Dissecting the Region around *IC200107A*

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Abstract

The IceCube Neutrino Observatory has recently reported the detection of a highly-energetic neutrino, *IC200107A* [1] (MJD: 58855.00), with direction ra: 148.78°, dec: 35.85° in equatorial and l: 188.54°, b: 51.75° in galactic coordinates. Due to the high-energy and the track-like signature the event has a good pointing and is likely of astrophysical origin. With the goal of identifing the corresponding electromagnetic counterpart we report here on the muli-wavenlength dissection of the region around the event. This report was generated autmoatically on 2021-01-20 09:32:06.688 UTC.

1 Identifying Counterpart Candidates

The search for possible counterparts is based on the *VOU-Blazars* tool [1] and follows closely the pipeline developed in [2]. *VOU-Blazars* compares 32 multi-wavelength catalogs[2] to find all positions in the vicinity of the alert with a *blazar-like* emission profile in radio, optical and X-ray. Each of these matches is then additionally checked against existing catalogs to identify the associated object if possible.

In a second step a dedicated gamma-ray analysis is performed. In order to search for interesting emission features in the region we use *Fermi LAT* data around the event time and run three different analysis pipelines. Firstly, test-statistic maps are generated to search for unknown gamma-ray emmitters, e.g. indication for gamma-ray emission from the previously identfied *VOU-Blazars* source candidates. Subsequently SEDs and light curves are produced for each identified catalog source and interesting *VOU-Blazars* candidate. Based on these results we can finally search for specific features in flux and spectral shape around the neutrino arrival time.

The gamma-ray analyses are based on the latest version of the FSSC Tools v11r5p3 and the fermipy package [3]. We use the the standart procedures as described in the *Fermi LAT* Cicerone [4]. The dataset for the analysis contains events with photon energy above 0.1 GeV in a time window between 54682.7 and 59233.3.

[1]`NoGCNgiven`
[2]List of the 32 catalogs used in this analysis: SDS82 , 3HSP , Fermi8YR ,1BIGB, MST9Y, FIRST, SUMSS, WGACAT, IPC2E, ZWCLUSTERS, PSZ2, ABELL , SDSSWHL, CRATES, NVSS, SXPS, RASS, XMMSL, BMW , IPCSL, CHANDRA, MCXC, 5BZCat, SWXCS, PULSAR, F2PSR, 3FHL, 3FGL, 3XMM, MAXI, FermiMEV, AGILE

1.1 Catalog Sources in the Region around IC200107A

The following list gives a quick overview about the catalog blazars in the region. Sources are sorted by their angular distance to the neutrino direction.

4FGL J0955.1+3551 — Energy flux (E $\geq$ 100MeV): 1.00e-12 erg/cm^2/s [Top 97.1% in 4FGL]
ra: 148.78 deg — dec: 35.86 deg — distance: 0.01 deg [ra: -0.00 deg , dec: 0.01 deg]
Associations: 3HSPJ095507.1+355100, 5BZB J0955+3551

2 Full Multi-Wavelength Study of the Region

2.1 Description of the Analysis

In this section we present a full multi-wavelength search for possible neutrino counterparts. Starting from 32 multi-wavenlength catalogs the VOU-Blazar tool [1] uses the all the available radio, optical and X-ray data in order to identify blazar-like counterparts candidates. The full output of the tool cand be found in the appendix.

The analysis pipeline consists of two parts: 1) The radio and x-ray data, as well as the resulting counterpart candidates are shown and compared to the *Fermi LAT* gamma-ray emission in the region around the neutrino alert 2) For all known blazars with a angular distance of less than 1.5 degrees a multi-wavelength SED is constructed, including also a gamma-ray analysis that is started at the time of the neutrino alert. For each source we also calculated a fixed-binning light curve. For details about the analysis see the appendix.

2.2 The Multi-Wavelength SED

The multi-wavelength SED collects and visualizes all the publicly available multi-wavelength data, as well as the result of the gamma-ray analysis. The time evolution of the source is decoded in a color gradient from grey (old) to red (recent). Here the grey SEDs point and bowties represent the *Fermi-LAT* gamma-ray spectrum integrated over the entire mission while the black SED points show the gamma-ray spectrum in a time window around the neutrino arrival time. Colored bands indicate the corresponing spectral fits at different (if available) energy thresholds if the significance of the measurement is above 3 σ. The green dashed and solid line show the sensitivity and discovery potential of the IceCube 7yr point-source analysis [5], respectively.

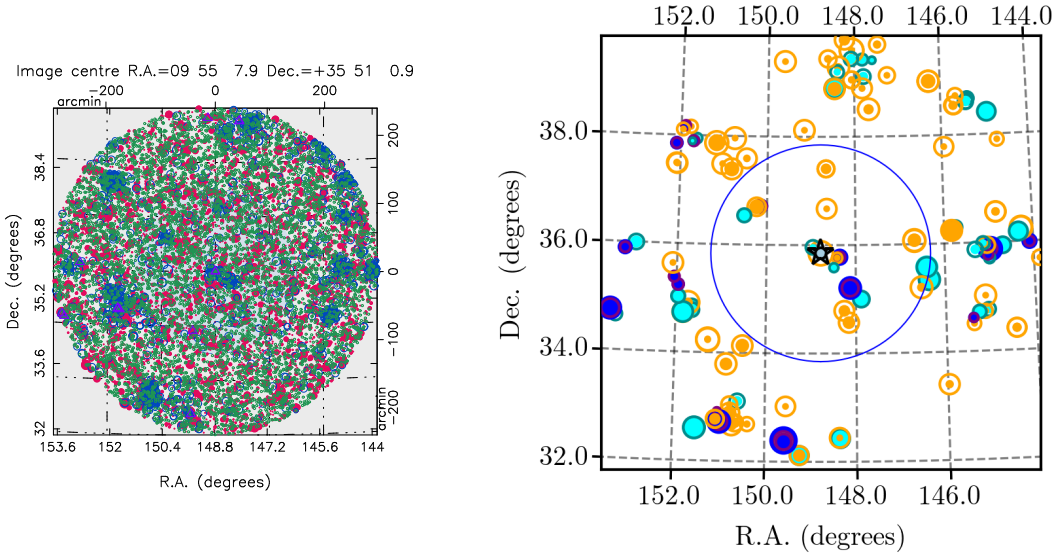

Figure 1: Left Plot: Radio and X-ray sources within 120 arc-minutes of the position of the neutrino event. Symbol diameters are proportional to source intensity. Radio sources appear as red filled circles, X-ray sources as open blue circles and gamma-ray sources as open triangles. Right Plot: Counterpart candidates in a 120 arc-minutes radius around the event direction. Dark blue circles represent LBL type candidates, that is sources with flux ratio in the range observed in the sample of LBL blazars of the latest edition of the BZCAT catalogue [6], cyan symbols are for IBL type candidates, and orange symbols are for HBL candidates. Known blazars are marked by a red diamond if they are included in the BZCAT catalogue or a star if they are part of the 2WHSP sample. The shaded area marks a circle of 90 arcmis around the events-best fit direction.

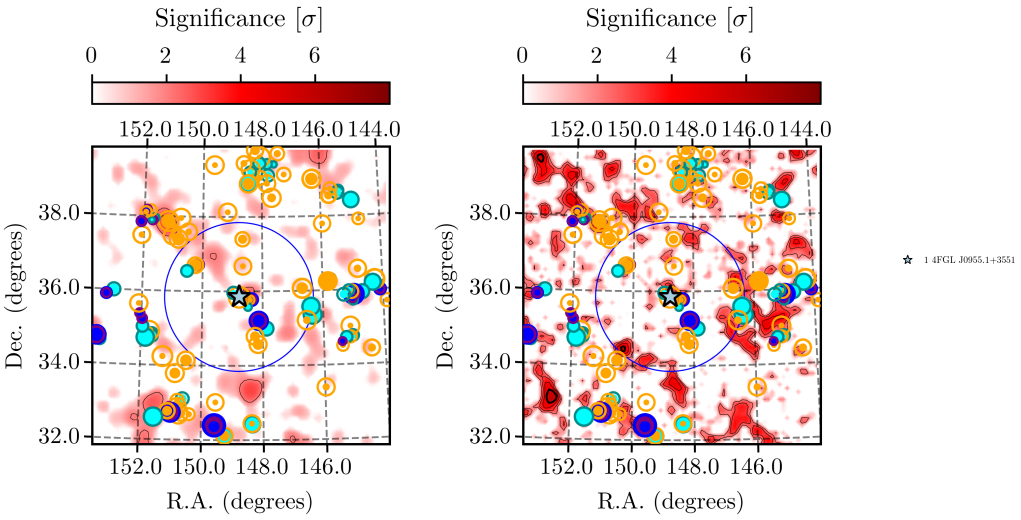

Figure 2: Test-statistic maps of the region after substracting know sources from the 4FGL catalog. The blue and black contours show the 90% and 50% error regions, respectively. Only photons with energies above 1.0 GeV are included. The map can be used to identify additional, yet unkown gamma-ray emitters, that coincide with multi-wavlength candidates. Contour lines are shown at 2,3,4,5 σ. **Left**: The map of the region for a time window of 200 days (MJD 58755.0, 58955.0) around the neutrino arrival time. **Right**: The map of the region for the entire *Fermi-LAT* mission (MJD 54682.7 to 59233.3).

3 SEDs and Light Curves

3.1 4FGL J0955.1+3551 | ra = 148.78°, dec = 35.86°, Σ= 7.3 σ, $\Delta\psi$ = 0.01°

Associations: 3HSPJ095507.1+355100, 5BZB J0955+3551

MJD	Probability [%]	Energy[GeV]
55799.79	98.72	178.75
58801.29	91.97	23.42
59013.96	95.81	21.16
59149.13	96.85	17.51
57094.65	92.46	9.44

Table 1: ≥ 5GeV photons with highest probability (p ≥ 90%) to be associated with the source

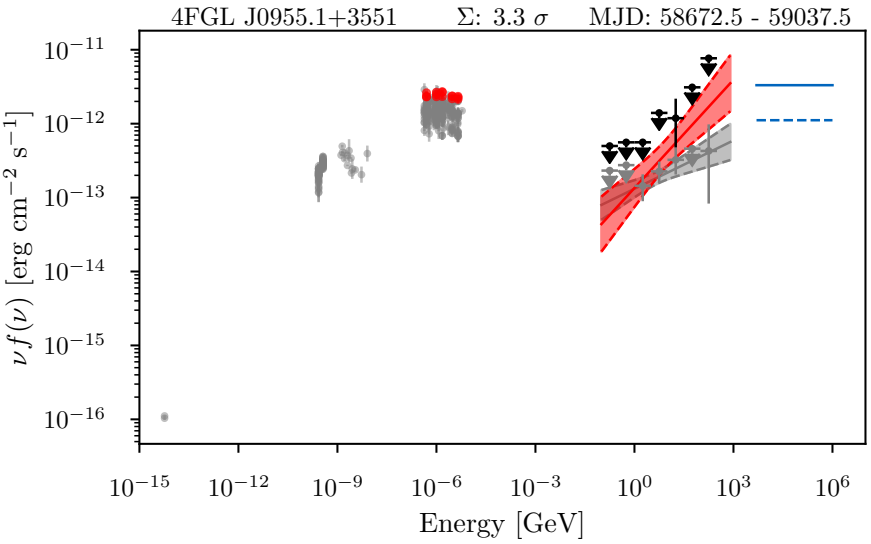

Figure 3: SED for 4FGL J0955.1+3551. See the description in section 2.2 for more details.

