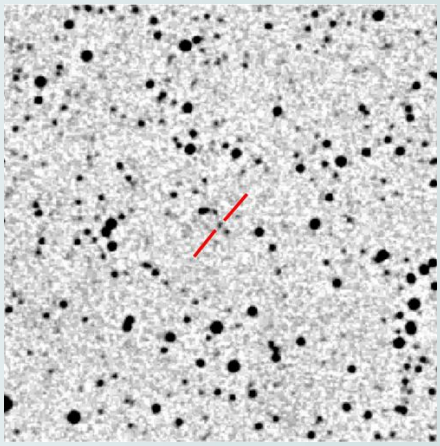
[1] Coe, M.J., Fabregat, J., Negueruela, I., et al. 1996, MNRAS, 281, 333
[2] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2006, ApJ, 636, 765
[3] Halpern, J.P., & Gotthelf, E.V. 2006, ATel 692
[4] Yamauchi, S., Aoki, T., Hayashida, K., et al. 1995, PASJ, 47, 189
[5] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 453, 83

IGR J18483-0311

RA_{2000}: **18 48 17.20** [1]
DEC_{2000}: **-03 10 16.8** [1]

Class: **HIGH-MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_R [mag]: **19.26** [2]	**R-K** [mag]: **+10.8** [2]	**z** = **0** [1]
F_X [erg/cm^2/s]: **2.0 10^{-9}** (20-100 keV) OUTBURST [2] **4.3 10^{-12}** (1-7 keV) LOW STATE [2] **6.0 10^{-11}** (20-100 keV) LOW STATE [3]	**F_{RADIO}** [mJy]: **<4.24** (0.61 GHz) [5] **<1.0** (1.28 GHz) [5]	**F_{IR}** [Jy]: **0.217** (3.6 μm) [6] **0.164** (4.5 μm) [6] **0.124** (5.8 μm) [6] **0.067** (8 μm) [6]
L_X [erg/s]: **3.0 10^{36}** (20-100 keV) OUTBURST **6.3 10^{33}** (1-7 keV) LOW STATE [1] **8.8 10^{34}** (20-100 keV) LOW STATE [1]	**L_{RADIO}** [erg/s]: **<3.8 10^{28}** (0.61 GHz) **<1.9 10^{28}** (1.28 GHz)	**L_{IR}** [erg/s]: **2.6 10^{35}** (3.6 μm) **1.6 10^{35}** (4.5 μm) **9.4 10^{34}** (5.8 μm) **3.7 10^{34}** (8 μm)
D [kpc]: **~3.5** [1, 2]; **0.9 - 2.7** [6]	**M_R** [mag]: **~ -4.0** [1, 2]	**A_V** [mag]: **~13** [2] or **17.4** [6]
P_{orb} [days]: **18.52** [2, 4]	**P_{spin}** [s]: **21.0526** [2]	**M_{NS}** [M_{sun}]: -

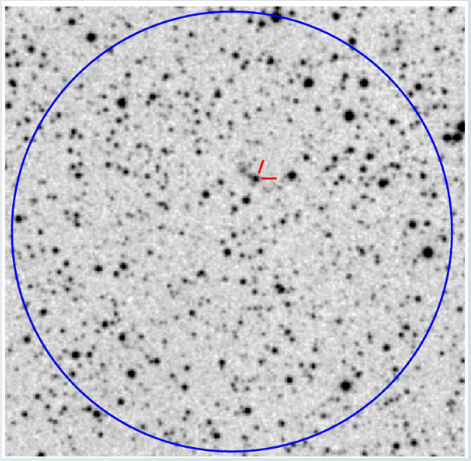
Notes:

Finding chart of size 5 x 5 arcmin; companion star is an OB giant [1].

