Source population properties derived from ROSAT catalogues

Wolfgang Voges, Th. Boller, and R. Supper
Max-Planck-Institut fuer extraterrestrische Physik,D-85740 Garching, Germany

Abstract

The X-ray satellite ROSAT has been operational for more than 8 years. One of its main scientific objects was to conduct the first All-Sky Survey in X-rays with an imaging telescope. During the ROSAT All-Sky Survey (RASS) more than 100,000 X-ray sources have been detected. After the survey, pointed observations were performed with the Positional Sensitive Proportional Counter (PSPC) and the High Resolution Imager (HRI). More then 9,000 pointed observations were carried out, resulting in the detection of approximately another 100,000 sources. Among the various object classes observed are comets, stars, white dwarfs, cataclysmic variables, neutron stars, black-hole candidates, supernova remnants, nearby galaxies, active galactic nuclei, quasi stellar objects, and clusters of galaxies. We present source population properties for the various object classes. We highlight the temporal and spectral properties of the most interesting objects classes and discuss underlying physical processes.