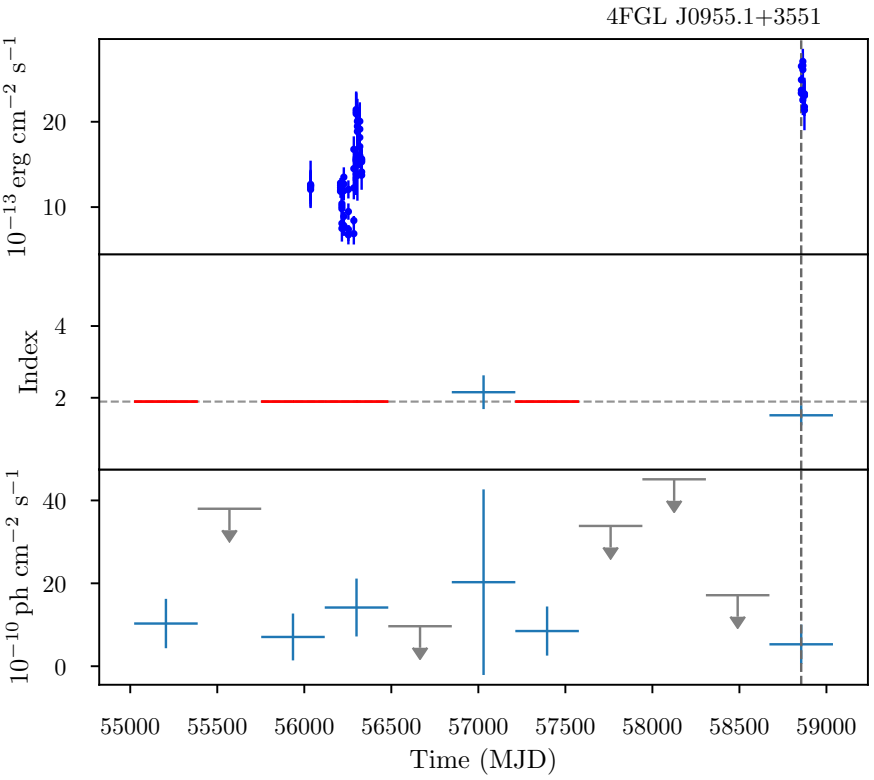

Figure 4: Light curve for 4FGL J0955.1+3551

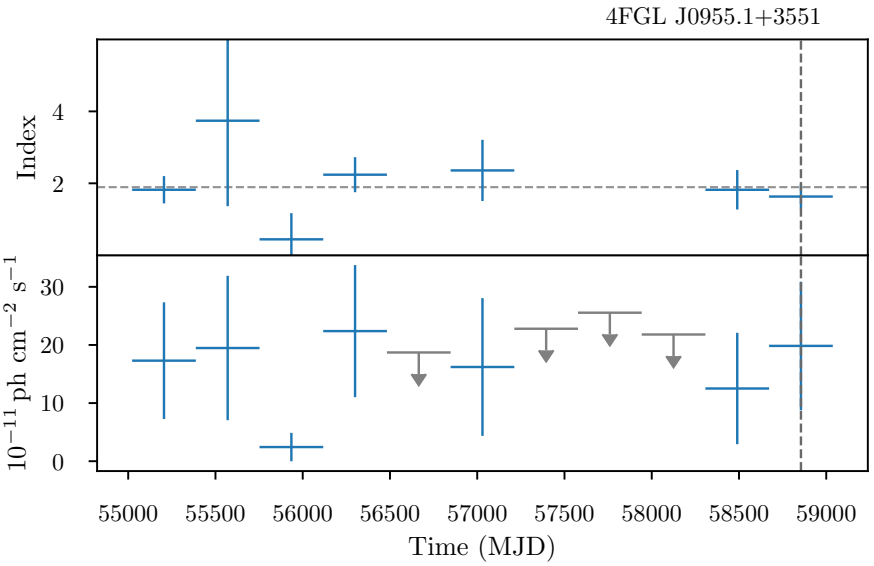

Figure 5: 1GeV light curve for 4FGL J0955.1+3551

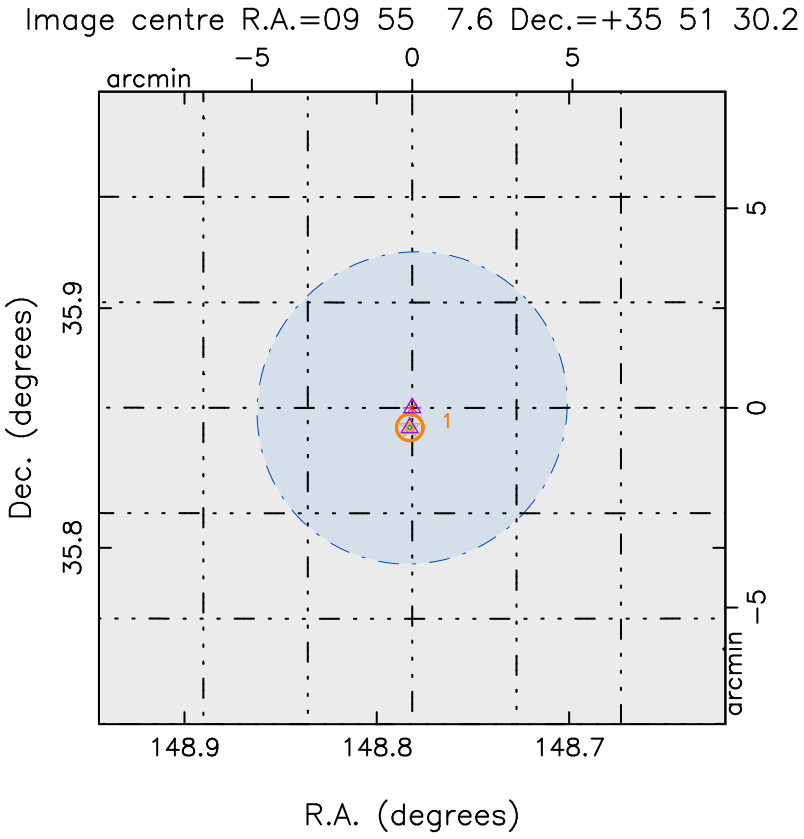

Figure 6: Possible couterparts for 4FGL J0955.1+3551

4 Appendix

4.1 Analyis Details - Light Curve

4.1.1 Ligh Curve Binning

Since we want to avoid running an extremly time consuming adaptive binning algorithm for all sources we try to estimate reasonable time windows for each source based on the following criteria:

- a) If possible we want to have a significant detection in each time bin
- b) IceCube needs on an order of $\mathcal{O}(100$ days) integration time to detect a significant neutrino singal in a point-source analysis
- c) following from b) we don't care too much about extremly short time-windows, since they are experimental hard to access
- d) unkown gamma-ray emitters are not expected to have a large time-integrated signal, but can still have gamma-ray outburst/flares

As a result of this we adapt the following procedure:

- For unkown gamma-ray emitters we built a light curve with time windows of 100 days, starting from the time of the neutrino alert. In case of subsequent measurements close to the detection threshold, an adaptive binning light curve can be run as a follow-up
- For known gamma-ray emitters, i.e. sources listed in the 4FGL catalog, we calculate the time window need for a 5σ (3σ) detection assuming a constant emission. This value is then used as time window, with the only limitation that we limit it to maximal 200 days in order to avoid missing interesting fluctuations around the neutrino arrival time.

The calculation of the time-windows for known-gamma ray emitters is based on the asymptotic behaviour of counting experiments combined with the information given in the 4FGL catalog. For a counting experiments with χ^2 background test-statistic distribution in the asymptotic limit the median test statistic value of a signal behaves as [7]

$$\mathcal{TS} = 2 \times \left[(s+b) \ln\left(1 + \frac{s}{b}\right) - s \right]. \tag{1}$$

As Fermi-LAT has only limited background we consider this equation in the limit of $s >> b >> 1$ and $s + b \to \infty$, hence we can simplify to

$$\mathcal{TS} \to 2 \times s \left[\ln\left(\frac{s}{b}\right) \right] \tag{2}$$

rewriting $s = s_0 t$ and $b = b_0 t$ we finally get

$$\mathcal{TS} \to 2 \times s_0 t \left[\ln\left(\frac{s_0}{b_0}\right) \right] \tag{3}$$

which scales linearly in time. The 4FGL catalog provides the 8 year time-integrated test-statistic values for each source in 7 energy bands. In order to calculate the total test-statistic value for our selection we sum up all the test-statistic values with energies larger than the minimimum (threshold) energy of this analysis. Finally we can calculate the integration time needed for 5σ ($\mathcal{TS} = 25$) and 3σ ($\mathcal{TS} = 9$) detection using equation (3)

$$t(5\sigma) = \frac{25}{\mathcal{TS}_{8years}} \cdot 2920\,[\text{days}] \tag{4}$$

4.2 Analyis Details - SED

The construction of the SED of the counterpart candiates is based on the *VOU-Blazars* tool [1]. For a given source position it identifies all the corresponding measurements based on likelihood ratios test taking into account the specific point spread functions of the 32 respective experiments/catalogs taken into account in our analysis [3]. This procedure works stable for multi-wavelength catalogs, as well as single band measurements except for gamma-ray catalogs where the point-spread function is comparably large. For the construction of the SED of Fermi-LAT counterparts the procedure is hence two-step. 1) We run a counterpart search in the given 95% confidence region of the source position. In most cases there is only one (or no) possible multi-wavelength counterpart candidate, in all other cases we assume the strongest source to be the countepart. 2) We construct the SED using the location of the indentified counterpart. In all of these cases the skymap in the vicinity with all the possible multi-wavelength counterparts is additionally shown in the source summary in section 3. Finally the IceCube point source sensitivity and discovery potential are taken from [5] and shown for reference.

[3] List of the 32 catalogs used in this analysis: SDS82 , 3HSP , Fermi8YR ,1BIGB, MST9Y, FIRST, SUMSS, WGACAT, IPC2E, ZWCLUSTERS, PSZ2, ABELL , SDSSWHL, CRATES, NVSS, SXPS, RASS, XMMSL, BMW , IPCSL, CHANDRA, MCXC, 5BZCat, SWXCS, PULSAR, F2PSR, 3FHL, 3FGL, 3XMM, MAXI, FermiMEV, AGILE

4.3 Full VOU Output

4XMM/FIRST ra dec 09 35 31.7, 35 41 1.0 radio flux d. 2.120 X-ray/radio flux-ratio 1534. arx 0.613 Log(nu peak) 16.5+/- 1 possible HBL **Dist. 238.784 arcmin**
Match nr. 1 ra dec: 143.88195, 35.68361
.....Cataloged sources.....
MQ FBQS J093531.6+354100

4XMM/NVSS ra dec 09 36 23.0, 35 59 39.9 radio flux d. 37.200 flux-ratio 13. arx 0.864 possible LBL **Dist. 227.874 arcmin**
Match nr. 2 ra dec: 144.09600, 35.99442
.....Cataloged sources.....
BROS J0936.3+3559
MQ SDSS J093623.36+355945.8

4XMM/FIRST ra dec 09 36 23.0, 35 59 40.0 radio flux d. 38.540 flux-ratio 13. arx 0.866 possible LBL **Dist. 227.872 arcmin**
Repeated radio counterpart, 0.137 arcsec away from the matched nr. 2

RASS/FIRST ra dec 09 37 3.0, 36 15 37.3 radio flux d. 3.210 X-ray/radio flux-ratio 30421. arx 0.456 Log(nu peak) 19.7+/- 1 possible HBL **Dist. 220.625 arcmin**
WGA/FIRST ra dec 09 37 3.0, 36 15 37.3 radio flux d. 3.210 X-ray/radio flux-ratio 6805. arx 0.535 Log(nu peak) 18.1+/- 1 possible HBL **Dist. 220.625 arcmin**
Match nr. 3 ra dec: 144.26256, 36.26037
.....Cataloged sources.....
MQ HS 0934+3629

RASS/NVSS ra dec 09 37 3.7, 36 15 38.9 radio flux d. 2.400 X-ray/radio flux-ratio 40688. arx 0.440 Log(nu peak) 20.0+/- 1 possible HBL **Dist. 220.499 arcmin**
WGA/NVSS ra dec 09 37 3.7, 36 15 38.9 radio flux d. 2.400 X-ray/radio flux-ratio 9102. arx 0.519 Log(nu peak) 18.4+/- 1 possible HBL **Dist. 220.499 arcmin**
SXPS/NVSS ra dec 09 37 3.7, 36 15 38.9 radio flux d. 2.400 X-ray/radio flux-ratio 3010. arx 0.578 Log(nu peak) 17.2+/- 1 possible HBL **Dist. 220.499 arcmin**
Match nr. 4 ra dec: 144.26521, 36.26081
.....Cataloged sources.....

WGA/NVSS ra dec 09 37 18.8, 36 11 15.7 radio flux d. 49.100 X-ray/radio flux-ratio 252. arx 0.708 Log(nu peak) 14.6+/- 1 possible IBL **Dist. 217.105 arcmin**
Match nr. 5 ra dec: 144.32833, 36.18769
.....Cataloged sources.....

WGA/FIRST ra dec 09 37 18.9, 36 11 15.5 radio flux d. 51.340 X-ray/radio flux-ratio 241. arx 0.711 Log(nu peak) 14.6+/- 1 possible IBL **Dist. 217.087 arcmin**
Repeated radio counterpart, 1.061 arcsec away from the matched nr. 5

SXPS/NVSS ra dec 09 37 49.3, 34 24 58.4 radio flux d. 4.800 X-ray/radio flux-ratio 2566. arx 0.586 Log(nu peak) 17.1+/- 1 possible HBL **Dist. 229.089 arcmin**
Match nr. 6 ra dec: 144.45538, 34.41622

.....Cataloged sources.....
MQ SDSS J093749.89+342457.3

SXPS/FIRST ra dec 09 37 49.9, 34 24 57.0 radio flux d. 5.330 X-ray/radio flux-ratio 2311. arx 0.592 Log(nu peak) 17.0+/- 1 possible HBL **Dist. 228.986 arcmin**
Match nr. 7 ra dec: 144.45785, 34.41584
.....Cataloged sources.....

4XMM/FIRST ra dec 09 38 46.0, 35 56 42.0 radio flux d. 39.080 X-ray/radio flux-ratio 124. arx 0.746 Log(nu peak) 13.9+/- 1 possible IBL **Dist. 198.916 arcmin**
Match nr. 8 ra dec: 144.69170, 35.94499
.....Cataloged sources.....

4XMM/NVSS ra dec 09 38 54.5, 37 54 10.4 radio flux d. 2.400 X-ray/radio flux-ratio 743. arx 0.651 Log(nu peak) 15.8+/- 1 possible HBL **Dist. 230.312 arcmin**
Match nr. 9 ra dec: 144.72717, 37.90289
.....Cataloged sources.....

WGA/FIRST ra dec 09 39 17.3, 36 33 44.2 radio flux d. 4.500 X-ray/radio flux-ratio 5130. arx 0.550 Log(nu peak) 17.8+/- 1 possible HBL **Dist. 196.452 arcmin**
Match nr. 10 ra dec: 144.82192, 36.56227
.....Cataloged sources.....
zw 8993
zw 8997

WGA/NVSS ra dec 09 39 17.8, 36 33 45.3 radio flux d. 4.000 X-ray/radio flux-ratio 5771. arx 0.543 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 196.342 arcmin**
Match nr. 11 ra dec: 144.82433, 36.56258
.....Cataloged sources.....
zw 8993
zw 8997

WGA/FIRST ra dec 09 39 48.3, 38 24 45.3 radio flux d. 60.590 X-ray/radio flux-ratio 193. arx 0.722 Log(nu peak) 14.4+/- 1 possible IBL **Dist. 239.192 arcmin**
Match nr. 12 ra dec: 144.95113, 38.41258
.....Cataloged sources.....
BROS J0939.8+3824
MQ SDSS J093948.29+382444.7

WGA/NVSS ra dec 09 39 48.3, 38 24 45.0 radio flux d. 66.800 X-ray/radio flux-ratio 175. arx 0.728 Log(nu peak) 14.2+/- 1 possible IBL **Dist. 239.188 arcmin**
Repeated radio counterpart, 0.309 arcsec away from the matched nr. 12

4XMM/FIRST ra dec 09 39 49.5, 35 56 15.7 radio flux d. 340.800 flux-ratio 0. arx 1.050 type unknown **Dist. 186.067 arcmin**
Match nr. 13 ra dec: 144.95615, 35.93770
.....Cataloged sources.....

4XMM/FIRST ra dec 09 39 50.0, 35 56 15.0 radio flux d. 244.100 flux-ratio 1. arx 1.032 type unknown **Dist. 185.953 arcmin**
Match nr. 14 ra dec: 144.95850, 35.93751
.....Cataloged sources.....

4XMM/NVSS ra dec 09 39 50.2, 35 55 53.1 radio flux d. 1949.600 flux-ratio 0. arx 1.142 type unknown **Dist. 185.917 arcmin**
Match nr. 15 ra dec: 144.95917, 35.93142
.....Cataloged sources.....

4XMM/FIRST ra dec 09 39 50.5, 35 55 41.8 radio flux d. 693.960 flux-ratio 0. arx 1.088 type unknown **Dist. 185.851 arcmin**
Match nr. 16 ra dec: 144.96050, 35.92828
.....Cataloged sources.....