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Sguera, V., Hill, A.B., Bird, A.J., et al. 2007, A&A, 467, 249
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] Levine, A.M., & Corbet, R. 2006, ATel 940
[5] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446,471
[6] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)

2E 1853.7+1534



RA_{2000}: **18 56 00.0** [2]

DEC_{2000}: **+15 38 13** [2]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.2 GALAXY**

Optical Spectrum [1]

General Data		
m_B [mag]: **1 8.4** [2]	**B-R** [mag]: **+2.5** [2]	**z** = **0.084** [1, 4]
F_X [erg/cm^2/s]: **~10^{-12}** (0.16-3.5 keV) [1] **1.4 10^{-11}** (2-10 keV) [5] **2.1 10^{-11}** (20-40 keV) [1] **1.9 10^{-11}** (40-100 keV) [1]	**F_{RADIO}** [mJy]: **3.4** (1.4 GHz) [3]	**F_{IR}** [Jy]: -
L_X [erg/s]: **~2.0 10^{43}** (0.1-2 keV) [1] **2.8 10^{44}** (2-10 keV) **8.1 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **9.7 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **412** [1]	**M_B** [mag]: **-23.5** [1]	**A_V** [mag]: **2.91** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **1.4 10^8** [1]

Notes:

INTEGRAL error box reported as a circle in the figure; finding chart of size 6 x 6 arcmin.

References:

[1] Masetti, N., Mason, E., Bassani, L., et al. 2006, A&A, 448, 547
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[4] Bikmaev, I.F., Sunyaev, R.A., Revnivtsev, M.G., & Burenin, R.A. 2006, Astron. Lett., 32, 221
[5] Rodriguez, J., Tomsick, J.A., & Chaty, S. 2008, A&A, 482, 731

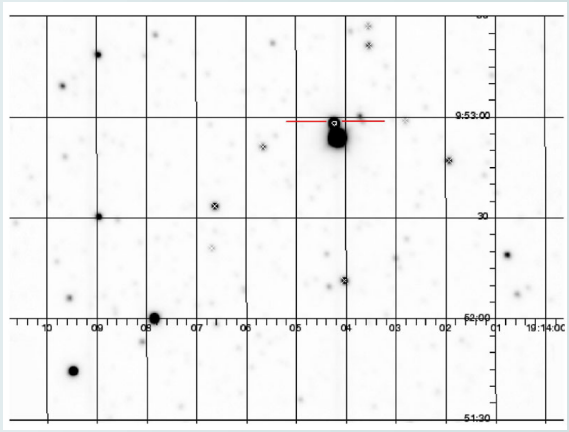
IGR J19140+0951

RA_{2000}: **19 14 04.23** [1]
DEC_{2000}: **+09 52 58.3** [1]

Class: **HIGH MASS X-RAY BINARY**
Type: **SUPERGIANT X-RAY BINARY**

Optical Spectrum [1]

Near-Infrared Spectrum [2.0-2.5 μm] [6]; [0.9-2.4 μm] [7]



General Data		
m_I [mag]: **1 3.0** [1]	**V-I** [mag]: **> +5.8** [1]	**z** = **0** [6, 7]
F_X [erg/cm^2/s]: **2.09 10^{-9}** (1-20 keV) HIGH [3] **1.03 10^{-9}** (20-200 keV) HIGH [3] **1.83 10^{-10}** (1-20 keV) LOW [3] **4.26 10^{-10}** (20-200 keV) LOW [3] **2.47 10^{-11}** (1-20 keV) FAINT [4]	**F_{RADIO}** [mJy]: **<5** (0.61 GHz) [5] **<0.5** (1.28 GHz) [5]	**F_{IR}** [erg/cm^2/s]: **0.185** (3.6 μm) [8] **0.152** (4.5 μm) [8] **0.104** (5.8 μm) [8] **0.062** (8 μm) [8] **0.035** (8.59 μm) [8] **0.019** (11.25 μm) [8]
L_X [erg/s]: **2.4 10^{36}** (1-20 keV) HIGH **1.2 10^{36}** (20-200 keV) HIGH **2.1 10^{35}** (1-20 keV) LOW **5.0 10^{35}** (20-200 keV) LOW **2.8 10^{34}** (1-20 keV) FAINT	**L_{RADIO}** [erg/s]: **<3.5 10^{28}** (0.61 GHz) **<7.3 10^{27}** (1.28 GHz)	**L_{IR}** [erg/s]: **1.8 10^{35}** (3.6 μm) **1.2 10^{35}** (4.5 μm) **6.2 10^{34}** (5.8 μm) **2.7 10^{34}** (8 μm) **1.4 10^{34}** (8.59 μm) **5.6 10^{33}** (11.25 μm)
D [kpc]: **~3.1** [8]	**M_K** [mag]: **-5.8** [6]	**A_V** [mag]: **11** [1] or **16.5** [7]
P_{orb} [days]: **13.558** [2]	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

Notes:

Spectral type of secondary star: B0.5 I [6]; finding chart of size 3 x 2 arcmin.

