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Time Series Analysis of the Blazar OJ 287 ELLEN GAMEL, WES RYLE, Thomas More College, MICHAEL CARINI, Western Kentucky University — Blazars are a subset of active galactic nuclei (AGN) where the light is viewed along the jet of radiation produced by the central supermassive black hole. These very luminous objects vary in brightness and are associated with the cores of distant galaxies. The blazar, OJ 287, has been monitored and its brightness tracked over time. From these light curves the relationship between the characteristic "break frequency" and black hole mass can be determined through the use of power density spectra. In order to obtain a well-sampled light curve, this blazar was observed at a wide range of timescales. Long time scales were obtained using archived light curves from published literature. Medium time scales were obtained through a combination of data provided by Western Kentucky University and data collected at The Bank of Kentucky Observatory. Short time scales were achieved via a single night of observation at the 72" Perkins Telescope at Lowell Observatory in Flagstaff, AZ. Using time series analysis, we present a revised mass estimate for the super massive black hole of OJ 287. This object is of particular interest because it may harbor a binary black hole at its center.

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