4XMM/FIRST ra dec 09 39 52.8, 35 53 58.8 radio flux d. 2.810 X-ray/radio flux-ratio 3968. arx 0.563 Log(nu peak) 17.5+/- 1 possible HBL **Dist. 185.395 arcmin**
WGA/FIRST ra dec 09 39 52.8, 35 53 58.8 radio flux d. 2.810 X-ray/radio flux-ratio 1075. arx 0.632 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 185.395 arcmin**
Match nr. 17 ra dec: 144.96986, 35.89968
.....Cataloged sources.....
CRATES J093951+355433
MQ 3C 223

4XMM/FIRST ra dec 09 39 54.9, 35 52 9.2 radio flux d. 539.160 flux-ratio 4. arx 0.929 possible LBL **Dist. 184.988 arcmin**
Match nr. 18 ra dec: 144.97855, 35.86922
.....Cataloged sources.....

4XMM/NVSS ra dec 09 39 55.2, 35 52 11.2 radio flux d. 1460.800 flux-ratio 0. arx 1.091 type unknown **Dist. 184.923 arcmin**
!!!Warning, check X-ray counterpart!
Repeated radio counterpart, 4.372 arcsec away from the matched nr. 18

4XMM/NVSS ra dec 09 40 0.9, 35 42 58.3 radio flux d. 2.600 X-ray/radio flux-ratio 213. arx 0.717 Log(nu peak) 14.5+/- 1 possible IBL **Dist. 184.120 arcmin**
Match nr. 19 ra dec: 145.00358, 35.71619
.....Cataloged sources.....

4XMM/FIRST ra dec 09 40 1.8, 35 43 10.1 radio flux d. 1.520 X-ray/radio flux-ratio 364. arx 0.689 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 183.922 arcmin**
Match nr. 20 ra dec: 145.00740, 35.71947
.....Cataloged sources.....

4XMM/FIRST ra dec 09 40 2.9, 35 47 5.9 radio flux d. 7.070 flux-ratio 30. arx 0.821 possi-

ble LBL **Dist. 183.500 arcmin**
Match nr. 21 ra dec: 145.01194, 35.78496
.....Cataloged sources.....

4XMM/FIRST ra dec 09 40 4.9, 35 46 25.5 radio flux d. 9.460 flux-ratio 39. arx 0.807 possible LBL **Dist. 183.118 arcmin**
Match nr. 22 ra dec: 145.02039, 35.77374
.....Cataloged sources.....

WGA/FIRST ra dec 09 40 12.8, 35 57 18.2 radio flux d. 3.880 X-ray/radio flux-ratio 1134. arx 0.629 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 181.358 arcmin**
Match nr. 23 ra dec: 145.05335, 35.95505
.....Cataloged sources.....

4XMM/FIRST ra dec 09 40 13.9, 34 46 28.7 radio flux d. 4.910 X-ray/radio flux-ratio 351. arx 0.691 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 193.453 arcmin**
SXPS/FIRST ra dec 09 40 13.9, 34 46 28.7 radio flux d. 4.910 X-ray/radio flux-ratio 358. arx 0.690 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 193.453 arcmin**
Match nr. 24 ra dec: 145.05773, 34.77464
.....Cataloged sources.....
MQ SDSS J094013.88+344628.8

RASS/FIRST ra dec 09 40 30.0, 35 01 47.0 radio flux d. 1.820 X-ray/radio flux-ratio 17108. arx 0.486 Log(nu peak) 19.1+/- 1 possible HBL **Dist. 185.461 arcmin**
Match nr. 25 ra dec: 145.12480, 35.02972
.....Cataloged sources.....
MQ SDSS J094029.89+350147.4

4XMM/NVSS ra dec 09 40 32.5, 35 59 14.5 radio flux d. 3.200 X-ray/radio flux-ratio 420. arx 0.681 Log(nu peak) 15.2+/- 1 possible IBL **Dist. 177.406 arcmin**
Match nr. 26 ra dec: 145.13562, 35.98736
.....Cataloged sources.....

4XMM/FIRST ra dec 09 40 32.6, 34 44 14.0 radio flux d. 1.800 X-ray/radio flux-ratio 1068. arx 0.632 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 190.672 arcmin**
Match nr. 27 ra dec: 145.13570, 34.73721
.....Cataloged sources.....

4XMM/FIRST ra dec 09 41 4.1, 34 43 58.0 radio flux d. 16.830 X-ray/radio flux-ratio 91. arx 0.762 Log(nu peak) 13.6+/- 1 possible IBL **Dist. 184.763 arcmin**
Match nr. 28 ra dec: 145.26706, 34.73278
.....Cataloged sources.....
BROS J0941.0+3443

4XMM/NVSS ra dec 09 41 4.1, 34 43 56.9 radio flux d. 21.000 X-ray/radio flux-ratio 73. arx 0.774 Log(nu peak) 13.3+/- 1 possible IBL **Dist. 184.761 arcmin**
Repeated radio counterpart, 1.250 arcsec away from the matched nr. 28

WGA/FIRST ra dec 09 41 16.6, 35 52 56.9 radio flux d. 5.790 X-ray/radio flux-ratio 492. arx 0.673 Log(nu peak) 15.3+/- 1 possible IBL **Dist. 168.414 arcmin**
Match nr. 29 ra dec: 145.31930, 35.88246
.....Cataloged sources.....
zw 9050

WGA/NVSS ra dec 09 41 16.8, 35 52 58.1 radio flux d. 12.900 X-ray/radio flux-ratio 221. arx 0.715 Log(nu peak) 14.5+/- 1 possible IBL **Dist. 168.384 arcmin**
Repeated radio counterpart, 2.204 arcsec away from the matched nr. 29

4XMM/FIRST ra dec 09 41 30.9, 38 40 42.7 radio flux d. 2.850 X-ray/radio flux-ratio 349. arx 0.691 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 234.951 arcmin**
Match nr. 30 ra dec: 145.37879, 38.67852
.....Cataloged sources.....
MQ SDSS J094130.92+384042.9

4XMM/NVSS ra dec 09 41 31.5, 38 40 43.8 radio flux d. 3.500 X-ray/radio flux-ratio 284. arx 0.702 Log(nu peak) 14.8+/- 1 possible IBL **Dist. 234.877 arcmin**
Match nr. 31 ra dec: 145.38142, 38.67883
.....Cataloged sources.....

4XMM/FIRST ra dec 09 41 34.4, 34 30 57.6 radio flux d. 1.100 X-ray/radio flux-ratio 1353. arx 0.620 Log(nu peak) 16.4+/- 1 possible HBL **Dist. 184.475 arcmin**
Match nr. 32 ra dec: 145.39343, 34.51601
.....Cataloged sources.....

4XMM/NVSS ra dec 09 41 35.1, 34 37 25.7 radio flux d. 10.400 flux-ratio 23. arx 0.834 possible LBL **Dist. 181.539 arcmin**
Match nr. 33 ra dec: 145.39617, 34.62381
.....Cataloged sources.....

WGA/NVSS ra dec 09 41 39.5, 38 36 59.5 radio flux d. 5.400 X-ray/radio flux-ratio 475. arx 0.675 Log(nu peak) 15.3+/- 1 possible IBL **Dist. 231.130 arcmin**
Match nr. 34 ra dec: 145.41471, 38.61653
.....Cataloged sources.....

WGA/FIRST ra dec 09 41 40.0, 38 37 5.4 radio flux d. 5.780 X-ray/radio flux-ratio 444. arx 0.679 Log(nu peak) 15.2+/- 1 possible IBL **Dist. 231.128 arcmin**
Match nr. 35 ra dec: 145.41685, 38.61816
.....Cataloged sources.....

WGA/NVSS ra dec 09 42 38.4, 38 43 26.2 radio flux d. 2.300 X-ray/radio flux-ratio 1361. arx 0.620 Log(nu peak) 16.4+/- 1 possible HBL **Dist. 227.904 arcmin**
Match nr. 36 ra dec: 145.65988, 38.72394
.....Cataloged sources.....

WGA/FIRST ra dec 09 42 48.9, 38 32 38.5 radio flux d. 1.030 X-ray/radio flux-ratio 7468. arx 0.530 Log(nu peak) 18.2+/- 1 possible HBL **Dist. 218.562 arcmin**
Match nr. 37 ra dec: 145.70367, 38.54404
.....Cataloged sources.....

WGA/NVSS ra dec 09 42 52.3, 38 32 53.0 radio flux d. 4.800 X-ray/radio flux-ratio 1603. arx 0.611 Log(nu peak) 16.6+/- 1 possible HBL **Dist. 218.279 arcmin**
Match nr. 38 ra dec: 145.71796, 38.54806
.....Cataloged sources.....
MQ WISEA J094252.93+383256.2

WGA/FIRST ra dec 09 42 52.9, 38 32 55.5 radio flux d. 4.740 X-ray/radio flux-ratio 1623. arx 0.610 Log(nu peak) 16.6+/- 1 possible HBL **Dist. 218.232 arcmin**
Match nr. 39 ra dec: 145.72039, 38.54876
.....Cataloged sources.....

SXPS/FIRST ra dec 09 42 58.3, 36 18 19.7 radio flux d. 14.340 X-ray/radio flux-ratio 101. arx 0.757 Log(nu peak) 13.7+/- 1 possible IBL **Dist. 149.918 arcmin**
Match nr. 40 ra dec: 145.74299, 36.30547
.....Cataloged sources.....
MQ SDSS J094258.35+361815.3

SXPS/NVSS ra dec 09 42 58.4, 36 18 17.7 radio flux d. 18.000 X-ray/radio flux-ratio 80. arx 0.769 Log(nu peak) 13.4+/- 1 possible IBL **Dist. 149.900 arcmin**
Repeated radio counterpart, 2.119 arcsec away from the matched nr. 40

WGA/NVSS ra dec 09 43 19.2, 36 14 52.2 radio flux d. 75.000 X-ray/radio flux-ratio 686. arx 0.656 Log(nu peak) 15.7+/- 1 possible HBL **Dist. 145.223 arcmin**
SXPS/NVSS ra dec 09 43 19.2, 36 14 52.2 radio flux d. 75.000 X-ray/radio flux-ratio 93. arx 0.761 Log(nu peak) 13.6+/- 1 possible IBL **Dist. 145.223 arcmin**
Match nr. 41 ra dec: 145.82983, 36.24783
.....Cataloged sources.....
BROS J0943.3+3614
CRATES J094319+361447
MQ NGC 2965

WGA/FIRST ra dec 09 43 19.2, 36 14 52.3 radio flux d. 74.910 X-ray/radio flux-ratio 687. arx 0.656 Log(nu peak) 15.7+/- 1 possible HBL **Dist. 145.223 arcmin**
SXPS/FIRST ra dec 09 43 19.2, 36 14 52.3 radio flux d. 74.910 X-ray/radio flux-ratio 93. arx 0.761 Log(nu peak) 13.6+/- 1 possible IBL **Dist. 145.223 arcmin**
Repeated radio counterpart, 0.112 arcsec away from the matched nr. 41

RASS/NVSS ra dec 09 43 50.0, 37 48 5.6 radio flux d. 2.600 X-ray/radio flux-ratio 5536. arx 0.546 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 179.182 arcmin**
Match nr. 42 ra dec: 145.95821, 37.80156
.....Cataloged sources.....

RASS/NVSS ra dec 09 43 55.0, 33 24 25.0 radio flux d. 4.700 X-ray/radio flux-ratio 4610. arx 0.555 Log(nu peak) 17.7+/- 1 possible HBL **Dist. 201.608 arcmin**
Match nr. 43 ra dec: 145.97904, 33.40694
.....Cataloged sources.....

RASS/FIRST ra dec 09 43 55.2, 33 24 24.9 radio flux d. 4.030 X-ray/radio flux-ratio 5376. arx 0.547 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 201.579 arcmin**
Repeated radio counterpart, 2.706 arcsec away from the matched nr. 43

WGA/FIRST ra dec 09 45 5.7, 39 00 35.6 radio flux d. 6.960 X-ray/radio flux-ratio 4741. arx 0.554 Log(nu peak) 17.7+/- 1 possible HBL **Dist. 224.099 arcmin**
Match nr. 44 ra dec: 146.27385, 39.00989
.....Cataloged sources.....

RASS/NVSS ra dec 09 45 6.9, 39 00 22.9 radio flux d. 33.800 X-ray/radio flux-ratio 872. arx 0.643 Log(nu peak) 15.9+/- 1 possible HBL **Dist. 223.799 arcmin**
WGA/NVSS ra dec 09 45 6.9, 39 00 22.9 radio flux d. 33.800 X-ray/radio flux-ratio 976. arx 0.637 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 223.799 arcmin**
Match nr. 45 ra dec: 146.27867, 39.00636
.....Cataloged sources.....

RASS/FIRST ra dec 09 45 7.2, 39 00 20.2 radio flux d. 23.150 X-ray/radio flux-ratio 1273. arx 0.623 Log(nu peak) 16.3+/- 1 possible HBL **Dist. 223.728 arcmin**
WGA/FIRST ra dec 09 45 7.2, 39 00 20.2 radio flux d. 23.150 X-ray/radio flux-ratio 1425. arx 0.617 Log(nu peak) 16.5+/- 1 possible HBL **Dist. 223.728 arcmin**
Repeated radio counterpart, 4.645 arcsec away from the matched nr. 45

RASS/FIRST ra dec 09 45 25.9, 35 21 3.5 radio flux d. 147.550 X-ray/radio flux-ratio 232. arx 0.713 Log(nu peak) 14.5+/- 1 possible IBL **Dist. 122.039 arcmin**
Match nr. 46 ra dec: 146.35785, 35.35096
.....Cataloged sources.....
MQ FBQS J09454+3521

RASS/NVSS ra dec 09 45 25.9, 35 21 3.6 radio flux d. 155.800 X-ray/radio flux-ratio 220. arx 0.716 Log(nu peak) 14.5+/- 1 possible IBL **Dist. 122.033 arcmin**
Repeated radio counterpart, 0.354 arcsec away from the matched nr. 46

RASS/FIRST ra dec 09 45 38.1, 35 34 55.1 radio flux d. 261.920 X-ray/radio flux-ratio 84. arx 0.766 Log(nu peak) 13.5+/- 1 possible IBL **Dist. 116.770 arcmin**
Match nr. 47 ra dec: 146.40874, 35.58196
.....Cataloged sources.....
BROS J0945.6+3534
CRATES J094538+353452
MQ B2 0942+35B

RASS/NVSS ra dec 09 45 38.1, 35 34 55.5 radio flux d. 329.300 X-ray/radio flux-ratio 67. arx 0.778 Log(nu peak) 13.2+/- 1 possible IBL **Dist. 116.763 arcmin**
Repeated radio counterpart, 0.596 arcsec away from the matched nr. 47

RASS/NVSS ra dec 09 46 11.8, 35 12 43.4 radio flux d. 6.500 X-ray/radio flux-ratio 6329. arx 0.538 Log(nu peak) 18.0+/- 1 possible HBL **Dist. 115.600 arcmin**
Match nr. 48 ra dec: 146.54900, 35.21206
.....Cataloged sources.....