References:

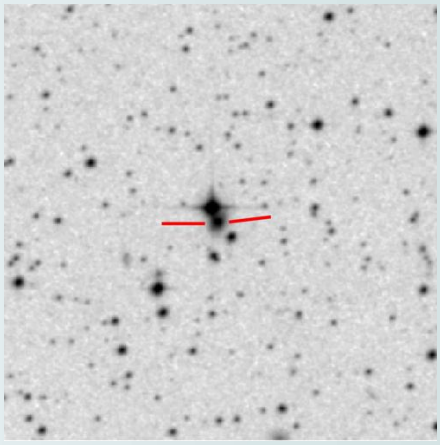
[1] in't Zand, J.J.M., Jonker, P.G., Nelemans G., et al. 2006, A&A, 448, 1106
[2] Corbet, R.H.D., Hannikainen, D.C., Remillard, R. 2004, ATel 269
[3] Rodriguez, J., Cabanac, C., Hannikainen, D.C., et al. 2005, A&A, 432, 235
[4] Rodriguez, J., Beckmann, V., Hannikainen, D.C. 2006, ATel 800
[5] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[6] Hannikainen, D.C., Rawlings, M.G., Muhli, P., et al. 2007, MNRAS, 380, 665
[7] Chaty, S., Rahoui, F., Foellmi, C., et al. 2008, A&A, in press (arXiv:0802.1774)
[8] Rahoui, F., Chaty, S., Lagage, P.-O., & Pantin, E. 2008, A&A, in press (arXiv:0802.1770)

IGR J19405-3016

RA_{2000}: **19 40 15.07** [1]
DEC_{2000}: **-30 15 52.2** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1.2 GALAXY**

Optical Spectrum [1]



General Data		
m_B [mag]: **18.54** [5]	**B-V** [mag]: -	**z** = **0.052** [1, 7]
F_X [erg/cm^2/s]: **3.5 10^{-12}** (0.1-2.4 keV) [2] **1.1 10^{-12}** (2-10 keV) [3] **1.8 10^{-11}** (20-100 keV) [4]	**F_{RADIO}** [mJy]: **9.6** (1.4 GHz) [6]	**F_{IR}** [Jy]: **<0.255** (12 μm) [8] **<0.387** (25 μm) [8] **0.791** (60 μm) [8] **<1.88** (100 μm) [8]
L_X [erg/s]: **2.6 10^{43}** (0.1-2.4 keV) [1] **8.2 10^{42}** (2-10 keV) [1] **1.4 10^{44}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: **1.0 10^{39}** (14 GHz)	**L_{IR}** [erg/s]: **<4.7 10^{44}** (12 μm) **<3.5 10^{44}** (25 μm) **2.9 10^{44}** (60 μm) **<4.2 10^{44}** (100 μm)
D [Mpc]: **249.3** [1]	**M_B** [mag]: **-18.9**	**A_V** [mag]: **0.32** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: **6.2 10^8** [1]

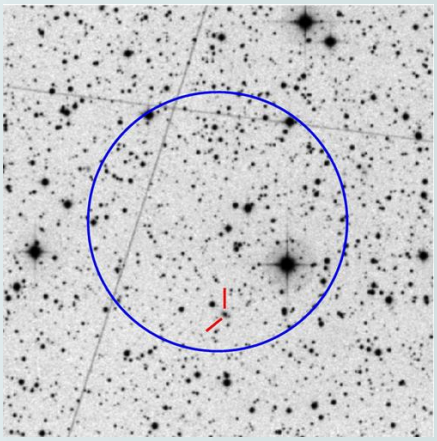
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Voges, W., Aschenbach, B., Boller, T., et al. 1999, A&A, 349, 389
[3] Landi, R., Malizia, A., Masetti, N., et al. 2007, ATel 1274
[4] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[5] Saunders, W., Sutherland, W.J., Maddox, S.J., et al. 2000, MNRAS, 317, 55
[6] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[7] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[8] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J19473+4452



