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ZTF constraints on variability from intermediate-mass black hole candidates

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Intermediate-mass black holes (IMBHs) are key pieces in the puzzle of extragalactic and galactic astronomy, due to their potential to answer questions related the formation and evolution of supermassive black holes and co-evolution with their host galaxies, among others. Because of the difficulties present when detecting and confirming sources as IMBHs, they have proven to be an elusive population. Accreting BHs are known to show random variability in different spectral bands (optical, UV, etc.). We aim to demonstrate the viability of optical variability as a technique to select IMBHs candidates and characterize a sample of IMBHs obtained from the literature. Using ZTF forced photometry on the difference image, and various variability features, we obtain a high-confidence IMBHs candidates subgroup. We aim to study the multi-wavelength properties of the selected subsample and discuss it's implications in the AGN paradigm.

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