RASS/FIRST ra dec 09 46 11.8, 35 12 39.8 radio flux d. 4.930 X-ray/radio flux-ratio 8344. arx 0.524 Log(nu peak) 18.3+/- 1 possible HBL **Dist. 115.607 arcmin**
Repeated radio counterpart, 3.735 arcsec away from the matched nr. 48

RASS/FIRST ra dec 09 46 44.1, 36 04 42.5 radio flux d. 18.900 X-ray/radio flux-ratio 2477. arx 0.588 Log(nu peak) 17.0+/- 1 possible HBL **Dist. 102.859 arcmin**
Match nr. 49 ra dec: 146.68368, 36.07846
.....Cataloged sources.....

RASS/FIRST ra dec 09 46 44.8, 36 03 57.8 radio flux d. 3.250 X-ray/radio flux-ratio 14406. arx 0.495 Log(nu peak) 18.9+/- 1 possible HBL **Dist. 102.631 arcmin**
Match nr. 50 ra dec: 146.68657, 36.06606
.....Cataloged sources.....

WGA/NVSS ra dec 09 48 58.3, 39 08 8.3 radio flux d. 2.500 X-ray/radio flux-ratio 1890. arx 0.602 Log(nu peak) 16.8+/- 1 possible HBL **Dist. 210.308 arcmin**
Match nr. 51 ra dec: 147.24275, 39.13564
.....Cataloged sources.....

WGA/FIRST ra dec 09 49 49.0, 39 42 5.1 radio flux d. 4.110 X-ray/radio flux-ratio 1148. arx 0.628 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 239.501 arcmin**
Match nr. 52 ra dec: 147.45400, 39.70141
.....Cataloged sources.....
MQ SDSS J094949.00+394204.9

WGA/NVSS ra dec 09 49 49.3, 39 42 3.1 radio flux d. 5.800 X-ray/radio flux-ratio 813. arx 0.647 Log(nu peak) 15.9+/- 1 possible HBL **Dist. 239.451 arcmin**
Repeated radio counterpart, 4.503 arcsec away from the matched nr. 52

4XMM/FIRST ra dec 09 50 19.5, 39 24 48.1 radio flux d. 1.550 X-ray/radio flux-ratio 87. arx 0.764 Log(nu peak) 13.5+/- 1 possible IBL **Dist. 221.272 arcmin**
Match nr. 53 ra dec: 147.58135, 39.41335
.....Cataloged sources.....
MQ SDSS J095019.48+392448.6

RASS/NVSS ra dec 09 50 40.7, 38 30 48.7 radio flux d. 7.500 X-ray/radio flux-ratio 4748. arx 0.554 Log(nu peak) 17.7+/- 1 possible HBL **Dist. 168.419 arcmin**

Match nr. 54 ra dec: 147.66979, 38.51353
.....Cataloged sources.....
3HSPJ095040.9+383044
MQ SDSS J095040.89+383045.8

RASS/FIRST ra dec 09 50 40.9, 38 30 46.8 radio flux d. 6.970 X-ray/radio flux-ratio 5109. arx 0.550 Log(nu peak) 17.8+/- 1 possible HBL **Dist. 168.381 arcmin**
Repeated radio counterpart, 2.417 arcsec away from the matched nr. 54

WGA/NVSS ra dec 09 51 9.8, 39 06 59.9 radio flux d. 6.900 X-ray/radio flux-ratio 323. arx 0.695 Log(nu peak) 14.9+/- 1 possible IBL **Dist. 201.593 arcmin**
Match nr. 55 ra dec: 147.79067, 39.11664
.....Cataloged sources.....
MQ SDSS J095110.03+390702.0

WGA/FIRST ra dec 09 51 9.9, 39 07 1.6 radio flux d. 6.140 X-ray/radio flux-ratio 363. arx 0.689 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 201.616 arcmin**
Repeated radio counterpart, 2.059 arcsec away from the matched nr. 55

4XMM/NVSS ra dec 09 51 16.8, 39 25 36.5 radio flux d. 4.600 X-ray/radio flux-ratio 165. arx 0.731 Log(nu peak) 14.2+/- 1 possible IBL **Dist. 219.410 arcmin**
Match nr. 56 ra dec: 147.82017, 39.42681
.....Cataloged sources.....

RASS/NVSS ra dec 09 51 19.2, 38 53 20.5 radio flux d. 2.900 X-ray/radio flux-ratio 6505. arx 0.537 Log(nu peak) 18.1+/- 1 possible HBL **Dist. 187.901 arcmin**
Match nr. 57 ra dec: 147.82996, 38.88903
.....Cataloged sources.....

SXPS/FIRST ra dec 09 51 33.3, 35 00 12.2 radio flux d. 20.210 X-ray/radio flux-ratio 259. arx 0.707 Log(nu peak) 14.7+/- 1 possible IBL **Dist. 67.031 arcmin**
Match nr. 58 ra dec: 147.88869, 35.00340
.....Cataloged sources.....
BROS J0951.5+3500
MQ PGC 2057879

SXPS/NVSS ra dec 09 51 33.3, 35 00 11.9 radio flux d. 19.300 X-ray/radio flux-ratio 271. arx 0.705 Log(nu peak) 14.7+/- 1 possible IBL **Dist. 67.029 arcmin**
Repeated radio counterpart, 0.647 arcsec away from the matched nr. 58

RASS/NVSS ra dec 09 52 14.0, 39 36 8.5 radio flux d. 2.700 X-ray/radio flux-ratio 39647. arx 0.442 Log(nu peak) 20.0+/- 1 possible HBL **Dist. 227.736 arcmin**
WGA/NVSS ra dec 09 52 14.0, 39 36 8.5 radio flux d. 2.700 X-ray/radio flux-ratio 32994. arx 0.451 Log(nu peak) 19.8+/- 1 possible HBL **Dist. 227.736 arcmin**
Match nr. 59 ra dec: 148.05825, 39.60236
.....Cataloged sources.....
3HSPJ095214.7+393615

5BZB J0952+3936
MQ RXS J09522+3936

RASS/FIRST ra dec 09 52 14.7, 39 36 15.8 radio flux d. 2.540 X-ray/radio flux-ratio 42144. arx 0.438 Log(nu peak) 20.0+/- 1 possible HBL **Dist. 227.834 arcmin**
WGA/FIRST ra dec 09 52 14.7, 39 36 15.8 radio flux d. 2.540 X-ray/radio flux-ratio 35072. arx 0.448 Log(nu peak) 19.8+/- 1 possible HBL **Dist. 227.834 arcmin**
Match nr. 60 ra dec: 148.06129, 39.60438
.....Cataloged sources.....

WGA/FIRST ra dec 09 52 16.9, 39 03 21.3 radio flux d. 3.210 X-ray/radio flux-ratio 1786. arx 0.605 Log(nu peak) 16.7+/- 1 possible HBL **Dist. 195.311 arcmin**
Match nr. 61 ra dec: 148.07030, 39.05593
.....Cataloged sources.....

WGA/NVSS ra dec 09 52 17.3, 39 03 15.8 radio flux d. 2.700 X-ray/radio flux-ratio 2123. arx 0.596 Log(nu peak) 16.9+/- 1 possible HBL **Dist. 195.207 arcmin**
Match nr. 62 ra dec: 148.07188, 39.05439
.....Cataloged sources.....

WGA/NVSS ra dec 09 52 18.7, 39 26 41.8 radio flux d. 7.700 X-ray/radio flux-ratio 249. arx 0.709 Log(nu peak) 14.6+/- 1 possible IBL **Dist. 218.265 arcmin**
Match nr. 63 ra dec: 148.07779, 39.44494
.....Cataloged sources.....
MQ SDSS J095218.73+392645.3

WGA/FIRST ra dec 09 52 18.7, 39 26 45.3 radio flux d. 6.440 X-ray/radio flux-ratio 298. arx 0.700 Log(nu peak) 14.8+/- 1 possible IBL **Dist. 218.320 arcmin**
Repeated radio counterpart, 3.590 arcsec away from the matched nr. 63

OUSXB/FIRST ra dec 09 52 31.8, 35 12 42.4 radio flux d. 16.120 X-ray/radio flux-ratio 326. arx 0.695 Log(nu peak) 14.9+/- 1 possible IBL **Dist. 49.766 arcmin**
Match nr. 64 ra dec: 148.13232, 35.21179
.....Cataloged sources.....
BROS J0952.5+3512

OUSXB/NVSS ra dec 09 52 32.0, 35 12 51.6 radio flux d. 333.200 flux-ratio 16. arx 0.855 possible LBL **Dist. 49.617 arcmin**
SXPS/NVSS ra dec 09 52 32.0, 35 12 51.6 radio flux d. 333.200 flux-ratio 17. arx 0.851 possible LBL **Dist. 49.617 arcmin**
Match nr. 65 ra dec: 148.13333, 35.21433
.....Cataloged sources.....
5BZQ J0952+3512
CRATES J095232+351253
MQ CBS 112

OUSXB/FIRST ra dec 09 52 32.0, 35 12 52.5 radio flux d. 312.300 flux-ratio 17. arx 0.851

possible LBL **Dist. 49.604 arcmin**
SXPS/FIRST ra dec 09 52 32.0, 35 12 52.5 radio flux d. 312.300 flux-ratio 18. arx 0.847 possible LBL **Dist. 49.604 arcmin**
Repeated radio counterpart, 0.882 arcsec away from the matched nr. 65

RASS/NVSS ra dec 09 52 40.2, 34 34 47.5 radio flux d. 18.600 X-ray/radio flux-ratio 1189. arx 0.627 Log(nu peak) 16.3+/- 1 possible HBL **Dist. 81.979 arcmin**
Match nr. 66 ra dec: 148.16733, 34.57986
.....Cataloged sources.....
whl J095238.6+343501

RASS/FIRST ra dec 09 52 40.3, 34 34 47.9 radio flux d. 14.080 X-ray/radio flux-ratio 1571. arx 0.612 Log(nu peak) 16.6+/- 1 possible HBL **Dist. 81.964 arcmin**
Repeated radio counterpart, 1.448 arcsec away from the matched nr. 66

RASS/FIRST ra dec 09 52 53.8, 39 47 42.7 radio flux d. 9.240 X-ray/radio flux-ratio 2247. arx 0.593 Log(nu peak) 16.9+/- 1 possible HBL **Dist. 238.173 arcmin**
WGA/FIRST ra dec 09 52 53.8, 39 47 42.7 radio flux d. 9.240 X-ray/radio flux-ratio 1098. arx 0.631 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 238.173 arcmin**
Match nr. 67 ra dec: 148.22398, 39.79520
.....Cataloged sources.....

RASS/NVSS ra dec 09 52 53.8, 39 47 44.5 radio flux d. 10.300 X-ray/radio flux-ratio 2015. arx 0.599 Log(nu peak) 16.8+/- 1 possible HBL **Dist. 238.201 arcmin**
WGA/NVSS ra dec 09 52 53.8, 39 47 44.5 radio flux d. 10.300 X-ray/radio flux-ratio 985. arx 0.637 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 238.201 arcmin**
Repeated radio counterpart, 1.916 arcsec away from the matched nr. 67

RASS/FIRST ra dec 09 53 4.2, 34 47 46.0 radio flux d. 10.520 X-ray/radio flux-ratio 1815. arx 0.604 Log(nu peak) 16.7+/- 1 possible HBL **Dist. 68.093 arcmin**
Match nr. 68 ra dec: 148.26764, 34.79611
.....Cataloged sources.....

RASS/NVSS ra dec 09 53 4.5, 34 47 46.0 radio flux d. 10.200 X-ray/radio flux-ratio 1872. arx 0.603 Log(nu peak) 16.7+/- 1 possible HBL **Dist. 68.074 arcmin**
Repeated radio counterpart, 3.045 arcsec away from the matched nr. 68

OUSXG/FIRST ra dec 09 53 27.4, 35 47 5.0 radio flux d. 52.350 flux-ratio 11. arx 0.874 possible LBL **Dist. 20.755 arcmin**
SXPS/FIRST ra dec 09 53 27.4, 35 47 5.0 radio flux d. 52.350 flux-ratio 11. arx 0.875 possible LBL **Dist. 20.755 arcmin**
Match nr. 69 ra dec: 148.36406, 35.78471
.....Cataloged sources.....

OUSXG/NVSS ra dec 09 53 27.5, 35 47 7.8 radio flux d. 74.600 flux-ratio 8. arx 0.893 possible LBL **Dist. 20.730 arcmin**
SXPS/NVSS ra dec 09 53 27.5, 35 47 7.8 radio flux d. 74.600 flux-ratio 7. arx 0.894 possible LBL

Dist. 20.730 arcmin
Repeated radio counterpart, 2.994 arcsec away from the matched nr. 69

OUSXB/FIRST ra dec 09 53 28.0, 32 25 51.6 radio flux d. 131.850 X-ray/radio flux-ratio 124. arx 0.746 Log(nu peak) 13.9+/- 1 possible IBL **Dist. 206.193 arcmin**
SXPS/FIRST ra dec 09 53 28.0, 32 25 51.6 radio flux d. 131.850 X-ray/radio flux-ratio 111. arx 0.752 Log(nu peak) 13.8+/- 1 possible IBL **Dist. 206.193 arcmin**
Match nr. 70 ra dec: 148.36649, 32.43101
.....Cataloged sources.....
5BZQ J0953+3225
CRATES J095328+322552
MQ CSO 23

4XMM/FIRST ra dec 09 53 28.0, 39 17 21.9 radio flux d. 0.920 X-ray/radio flux-ratio 1014. arx 0.635 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 207.296 arcmin**
WGA/FIRST ra dec 09 53 28.0, 39 17 21.9 radio flux d. 0.920 flux-ratio 67865. arx 0.413 possible non-jetted AGN **Dist. 207.296 arcmin**
Match nr. 71 ra dec: 148.36680, 39.28941
.....Cataloged sources.....

OUSXB/NVSS ra dec 09 53 28.0, 32 25 50.4 radio flux d. 140.800 X-ray/radio flux-ratio 116. arx 0.749 Log(nu peak) 13.8+/- 1 possible IBL **Dist. 206.212 arcmin**
SXPS/NVSS ra dec 09 53 28.0, 32 25 50.4 radio flux d. 140.800 X-ray/radio flux-ratio 104. arx 0.755 Log(nu peak) 13.7+/- 1 possible IBL **Dist. 206.212 arcmin**
Repeated radio counterpart, 1.602 arcsec away from the matched nr. 70

.....Cataloged sources.....