RA_{2000}: 19 47 19.37 [2]
DEC_{2000}: +44 49 42.4 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 2 GALAXY

Optical Spectrum [3]

General Data		
m_B [mag]: 1 5.7 [2]	**B-R** [mag]: +0. 5 [2]	**z** = 0.053 [3, 5]
F_X [erg/cm^2/s]: 3.0 10^{-12} (0.5-8 keV) [1] 2.5 10^{-11} (17-60 keV) [1]	F_{RADIO} [mJy]: 4.7 (1.4 GHz) [4]	F_{IR} [erg/cm^2/s]: -
L_X [erg/s]: 2.3 10^{43} (0.5-8 keV) [3] 1.9 10^{44} (17-60 keV) [3]	L_{RADIO} [erg/s]: 5.1 10^{38} (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: 254 [3]	M_B [mag]: -23.4 [3]	A_V [mag]: 0.63 GALACTIC [3] 1.49 AGN [3]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

INTEGRAL error box reported as a circle in the figure.

References:

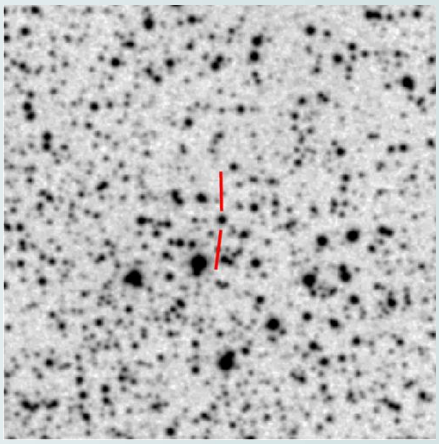
[1] Sazonov, S., Churazov, E., Revnivtsev, M. et al. 2005, A&A, 444, L37
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Masetti, N., Mason, E., Bassani, L., et al. 2006, A&A, 448, 547
[4] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[5] Bikmaev, I.F., Sunyaev, R.A., Revnivtsev, M.G., & Burenin, R.A. 2006, Astron. Lett., 32, 221

SWIFT J2000.6+3210

RA_{2000}: **20 00 21.85** [1]
DEC_{2000}: **+32 11 23.2** [1]

Class: **HIGH-MASS X-RAY BINARY**
Type: **Be/X BINARY**

Optical Spectrum [1]



General Data		
m_R [mag]: **16.1** [4]	**B-R** [mag]: **+1.5** [4]	**z** = **0** [1, 5]
F_X [erg/cm^2/s]: **5.0 10^{-12}** (0.2-12 keV) [2] **3.2 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **3.8 10^{34}** (0.2-12 keV) [1] **2.5 10^{35}** (20-100 keV) [1]	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [kpc]: **~8** [1]	**M_V** [mag]: **~ -1.8** [1]	**A_V** [mag]: **~4** [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{obj}** [M_{sun}]: -

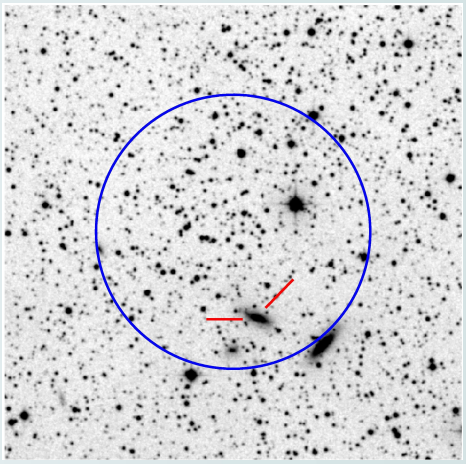
Notes:

Finding chart of size 5 x 5 arcmin; companion star is not a supergiant but either an early B V or a mid B III star [1].

