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NEW TIMES OF MINIMA OF W UMa TYPE STARS

The W UMa star systems ER Ori, YY Eri, and RZ Tau have been observed photoelectrically to obtain accurate times of minima in order to increase the time span of the minima reported. These stars were observed during several seasons as seen in Table I. The methodology followed in the observations and data reduction for the data obtained at the Observatorio Astronómico Nacional at San Pedro Mártir, B.C., México (OAN-SPM),

Table I

STAR	HJD 2440000+	Type of minimum	Equipment	Observer
ER ORIONIS	6775.7990	I	A	1
	6777.9180	I	A	1
YY ERIDANI	6774.7457	I	A	1
	6774.9090	II	A	1
	6778.7648	II	A	1
	6798.6983	II	B	2
	6799.6610	II	B	2
	6818.6288	II	B	2
	7458.8953	I	B	3
	7459.8550	I	B	3
RZ TAURI	7827.9828	II	A	4
	7828.8143	II	A	4
	7835.8790	II	A	4
	7837.9562	II	C	1

Equipment: (A) A cooled photoelectric photometer with the Johnson's V filter attached to the 0.84m telescope of the OAN-SPM.

(B) Photoelectric photometer with the Johnson's V filter attached to the 0.50m telescope of the OJAB.

(C) uvby multiphotometer attached to the 1.50m telescope of the OAN-SPM.

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is described in Peña et al. (1993) while for the observations made at the Observatorio José Arbol y Bonilla at Zacatecas, Zac. México (OJAB), they are described in Peña et al. (1987). The times of minima were determined from the minima obtained from a mathematical fit to the light curves around the times of occultation.

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References:

- Peña, J. H., Peniche, R., Arellano, A., Ríos-Berumen, M. and Ríos-Herrera, M., 1987, *Acta Astronomica*, **37**, 63
 Peña, J. H., Hobart, M. A. and Rodriguez, E., 1993, *Rev. Mexicana Astron. Astrof.*, in press