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TIMES OF MINIMA OF ECLIPSING BINARIES AND MID-TRANSIT TIMES OF TRANSITING EXOPLANETS

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Observatory and telescope:
16" Schmidt-Cassegrain telescope of the Ankara University Kreiken Observatory

Detector:	Apogee ALTA U47+ CCD camera. 1024 x 1024 pixels.

Method of data reduction:
Reduction of the CCD frames and differential photometry were performed with the standard tasks of IRAF[1] package

Method of minimum determination:
The minima times of eclipsing binaries were calculated using Kwee & van Woerden's (1956) method. Mid-transit times were calculated by making use of a model-fitting algorithm available via the Exoplanet Transit Database (Poddaný et al. 2010)[2].

[†]Based on the observations performed at Ankara University Kreiken Observatory

[1]IRAF is distributed by the National Optical Astronomical Observatories, operated by the Association of the Universities for Research in Astronomy, inc., under cooperative agreement with the National Science Foundation

[2]`http://var2.astro.cz/ETD/`

Table 1: Minima Times of Eclipsing binaries

Star name	Time of min. HJD 2400000+	Error	Type	Filter	Obs.
RT And	56515.4310	0.0001	I	$BVRI$	IO
	56617.3173	0.0001	I	$BVRI$	KS
AB And	56504.4851	0.0001	II	VRI	AUU
	56257.2270	0.0001	II	BVR	OY
	56645.2063	0.0001	II	VRI	SC
BD And	56847.51139	0.00008	I	$BVRI$	SO
OO Aql	56852.34508	0.00008	II	$BVRI$	OO
V417 Aql	56891.47788	0.00009	II	$BVRI$	AAUU
SS Ari	56885.4908	0.0001	II	$BVRI$	MBD
AR Aur	56336.2991	0.0003	II	$BVRI$	CTT
IU Aur	56264.2627	0.0003	I	BVR	YN
EL Boo	56420.4498	0.0002	I	$BVRI$	DO
	56441.3421	0.0002	II	$BVRI$	ZA
	56444.4470	0.0002	I	$BVRI$	RO
	56477.3406	0.0002	II	$BVRI$	AO
V776 Cas	56638.5450	0.0002	I	$BVRI$	DDI
GW Cep	56737.3880	0.0001	II	$BVRI$	DG
RW Com	56385.5154	0.0001	I	$BVRI$	MBD
CC Com	56690.59636	0.00009	I	VRI	BK
YY CrB	56532.3252	0.0001	I	$BVRI$	BE
WZ Cyg	56826.46413	0.00006	I	$BVRI$	OV
ZZ Cyg	56853.48273	0.00004	I	$BVRI$	OY
MY Cyg	56821.3628	0.0002	I	$BVRI$	KA
V2280 Cyg	56513.4856	0.0001	II	VRI	RO
	56483.4532	0.0002	II	R	MA
V2294 Cyg	56483.2961	0.0002	I	R	OK
	56499.4310	0.0002	II	$BVRI$	RO
YY Del	56835.4604	0.0002	I	$BVRI$	CTT
AK Her	56880.3126	0.0001	I	$BVRI$	ZA
	56840.4806	0.0004	II	$BVRI$	MU
CC Her	56416.4795	0.0002	II	VRI	EB
PP Lac	56866.4549	0.0001	I	$BVRI$	ZA
AP Leo	56687.56866	0.00008	I	$BVRI$	YK
UV Lyn	56653.5820	0.0001	II	$BVRI$	CTT
	56653.5792	0.0001	II	$BVRI$	UD
U Peg	56482.4965	0.0001	I	$BVRI$	OU
	56616.2924	0.0002	I	$BVRI$	UB
KL Per	56228.3409	0.0002	I	$BVRI$	MMK
CU Sge	56804.4717	0.0004	I	$BVRI$	MAK
CW Sge	56839.4860	0.0001	I	$BVRI$	EB
CU Tau	56690.2423	0.0002	I	VRI	DT
V781 Tau	56325.2965	0.0002	II	$BVRI$	CTT
	56638.2995	0.0001	I	$BVRI$	AUU
	56325.2961	0.0002	II	$BVRI$	ND
HH UMa	56357.2530	0.0002	I	$BVRI$	ZA
AX Vir	56408.4600	0.0001	I	$BVRI$	AO
	56409.5153	0.0004	II	$BVRI$	TG
	56413.3764	0.0001	I	$BVRI$	TK
HW Vir	56809.33987	0.00002	I	R	OB

Table 2: Transit Mid-Times of Transiting Exoplanets

Star name	Transit mid-time HJD 2400000+	Error	Filter	Obs.
Qatar-1b	56407.3494	0.0017	*R*	AOE
Qatar-1b	56478.3449	0.0007	*R*	SG
Qatar-1b	56576.3267	0.0007	*R*	HVS
Qatar-1b	56884.4733	0.0006	*R*	HVY
TrES-1b	56562.3023	0.0008	*R*	MY
TrES-1b	56880.4611	0.0010	*R*	BAS
TrES-2b	56497.4296	0.0009	*R*	BC
TrES-2b	56875.4270	0.0011	*R*	BA
TrES-3b	56867.5116	0.0006	*R*	MHT
TrES-3b	56892.3285	0.0005	*R*	OB
WASP-2b	56845.3667	0.0009	*R*	OB
WASP-3b	56476.3998	0.0006	*R*	SOS
WASP-3b	56537.3456	0.0017	*R*	OB
WASP-3b	56838.3867	0.0008	*R*	MHT
WASP-3b	56849.4633	0.0009	*R*	HVS
WASP-33b	56217.4783	0.0012	*I*	MY
WASP-33b	56217.4782	0.0012	*R*	MY
WASP-33b	56217.4709	0.0013	*V*	DGT

Observers:			
AUU:	A. Ulus Uludağ	MMK:	M. Metin Keklik
AOE:	Ali Öğer	MU:	Murat Uzundağ
AO:	Anıl Özkeleş	MY:	Mesut Yılmaz
BA:	Büşra Akerdem	ND:	Nermin Demircioğlu
BAS:	Büşra Aslan	OEA :	Ö. Ezgi Aydoğdu
BC:	Burcu Çelikoğlu	OB:	Özgür Baştürk
BE:	Başak Esmer	OK:	Oğuzhan Karadeniz
BK:	Burak Keten	OO:	Özge Özata
CTT:	C. Tuğrul Tezcan	OU:	Özge Ünal
DDI:	D. Dilan İzci	OV:	Özge Varol
DG:	Damla Gümüş	OY:	Onur Yörükoğlu
DGT:	Dilem Göktaş	RO:	Reyhan Orhan
DO:	Derya Öztürk	SO:	Sercan Öz
DT:	Damla Tire	SOS:	Selim O. Selam
EB:	Engin Bahar	SC:	Şeyma Çalışkan
HKA:	H. Kübra Aygören	SG:	Serdar Gökçeğaçlı
HVS:	H. Volkan Şenavcı	TG:	Tolga Günday
HVY:	H. Volkan Yıldırım	TK:	Tolgahan Kılıçoğlu
IO:	İbrahim Özavcı	UB:	Ufuk Bostancı
KS:	Koray Sevim	UD:	Utku Demirhan
MA:	Mihriban Akı	YN:	Yahya Nasolo
MAK:	Merih Akgünay	YK:	Yasemin Karademirci
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References:

Kwee, K.K., van Woerden, H., 1956, BAN, 12, 327
Poddaný S., Brát L., Pejcha O., 2010, NewA, 15, 297