

A VERY LARGE LIGHT PULSE FROM THE OBJECT IDENTIFIED WITH PKS 0537-441

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ABSTRACT

The object identified with PKS 0537-441 shows light variations with an amplitude near 4 mag. *Subject heading:* quasi-stellar sources or objects

Peterson and Bolton (1972) have identified the radio source PKS 0537-441 with a quasi-stellar object of magnitude 17.5 on the southern extension of the *Palomar Sky Survey*. Photoelectric *UBV* observations started on JD 2,441,224 (1971 September) showed this object to be then 2 mag brighter at $V = 15.5$ mag, and rising rapidly. The light curve is shown in figure 1, and the observations are listed in table 1. By JD 2,441,500, the magnitude had faded to less than $V = 16.5$ mag.

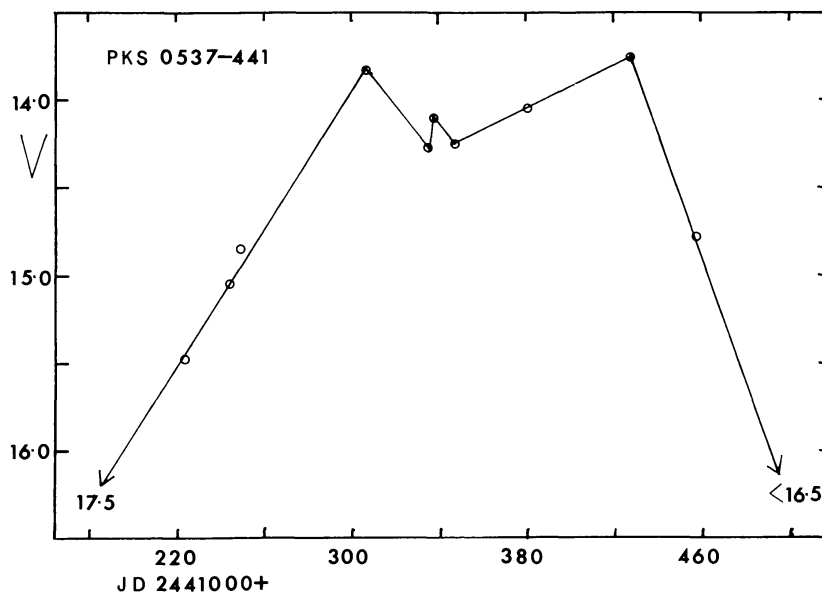


FIG. 1.—Light curve of PKS 0537-441.

From unpublished observations with the image-tube spectrograph on the 74-inch (1.9-m) reflector Peterson has found the spectrum to be continuous. The observed properties of PKS 0537-441 are similar to those of such objects as BL Lac and AP Lib (e.g., Rodgers 1971) and OJ 287 (Kinman and Conklin 1971); but with a visual range near 4 mag, the optical variability of this object is the largest observed thus far.

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TABLE 1
OBSERVATIONS OF PKS 0537-441

JD (2,441,000+)	V_E	$B - V$	$U - B$
224	15.47	+0.50	-0.55
245	15.06	+0.46	-0.52
249	14.85	+0.46	-0.51
308	13.86	+0.46	-0.51
336	14.28	+0.47	-0.60
338	14.10	+0.44	-0.62
347	14.25	+0.47	-0.60
381	14.06	+0.46	-0.61
428	13.76	+0.47	-0.56
458	14.78	+0.45	-0.61

REFERENCES

- Kinman, T. D., and Conklin, E. K. 1971, *Ap. Letters*, **9**, 149.
 Peterson, B. A., and Bolton, J. 1972, *Ap. Letters*, **10**, 105.
 Rodgers, A. W. 1971, *Nature Phys. Sci.*, No. 39, **233**, 75.