

P11 X-ray study of new particle acceleration candidate, the bow-shock region in G70.7+1.2

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“Runaway stars are massive OB-stars with high spatial velocities that can serve as particle acceleration sites on their bow shocks. Non-thermal X-ray and gamma-ray, which can constrain the efficiency of particle acceleration strongly, have not been detected clearly. Therefore, it is important to detect them from shocks of runaway stars and to constrain the maximum energy of accelerated particles.

We targeted 3FGL J2004.4+3338, Fermi-LAT unidentified gamma-ray source with the shell-like radio morphology with VLA and a B-star, so it can be a runaway star.

In this study, the shell-like X-ray morphology with a radius of 15” was found with Chandra. In this paper, we report on the spectral information of the source and possible observations with XRISM and HXMT.”

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