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TeV emission from FSRQs: The first systematic and unbiased survey

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Executive Summary:

The VERITAS is carrying out the systematic search of TeV emission from a set of 12 FSRQs which is catered over two observation seasons. During the previous season, 2020-21, five FSRQs from this sample were observed. We present the analysis results from four sources in this work. During 2020-21 observation season the gamma-ray emission was not detected above VERITAS energy threshold (~ 200 GeV) from these four sources, hence we report the 95% flux upper limits for these sources. We use near-simultaneous 0.1-300 GeV *Fermi*-LAT data to make the spectral energy distributions, and show the VERITAS upper limits along with spectral model over 10 GeV to 2 TeV from 3FHL catalog.

We plan to make deeper observations of these four sources and remaining sources of the sample in the next season to provide stringent constraints on spectra above 200 GeV.