

## [GC-32] Multiple Emission States in Active Galactic Nuclei

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We present a test of the emission statistics of active galactic nuclei (AGN), probing the connection between the red-noise temporal power spectra and multi-modal flux distributions known from observations. We simulate AGN lightcurves under the assumption of uniform stochastic emission processes for different power-law indices of their respective power spectra. For sufficiently shallow slopes (power-law indices  $\beta \leq 1.0$ ), the flux distributions (histograms) of the resulting lightcurves are approximately Gaussian. For indices corresponding to steeper slopes ( $\beta \geq 1.0$ ), the flux distributions become multi-modal. This finding disagrees systematically with result of recent mm/radio observations. Accordingly, we conclude that the emission from AGN does not necessarily originate from uniform stochastic processes even if their power spectra suggest otherwise. Possible mechanisms include transitions between different activity states and/or the presence of multiple, spatially disconnected, emission regions.

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