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PHOTOELECTRIC OBSERVATIONS OF SZ PISCIIUM

The UBV photoelectric observations of SZ Piscium, which is known to be a member of close binaries of the RS CVn type, were secured with the 91-cm reflectors at the Dodaira Station of Tokyo Astronomical Observatory and at the Okayama Astrophysical Observatory on five nights in November and December 1977. HD 219018 was chosen for the comparison star, which is the same as used by Jakate et al., (1976).

The observations are presented in Table I and also plotted in Figure 1. Phases in the second column of the table were calculated according to the linear ephemeris:

$$t_E = \text{Hel.J.D. } 2442903.635 + 3^d.9655702 \cdot E$$

which are based on the times of observed primary minima due to Jakate et al., (1976) and Catalano et al., (1978). In the next three columns, we list the differential magnitudes and colour indices (the variable minus the comparison star) which have been corrected for differential atmospheric extinctions and transformed to the standard UBV system.

It is known that SZ Psc shows a wave-like variation in its light curve, as has been pointed out by Eaton (1977). Although our observations have scantily covered phases outside the eclipses, they seem to confirm such a light variation of this system with an amplitude of at least 0.05 mag in V during our observational period.

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References:

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Jakate, B., Bakos, G.A., Fernie, J.D., Heard, J.F. 1976,
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Table I

Hel.J.D. 2443400+	Phase	ΔV	$\Delta(U-B)$	$\Delta(B-V)$
71.975	0.3187	-0.491	0.260	0.208
71.985	0.3211	-0.470	0.198	0.208
71.994	0.3235	-0.491	0.251	0.194
72.004	0.3258	-0.466	0.192	0.229
72.014	0.3286	-0.464	0.213	0.203
72.024	0.3312	-0.469	0.219	0.220
72.033	0.3333	-0.448	0.200	0.197
72.042	0.3354	-0.464	0.221	0.196
72.050	0.3375	-0.454	0.201	0.190
72.058	0.3395	-0.478	0.226	0.214
83.019	0.1035	-0.372	0.221	0.203
83.028	0.1059	-0.349	0.204	0.186
83.035	0.1078	-0.371	0.198	0.198
96.898	0.6035	-0.424	0.190	0.210
96.905	0.6053	-0.422	0.184	0.207
96.912	0.6070	-0.424	0.201	0.207
96.920	0.6089	-0.432	0.192	0.211
96.926	0.6106	-0.432	0.210	0.203
96.933	0.6122	-0.426	0.205	0.203
96.939	0.6138	-0.430	0.205	0.200
96.945	0.6154	-0.434	0.203	0.207
96.953	0.6173	-0.444	0.204	0.214
96.959	0.6188	-0.436	0.214	0.206
96.965	0.6205	-0.435	0.203	0.203
96.972	0.6222	-0.440	0.205	0.204
96.978	0.6236	-0.439	0.201	0.208
96.984	0.6252	-0.441	0.207	0.205
96.991	0.6268	-0.448	0.195	0.213
96.997	0.6286	-0.439	0.193	0.211
97.006	0.6305	-0.432	0.194	0.196
97.904	0.8573	-0.470	0.206	0.208
97.911	0.8590	-0.468	0.200	0.208
97.918	0.8608	-0.472	0.202	0.214
97.924	0.8623	-0.478	0.205	0.211
97.931	0.8639	-0.477	0.214	0.216
97.937	0.8655	-0.471	0.217	0.207
97.944	0.8671	-0.466	0.208	0.210
97.950	0.8689	-0.466	0.211	0.209
97.959	0.8709	-0.477	0.209	0.210
97.972	0.8744	-0.469	0.212	0.201
97.980	0.8764	-0.463	0.227	0.203
97.986	0.8779	-0.455	0.212	0.214
97.992	0.8794	-0.457	0.187	0.211
97.999	0.8810	-0.464	0.189	0.218
98.954	0.1220	-0.382	0.180	0.203
98.961	0.1236	-0.381	0.183	0.212
98.969	0.1257	-0.386	0.197	0.196
98.977	0.1278	-0.379	0.163	0.200

