

QSO SURFACE DENSITY AT FAINT LIGHT LEVELS

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Two independent fields of 14' x 14' south east of M82 and 7' x 7' in SA 57 were completely spectroscopically searched for quasars using the Multi Slit Field Spectrograph at the 6-meter telescope of the Academy of Sciences of the USSR (Dodonov, 1982).

In the field near M82 four objects were identified as quasars by Arp (1983) and Burbidge et al. (1980). Additional to these objects we found two new quasars to a limiting magnitude of $22^m.2$ in B. This corresponds to a surface density of 140 ± 57 sq. deg.

The seven quasars found in SA 57 (Afanasiev et al. 1986) indicate to 500 ± 190 objects per sq. deg. brighter than $23^m.0$ in B. This number density is a factor of two higher than published previously by Koo et al. 1986. The derived steeper slope at the faint end of the number-magnitude relation flattens the observed turn over beyond about $B=19^m.5$.

We conclude, that the large scatter in the observed spatial quasar distribution represents selection effects, rather than indications for quasar density fluctuations in small fields.

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