RASS/FIRST ra dec 09 53 30.1, 32 27 6.4 radio flux d. 1.000 X-ray/radio flux-ratio 19773. arx 0.478 Log(nu peak) 19.2+/- 1 possible HBL **Dist. 204.910 arcmin**
Match nr. 72 ra dec: 148.37534, 32.45177
.....Cataloged sources.....
MQ PGC 1997578

4XMM/NVSS ra dec 09 53 31.3, 39 17 26.4 radio flux d. 4.900 X-ray/radio flux-ratio 2891. arx 0.580 Log(nu peak) 17.2+/- 1 possible HBL **Dist. 207.311 arcmin**
RASS/NVSS ra dec 09 53 31.3, 39 17 26.4 radio flux d. 4.900 X-ray/radio flux-ratio 8148. arx 0.525 Log(nu peak) 18.3+/- 1 possible HBL **Dist. 207.311 arcmin**
WGA/NVSS ra dec 09 53 31.3, 39 17 26.4 radio flux d. 4.900 X-ray/radio flux-ratio 12742. arx 0.502 Log(nu peak) 18.8+/- 1 possible HBL **Dist. 207.311 arcmin**
Match nr. 73 ra dec: 148.38025, 39.29067
.....Cataloged sources.....
MQ FBQS J095331.6+391729

4XMM/FIRST ra dec 09 53 31.7, 39 17 29.7 radio flux d. 4.450 X-ray/radio flux-ratio 3183. arx 0.575 Log(nu peak) 17.3+/- 1 possible HBL **Dist. 207.359 arcmin**
RASS/FIRST ra dec 09 53 31.7, 39 17 29.7 radio flux d. 4.450 X-ray/radio flux-ratio 8972. arx 0.520 Log(nu peak) 18.4+/- 1 possible HBL **Dist. 207.359 arcmin**

WGA/FIRST ra dec 09 53 31.7, 39 17 29.7 radio flux d. 4.450 X-ray/radio flux-ratio 14031. arx 0.496 Log(nu peak) 18.9+/- 1 possible HBL **Dist. 207.359 arcmin**
Repeated radio counterpart, 5.666 arcsec away from the matched nr. 73

4XMM/FIRST ra dec 09 53 35.4, 39 12 21.1 radio flux d. 2.990 X-ray/radio flux-ratio 512. arx 0.671 Log(nu peak) 15.4+/- 1 possible IBL **Dist. 202.170 arcmin**
Match nr. 74 ra dec: 148.39735, 39.20585
.....Cataloged sources.....

SXPS/NVSS ra dec 09 53 37.9 , 35 37 27.1 radio flux d. 7.300 No X-ray flux available! **Dist. 22.757 arcmin**
Match nr. 75 ra dec: 148.40771, 35.62419
.....Cataloged sources.....

SXPS/FIRST ra dec 09 53 38.5 , 35 37 29.1 radio flux d. 3.280 No X-ray flux available! **Dist. 22.626 arcmin**
Match nr. 76 ra dec: 148.41056, 35.62474
.....Cataloged sources.....

OUSXG/FIRST ra dec 09 53 41.2, 35 46 17.1 radio flux d. 0.710 X-ray/radio flux-ratio 670. arx 0.657 Log(nu peak) 15.7+/- 1 possible HBL **Dist. 18.206 arcmin**
SXPS/FIRST ra dec 09 53 41.2, 35 46 17.1 radio flux d. 0.710 X-ray/radio flux-ratio 639. arx 0.659 Log(nu peak) 15.6+/- 1 possible HBL **Dist. 18.206 arcmin**
Match nr. 77 ra dec: 148.42161, 35.77141
.....Cataloged sources.....
MQ SDSS J095341.14+354617.9

RASS/FIRST ra dec 09 53 50.2, 38 54 3.5 radio flux d. 21.760 X-ray/radio flux-ratio 943. arx 0.639 Log(nu peak) 16.0+/- 1 possible HBL **Dist. 183.694 arcmin**
Match nr. 78 ra dec: 148.45896, 38.90098
.....Cataloged sources.....

RASS/NVSS ra dec 09 53 51.3, 38 53 46.9 radio flux d. 48.100 X-ray/radio flux-ratio 427. arx 0.681 Log(nu peak) 15.2+/- 1 possible IBL **Dist. 183.398 arcmin**
SXPS/NVSS ra dec 09 53 51.3, 38 53 46.9 radio flux d. 48.100 X-ray/radio flux-ratio 305. arx 0.698 Log(nu peak) 14.8+/- 1 possible IBL **Dist. 183.398 arcmin**
Match nr. 79 ra dec: 148.46383, 38.89636
.....Cataloged sources.....
MQ SDSS J095351.31+385352.6

RASS/FIRST ra dec 09 53 52.4, 38 53 26.8 radio flux d. 20.050 X-ray/radio flux-ratio 1024. arx 0.634 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 183.046 arcmin**
Match nr. 80 ra dec: 148.46852, 38.89078
.....Cataloged sources.....

OUSXG/FIRST ra dec 09 53 58.1, 35 35 19.8 radio flux d. 3.250 X-ray/radio flux-ratio 82. arx 0.768 Log(nu peak) 13.4+/- 1 possible IBL **Dist. 21.143 arcmin**

SXPS/FIRST ra dec 09 53 58.1, 35 35 19.8 radio flux d. 3.250 X-ray/radio flux-ratio 92. arx 0.762 Log(nu peak) 13.6+/- 1 possible IBL **Dist. 21.143 arcmin**
Match nr. 81 ra dec: 148.49188, 35.58884
.....Cataloged sources.....

SXPS/NVSS ra dec 09 53 58.5, 35 35 20.4 radio flux d. 6.700 flux-ratio 45. arx 0.800 possible LBL **Dist. 21.070 arcmin**
!!!Warning, check X-ray counterpart!
Repeated radio counterpart, 5.883 arcsec away from the matched nr. 81

4XMM/NVSS ra dec 09 54 28.1, 39 26 24.9 radio flux d. 3.800 X-ray/radio flux-ratio 1829. arx 0.604 Log(nu peak) 16.7+/- 1 possible HBL **Dist. 215.544 arcmin**
Match nr. 82 ra dec: 148.61700, 39.44025
.....Cataloged sources.....
MQ SDSS J095428.47+392632.4

SXPS/FIRST ra dec 09 54 39.4, 37 24 31.2 radio flux d. 3.550 X-ray/radio flux-ratio 1625. arx 0.610 Log(nu peak) 16.6+/- 1 possible HBL **Dist. 93.679 arcmin**
Match nr. 83 ra dec: 148.66429, 37.40867
.....Cataloged sources.....
MQ IC 2515
zw 9462

RASS/NVSS ra dec 09 54 39.9, 36 40 40.8 radio flux d. 2.200 X-ray/radio flux-ratio 9057. arx 0.520 Log(nu peak) 18.4+/- 1 possible HBL **Dist. 49.986 arcmin**
Match nr. 84 ra dec: 148.66608, 36.67800
.....Cataloged sources.....

SXPS/NVSS ra dec 09 54 40.0, 37 24 34.2 radio flux d. 7.600 X-ray/radio flux-ratio 759. arx 0.650 Log(nu peak) 15.8+/- 1 possible HBL **Dist. 93.723 arcmin**
Match nr. 85 ra dec: 148.66646, 37.40950
.....Cataloged sources.....

XMMSLEW/FIRST ra dec 09 55 7.9, 35 51 0.8 radio flux d. 7.940 X-ray/radio flux-ratio 24554. arx 0.467 Log(nu peak) 19.5+/- 1 possible HBL **Dist. 0.005 arcmin**
RASS/FIRST ra dec 09 55 7.9, 35 51 0.8 radio flux d. 7.940 X-ray/radio flux-ratio 11726. arx 0.506 Log(nu peak) 18.7+/- 1 possible HBL **Dist. 0.005 arcmin**
OUSXB/FIRST ra dec 09 55 7.9, 35 51 0.8 radio flux d. 7.940 X-ray/radio flux-ratio 20844. arx 0.476 Log(nu peak) 19.3+/- 1 possible HBL **Dist. 0.005 arcmin**
SXPS/FIRST ra dec 09 55 7.9, 35 51 0.8 radio flux d. 7.940 X-ray/radio flux-ratio 15799. arx 0.490 Log(nu peak) 19.0+/- 1 possible HBL **Dist. 0.005 arcmin**
Match nr. 86 ra dec: 148.78283, 35.85023
.....Cataloged sources.....
3HSPJ095507.1+355100
5BZB J0955+3551
MQ SDSS J095507.88+355100.8

XMMSLEW/NVSS ra dec 09 55 8.0, 35 51 2.5 radio flux d. 7.400 X-ray/radio flux-ratio 26345.

arx 0.463 Log(nu peak) 19.5+/- 1 possible HBL **Dist. 0.039 arcmin**
RASS/NVSS ra dec 09 55 8.0, 35 51 2.5 radio flux d. 7.400 X-ray/radio flux-ratio 12582. arx 0.502 Log(nu peak) 18.8+/- 1 possible HBL **Dist. 0.039 arcmin**
OUSXB/NVSS ra dec 09 55 8.0, 35 51 2.5 radio flux d. 7.400 X-ray/radio flux-ratio 22365. arx 0.472 Log(nu peak) 19.4+/- 1 possible HBL **Dist. 0.039 arcmin**
SXPS/NVSS ra dec 09 55 8.0, 35 51 2.5 radio flux d. 7.400 X-ray/radio flux-ratio 16952. arx 0.486 Log(nu peak) 19.1+/- 1 possible HBL **Dist. 0.039 arcmin**
Repeated radio counterpart, 2.562 arcsec away from the matched nr. 86

OUSXB/NVSS ra dec 09 55 53.1, 35 57 57.1 radio flux d. 2.500 X-ray/radio flux-ratio 489. arx 0.673 Log(nu peak) 15.3+/- 1 possible IBL **Dist. 11.486 arcmin**
SXPS/NVSS ra dec 09 55 53.1, 35 57 57.1 radio flux d. 2.500 X-ray/radio flux-ratio 1086. arx 0.631 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 11.486 arcmin**
Match nr. 87 ra dec: 148.97129, 35.96586
.....Cataloged sources.....
MQ MCG 6-22-032
zw 9492

RASS/FIRST ra dec 09 56 40.9, 38 07 49.1 radio flux d. 1.320 X-ray/radio flux-ratio 19284. arx 0.480 Log(nu peak) 19.2+/- 1 possible HBL **Dist. 138.057 arcmin**
Match nr. 88 ra dec: 149.17032, 38.13030
.....Cataloged sources.....

WGA/FIRST ra dec 09 57 1.5, 32 07 2.2 radio flux d. 36.220 X-ray/radio flux-ratio 349. arx 0.691 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 225.211 arcmin**
Match nr. 89 ra dec: 149.25630, 32.11729
.....Cataloged sources.....
MQ 1WGA J0957.0+3207

WGA/NVSS ra dec 09 57 1.5, 32 07 4.8 radio flux d. 67.000 X-ray/radio flux-ratio 188. arx 0.724 Log(nu peak) 14.3+/- 1 possible IBL **Dist. 225.170 arcmin**
Repeated radio counterpart, 2.582 arcsec away from the matched nr. 89

WGA/FIRST ra dec 09 57 1.7, 32 07 11.0 radio flux d. 12.810 X-ray/radio flux-ratio 986. arx 0.637 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 225.071 arcmin**
Match nr. 90 ra dec: 149.25706, 32.11971
.....Cataloged sources.....

WGA/FIRST ra dec 09 58 11.7, 33 01 15.2 radio flux d. 0.930 X-ray/radio flux-ratio 17825. arx 0.484 Log(nu peak) 19.1+/- 1 possible HBL **Dist. 173.940 arcmin**
Match nr. 91 ra dec: 149.54881, 33.02088
.....Cataloged sources.....

WGA/NVSS ra dec 09 58 20.9, 32 24 1.6 radio flux d. 1247.100 flux-ratio 10. arx 0.881 possible LBL **Dist. 210.805 arcmin**
OUSXB/NVSS ra dec 09 58 20.9, 32 24 1.6 radio flux d. 1247.100 flux-ratio 8. arx 0.890 possible LBL **Dist. 210.805 arcmin**
SXPS/NVSS ra dec 09 58 20.9, 32 24 1.6 radio flux d. 1247.100 flux-ratio 11. arx 0.875 possible

LBL **Dist. 210.805 arcmin**
Match nr. 92 ra dec: 149.58717, 32.40044
.....Cataloged sources.....
CRATES J095821+322351
MQ 3C 232

WGA/FIRST ra dec 09 58 20.9, 32 24 2.2 radio flux d. 1228.720 flux-ratio 10. arx 0.880 possible LBL **Dist. 210.796 arcmin**
OUSXB/FIRST ra dec 09 58 20.9, 32 24 2.2 radio flux d. 1228.720 flux-ratio 8. arx 0.889 possible LBL **Dist. 210.796 arcmin**
SXPS/FIRST ra dec 09 58 20.9, 32 24 2.2 radio flux d. 1228.720 flux-ratio 11. arx 0.874 possible LBL **Dist. 210.796 arcmin**
Repeated radio counterpart, 0.625 arcsec away from the matched nr. 92

WGA/FIRST ra dec 09 58 21.1, 32 22 16.6 radio flux d. 3.650 X-ray/radio flux-ratio 1099. arx 0.631 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 212.530 arcmin**
Match nr. 93 ra dec: 149.58771, 32.37127
.....Cataloged sources.....
zw 9557

WGA/NVSS ra dec 09 58 21.6, 32 22 12.2 radio flux d. 62.900 flux-ratio 64. arx 0.781 possible LBL **Dist. 212.622 arcmin**
Match nr. 94 ra dec: 149.58988, 32.37006
.....Cataloged sources.....
zw 9557

RASS/FIRST ra dec 09 58 30.6, 39 23 54.9 radio flux d. 1.450 X-ray/radio flux-ratio 18339. arx 0.482 Log(nu peak) 19.2+/- 1 possible HBL **Dist. 216.648 arcmin**
Match nr. 95 ra dec: 149.62759, 39.39859
.....Cataloged sources.....
MQ SDSS J095830.60+392354.4

SXPS/FIRST ra dec 10 00 36.3, 36 42 46.7 radio flux d. 32.080 flux-ratio 36. arx 0.811 possible LBL **Dist. 84.022 arcmin**
Match nr. 96 ra dec: 150.15131, 36.71298
.....Cataloged sources.....
BROS J1000.6+3642
MQ SDSS J100036.31+364246.8

SXPS/NVSS ra dec 10 00 36.4, 36 42 45.8 radio flux d. 29.800 flux-ratio 39. arx 0.807 possible LBL **Dist. 84.023 arcmin**
Repeated radio counterpart, 1.218 arcsec away from the matched nr. 96

RASS/FIRST ra dec 10 00 58.8, 36 42 10.9 radio flux d. 15.040 X-ray/radio flux-ratio 1254. arx 0.624 Log(nu peak) 16.3+/- 1 possible HBL **Dist. 87.286 arcmin**
SXPS/FIRST ra dec 10 00 58.8, 36 42 10.9 radio flux d. 15.040 X-ray/radio flux-ratio 269. arx 0.705 Log(nu peak) 14.7+/- 1 possible IBL **Dist. 87.286 arcmin**
Match nr. 97 ra dec: 150.24494, 36.70303

.....Cataloged sources.....
MQ SDSS J100058.78+364210.8

RASS/NVSS ra dec 10 00 59.0, 36 42 15.5 radio flux d. 35.400 X-ray/radio flux-ratio 533. arx 0.669 Log(nu peak) 15.4+/- 1 possible IBL **Dist. 87.365 arcmin**
!!!Warning, check X-ray counterpart!
Repeated radio counterpart, 5.276 arcsec away from the matched nr. 97

RASS/FIRST ra dec 10 00 59.1, 36 42 18.1 radio flux d. 25.140 X-ray/radio flux-ratio 750. arx 0.651 Log(nu peak) 15.8+/- 1 possible HBL **Dist. 87.406 arcmin**
!!!Warning, check X-ray counterpart!
Repeated radio counterpart, 2.849 arcsec away from the matched nr. 97

4XMM/NVSS ra dec 10 01 33.7, 32 41 36.9 radio flux d. 3.100 X-ray/radio flux-ratio 637. arx 0.660 Log(nu peak) 15.6+/- 1 possible HBL **Dist. 205.481 arcmin**
Match nr. 98 ra dec: 150.39058, 32.69358
.....Cataloged sources.....

