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UBV PHOTOMETRY OF THE COMPOSITE STAR DELTA SAGITTAE

A few differential UBV observations were made of the composite star Delta Sge (M2II? + B?) in an attempt to detect an atmospheric eclipse which, as Koch (1969) pointed out, might have occurred at the end of the calendar year 1969.

The comparison star was Zeta Sge ABC, and all three components were included in the diaphragm. The differential magnitudes were corrected for differential extinction, both principal and second-order, and transformed to the UBV system. The telescope was a 24-inch reflector and a refrigerated 1P21 photomultiplier was used. The observations are listed in Table I, where the last three columns are the differential UBV magnitudes in the sense variable minus comparison.

TABLE I  
 Differential UBV Observations  
 (Delta Sge minus Zeta Sge ABC)

Date	JD hel. 2,440,000+	$\Delta V$	$\Delta B$	$\Delta U$
26-27 Sept. 1969	491.60	-1.19	+0.13	+0.99
	.61	-1.19	+0.13	+0.98
	.62	-1.20	+0.13	+0.98
28-29 Sept. 1969	493.57	-1.19	+0.13	+0.99
	.58	-1.19	+0.13	+1.00
1-2 Dec. 1969	557.53	-1.23	+0.13	+1.04
	.54	-1.22	+0.12	+0.98
	.55	-1.21	+0.10	+1.02
	.56	-1.22	+0.13	+1.02
20-21 Feb. 1970	638.96	-1.19	+0.15	+1.02
	.97	-1.18	+0.16	+1.03
	.98	-1.18	-	-

There is no indication that Delta Sge changed significantly in brightness in any color, but these few observations should perhaps be combined with any others which were obtained during the 1969-70 season before it is decided whether or not an atmospheric eclipse did occur.

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REFERENCES:

Koch, R.H. 1969, I.A.U. Central Bureau for Telegrams, Circ. No. 2165.