HIGH-PRECISION KEPLER MONITORING OF ACTIVE GALACTIC NUCLEI - CYCLE 3
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We propose continued long-cadence monitoring of 11 confirmed and 8 candidate AGN in the Kepler FOV. Kepler's unparalleled combination of high precision, good cadence, long duration and nearly uninterrupted coverage will provide AGN light curves that will be unsurpassed for many years to come. These will allow the first optical power spectral density functions capable of determining the form of the PSD and the first optical/x-ray cross-correlation functions to probe time scales below 1 day. Kepler's only limitation is that only a small number of AGN had been identified in its FOV; to rectify this we have identified 9 new AGN candidates in addition to our cycle 2 sample in order to accumulate the richest achievable data set while this unique instrument is still operating.