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Saxton, R.D., Read, A.M., Esquej, P., et al. 2008, A&A, 480, 611
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[5] Burenin, R., Mescheryakov, A., Revnivtsev, M., Bikmaev, I., & Sunyaev, R. 2006, ATel 880

IGR J20286+2544



RA_{2000}: **20 28 35.1** [1]
DEC_{2000}: **+25 44 01** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **STARBURST/SEYFERT 2 GALAXY**

Optical Spectrum [4]

General Data		
m_B [mag]: **1 5.4** [1]	**B-V** [mag]: -	**z** = **0.0142** [1, 4]
F_X [erg/cm^2/s]: **4.1 10^{-11}** (20-100 keV) [3]	**F_{RADIO}** [mJy]: **27.4** (1.4 GHz) [2]	**F_{IR}** [erg/cm^2/s]: **0.580** (12 μm) [5] **1.06** (25 μm) [5] **11.2** (60 μm) [5] **17.6** (100 μm) [5]
L_X [erg/s]: **2.1 10^{43}** (20-100 keV) [4]	**L_{RADIO}** [erg/s]: **2.0 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: **7.6 10^{43}** (12 μm) **6.7 10^{43}** (25 μm) **2.9 10^{44}** (60 μm) **2.8 10^{44}** (100 μm)
D [Mpc]: **66.2** [4]	**M_B** [mag]: **-21.36** [1]	**A_V** [mag]: **1.4** GALACTIC [4] **4.0** AGN [4]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

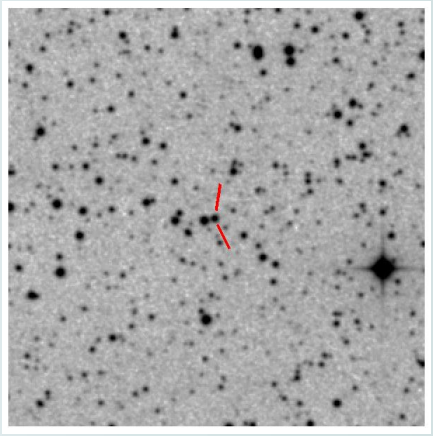
Notes:

INTEGRAL error box reported as a circle in the figure; finding chart of size 5 x 5 arcmin.

References:

[1] Hyperleda Catalogue (http://leda.univ-lyon1.fr/)
[2] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[3] Bassani, L., Molina, M., Malizia, A., et al., 2006, 636, L65
[4] Masetti, N., Bassani, L., Bazzano, A., et al. 2006, A&A, 455, 11
[5] IRAS catalogue of Point Sources, Version 2.0 (1986)

IGR J21247+5058



RA_{2000}: 21 24 39.33 [2]
DEC_{2000}: +50 58 26.0 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1 GALAXY

Optical Spectrum [1]

General Data		
m_B [mag]: 1 6.59 [1]	**B-V** [mag]: +0.54 [1]	**z** = 0.020 [1]
F_X [erg/cm^2/s]: 4.1 10^{-11} (20-40 keV) [4] 8.7 10^{-11} (40-100 keV) [4]	F_{RADIO} [mJy]: ~180 (0.61 GHz) [3] 381 (1.4 GHz) [5]	F_{IR} [erg/cm^2/s]: -
L_X [erg/s]: 1.4 10^{44} (20-100 keV) [1]	L_{RADIO} [erg/s]: ~1.2 10^{39} (0.61 GHz) 5.6 10^{39} (1.4 GHz)	L_{IR} [erg/s]: -
D [Mpc]: 94 [1]	M_V [mag]: -	A_V [mag]: 7.5 GALACTIC
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Aligned with an F-type Galactic star [1]; at the centre of an extended radio lobe emission [3]; finding chart of size 5 x 5 arcmin.

