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Dynamic and spectral X-ray features of the microquasar XTE J1550-564

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Abstract

Memory function formalism is used to investigate the dynamic and spectral features (including a quantitative comparison of the decay of correlations and statistical memory) of the time discrete X-ray signals from the microquasar XTE J1550-564. The X-ray dynamics has been recorded aboard the Rossi X-Ray Timing Explorer. Temporal and event correlations are analyzed to find distinct patterns in the relaxation processes and memory effects in the equi- and nonequidistant dynamics of the X-ray flux from XTE J1550-564. The described method can be used to study a wide range of astrophysical phenomena and processes associated with event representation. © 2014 Allerton Press, Inc.

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