RASS/FIRST ra dec 10 01 57.8, 37 35 38.4 radio flux d. 3.490 X-ray/radio flux-ratio 5579. arx 0.545 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 133.011 arcmin**
Match nr. 99 ra dec: 150.49092, 37.59399
.....Cataloged sources.....
MQ SDSS J100158.50+373538.6

RASS/NVSS ra dec 10 01 58.1, 37 35 36.5 radio flux d. 5.000 X-ray/radio flux-ratio 3894. arx 0.564 Log(nu peak) 17.5+/- 1 possible HBL **Dist. 133.017 arcmin**
Repeated radio counterpart, 3.412 arcsec away from the matched nr. 99

RASS/NVSS ra dec 10 02 2.0, 34 08 35.3 radio flux d. 17.900 X-ray/radio flux-ratio 1299. arx 0.622 Log(nu peak) 16.4+/- 1 possible HBL **Dist. 132.974 arcmin**
Match nr. 100 ra dec: 150.50838, 34.14314
.....Cataloged sources.....
3HSPJ100202.0+340837

RASS/FIRST ra dec 10 02 2.0, 34 08 29.3 radio flux d. 7.590 X-ray/radio flux-ratio 3064. arx 0.577 Log(nu peak) 17.3+/- 1 possible HBL **Dist. 133.055 arcmin**
Match nr. 101 ra dec: 150.50848, 34.14147
.....Cataloged sources.....

RASS/FIRST ra dec 10 02 2.3, 34 08 36.8 radio flux d. 10.080 X-ray/radio flux-ratio 2307. arx 0.592 Log(nu peak) 17.0+/- 1 possible HBL **Dist. 132.996 arcmin**
Repeated radio counterpart, 4.117 arcsec away from the matched nr.

.....Cataloged sources.....

SXPS/NVSS ra dec 10 02 5.6, 36 32 21.5 radio flux d. 9.300 X-ray/radio flux-ratio 183. arx 0.725 Log(nu peak) 14.3+/- 1 possible IBL **Dist. 93.869 arcmin**
Match nr. 102 ra dec: 150.52342, 36.53931
.....Cataloged sources.....

4XMM/FIRST ra dec 10 02 24.8, 33 06 32.5 radio flux d. 7.260 X-ray/radio flux-ratio 404. arx 0.684 Log(nu peak) 15.1+/- 1 possible IBL **Dist. 187.498 arcmin**
Match nr. 103 ra dec: 150.60345, 33.10902
.....Cataloged sources.....
MQ SDSS J100224.82+330632.5

4XMM/NVSS ra dec 10 02 24.9, 33 06 31.9 radio flux d. 8.200 X-ray/radio flux-ratio 358. arx 0.690 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 187.514 arcmin**
Repeated radio counterpart, 1.176 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 02 36.6, 32 42 24.2 radio flux d. 8.120 X-ray/radio flux-ratio 1067. arx 0.632 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 210.141 arcmin**
WGA/FIRST ra dec 10 02 36.6, 32 42 24.2 radio flux d. 8.120 X-ray/radio flux-ratio 1278. arx 0.623 Log(nu peak) 16.3+/- 1 possible HBL **Dist. 210.141 arcmin**
Match nr. 104 ra dec: 150.65230, 32.70671
.....Cataloged sources.....
mcxcJ1002.6+3241
zw 9686

4XMM/NVSS ra dec 10 02 36.6, 32 42 26.2 radio flux d. 10.000 X-ray/radio flux-ratio 867. arx 0.643 Log(nu peak) 15.9+/- 1 possible HBL **Dist. 210.111 arcmin**
WGA/NVSS ra dec 10 02 36.6, 32 42 26.2 radio flux d. 10.000 X-ray/radio flux-ratio 1038. arx 0.634 Log(nu peak) 16.1+/- 1 possible HBL **Dist. 210.111 arcmin**
Repeated radio counterpart, 2.066 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 02 54.5, 32 40 38.9 radio flux d. 9.000 X-ray/radio flux-ratio 5717. arx 0.544 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 213.375 arcmin**
WGA/FIRST ra dec 10 02 54.5, 32 40 38.9 radio flux d. 9.000 X-ray/radio flux-ratio 4217. arx 0.560 Log(nu peak) 17.6+/- 1 possible HBL **Dist. 213.375 arcmin**
Match nr. 105 ra dec: 150.72725, 32.67748
.....Cataloged sources.....
MQ KUV 10000+3255

4XMM/NVSS ra dec 10 02 54.9, 32 40 37.1 radio flux d. 9.500 X-ray/radio flux-ratio 5416. arx 0.547 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 213.435 arcmin**
WGA/NVSS ra dec 10 02 54.9, 32 40 37.1 radio flux d. 9.500 X-ray/radio flux-ratio 3996. arx 0.563 Log(nu peak) 17.5+/- 1 possible HBL **Dist. 213.435 arcmin**
Repeated radio counterpart, 4.790 arcsec away from the matched nr.

RASS/FIRST ra dec 10 03 2.7, 37 57 51.4 radio flux d. 1.800 X-ray/radio flux-ratio 23148. arx 0.470 Log(nu peak) 19.4+/- 1 possible HBL **Dist. 158.417 arcmin**
Match nr. 106 ra dec: 150.76140, 37.96429
.....Cataloged sources.....

MQ SDSS J100302.73+375750.9

4XMM/NVSS ra dec 10 03 4.6, 32 53 40.9 radio flux d. 26.700 X-ray/radio flux-ratio 797. arx 0.648 Log(nu peak) 15.8+/- 1 possible HBL **Dist. 202.777 arcmin**
RASS/NVSS ra dec 10 03 4.6, 32 53 40.9 radio flux d. 26.700 X-ray/radio flux-ratio 894. arx 0.642 Log(nu peak) 16.0+/- 1 possible HBL **Dist. 202.777 arcmin**
Match nr. 107 ra dec: 150.76929, 32.89469
.....Cataloged sources.....
mcxcJ1003.0+3254
whl J100304.6+325341

4XMM/FIRST ra dec 10 03 4.6, 32 53 41.1 radio flux d. 24.970 X-ray/radio flux-ratio 852. arx 0.644 Log(nu peak) 15.9+/- 1 possible HBL **Dist. 202.775 arcmin**
RASS/FIRST ra dec 10 03 4.6, 32 53 41.1 radio flux d. 24.970 X-ray/radio flux-ratio 956. arx 0.638 Log(nu peak) 16.0+/- 1 possible HBL **Dist. 202.775 arcmin**
Repeated radio counterpart, 0.264 arcsec away from the matched nr.

4XMM/NVSS ra dec 10 03 6.4, 33 02 51.1 radio flux d. 2.400 X-ray/radio flux-ratio 1956. arx 0.600 Log(nu peak) 16.8+/- 1 possible HBL **Dist. 194.951 arcmin**
Match nr. 108 ra dec: 150.77675, 33.04753
.....Cataloged sources.....

RASS/FIRST ra dec 10 03 18.9, 37 24 4.0 radio flux d. 25.660 X-ray/radio flux-ratio 1137. arx 0.629 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 135.508 arcmin**
Match nr. 109 ra dec: 150.82887, 37.40110
.....Cataloged sources.....
MQ SDSS J100318.93+372403.8

RASS/NVSS ra dec 10 03 19.0, 37 24 3.6 radio flux d. 25.300 X-ray/radio flux-ratio 1153. arx 0.628 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 135.520 arcmin**
Repeated radio counterpart, 1.364 arcsec away from the matched nr.

XMMSLEW/NVSS ra dec 10 03 26.8, 33 47 28.5 radio flux d. 13.800 X-ray/radio flux-ratio 2412. arx 0.589 Log(nu peak) 17.0+/- 1 possible HBL **Dist. 160.443 arcmin**
Match nr. 110 ra dec: 150.86154, 33.79125
.....Cataloged sources.....
MQ SDSS J100326.77+334729.0

XMMSLEW/FIRST ra dec 10 03 26.8, 33 47 29.1 radio flux d. 13.040 X-ray/radio flux-ratio 2552. arx 0.586 Log(nu peak) 17.1+/- 1 possible HBL **Dist. 160.435 arcmin**
Repeated radio counterpart, 0.615 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 03 57.6, 32 44 3.6 radio flux d. 422.490 flux-ratio 15. arx 0.857 possible LBL **Dist. 216.594 arcmin**
WGA/FIRST ra dec 10 03 57.6, 32 44 3.6 radio flux d. 422.490 flux-ratio 11. arx 0.873 possible LBL **Dist. 216.594 arcmin**
Match nr. 111 ra dec: 150.98988, 32.73434

.....Cataloged sources.....
5BZQ J1003+3244
BROS J1003.9+3244
CRATES J100358+324403
MQ B2 1001+32A

4XMM/NVSS ra dec 10 03 57.6, 32 44 3.7 radio flux d. 428.500 flux-ratio 15. arx 0.858 possible LBL **Dist. 216.599 arcmin**
WGA/NVSS ra dec 10 03 57.6, 32 44 3.7 radio flux d. 428.500 flux-ratio 11. arx 0.874 possible LBL **Dist. 216.599 arcmin**
Repeated radio counterpart, 0.730 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 04 9.6, 32 55 32.6 radio flux d. 2.980 flux-ratio 50. arx 0.793 possible LBL **Dist. 208.018 arcmin**
Match nr. 112 ra dec: 151.03988, 32.92573
.....Cataloged sources.....

4XMM/NVSS ra dec 10 04 10.3, 32 55 31.8 radio flux d. 2.700 flux-ratio 55. arx 0.788 possible LBL **Dist. 208.115 arcmin**
Match nr. 113 ra dec: 151.04308, 32.92550
.....Cataloged sources.....

RASS/NVSS ra dec 10 04 12.0, 37 29 11.8 radio flux d. 2.400 X-ray/radio flux-ratio 10669. arx 0.511 Log(nu peak) 18.6+/- 1 possible HBL **Dist. 146.766 arcmin**
Match nr. 114 ra dec: 151.04992, 37.48661
.....Cataloged sources.....

WGA/FIRST ra dec 10 04 20.0, 32 46 43.8 radio flux d. 1.620 X-ray/radio flux-ratio 5403. arx 0.547 Log(nu peak) 17.9+/- 1 possible HBL **Dist. 216.682 arcmin**
Match nr. 115 ra dec: 151.08350, 32.77884
.....Cataloged sources.....

WGA/NVSS ra dec 10 04 20.4, 32 46 35.7 radio flux d. 14.800 X-ray/radio flux-ratio 591. arx 0.663 Log(nu peak) 15.5+/- 1 possible HBL **Dist. 216.834 arcmin**
Match nr. 116 ra dec: 151.08488, 32.77658
.....Cataloged sources.....

WGA/FIRST ra dec 10 04 20.6, 32 46 35.3 radio flux d. 10.160 X-ray/radio flux-ratio 862. arx 0.644 Log(nu peak) 15.9+/- 1 possible HBL **Dist. 216.867 arcmin**
Repeated radio counterpart, 3.113 arcsec away from the matched nr.

RASS/NVSS ra dec 10 04 44.5, 37 52 14.2 radio flux d. 48.200 X-ray/radio flux-ratio 1435. arx 0.617 Log(nu peak) 16.5+/- 1 possible HBL **Dist. 167.308 arcmin**
Match nr. 117 ra dec: 151.18538, 37.87061
.....Cataloged sources.....
3HSPJ100444.8+375212
5BZB J1004+3752

MQ SDSS J100444.76+375212.0

RASS/FIRST ra dec 10 04 44.6, 37 52 13.0 radio flux d. 44.380 X-ray/radio flux-ratio 1559. arx 0.612 Log(nu peak) 16.6+/- 1 possible HBL **Dist. 167.313 arcmin**
Repeated radio counterpart, 1.988 arcsec away from the matched nr.

XMMSLEW/NVSS ra dec 10 05 7.3, 34 14 31.3 radio flux d. 2.700 X-ray/radio flux-ratio 26633. arx 0.463 Log(nu peak) 19.5+/- 1 possible HBL **Dist. 156.070 arcmin**
RASS/NVSS ra dec 10 05 7.3, 34 14 31.3 radio flux d. 2.700 X-ray/radio flux-ratio 39422. arx 0.442 Log(nu peak) 20.0+/- 1 possible HBL **Dist. 156.070 arcmin**
WGA/NVSS ra dec 10 05 7.3, 34 14 31.3 radio flux d. 2.700 X-ray/radio flux-ratio 21661. arx 0.474 Log(nu peak) 19.3+/- 1 possible HBL **Dist. 156.070 arcmin**
Match nr. 118 ra dec: 151.28038, 34.24203
.....Cataloged sources.....
MQ FIRST J100507.9+341424

XMMSLEW/FIRST ra dec 10 05 7.9, 34 14 24.1 radio flux d. 2.660 X-ray/radio flux-ratio 27033. arx 0.462 Log(nu peak) 19.6+/- 1 possible HBL **Dist. 156.244 arcmin**
RASS/FIRST ra dec 10 05 7.9, 34 14 24.1 radio flux d. 2.660 X-ray/radio flux-ratio 40015. arx 0.441 Log(nu peak) 20.0+/- 1 possible HBL **Dist. 156.244 arcmin**
WGA/FIRST ra dec 10 05 7.9, 34 14 24.1 radio flux d. 2.660 X-ray/radio flux-ratio 21987. arx 0.473 Log(nu peak) 19.3+/- 1 possible HBL **Dist. 156.244 arcmin**
Match nr. 119 ra dec: 151.28294, 34.24003
.....Cataloged sources.....