References:

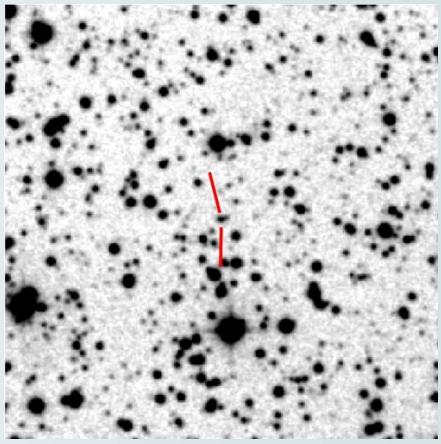
[1] Masetti, N., Palazzi, E., Bassani et al. 2004, A&A, 426, L41
[2] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[3] Pandey, M., Manchanda, R.K., Rao, A.P., Durouchoux P., & Ishwara-Chandra, C.H. 2006, A&A, 446, 471
[4] Bird, A.J., Barlow, E.J., Bassani, L., et al. 2004, ApJ, 607, L33
[5] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963

IGR J21272+4241

RA_{2000}: 21 27 18.51 [1]
DEC_{2000}: +42 39 11.2 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: SEYFERT 1.8/1.9 GALAXY

Optical Spectrum [1]



General Data		
m_R [mag]: 17.6 [4]	**B-R** [mag]: +1.7 [4]	**z** = 0.316 [1]
F_X [erg/cm^2/s]: 2.6 10^{-13} (2-10 keV) [2] 6.8 10^{-12} (20-40 keV) [3] <4.7 10^{-12} (40-100 keV) [3]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: 1.0 10^{44} (2-10 keV) [1] 2.6 10^{45} (20-40 keV) [1] <1.8 10^{45} (40-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: 1788.9 [1]	M_B [mag]: -23.7	A_V [mag]: 1.28 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 4.0 10^6 [1]

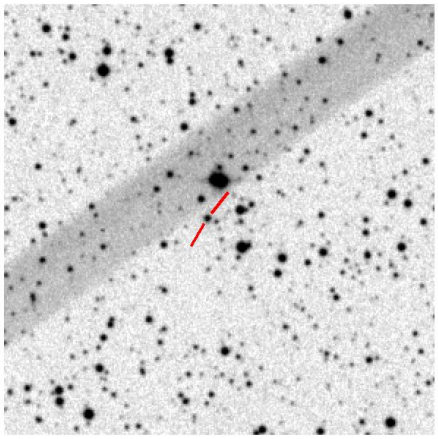
Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Sguera, V., et al. 2007, ATel 1322
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J21277+5656



RA_{2000}: 21 27 45.35 [2]
DEC_{2000}: +56 56 35.0 [2]

Class: ACTIVE GALACTIC NUCLEUS
Type: NARROW LINE SEYFERT 1 GALAXY

Optical Spectrum [1]

General Data		
m_B [mag]: 18.4 [5]	B-R [mag]: +2.6 [5]	z = 0.0144 [1]
F_X [erg/cm^2/s]: 9.1 10^{-12} (0.1-2 keV) [6] 1.7 10^{-11} (20-40 keV) [4] <9.4 10^{-12} (40-100 keV) [4]	F_{RADIO} [mJy] : 6.4 (1.4 GHz) [2]	F_{IR} [Jy]: <0.277 (12 μm) [3] 0.463 (25 μm) [3] <2.02 (60 μm) [3] <49.0 (100 μm) [3]
L_X [erg/s]: 5.0 10^{42} (0.1-2 keV) 9.2 10^{42} (20-40 keV) <5.1 10^{42} (40-100 keV)	L_{RADIO} [erg/s] : 4.8 10^{37} (1.4 GHz)	L_{IR} [erg/s]: <3.7 10^{43} (12 μm) 3.0 10^{43} (25 μm) <5.5 10^{43} (60 μm) <7.9 10^{44} (100 μm)
D [Mpc]: 67.2	M_B [mag]: -21.1	A_V [mag]: 4.0 GALACTIC
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: 1.5 10^7

Notes:

Finding chart of size 5 x 5 arcmin.

