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PHOTOELECTRIC OBSERVATIONS OF RW TAURI

The eclipsing binary RW Tauri was observed by the author on two nights at the Fernbank Science Center Observatory for the purpose of obtaining times of primary minimum. These observations were made with the 91 cm Cassegrain reflector and an EMI 6256s photomultiplier. Because of the rapid light variations, only the yellow filter of the standard UBV system was used.

All observations were made with respect to a twelfth magnitude comparison star located 1' north of RW Tauri as shown in Fig.1. The magnitude difference in the sense variable minus comparison and the corresponding Julian dates are given in the table. The observations of universal date 21 November, 1974, are plotted in Fig.2. The residual light that is evident just after second contact and just before third contact is due to luminous ring around the B component as explained by Grant (Ap.J. 129, 62, 1959).

The method of Hertzsprung (BAN 4, 178, 1928) was used to calculate the time of minimum of 21 November, 1974. Only the ascending branch was observed on 17 March, 1974, and a tracing paper method

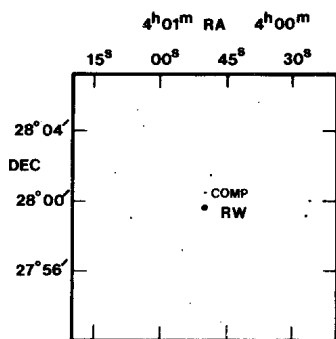


Fig.1. A FINDING CHART FOR RW TAURI. COORDINATES ARE REFERRED TO EPOCH 1950.

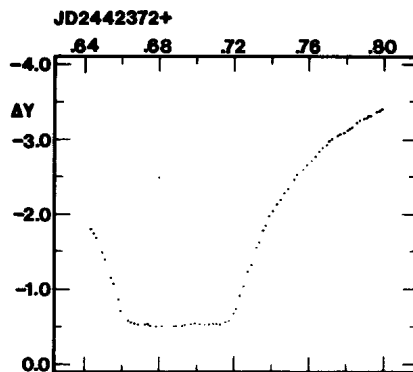


Fig.2. YELLOW LIGHT CURVE OF 21 NOV. 1974

was used for this time of minimum calculation. The times of minimum are given as:

17 March, 1974 JD(Hel) 2442123.498
 21 November, 1974 JD(Hel) 2442372.6902

The (O-C)'s as calculated from Grant's period are -0.066 and -0.0704 respectively.

OBSERVATIONS OF RW TAURI IN YELLOW LIGHT

JD (Hel) 2442000+	V-C	JD (Hel) 2442000+	V-C	JD (Hel) 2442000+	V-C
123.5551	-2.310	123.6370	-3.620	272.7270	-1.235
.5567	-2.348	.6397	-3.638	.7283	-1.332
.5596	-2.441	123.6411	-3.675	.7320	-1.557
.5610	-2.480	372.6437	-1.803	.7330	-1.613
.5646	-2.640	.6452	-1.750	.7354	-1.763
.5659	-2.714	.6462	-1.690	.7366	-1.840
.5700	-2.751	.6497	-1.481	.7390	-1.969
.5713	-2.772	.6511	-1.391	.7403	-2.035
.5755	-2.822	.6541	-1.154	.7424	-2.119
.5769	-2.877	.6559	-1.107	.7441	-2.177
.5814	-3.026	.6582	-0.852	.7467	-2.275
.5826	-3.030	.6599	-0.703	.7483	-2.334
.5850	-3.064	.6634	-0.584	.7520	-2.465
.5863	-3.095	.6646	-0.566	.7537	-2.514
.5887	-3.125	.6677	-0.550	.7567	-2.605
.5901	-3.167	.6692	-0.546	.7588	-2.662
.5928	-3.164	.6722	-0.538	.7618	-2.731
.5940	-3.179	.6737	-0.541	.7629	-2.762
.5967	-3.213	.6768	-0.519	.7657	-2.838
.5979	-3.244	.6801	-0.507	.7669	-2.879
.6001	-3.246	.6816	-0.510	.7695	-2.933
.6013	-3.261	.6882	-0.518	.7709	-2.965
.6037	-3.320	.6897	-0.517	.7721	-2.987
.6050	-3.330	.6923	-0.515	.7751	-3.045
.6074	-3.373	.6938	-0.524	.7764	-3.066
.6086	-3.386	.6970	-0.535	.7776	-3.079
.6111	-3.431	.6989	-0.545	.7802	-3.112
.6123	-3.438	.7019	-0.521	.7814	-3.140
.6159	-3.482	.7036	-0.530	.7826	-3.158
.6173	-3.505	.7067	-0.528	.7854	-3.226
.6200	-3.544	.7082	-0.531	.7865	-3.245
.6213	-3.552	.7110	-0.531	.7878	-3.261
.6239	-3.596	.7127	-0.521	.7905	-3.289
.6250	-3.615	.7156	-0.554	.7916	-3.305
.6278	-3.679	.7173	-0.573	.7928	-3.316
.6290	-3.712	.7196	-0.673	.7961	-3.364
.6317	-3.687	.7210	-0.730	.7972	-3.367
.6329	-3.642	.7232	-0.906	.7985	-3.391
.6356	-3.628	.7246	-1.043		

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