WGA/FIRST ra dec 10 06 1.7, 34 54 10.4 radio flux d. 3399.410 flux-ratio 1. arx 1.011 type unknown **Dist. 144.886 arcmin**
SXPS/FIRST ra dec 10 06 1.7, 34 54 10.4 radio flux d. 3399.410 flux-ratio 1. arx 0.982 type unknown **Dist. 144.886 arcmin**
Match nr. 120 ra dec: 151.50724, 34.90290
.....Cataloged sources.....
BROS J1006.0+3454
MQ 3C 236

WGA/NVSS ra dec 10 06 1.7, 34 54 10.4 radio flux d. 3236.600 flux-ratio 1. arx 1.008 type unknown **Dist. 144.887 arcmin**
SXPS/NVSS ra dec 10 06 1.7, 34 54 10.4 radio flux d. 3236.600 flux-ratio 1. arx 0.979 type unknown **Dist. 144.887 arcmin**
Repeated radio counterpart, 0.047 arcsec away from the matched nr.

RASS/FIRST ra dec 10 06 7.4, 32 36 31.1 radio flux d. 198.130 X-ray/radio flux-ratio 185. arx 0.725 Log(nu peak) 14.3+/- 1 possible IBL **Dist. 237.478 arcmin**
WGA/FIRST ra dec 10 06 7.4, 32 36 31.1 radio flux d. 198.130 X-ray/radio flux-ratio 203. arx 0.720 Log(nu peak) 14.4+/- 1 possible IBL **Dist. 237.478 arcmin**
Match nr. 121 ra dec: 151.53063, 32.60863
.....Cataloged sources.....
MQ TEX 1003+328

RASS/NVSS ra dec 10 06 7.7, 32 36 27.7 radio flux d. 473.800 X-ray/radio flux-ratio 77. arx 0.771 Log(nu peak) 13.4+/- 1 possible IBL **Dist. 237.565 arcmin**
WGA/NVSS ra dec 10 06 7.7, 32 36 27.7 radio flux d. 473.800 X-ray/radio flux-ratio 85. arx 0.766 Log(nu peak) 13.5+/- 1 possible IBL **Dist. 237.565 arcmin**
Repeated radio counterpart, 5.453 arcsec away from the matched nr.

RASS/FIRST ra dec 10 06 7.7, 32 36 26.2 radio flux d. 164.800 X-ray/radio flux-ratio 222. arx 0.715 Log(nu peak) 14.5+/- 1 possible IBL **Dist. 237.586 arcmin**
WGA/FIRST ra dec 10 06 7.7, 32 36 26.2 radio flux d. 164.800 X-ray/radio flux-ratio 244. arx 0.710 Log(nu peak) 14.6+/- 1 possible IBL **Dist. 237.586 arcmin**
Repeated radio counterpart, 1.451 arcsec away from the matched nr.

RASS/FIRST ra dec 10 06 8.2, 32 36 20.0 radio flux d. 120.610 X-ray/radio flux-ratio 304. arx 0.699 Log(nu peak) 14.8+/- 1 possible IBL **Dist. 237.729 arcmin**
WGA/FIRST ra dec 10 06 8.2, 32 36 20.0 radio flux d. 120.610 X-ray/radio flux-ratio 333. arx 0.694 Log(nu peak) 14.9+/- 1 possible IBL **Dist. 237.729 arcmin**
Match nr. 122 ra dec: 151.53407, 32.60555
.....Cataloged sources.....

WGA/NVSS ra dec 10 06 26.6, 34 51 13.9 radio flux d. 16.600 X-ray/radio flux-ratio 99. arx 0.758 Log(nu peak) 13.6+/- 1 possible IBL **Dist. 150.747 arcmin**
Match nr. 123 ra dec: 151.61096, 34.85386
.....Cataloged sources.....

4XMM/FIRST ra dec 10 06 35.3, 37 56 57.2 radio flux d. 2.040 X-ray/radio flux-ratio 205. arx 0.719 Log(nu peak) 14.4+/- 1 possible IBL **Dist. 186.389 arcmin**
Match nr. 124 ra dec: 151.64722, 37.94921
.....Cataloged sources.....

WGA/NVSS ra dec 10 06 42.0, 34 47 55.8 radio flux d. 11.500 X-ray/radio flux-ratio 193. arx 0.723 Log(nu peak) 14.3+/- 1 possible IBL **Dist. 154.991 arcmin**
Match nr. 125 ra dec: 151.67508, 34.79883
.....Cataloged sources.....
MQ J100636.66+344640.5

4XMM/FIRST ra dec 10 06 52.5, 37 53 35.1 radio flux d. 10.200 flux-ratio 23. arx 0.835 possible LBL **Dist. 186.742 arcmin**
Match nr. 126 ra dec: 151.71866, 37.89308
.....Cataloged sources.....
MQ J100652.50+375335.1

4XMM/NVSS ra dec 10 06 52.6, 37 53 33.6 radio flux d. 9.500 flux-ratio 24. arx 0.831 possible LBL **Dist. 186.748 arcmin**
Repeated radio counterpart, 2.320 arcsec away from the matched nr.

RASS/NVSS ra dec 10 06 56.3, 34 54 43.8 radio flux d. 6.100 X-ray/radio flux-ratio 24479. arx 0.467 Log(nu peak) 19.5+/- 1 possible HBL **Dist. 154.972 arcmin**

WGA/NVSS ra dec 10 06 56.3, 34 54 43.8 radio flux d. 6.100 X-ray/radio flux-ratio 9778. arx 0.516 Log(nu peak) 18.5+/- 1 possible HBL **Dist. 154.972 arcmin**
OUSXB/NVSS ra dec 10 06 56.3, 34 54 43.8 radio flux d. 6.100 X-ray/radio flux-ratio 4911. arx 0.552 Log(nu peak) 17.8+/- 1 possible HBL **Dist. 154.972 arcmin**
SXPS/NVSS ra dec 10 06 56.3, 34 54 43.8 radio flux d. 6.100 X-ray/radio flux-ratio 6578. arx 0.536 Log(nu peak) 18.1+/- 1 possible HBL **Dist. 154.972 arcmin**
Match nr. 127 ra dec: 151.73471, 34.91217
.....Cataloged sources.....
3HSPJ100656.5+345445
5BZB J1006+3454
MQ EXO 1004.0+3509

4XMM/FIRST ra dec 10 07 0.4, 37 53 52.9 radio flux d. 1.370 X-ray/radio flux-ratio 71. arx 0.776 Log(nu peak) 13.3+/- 1 possible IBL **Dist. 188.129 arcmin**
Match nr. 128 ra dec: 151.75164, 37.89804
.....Cataloged sources.....

4XMM/FIRST ra dec 10 07 7.8, 38 09 25.5 radio flux d. 2.020 X-ray/radio flux-ratio 627. arx 0.660 Log(nu peak) 15.6+/- 1 possible HBL **Dist. 199.511 arcmin**
Match nr. 129 ra dec: 151.78243, 38.15709
.....Cataloged sources.....

WGA/NVSS ra dec 10 07 16.9, 34 44 46.8 radio flux d. 25.400 X-ray/radio flux-ratio 1141. arx 0.629 Log(nu peak) 16.2+/- 1 possible HBL **Dist. 162.818 arcmin**
Match nr. 130 ra dec: 151.82050, 34.74633
.....Cataloged sources.....
MQ SDSS J100717.51+344509.8

WGA/NVSS ra dec 10 07 24.8, 34 44 34.7 radio flux d. 165.600 X-ray/radio flux-ratio 175. arx 0.728 Log(nu peak) 14.2+/- 1 possible IBL **Dist. 164.378 arcmin**
Match nr. 131 ra dec: 151.85346, 34.74297
.....Cataloged sources.....
CRATES J100723+344409

WGA/FIRST ra dec 10 07 24.8, 34 44 35.8 radio flux d. 84.550 X-ray/radio flux-ratio 343. arx 0.692 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 164.370 arcmin**
Repeated radio counterpart, 1.152 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 07 39.9, 38 10 42.0 radio flux d. 6.420 flux-ratio 64. arx 0.780 possible LBL **Dist. 205.031 arcmin**
Match nr. 132 ra dec: 151.91636, 38.17834
.....Cataloged sources.....

4XMM/FIRST ra dec 10 07 50.1, 35 02 4.4 radio flux d. 9.060 X-ray/radio flux-ratio 188. arx 0.724 Log(nu peak) 14.3+/- 1 possible IBL **Dist. 162.765 arcmin**
Match nr. 133 ra dec: 151.95880, 35.03456
.....Cataloged sources.....

4XMM/NVSS ra dec 10 07 50.2, 38 06 24.6 radio flux d. 2.800 X-ray/radio flux-ratio 386. arx 0.686 Log(nu peak) 15.1+/- 1 possible IBL **Dist. 203.708 arcmin**
Match nr. 134 ra dec: 151.95900, 38.10683
.....Cataloged sources.....
MQ WISEA J100750.75+380623.8

4XMM/NVSS ra dec 10 07 50.5, 35 02 6.4 radio flux d. 12.400 X-ray/radio flux-ratio 137. arx 0.741 Log(nu peak) 14.0+/- 1 possible IBL **Dist. 162.823 arcmin**
Repeated radio counterpart, 4.710 arcsec away from the matched nr.

.....Cataloged sources.....

4XMM/FIRST ra dec 10 07 51.1, 38 06 24.6 radio flux d. 1.380 X-ray/radio flux-ratio 783. arx 0.649 Log(nu peak) 15.8+/- 1 possible HBL **Dist. 203.847 arcmin**
Match nr. 135 ra dec: 151.96290, 38.10682
.....Cataloged sources.....

4XMM/NVSS ra dec 10 07 53.1, 35 14 40.5 radio flux d. 20.300 flux-ratio 30. arx 0.821 possible LBL **Dist. 159.824 arcmin**
Match nr. 136 ra dec: 151.97121, 35.24458
.....Cataloged sources.....
BROS J1007.8+3514

4XMM/FIRST ra dec 10 07 53.2, 35 14 41.7 radio flux d. 18.870 flux-ratio 32. arx 0.817 possible LBL **Dist. 159.839 arcmin**
Repeated radio counterpart, 1.692 arcsec away from the matched nr.

4XMM/FIRST ra dec 10 08 15.0, 35 23 15.6 radio flux d. 9.950 flux-ratio 55. arx 0.788 possible LBL **Dist. 162.348 arcmin**
Match nr. 137 ra dec: 152.06263, 35.38766
.....Cataloged sources.....

4XMM/NVSS ra dec 10 08 15.0, 35 23 15.5 radio flux d. 8.800 flux-ratio 63. arx 0.782 possible LBL **Dist. 162.350 arcmin**
Repeated radio counterpart, 0.138 arcsec away from the matched nr.

SXPS/FIRST ra dec 10 08 19.2, 37 29 3.9 radio flux d. 1.350 X-ray/radio flux-ratio 14605. arx 0.494 Log(nu peak) 18.9+/- 1 possible HBL **Dist. 186.502 arcmin**
Match nr. 138 ra dec: 152.07983, 37.48441
.....Cataloged sources.....
MQ NPM 1G+37.0250

SXPS/NVSS ra dec 10 08 19.9, 37 29 7.1 radio flux d. 3.000 X-ray/radio flux-ratio 6572. arx 0.536 Log(nu peak) 18.1+/- 1 possible HBL **Dist. 186.661 arcmin**
Match nr. 139 ra dec: 152.08304, 37.48531

.....Cataloged sources.....

4XMM/FIRST ra dec 10 08 23.6, 37 50 29.7 radio flux d. 3.460 X-ray/radio flux-ratio 72. arx 0.774 Log(nu peak) 13.3+/- 1 possible IBL **Dist. 199.015 arcmin**
Match nr. 140 ra dec: 152.09829, 37.84159
.....Cataloged sources.....
zw 9866

RASS/FIRST ra dec 10 08 23.6, 35 38 42.1 radio flux d. 0.930 X-ray/radio flux-ratio 26719. arx 0.462 Log(nu peak) 19.6+/- 1 possible HBL **Dist. 161.914 arcmin**
Match nr. 141 ra dec: 152.09846, 35.64502
.....Cataloged sources.....
MQ SDSS J100823.63+353841.8

4XMM/FIRST ra dec 10 08 25.8, 37 51 0.4 radio flux d. 20.560 flux-ratio 35. arx 0.813 possible LBL **Dist. 199.663 arcmin**
Match nr. 142 ra dec: 152.10736, 37.85011
.....Cataloged sources.....
zw 9866

OUSXB/FIRST ra dec 10 11 47.5, 36 00 19.0 radio flux d. 11.190 X-ray/radio flux-ratio 320. arx 0.696 Log(nu peak) 14.9+/- 1 possible IBL **Dist. 202.559 arcmin**
Match nr. 143 ra dec: 152.94796, 36.00529
.....Cataloged sources.....
MQ NVSS J101147+360019

OUSXB/NVSS ra dec 10 11 47.5, 36 00 19.4 radio flux d. 10.800 X-ray/radio flux-ratio 331. arx 0.694 Log(nu peak) 14.9+/- 1 possible IBL **Dist. 202.563 arcmin**
Repeated radio counterpart, 0.429 arcsec away from the matched nr.

SXPS/FIRST ra dec 10 12 44.4, 35 53 47.9 radio flux d. 27.610 flux-ratio 16. arx 0.852 possible LBL **Dist. 214.019 arcmin**
Match nr. 144 ra dec: 153.18489, 35.89664
.....Cataloged sources.....
MQ 7C 1009+3608

SXPS/NVSS ra dec 10 12 44.4, 35 53 46.6 radio flux d. 27.300 flux-ratio 17. arx 0.852 possible LBL **Dist. 214.022 arcmin**
Repeated radio counterpart, 1.312 arcsec away from the matched nr.

SXPS/NVSS ra dec 10 13 21.0, 34 39 15.1 radio flux d. 8.700 X-ray/radio flux-ratio 170. arx 0.729 Log(nu peak) 14.2+/- 1 possible IBL **Dist. 234.386 arcmin**
Match nr. 145 ra dec: 153.33746, 34.65419
.....Cataloged sources.....
MQ SDSS J101321.20+343912.3

SXPS/FIRST ra dec 10 13 21.2, 34 39 12.4 radio flux d. 4.030 X-ray/radio flux-ratio 367. arx 0.689 Log(nu peak) 15.0+/- 1 possible IBL **Dist. 234.441 arcmin**
Repeated radio counterpart, 3.691 arcsec away from the matched nr.

