

ON SOME ASPECTS OF GALACTIC FEATURELESS-SPECTRUM SOURCES

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The problem of direct detection of a black hole event horizon still remains unresolved. Isolated stellar-mass black holes could be ideal objects for solving this problem, since the event horizon would not be screened by the surrounding interstellar plasma due to its low accretion rate. Theories predict that isolated black holes should exhibit featureless flat spectra covering the entire electromagnetic range. Sources classified as DC dwarfs, which demonstrate featureless spectra with no lines, are among such galactic sources, and they constitute a good sample for searching for possible black hole candidates among them. We analyze sources with available spectral, photometric, and proper motion data which fit the selection criteria to further differentiate between truly featureless spectra and low signal-to-noise ratio spectra with possible lines in order to distinguish between actual white dwarfs and isolated stellar-mass black hole candidates. We discuss how excluding the possibility of lines in the spectrum can point to sources of interest and use several examples to demonstrate the selection criteria for possible black hole candidates.