

IDENTIFICATION OF A COMPLETE SAMPLE OF NORTHERN ROSAT ALL-SKY SURVEY X-RAY SOURCES

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Abstract. We present results of the optical identification of a spatially complete, flux limited sample of about 700 ROSAT All-Sky X-ray sources contained in 6 study areas north of $\delta = -9^\circ$ with $|b^{II}| > 20^\circ$ (including one region near the North Galactic pole (NGP), another one near the North Ecliptic pole (NEP)). Countrate limits are 0.01 ctss^{-1} near the NEP and 0.03 ctss^{-1} for the other areas. The optical observations were performed at the 2.15-m telescope of the Guillermo Haro Observatory, Mexico, using the Landessternwarte Faint Object Spectrograph Camera which allows to carry out direct CCD imaging and multi-object spectroscopy. The limiting magnitude is about 19^m for spectroscopy and about 23^m for B and R direct imaging. Our analysis shows a dependency of the ratio of ‘extragalactic’ (e.g., AGN, cluster of galaxies) to ‘stellar’ (e.g., coronal emitters, active binaries) counterparts on N_{H} . In the area near the NGP (low N_{H}) ‘extragalactic’ counterparts dominate, while in the area with the highest N_{H} ‘stellar’ counterparts dominate.