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**OAN-TNT RESULTS OF OBSERVATIONS - PHOTOELECTRIC  
MAXIMA OF PULSATING STARS**

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In this second compilation of OAN-TNT results, photoelectric and CCD observations of 10 variable stars obtained from 2016 to January 2017, are presented giving 72 maxima of pulsating stars. The observations were made at both the Observatorio Astronómico Nacional at Tonantzintla (TNT) and San Pedro Mártir (SPM), both belonging to Universidad Nacional Autónoma de México (UNAM). The CCD reduction was done with AstroImageJ (Collins & Kielkopf 2012) and the photoelectric observations were reduced using a classical procedure (see Peña et al., 2016 for details). All times of maxima are heliocentric and were determined with a fifth grade polynomial fitting to the light curve. The epoch values and period to determine the O-C were taken from GCVS (Samus et al., 2017) and are given in days. The star BO Lyn was not listed in this source so its values were taken from Peña et al. (2016). The values in column O-C are determined without incorporation of nonlinear terms. The errors were determined from the RMS error of the residuals evaluated for the times of maxima and are about 0.016 day. The accuracy of each point is given by the exposure time and varies between 3 min for the 1-meter telescope and 1 min for the smaller telescopes. It may seem contradictory to give a longer integration time to the larger aperture telescope. However, this is done since the mounting of the smaller telescopes is of an altazimuth type, which does not allow long integration times. For the 1-meter telescope there were around 40,000 counts, and for the 10-inch telescope there were 11,000 counts, enough to secure high precision. The photoelectric measurements and all the light curves can be requested for inspection.

In Table 1, the stellar coordinates refer to epoch 2000 and the V values are given in magnitudes. All information about telescopes, photometers and filters is specified in the Table remarks. In Table 2 the following quantities are listed: Column 1 is the ID, column 2 the time in HJD, in column 3, N gives the number of data points in each run, column 4  $\Delta t$  is the time span in days of the run, column 5 the telescope, column 6 the filter used, column 7 detector, column 8 the O-C value, and finally column 9 gives the observers and reducers. Observers and reducers are specified in the remarks at the end of the Table.

Table 1: Characteristics of the observed stars

Star	RA (2000)	DEC (2000)	V (mag)	SpTyp	T <sub>0</sub> (d)	P (d)	Observatory
GP And	00 55 18	+23 09 49.36	10.79	A3	2433861.438	0.07868270	TNT & SPM
RV Ari	02 15 07	+18 04 27.90	11.61	A	2435017.5124	0.093128264	TNT
V367 Cam	04 40 55	+53 38 06.45	10.80	F3VI			TNT
AD CMi	07 52 47	+01 35 50.50	9.38	F3III	2442429.458	0.12297443	TNT & SPM
RR Gem	07 21 33	+30 52 59.46	11.92	A8	2441357.205	0.03973106	TNT
KZ Hya	10 50 54	-25 21 14.00	10.06	B9III	2442516.158	0.059510421	TNT & SPM
EH Lib	14 58 55	-00 56 53.05	9.38	F0	2433438.608	0.088413245	TNT
SZ Lyn	08 09 35	+44 28 17.61	9.43	F2	2438124.398	0.120534920	TNT
BO Lyn	08 43 01	+40 59 51.78	11.49	A5-A8	2457412.8196	0.093357995	TNT & SPM
AE UMa	09 36 53	+44 04 00.39	11.35	A9	2435604.338	0.086017055	TNT

