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KO Aur

KO Aur = Wr 122 = BD +48^o1340 was discovered by Weber, R. in 1963. He classified this star as an eclipsing binary (1). Weber also gives the first elements obtaining a period of 0^d.428949(2).

I observed the star on 117 plates of the Hartha sky-patrol (JD.2437300-38800) and searched on Sonneberg sky-patrol plates.

The obtained minima, listed below, show that the elements of Weber are not correct.

The following improved elements could be derived:

$$\text{Min. (hel.)} = \text{JD.2436607.472} + 1^d.31793028 \cdot E.$$

Observed minima:

JD. (hel.)	Epoch	O-C
2435762.655	- 641	-0 ^d .024
36607.450	0	- .022
37639.459	+ 783	+ .048
730.356	852	+ .007
940.545	1011.5	- .013
38406.478	1365	+ .031
495.380	1432.5	- .027
651.610	1551	+ .028
849.311	1701	+ .040
39070.627	1869	- .057
40205.425	2730	+ .003
41592.495	3782.5	- .048
689.379	3856	- .032
957.556	4059.5	- .054
42697.573	4621	- .055
866.368	4749	+ .045
870.323	4752	+ .046

Using the improved elements the observations of Weber, R. and Diethelm, R.(3) can be exhibited.

KO Aur is an eclipsing binary (10^m45-11^m30ph). Comparison stars are published in (1). The secondary minimum seems to be of the same depth as the primary minimum.

Further particulars will be published in "Mitteilungen der
Bruno-H.-Bürgel-Sternwarte Hartha" Heft 12.

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References:

- (1) Weber, R. 1963 Inf.Bull.Var.Stars No.21
- (2) Weber, R. 1964 Bulletin de la station astrophotographique
de Maintenon No. 4 p. 15
- (3) Diethelm, R. 1976 BBSAG Bull. 26