References:

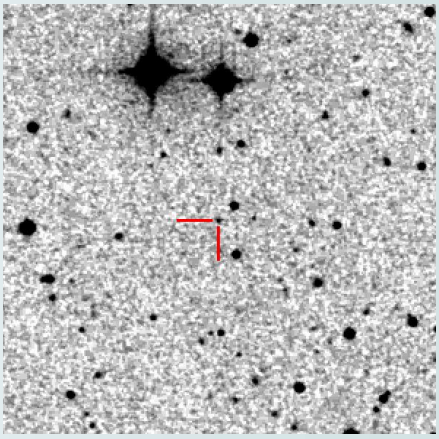
[1] Bikmaev, I.F., Sunyaev, R.A., Revnivtsev, M.G., & Burenin, R.A. 2006, Astron. Lett., 32, 221
[2] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1963
[3] IRAS catalogue of Point Sources, Version 2.0 (1986)
[4] ROSAT team, 2000, ROSAT News No.71, The ROSAT Source Catalog of Pointed Observations with the High Resolution Imager (1RXH; 3rd Release)
[5] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)

IGR J22517+2218

RA_{2000}: 22 51 53.50 [1]
DEC_{2000}: +22 17 37.3 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: BLAZAR

Optical Spectrum [1]



General Data		
m_I [mag]: 20.2 [1]	**B-V** [mag]: -	**z** = 3.668 [1]
F_X [erg/cm^2/s]: ~8 10^{-12} (2-10 keV) [2] 4 10^{-11} (20-100 keV) [2]	**F_{RADIO}** [mJy]: 190 (1.4 GHz) [3] 184 (4.85 GHz) [4]	**F_{IR}** [Jy]: -
L_X [erg/s]: 1.2 10^{48} (2-10 keV) 5.8 10^{48} (20-100 keV)	**L_{RADIO}** [erg/s]: 3.9 10^{44} (1.4 GHz) 1.3 10^{45} (4.85 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: 34819.5	**M_I** [mag]: < -27.7	**A_V** [mag]: 0.25 GALACTIC
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

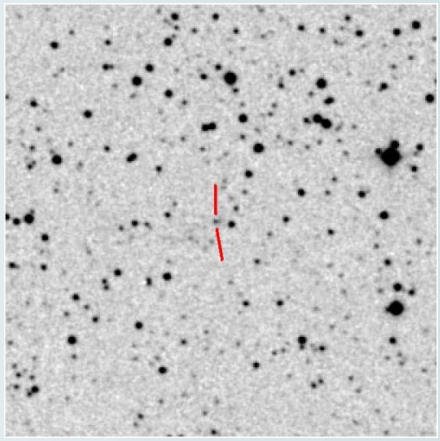
[1] Falco, E.E., Kochanek, C.S., & Muñoz, J.A. 1998, ApJ, 494, 47
[2] Bassani, Landi, R., Malizia, A., et al. 2007, ApJ, 669, L1
[3] Condon J.J., Cotton W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693
[4] Gregory, P.C., & Condon, J.J. 1991, ApJ, 75, 1011

IGR J23206+6431

RA_{2000}: **23 20 36.576** [1]
DEC_{2000}: **+64 30 45.15** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **SEYFERT 1 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **~19** [1]	**B-V** [mag]: -	**z** = **0.07173** [1]
F_X [erg/cm^2/s]: **8.6 10^{-12}** (17-60 keV) [1]	**F_{RADIO}** [mJy]: -	**F_{IR}** [Jy]: -
L_X [erg/s]: **1.2 10^{44}** (17-60 keV)	**L_{RADIO}** [erg/s]: -	**L_{IR}** [erg/s]: -
D [Mpc]: **348.8**	**M_R** [mag]: **~ -22.9**	**A_V** [mag]: **5.18** GALACTIC
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Field size of image: 5 x 5 arcmin.

