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Bimodal radio variability in OVRO-40m-monitored blazars

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Blazars are known to show periods of quiescence followed by extreme outbursts seen throughout the electromagnetic spectrum. We present a novel maximum likelihood approach to capturing this bimodal behavior by examining blazar radio variability in the flux-density domain. We separate quiescent and flaring components of a source's light curve by modeling its flux-density distribution as a series of "off" and "on" states. Our modeling allows us to extract information regarding the flaring ratio (S_{on}/S_{off}), duty cycle, and the modulation index in the "off"-state, in the "on"-state, as well as throughout the monitoring period of each blazar. We apply our method to a flux-density-limited subsample from the Owens Valley Radio observatory's 15 GHz blazar monitoring program, and explore differences in the variability characteristics between the different classes of blazars as well as gamma-ray detected and non-detected sources.

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