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Multi-Epoch X-ray observations of globular cluster M62

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The globular clusters (GCs) are dense stellar systems which can produce the compact binaries (e.g. cataclysmic variables (CVs), millisecond pulsars (MSPs), quiescent low-mass X-ray binary (qLMXBs)) through frequent dynamical interactions. M62 is among the GCs with the highest stellar encounter rate. In our analysis, we identify 43 X-ray sources within M62's half-light radius from two different observations with Chandra (0.3 - 7.0 keV) separated by ~12 years. Based on the distribution in the X-ray color-luminosity diagram and the variability analysis, 9 CV candidates and 4 qLMXBs candidates have been suggested. 2 MSP counterparts and 1 black hole (BH) candidate have been identified by the positional coincidence with the radio position. For all these compact binaries, we have also examined their spectral properties in details

Topic

Compact and diffuse sources in galaxies and in the Galactic Center

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