Table 2: Times of maxima of pulsating stars

ID	HJD-2450000	N	$\Delta t$ (d)	Telescope	Fil	Detector	O-C	Observers/Reducers
GP And	7713.7160	145	0.2074	1M	V	1001	0.0070	DSP/DSP
	7713.7949						0.0072	
	7731.2073	35	0.072	84	y	phot	0.0307	DSP/DSP
	7731.7343	31	0.0701	1M	G	8300	0.0069	TAO/CVR
	7732.6793	59	0.1096	1M	G	8300	0.0077	TAO/CVR
RV Ari	7732.7919	100	0.1059	m1	V	1001		TAO/JHP,ARL
	7733.8260	116	0.1290	m1	V	1001		TAO/JHP,ARL
	7736.7160	160	0.1519	m1	V	1001		TAO/JHP,ARL
	7736.8068							
V367 Cam	7732.7775	185	0.165	m2	G	ST8		TAO/JCC
	7768.7170	155	0.1355	m2	V	1001		TAO/JCC
	7776.7329	170	0.176	1M	V	1001		ESAOBELA17/JCC
	7776.8535							
	7772.7204	169	0.136	m1	V	1001		ESAOBELA17/JCC
AD CMi	7773.7927	61	0.0839	m1	V	1001		ESAOBELA17/JCC
	7767.7426	164	0.1695	me	V	1001		ESAOBELA17/ARL,JCC
	7768.8225	115	0.09132	me	V	1001		ESAOBELA17/ARL,JCC
	7400.8690	48	0.01	84	y	phot	-0.0002	AAS,JGT/JHP
	7409.8501	179	0.14	m2	V	1001	0.0037	ESAOBELA16/DSP
	7430.7541	130	0.13	m2	V	1001	0.0020	ESAOBELA16/DSP
RR Gem	7772.6941	182	0.2460	m2	G	ST8	-0.1929	ESAOBELA17/JHP
	7777.8590	53	0.0640	m2	G	ST8	-0.1931	ESAOBELA17/JHP
KZ Hya	7399.9693	41	0.08	84	y	phot	0.0166	ASS,JGT/DSP
	7411.8755	87	0.09	m1	G	ST8	0.0207	ESAOBELA16/DSP
	7412.8265	113	0.07	m2	V	1001	0.0195	ESAOBELA16/DSP
	7459.8400	82	0.10	m2	V	1001	0.0198	AOA16/DSP
	7459.8989						0.0192	
	7460.7921	52	0.06	m2	V	1001	0.0197	AOA16/DSP
	7470.7894	154	0.13	m1	V	1001	0.0193	DSP/DSP
	7470.8491						0.0194	
	7471.7419	192	0.17	m1	V	1001	0.0196	DSP/DSP
	7471.8013						0.0195	
	7471.8611						0.0198	
	7770.9547	75	0.07	m2	G	ST8	0.0140	ESAOBELA17/DSP
	7772.8602	212	0.16	m1	V	1001	0.0152	ESAOBELA17/DSP
	7772.9198						0.0152	
7772.9791						0.0150		
7774.8247	150	0.147	m1	V	1001	0.0158	ESAOBELA17/DSP	
7774.8858						0.0174		
7774.9449						0.0170		
7778.8709	89	0.09	m1	V	1001	0.0153	ESAOBELA17/DSP	
7778.9311						0.0159		
EH Lib	6753.9800	280	0.1552	m1	wo	8300	0.0035	DSP/DSP
	7459.8721	103	0.0878	m1	V	1001	0.0043	AOA16/CVR

Table 2: cont.

ID	HJD-2450000	N	$\Delta t$ (d)	Telescope	Fil	Detector	O-C	Observers/Reducers
EH Lib	7460.8441	103	0.0803	m1	V	1001	0.0037	AOA16/CVR
	7481.8879	90	0.1339	m1	G	8300	0.0052	AOA16/CVR
SZ Lyn	7481.9756						0.0045	
	7730.8865	56	0.06	m1	V	1001	0.0371	TAO/ARL
	7764.8761	166	0.14	m1	G	ST8	0.0359	ESAOBELA17/ARL
	7765.8415	161	0.13	m1	G	ST8	0.0370	ESAOBELA17/ARL
	7766.8055	155	0.13	m1	V	1001	0.0367	ESAOBELA17/ARL
BO Lyn	7777.7738	90	0.06	me	G	ST8	0.0363	ESAOBELA17/ARL
	7399.9256	37	0.0790	84	v	phot		AAS,JG/JHP
	7401.9861	41	0.086	84	v	phot		AAS,JG/JHP
	7409.8305	297	0.228	m14	G	8300		ESAOBELA16/JCC
	7409.9249							
	7411.8816	266	0.123	m14	G	8300		ESAOBELA16/JCC
	7412.7273	356	0.165	m14	G	8300		ESAOBELA16/JCC
	7412.8212							
	7425.7953	469	0.227	m2				AAS,JG/
	7425.8890							
	7770.8271	161	0.1268	m1	V	1001		ESAOBELA17/CVR
	7774.8653	148	0.1424	m2	G	ST8		ESAOBELA17/CVR
	7776.8271	130	0.1367	m2	G	ST8		ESAOBELA17/CVR
7775.7983	106	0.1081	me	G	8300		ESAOBELA17/JCC	
AE UMa	7480.7170			1M	G	8300	0.0055	JG/ARL
	7480.7995						0.0020	
	7776.7838	290	0.23	m1	V	1001	0.0015	ESAOBELA17/DSP
	7776.8661						-0.0021	
	7776.9566						0.0023	
	7778.8489			me	G	8300	0.0023	ESAOBELA17/DSP

**Remarks:**

## 1. Telescope

1M - 1m telescope

me - 10" Meade telescope equatorial

m1 - 10" Meade telescope

m2 - 10" Meade telescope

c11 - 11" Celestron telescope

84 - 0.84m telescope

## 2. Detector

ST8 - CCD camera ST-8

1001 - CCD camera ST-1001

8300 - CCD camera ST-8300

phot - *uvby* photometer

e2v2 - CCD camera e2v-4290

## 3. Filter

V - V-filter in UBV system

G - green in RGB set

y - y-filter in *uvby* system

wo - without filter

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