

A SEARCH FOR EXTENDED OBJECTS WITH VARIABLE NUCLEI

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A large sample of QSOs/AGNs with detectable host galaxies is important to study the relations between the properties of the host and nucleus. Relatively faint active nuclei are of particular interest since they represent the low luminosity part of the QSO luminosity function, whose cosmological evolution is still poorly known. The non-stellar colors criterion cannot be applied to extended objects since most galaxies appear as non-stellar in color space. We have selected a sample of candidate AGNs with extended image structure on the basis of their variability, extending a previous survey for variability in objects with stellar structure (Trèvese et al. 1989, *AJ*, **98**, 108; 1994, *ApJ*, **433**, 494). The new sample allows a comparison with different selection techniques and increases the completeness of our previous survey. We add to the previously published spectroscopic observations new data providing the confirmation of some additional candidates. Presently we have 5 confirmed candidates from our primary sample of 16 objects brighter than $B_J = 22$ (Bershady, Trèvese, & Kron 1997, *ApJ*, in press). Since it is likely that our sample contains some additional bona fide AGNs, further spectroscopic work is desirable. We can put a lower limit of 106 ± 20 deg⁻² on the surface density of AGNs brighter than $B_J = 22.0$ mag. The newly detected extended AGNs are at least ten times fainter than $M_B = -23$ mag and represent 13 % of the total number of AGNs.