

CLUSTERING OF RED GALAXIES NEAR A RADIO-LOUD QUASAR AT $z = 1.086$

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We investigated the environment of the radio-loud quasar 1335.8+2834 at $z = 1.086$ where an excess surface number density of galaxies was reported by Huthings et al. (1993). By obtaining near-infrared and new deep optical images of the field, we found a clustering of objects with very red optical-NIR color, $4 < R - K < 6$ and $3 < I - K < 5$ near the quasar. The colors and magnitude of the reddest objects are consistent with those predicted for old (2–4 Gyr) passively evolving elliptical galaxies at $z = 1.1$.

There is a large fraction ($> 60\%$ after field correction) of objects with moderately red colors, $4 < R - K < 4.5$, which have a similar sky distribution as the reddest objects. They are interpreted as cluster galaxies with on-going star formation. For more details, see Yamada et al. (1997) and Tanaka et al. (1997, in preparation).

References

- Huthings, J. B., Crampton, D., & Persram, D. 1993, *AJ*, **106**, 1324
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