References:

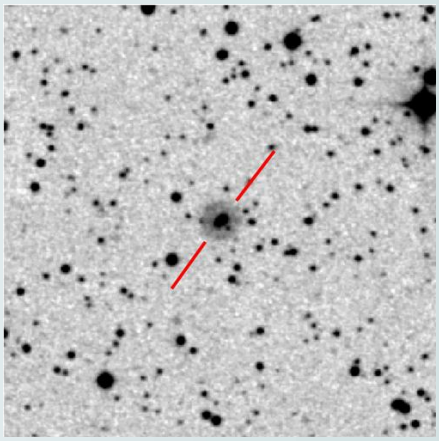
[1] Bikmaev, I., Revnivtsev, M., Burenin, R., et al. 2008, ATel 1363

IGR J23308+7120

RA_{2000}: **23 30 37.68** [1]
DEC_{2000}: **+71 22 46.6** [1]

Class: **ACTIVE GALACTIC NUCLEUS**
Type: **LIKELY SEYFERT 2 GALAXY**

Optical Spectrum [1]



General Data		
m_R [mag]: **14.2** [4]	**B-R** [mag]: **+2.9** [4]	**z** = **0.037** [1]
F_X [erg/cm^2/s]: **1.4 10^{-12}** (2-10 keV) [2] **6.8 10^{-12}** (20-40 keV) [3] **<5.7 10^{-12}** (40-100 keV) [3]	**F_{RADIO}** [mJy]: **2.6** (1.4 GHz) [5]	**F_{IR}** [Jy]: -
L_X [erg/s]: **5.2 10^{42}** (2-10 keV) [1] **2.5 10^{43}** (20-40 keV) [1] **<2.1 10^{43}** (40-100 keV) [1]	**L_{RADIO}** [erg/s]: **1.3 10^{38}** (1.4 GHz)	**L_{IR}** [erg/s]: -
D [Mpc]: **175.5** [1]	**M_B** [mag]: **< -21.8**	**A_V** [mag]: **2.06** GALACTIC [1]
P_{orb} [days]: -	**P_{spin}** [s]: -	**M_{AGN}** [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

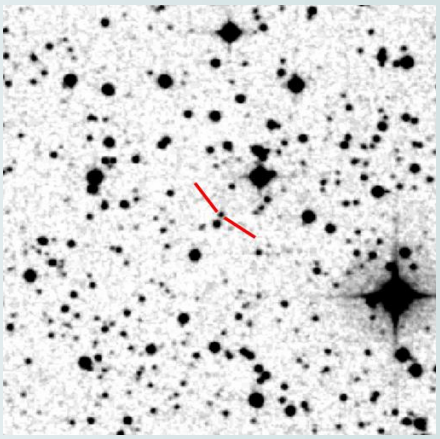
[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Landi, R., Masetti, N., Stephen, J.B, et al. 2007, ATel 1288
[3] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[4] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[5] Condon, J.J., Cotton, W.D., Greisen, E.W., et al. 1998, AJ, 115, 1693

IGR J23524+5842

RA_{2000}: 23 52 22.11 [1]
DEC_{2000}: +58 45 30.7 [1]

Class: ACTIVE GALACTIC NUCLEUS
Type: LIKELY SEYFERT 2 GALAXY

Optical Spectrum [1]



General Data		
m_R [mag]: 18.5 [3]	**B-R** [mag]: +1.2 [3]	**z** = 0.164 [1]
F_X [erg/cm^2/s]: 1.2 10^{-12} (0.5-8 keV) [4] 1.3 10^{-11} (20-100 keV) [2]	F_{RADIO} [mJy]: -	F_{IR} [Jy]: -
L_X [erg/s]: 1.0 10^{44} (0.5-8 keV) 1.1 10^{45} (20-100 keV) [1]	L_{RADIO} [erg/s]: -	L_{IR} [erg/s]: -
D [Mpc]: 849.9 [1]	M_B [mag]: < -25.2	A_V [mag]: 4.0 GALACTIC [1]
P_{orb} [days]: -	P_{spin} [s]: -	M_{AGN} [M_{sun}]: -

Notes:

Finding chart of size 5 x 5 arcmin.

References:

[1] Masetti, N., Mason, E., Morelli, L., et al. 2008, A&A, 482, 113
[2] Bird, A.J., Malizia, A., Bazzano, A., et al. 2007, ApJS, 170, 175
[3] USN0-A2.0 Catalogue (http://archive.eso.org/skycat/servers/usnoa)
[4] Sazonov, S., Revnivtsev, M., Burenin, R., et al. 2008, A&A, submitted (arXiv:0802.0928)