

## OO AQUILAE TIMES OF MINIMA IN 1993 FROM VISUAL OBSERVATIONS

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### Abstract

More than 250 visual observations of the eclipsing binary OO Aquilae were made during the 1993 observing season. The data were used to find 27 times of minima for this system. Most of them are low-accuracy times of minima found by extrapolating from near-minima observations; six were found by fitting a cubic equation to the data.

### 1. Introduction

OO Aquilae (BD +08°4224 = HD 187183 = SAO 125084) is a ninth-magnitude eclipsing binary with a W Ursae Majoris-type light curve and relatively deep minima. The variability of the system was discovered by Hoffleit (1932). The system is an overfilling contact binary (Hrivnak 1989) with a period of 0.5067848 day (Demircan *et al.* 1991). It was found that the shape of the light curve changed with time (Binnendijk 1968).

### 2. Observations

More than 250 visual observations of OO Aql were made during the 1993 observing season by Ofer Gabzo of the Israeli Astronomical Association Variable Star Section, using a 250-mm Newtonian reflector. The comparison stars used were BD +09°4254 (mag. 8.8, spectral type K5), BD +09°4256 (mag. 9.1, spectral type A0), GSC 1058-0689 (mag. 9.8), and BD +08°4220 (mag. 10.3, spectral type A2).

### 3. Minima

Fifteen primary times of minima and 12 secondary times of minima were calculated from the data. Six minima times (3 primary and 3 secondary) were calculated by fitting a cubic equation by the least squares method. The other minima were calculated by extrapolating from near-minima observations, thus their accuracy is rather low. The minima are listed in Table 1. H.J.D. is Heliocentric Julian Date of minimum, Error is the estimated standard deviation in the time of minimum, c in the Method column stands for the 6 minima calculated by fitting the cubic equation, P/S indicates whether a minimum is primary or secondary, and Cycle No. is the minimum cycle number as calculated from the ephemeris published by Rafert (1982).

### 4. Acknowledgements

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### References

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Table 1. OO Aql times of minima.

<i>H.J.D.</i>	<i>Error</i>	<i>P/S</i>	<i>Method</i>	<i>Cycle No.</i>	<i>H.J.D.</i>	<i>Error</i>	<i>P/S</i>	<i>Method</i>	<i>Cycle No.</i>
2449088.551	0.008	P	c	29920.0	2449184.315	0.012	P		30109.0
2449089.574	0.020	P		29922.0	2449185.307	0.015	P		30111.0
2449090.581	0.015	P		29924.0	2449186.334	0.011	P		30113.0
2449091.592	0.020	P		29926.0	2449188.374	0.020	P		30117.0
2449092.587	0.015	P		29928.0	2449192.428	0.020	P		30124.0
2449093.607	0.015	P		29930.0	2449255.264	0.007	P	c	30249.0
2449106.529	0.010	S	c	29955.5	2449256.274	0.015	P		30251.0
2449108.567	0.015	S		29959.5	2449257.297	0.09	P	c	30253.0
2449142.507	0.015	S		30026.5	2449267.177	0.020	S		30272.5
2449143.513	0.010	S	c	30028.5	2449268.186	0.013	S		30274.5
2449144.533	0.009	S	c	30030.5	2449270.213	0.012	S		30278.5
2449146.554	0.020	S		30034.5	2449271.224	0.012	S		30280.5
2449150.361	0.015	P		30042.0	2449272.234	0.020	S		30282.5
2449164.292	0.014	S		30069.5					