SXPS/NVSS ra dec 10 13 49.6, 34 45 50.7 radio flux d. 355.500 flux-ratio 33. arx 0.816 possible LBL **Dist. 237.913 arcmin**
Match nr. 146 ra dec: 153.45662, 34.76408
.....Cataloged sources.....
5BZQ J1013+3445
BROS J1013.8+3445
CRATES J101349+344534
MQ OL 318

SXPS/FIRST ra dec 10 13 49.6, 34 45 50.7 radio flux d. 354.760 flux-ratio 33. arx 0.816 possible LBL **Dist. 237.918 arcmin**
Repeated radio counterpart, 0.325 arcsec away from the matched nr.

Candidate nr. 147, Known blazar with no radio/X-ray match: 5BZB J0938+3717 found at a distance of 222.419 arcmin
Candidate nr. 148, Known blazar with no radio/X-ray match: 5BZB J0947+3453 found at a distance of 107.716 arcmin
Candidate nr. 149, Known blazar with no radio/X-ray match: 5BZQ J1001+3424 found at a distance of 113.863 arcmin
Candidate nr. 150, Known blazar with no radio/X-ray match: 5BZQ J1010+3330 found at a distance of 239.677 arcmin
Candidate nr. 151, Known flat spectrum radio source with no radio/X-ray match: BROS J0950.8+3201 found at a distance of 235.482 arcmin
Candidate nr. 152, Known flat spectrum radio source with no radio/X-ray match: BROS J0951.7+3216 found at a distance of 218.803 arcmin
Candidate nr. 153, Known flat spectrum radio source with no radio/X-ray match: BROS J0957.5+3237 found at a distance of 195.869 arcmin
Candidate nr. 154, Known flat spectrum radio source with no radio/X-ray match: BROS J1005.6+3229 found at a distance of 239.695 arcmin
Candidate nr. 155, Known flat spectrum radio source with no radio/X-ray match: BROS J1006.5+3252 found at a distance of 227.546 arcmin
BROS J1010.8+3330, repeated with candidate nr. 150 5BZQ J1010+3330
Candidate nr. 156, Known flat spectrum radio source with no radio/X-ray match: BROS J0941.3+3328 found at a distance of 221.666 arcmin
Candidate nr. 157, Known flat spectrum radio source with no radio/X-ray match: BROS J0940.7+3329 found at a distance of 226.680 arcmin
Candidate nr. 158, Known flat spectrum radio source with no radio/X-ray match: BROS J0946.1+3246 found at a distance of 215.426 arcmin
Candidate nr. 159, Known flat spectrum radio source with no radio/X-ray match: BROS J0951.2+3239 found at a distance of 197.374 arcmin
Candidate nr. 160, Known flat spectrum radio source with no radio/X-ray match: BROS J0951.2+3249 found at a distance of 187.796 arcmin
Candidate nr. 161, Known flat spectrum radio source with no radio/X-ray match: BROS J0943.5+3300 found at a distance of 222.857 arcmin
Candidate nr. 162, Known flat spectrum radio source with no radio/X-ray match: BROS J0942.2+3309 found at a distance of 226.729 arcmin
Candidate nr. 163, Known flat spectrum radio source with no radio/X-ray match: BROS J0943.4+3329 found at a distance of 201.687 arcmin

Candidate nr. 164, Known flat spectrum radio source with no radio/X-ray match: BROS J0942.6+3344 found at a distance of 199.454 arcmin
Candidate nr. 165, Known flat spectrum radio source with no radio/X-ray match: BROS J0944.3+3347 found at a distance of 181.135 arcmin
Candidate nr. 166, Known flat spectrum radio source with no radio/X-ray match: BROS J0945.5+3347 found at a distance of 170.850 arcmin
Candidate nr. 167, Known flat spectrum radio source with no radio/X-ray match: BROS J0939.3+3459 found at a distance of 199.950 arcmin
Candidate nr. 168, Known flat spectrum radio source with no radio/X-ray match: BROS J0942.0+3356 found at a distance of 197.014 arcmin
Candidate nr. 169, Known flat spectrum radio source with no radio/X-ray match: BROS J0945.8+3435 found at a distance of 136.410 arcmin
Candidate nr. 170, Known flat spectrum radio source with no radio/X-ray match: BROS J0947.1+3456 found at a distance of 111.555 arcmin
Candidate nr. 171, Known flat spectrum radio source with no radio/X-ray match: BROS J0947.6+3503 found at a distance of 102.566 arcmin
Candidate nr. 172, Known flat spectrum radio source with no radio/X-ray match: BROS J0951.2+3508 found at a distance of 63.618 arcmin
Candidate nr. 173, Known flat spectrum radio source with no radio/X-ray match: BROS J0942.8+3518 found at a distance of 152.878 arcmin
Candidate nr. 174, Known flat spectrum radio source with no radio/X-ray match: BROS J0949.5+3602 found at a distance of 68.478 arcmin
Candidate nr. 175, Known flat spectrum radio source with no radio/X-ray match: BROS J0956.2+3306 found at a distance of 164.945 arcmin
Candidate nr. 176, Known flat spectrum radio source with no radio/X-ray match: BROS J0954.4+3335 found at a distance of 135.886 arcmin
Candidate nr. 177, Known flat spectrum radio source with no radio/X-ray match: BROS J0958.4+3307 found at a distance of 168.634 arcmin
Candidate nr. 178, Known flat spectrum radio source with no radio/X-ray match: BROS J0954.5+3403 found at a distance of 107.700 arcmin
Candidate nr. 179, Known flat spectrum radio source with no radio/X-ray match: BROS J0954.0+3409 found at a distance of 102.130 arcmin
BROS J1001.1+3424, repeated with candidate nr. 149 5BZQ J1001+3424
Candidate nr. 180, Known flat spectrum radio source with no radio/X-ray match: BROS J1004.7+3326 found at a distance of 186.650 arcmin
Candidate nr. 181, Known flat spectrum radio source with no radio/X-ray match: BROS J1010.7+3409 found at a distance of 217.383 arcmin
Candidate nr. 182, Known flat spectrum radio source with no radio/X-ray match: BROS J1013.3+3430 found at a distance of 237.827 arcmin
Candidate nr. 183, Known flat spectrum radio source with no radio/X-ray match: BROS J1010.9+3446 found at a distance of 204.388 arcmin
Candidate nr. 184, Known flat spectrum radio source with no radio/X-ray match: BROS J1013.1+3446 found at a distance of 229.521 arcmin
Candidate nr. 185, Known flat spectrum radio source with no radio/X-ray match: BROS J0952.3+3508 found at a distance of 54.584 arcmin
Candidate nr. 186, Known flat spectrum radio source with no radio/X-ray match: BROS J1000.6+3545 found at a distance of 66.797 arcmin
Candidate nr. 187, Known flat spectrum radio source with no radio/X-ray match: BROS J0952.4+3606 found at a distance of 35.952 arcmin
Candidate nr. 188, Known flat spectrum radio source with no radio/X-ray match: BROS J0954.3+3601 found at a distance of 13.603 arcmin
Candidate nr. 189, Known flat spectrum radio source with no radio/X-ray match: BROS J0957.0+3617 found at a distance of 35.820 arcmin
Candidate nr. 190, Known flat spectrum radio source with no radio/X-ray match: BROS J0959.3+3607 found at a distance of 53.390 arcmin

Candidate nr. 191, Known flat spectrum radio source with no radio/X-ray match: BROS J0959.3+3652 found at a distance of 80.275 arcmin
Candidate nr. 192, Known flat spectrum radio source with no radio/X-ray match: BROS J1003.0+3546 found at a distance of 96.477 arcmin
Candidate nr. 193, Known flat spectrum radio source with no radio/X-ray match: BROS J1011.0+3552 found at a distance of 194.113 arcmin
Candidate nr. 194, Known flat spectrum radio source with no radio/X-ray match: BROS J1003.1+3638 found at a distance of 108.333 arcmin
Candidate nr. 195, Known flat spectrum radio source with no radio/X-ray match: BROS J1008.6+3725 found at a distance of 188.496 arcmin
Candidate nr. 196, Known flat spectrum radio source with no radio/X-ray match: BROS J0936.8+3533 found at a distance of 223.453 arcmin
Candidate nr. 197, Known flat spectrum radio source with no radio/X-ray match: BROS J0938.3+3556 found at a distance of 204.244 arcmin
Candidate nr. 198, Known flat spectrum radio source with no radio/X-ray match: BROS J0940.6+3609 found at a distance of 177.029 arcmin
Candidate nr. 199, Known flat spectrum radio source with no radio/X-ray match: BROS J0937.4+3618 found at a distance of 215.628 arcmin
Candidate nr. 200, Known flat spectrum radio source with no radio/X-ray match: BROS J0937.4+3629 found at a distance of 216.982 arcmin
Candidate nr. 201, Known flat spectrum radio source with no radio/X-ray match: BROS J0944.1+3642 found at a distance of 141.969 arcmin
Candidate nr. 202, Known flat spectrum radio source with no radio/X-ray match: BROS J0945.3+3655 found at a distance of 134.407 arcmin
Candidate nr. 203, Known flat spectrum radio source with no radio/X-ray match: BROS J0948.0+3622 found at a distance of 91.078 arcmin
Candidate nr. 204, Known flat spectrum radio source with no radio/X-ray match: BROS J0946.9+3618 found at a distance of 103.505 arcmin
Candidate nr. 205, Known flat spectrum radio source with no radio/X-ray match: BROS J0949.5+3643 found at a distance of 85.344 arcmin
Candidate nr. 206, Known flat spectrum radio source with no radio/X-ray match: BROS J0949.8+3703 found at a distance of 97.167 arcmin
Candidate nr. 207, Known flat spectrum radio source with no radio/X-ray match: BROS J0943.8+3708 found at a distance of 156.958 arcmin
Candidate nr. 208, Known flat spectrum radio source with no radio/X-ray match: BROS J0948.5+3739 found at a distance of 134.494 arcmin
Candidate nr. 209, Known flat spectrum radio source with no radio/X-ray match: BROS J0950.7+3749 found at a distance of 130.040 arcmin
Candidate nr. 210, Known flat spectrum radio source with no radio/X-ray match: BROS J0948.0+3751 found at a distance of 147.500 arcmin
Candidate nr. 211, Known flat spectrum radio source with no radio/X-ray match: BROS J0948.0+3757 found at a distance of 151.852 arcmin
Candidate nr. 212, Known flat spectrum radio source with no radio/X-ray match: BROS J0936.9+3725 found at a distance of 237.879 arcmin
Candidate nr. 213, Known flat spectrum radio source with no radio/X-ray match: BROS J0944.9+3803 found at a distance of 179.657 arcmin
Candidate nr. 214, Known flat spectrum radio source with no radio/X-ray match: BROS J0946.8+3820 found at a distance of 179.134 arcmin
Candidate nr. 215, Known flat spectrum radio source with no radio/X-ray match: BROS J0948.8+3906 found at a distance of 209.940 arcmin
Candidate nr. 216, Known flat spectrum radio source with no radio/X-ray match: BROS J0951.6+3902 found at a distance of 195.789 arcmin
Candidate nr. 217, Known flat spectrum radio source with no radio/X-ray match: BROS J0952.6+3640 found at a distance of 57.683 arcmin
Candidate nr. 218, Known flat spectrum radio source with no radio/X-ray match: BROS J0952.9+3708

found at a distance of 81.874 arcmin
Candidate nr. 219, Known flat spectrum radio source with no radio/X-ray match: BROS J0956.2+3732 found at a distance of 102.328 arcmin
Candidate nr. 220, Known flat spectrum radio source with no radio/X-ray match: BROS J0955.7+3747 found at a distance of 116.791 arcmin
Candidate nr. 221, Known flat spectrum radio source with no radio/X-ray match: BROS J1001.4+3724 found at a distance of 120.978 arcmin
Candidate nr. 222, Known flat spectrum radio source with no radio/X-ray match: BROS J0957.4+3741 found at a distance of 113.822 arcmin
Candidate nr. 223, Known flat spectrum radio source with no radio/X-ray match: BROS J0953.7+3836 found at a distance of 166.647 arcmin
Candidate nr. 224, Known flat spectrum radio source with no radio/X-ray match: BROS J1001.5+3823 found at a distance of 170.759 arcmin
Candidate nr. 225, Known flat spectrum radio source with no radio/X-ray match: BROS J0958.7+3848 found at a distance of 182.490 arcmin
Candidate nr. 226, Known flat spectrum radio source with no radio/X-ray match: BROS J1003.7+3730 found at a distance of 144.212 arcmin
Candidate nr. 227, Known flat spectrum radio source with no radio/X-ray match: BROS J1004.5+3744 found at a distance of 160.885 arcmin
Candidate nr. 228, Known flat spectrum radio source with no radio/X-ray match: BROS J1005.9+3819 found at a distance of 197.042 arcmin
Candidate nr. 229, Known flat spectrum radio source with no radio/X-ray match: BROS J0952.8+3845 found at a distance of 176.331 arcmin
Candidate nr. 230, Known flat spectrum radio source with no radio/X-ray match: BROS J0956.1+3935 found at a distance of 224.574 arcmin
Candidate nr. 231, Known flat spectrum radio source with no radio/X-ray match: BROS J1014.1+3612 found at a distance of 231.384 arcmin
CRATES J101052+333021, repeated with candidate nr. 150 5BZQ J1010+3330
CRATES J094235+334422, repeated with candidate nr. 164 BROS J0942.6+3344
CRATES J094420+334748, repeated with candidate nr. 165 BROS J0944.3+3347
CRATES J100112+342455, repeated with candidate nr. 149 5BZQ J1001+3424
Candidate nr. 232, Known flat spectrum radio source with no radio/X-ray match: CRATES J100508+350114 found at a distance of 131.978 arcmin
Candidate nr. 233, Known flat spectrum radio source with no radio/X-ray match: CRATES J101302+352605 found at a distance of 219.680 arcmin
Candidate nr. 234, Known flat spectrum radio source with no radio/X-ray match: CRATES J093942+353038 found at a distance of 188.784 arcmin
CRATES J101105+355202, repeated with candidate nr. 193 BROS J1011.0+3552
CRATES J095226+360613, repeated with candidate nr. 187 BROS J0952.4+3606
CRATES J095607+393524, repeated with candidate nr. 230 BROS J0956.1+3935

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