

Comments from Review 1

Content:

ACCEPTED

submitted on *Sat 15 Jul 2017 at 19:08*

Comments

The paper presents an analysis for identification of the softest sources in the 2RXS catalog. The authors first select the sources on the basis of the fitted power-law index of the spectra to select a sample of 1025 sources. The sample is mainly thought to contain narrow line Seyfert 1 galaxies with also contamination by white dwarfs and other stars. The authors try to build a match sample of known sources using ALLWISE and 2MASS colors to separate Seyfert 1 galaxies from the white dwarfs. They use this to further identify the sources from the 2RXS sample. The authors find in the end 370 new NLS1 candidates and 91 new white dwarf candidates which could be samples for spectroscopic confirmation to truly identify their nature using optical spectroscopy. The paper is an interesting attempt to identify sources in the 2RXS catalog especially before the launch of eROSITA. The sample could of course suffer from contamination and misidentification of counterparts due to the large error circle of the ROSAT catalog sources. It could be interesting to discuss the expected power law index of BLS1s and where they lie in the in the color-color /color-magnitude diagram of the ALLWISE to access the percentage of contamination. The authors could also provide a quantitative measure of chance coincidences which is important to have an idea of the credibility of the detections.

Reply from A. Odendaal

We acknowledge the importance of placing the possible contamination by BLS1s in perspective. Due to the page limit of 6 pages, we could not greatly elaborate on this, but added the following 2 sentences at the end of paragraph 5 in Section 4:

“As explained in §1, figure 8 of [8] shows that Seyfert 1s with $\Gamma \gtrsim 3$ are almost exclusively NLS1s. Even though BLS1s can be expected to have similar infrared colours to NLS1s (e.g. [16]), it is therefore very unlikely that the ss2RXS sample contains BLS1s, and the vast majority of the 182 known Seyfert 1s mentioned here can be considered to be NLS1s.”

The reviewer’s comment on the importance of chance coincidences is duly noted, but due to the page limit and time constrictions on the corrections, such an analysis might rather form part of a follow-up paper.

Comments from Review 2

Content:

ACCEPTED

submitted on *Fri 11 Aug 2017 at 11:39*

Comments

This work entails the search for new narrow-line Seyfert 1 galaxies and white dwarf stars. The authors conduct a search for sources with unusually soft X-ray spectra in the second ROSAT all-sky survey source catalogue. They then use the infrared colours from the ALLWISE catalogue to separate Seyfert galaxies from white dwarfs. Their method yields 370 new Seyfert 1 candidates and 91 new white dwarf candidates.

The work is original and worthy of publication in the SAIP proceeding. I have a few small comments, but not enough to warrant re-submission, so I'm happy to recommend acceptance of the article.

Reply from A. Odendaal

The positive comment from the reviewer is welcomed.

Additional changes to paper

- A sentence was added to the **Acknowledgments** section to thank the reviewers.
- The last sentence in paragraph 3 of section 3.1 was changed from “It is noted that the colours of the Z06 NLS1s agree very well with the known colours of AGN candidates in general [16].” to “The colours of the Z06 NLS1s agree very well with the known colours of broad-line AGN candidates in general [16].”
- The word “almost” was added to the last sentence in paragraph 3 of the Introduction (Section 1), since this reflects the information in the cited figure in literature more accurately.
- In order to accommodate the text added to the paper upon the reviewer’s comments, a few other very small linguistic changes were made here and there in the paper to save some space. However, none of these brought about a change of meaning in the text.