

It is clear that the observed correlations are statistically very significant. They seem to indicate that at some redshifts there are more lines per object to measure, and that at these redshifts more quasars have had their redshifts measured. This effect will be referred to as the "ease of measurement" effect. It may arise because the systematic redshift moves any given line steadily across the spectroscopic observing window ($\sim 3300 \text{ \AA}$ to 6900 \AA) or because of some systematic variation in the physical properties of quasars. The former reason seems more likely—it is noticeable that the low values of N_Q at $z \sim 1.25$ (Table 1) occur just as Mg II 2798 is being shifted out of the window, and the rise of N_Q at $z \sim 1.8$ occurs as Ly α is being shifted into the window. The fact that the 42 lines actually used in determining the redshifts (Table 3) are not spread uniformly across the wavelength interval from 6562 \AA to 1085 \AA also seems to support the proposed explanation.

Table 3 Emission Lines used in Determining QSO Redshifts

Line No.	Identification	Line No.	Identification
1	H α 6562	22	Mg II 2798
2	[O III] 5007	23	[Mg VII] 2632
3	[O III] 4959	24	[Ne IV] 2424
4	H β 4861	25	[C II] 2326
5	[O III] 4363	26	[O III] 2321
6	H γ 4340	27	C III] 1909
7	H δ 4102	28	Si II 1817
8	[S II] 4071	29	[N III] 1750
9	He ϵ , [Ne III] 3968	30	Al II Fe II 1671
10	H ζ 3889	31	He II 1640
11	[Ne III] 3869	32	[Ne IV] 1602
12	[O II] 3727	33	C IV 1549
13	[Ne V] 3426	34	N IV] 1488
14	[Ne V] 3346	35	Si IV 1400, [O IV] 1406
15	O III 3444	36	C II 1335
16	He II 3203	37	Si II 1308
17	O III 3133	38	O I 1304
18	[Ne V] 2973	39	N V 1240
19	[Mg V] 2931	40	Ly α 1216
20	[Ar IV] 2869	41	N II 1085
21	[Ar IV] 2854	42	O III] 1663

This discussion implies that the observed quasar redshift distribution does not represent the true distribution. A more accurate approximation to the true distribution would have to allow for the presence of "the ease of measurement effect", which is a function of redshift. The significance of the power spectrum of the observed redshift distribution should not, therefore, be judged by comparing the results with a similar analysis of white noise. The existence of an "ease of measurement effect" also means that the heights of peaks in the redshift distribution separated by intervals greater than ~ 0.1 in redshift cannot be directly compared with one another for statistical purposes.

I acknowledge helpful conversations with Drs S. van den Bergh, G. Burbidge, P. Kronberg and M. Schmidt. This work was supported by the National Research Council of Canada.

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Received July 1, 1971.

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Spectrum of AP Lib (\equiv PKS 1514-24)

Biraud¹ and Bond² have recently identified the rapid and erratic variable AP Lib with the radio source PKS 1514-24. The identification of AP Lib from the chart given by Bolton *et al.*³ for PKS 1514-24 is confirmed in brightness and in position given in the *General Catalogue of Variable Stars*⁴. Bond has pointed out that Searle and Bolton⁵ have noted that AP Lib has no emission lines between 6500 and 4300 \AA and that Westerlund and Wall⁶ have classified AP Lib as an N galaxy. This communication attempts to answer the question raised by Biraud concerning the similarity of AP Lib to BL Lac and describes two spectra (0.5 mm wide) of AP Lib obtained on August 16 and 18, 1971, with the 74-inch telescope at Mount Stromlo Observatory. The spectra cover the wavelength range 6800 to 3600 \AA with a resolution of 3 \AA (dispersion 100 \AA mm^{-1}) and with exposure times of 60 and 90 min. During both exposures the image of AP Lib was observed to be stellar when the seeing image was less than 1.5 arc s in diameter, supporting the classification of AP Lib as an N-type galaxy. Both spectra of AP Lib are continuous over the wavelength range covered and show no features in emission or absorption stronger than 200 m\AA equivalent width which cannot be ascribed to night sky emissions⁷. It is apparent from the energy distribution in the continuous spectrum that AP Lib, at the time observed, possesses a marked ultraviolet excess relative to stars of similar blue-visual gradient. This is in agreement with the Westerlund and Wall⁶ photometry of PKS 1514-24. The present results therefore indicate a marked spectrophotometric similarity between AP Lib and BL Lac.

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Received September 1, 1971.

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Helium-like Line Emission from Coronal Features

SINCE Gabriel and Jordan¹ proposed the theory relating the relative intensity of the inter-system ($^3P - ^1S_0$) and forbidden ($^3S_1 - ^1S_0$) lines of helium-like ions to the electron density of