Title:	X-ray and Gamma-ray Variability of NGC 1275
Authors:	Singh, K.P. (/jspui/browse?type=author&value=Singh%2C+K.P.)
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Abstract:	Gamma-ray emission from the bright radio source 3C 84, associated with the Perseus cluster, is ascribed to the radio galaxy NGC 1275 residing at the centre of the cluster. Study of the correlated X-ray/gamma-ray emission from this active galaxy, and investigation of the possible disk-jet connection, are hampered because the X-ray emission, particularly in the soft X-ray band (2–10 keV), is overwhelmed by the cluster emission. Here we present a method to spectrally decouple the cluster and active galactic nucleus (AGN) emission in imaging X-ray detectors. We use three sets of simultaneous Niel Gehrels Swift XRT and NuStar data. These observations were made during the period 2015 November to 2017 February, when a huge increase in the gamma-ray emission was observed. We find that the gamma-ray emission shows a very high degree of variability (40%–50%) on time scales of 1–10 days, whereas the hard X-ray emission, associated with the AGN, shows a low variability (~15%–30%), on various time scales in the range of 0.01–60 days.
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