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CCD PHOTOMETRY T UMi, SZ Aur, UV Aur, RU Lyr, RV Peg, SX Peg

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Observatory and telescope:					
Valašské Meziříčí Observatory, Astrocamera ZEISS 120/540 mm, Schmidt-Cassegrain 280/1764 mm telescope					
Detector:	SBIG ST-7 camera				
Filter(s):	<i>V, R</i>				
Observed star(s):					
Star name	GCVS type	Coordinates (J2000) RA Dec	Comp. star	Ephemeris E 2400000+ P [day]	Source
T UMi	M	13 34 41.1 73 25 53		301.1	
SZ Aur	M	05 41 56.6 38 55 56		454.04	
UV Aur	M	05 21 48.6 32 30 41		394.42	
RU Lyr	M	19 12 20.9 41 18 13		371.84	
RV Peg	M	22 25 37.9 30 28 22		396.8	
SX Peg	M	22 50 25.2 17 53 36		303.6	
Transformed to a standard system:		No			
Date(s) of the observation(s):		T UMi filter <i>V</i> : 2002.02.15 – 2004.08.19; filter <i>R</i> : 2003.06.27 – 2004.08.19; SZ Aur filter <i>V</i> : 2003.08.27 – 2004.05.20; filter <i>R</i> : 2003.08.27 – 2004.05.20; UV Aur filter <i>V</i> : 1999.01.18 – 2004.02.20; filter <i>R</i> : 2003.08.15 – 2004.02.20; RU Lyr filter <i>V</i> : 2003.06.22 – 2003.11.04; filter <i>R</i> : 2003.06.22 – 2003.11.04; RV Peg filter <i>V</i> : 2003.09.05 – 2004.01.06; filter <i>R</i> : 2003.06.27 – 2004.01.06; SX Peg filter <i>V</i> : 2003.07.27 – 2003.10.18; filter <i>R</i> : 2003.07.27 – 2003.10.18			
Comparison star(s):	T UMi - GSC 4408 1329, $V = 12.7^m$; SZ Aur - GSC 2911 23, $V = 10.62^m$, $B - V = 0.235^m$; UV Aur - GSC 2394 313, $V = 11.87^m$, $B - V = 0.324^m$; RU Lyr - GSC 3125 334 = HIP 94354 = PPM 58001 = SAO 48191 = HD 179869 = BD +40 3624, $V = 7.13^m$, $B - V = 1.543^m$; RV Peg - GSC 2734 1070 = PPM 87764 = BD +29 4659, $V = 10.62^m$, $B - V = 0.990^m$; SX Peg - GSC 1702 1270 = HIP 112821 = PPM 141914 = SAO 108214 = HD 216219 = BD +17 4818, $V = 7.44^m$, $B - V = 0.653^m$				

Remarks:

Maxima and minima timings are determined using the Kwee and von Woerden (1956) method implemented in AVE (Barbera, 2000) and their values are given in the following table.

Table 1: Maxima timings

Star name	Geo. JD	Error	
T UMi	2452436.2	0.2	filter V
	2452664.2	0.2	filter V
	2452705.7	0.1	filter V double maximum
	2452923.1	0.1	filter V
	2452929.9	0.1	filter R
	2453122.4	0.2	filter V
	2453121.2	0.2	filter R
RU Lyr	2452864.6	0.1	filter V
	2452865.0	0.1	filter R
RV Peg	2452929.6	0.1	filter V
	2452954.8	0.1	filter R
SX Peg	2452893.9	0.2	filter V
	2452896.9	0.2	filter R

Availability of the data:

Through the IBVS website as 5565-t2.txt to 5565-t13.txt

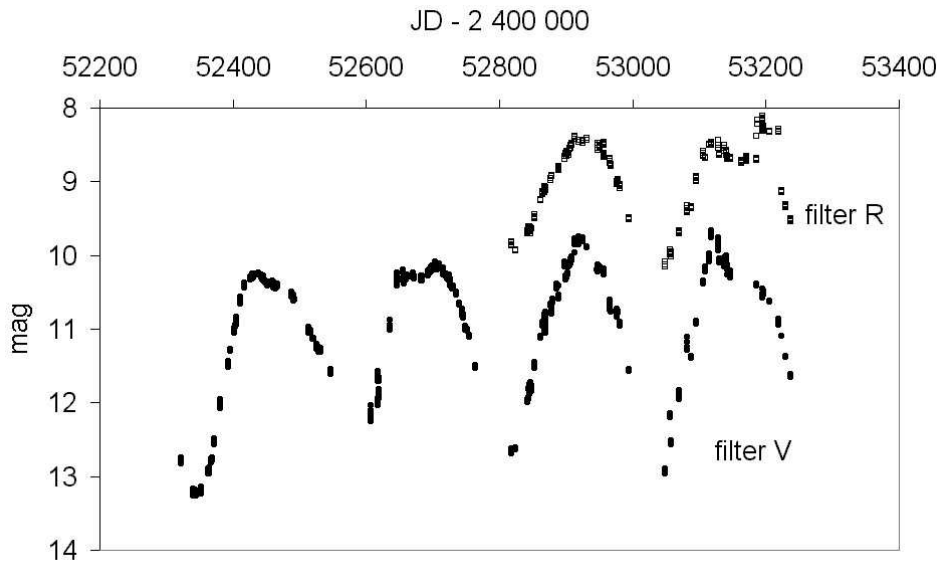


Figure 1. Light curve T UMi (filter V,R).

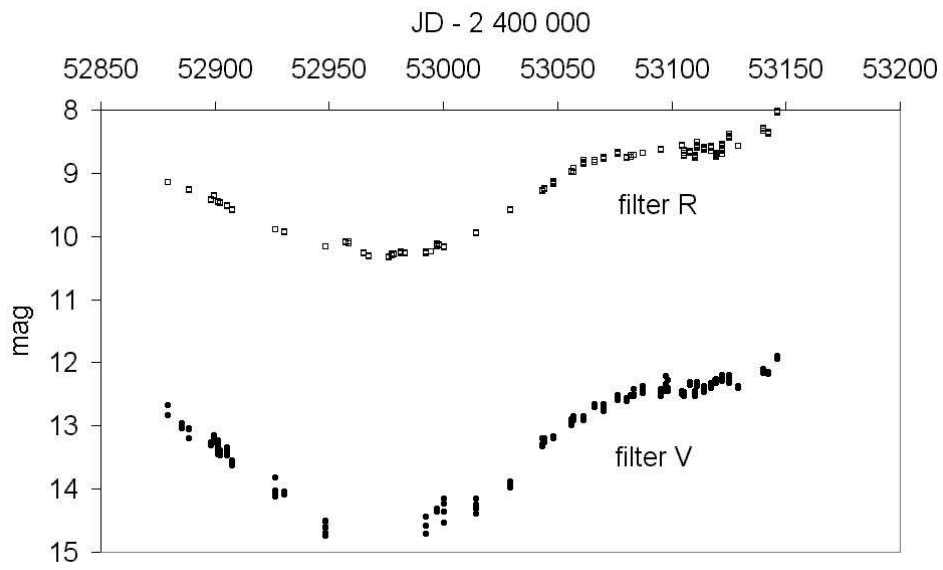


Figure 2. Light curve SZ Aur (filter V,R).

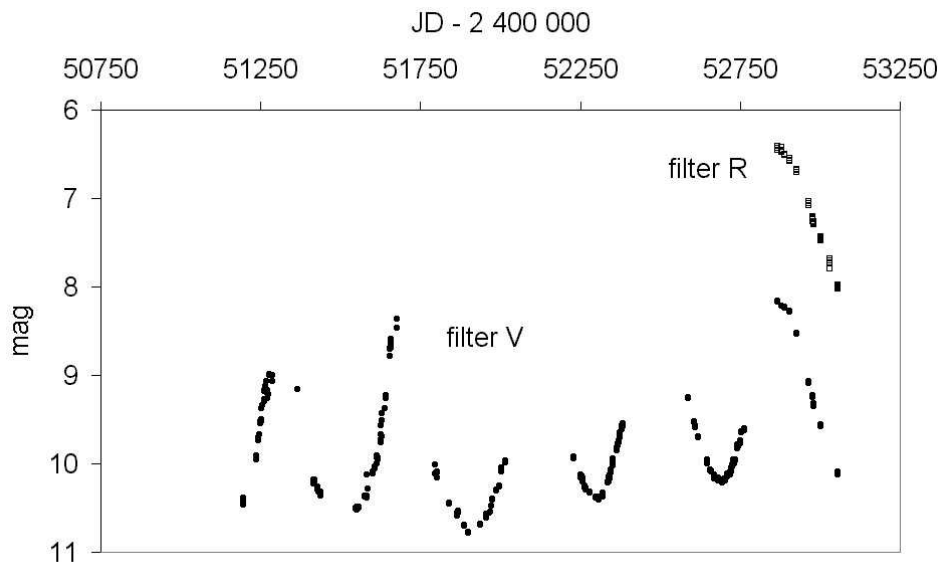


Figure 3. Light curve UV Aur (filter V,R).

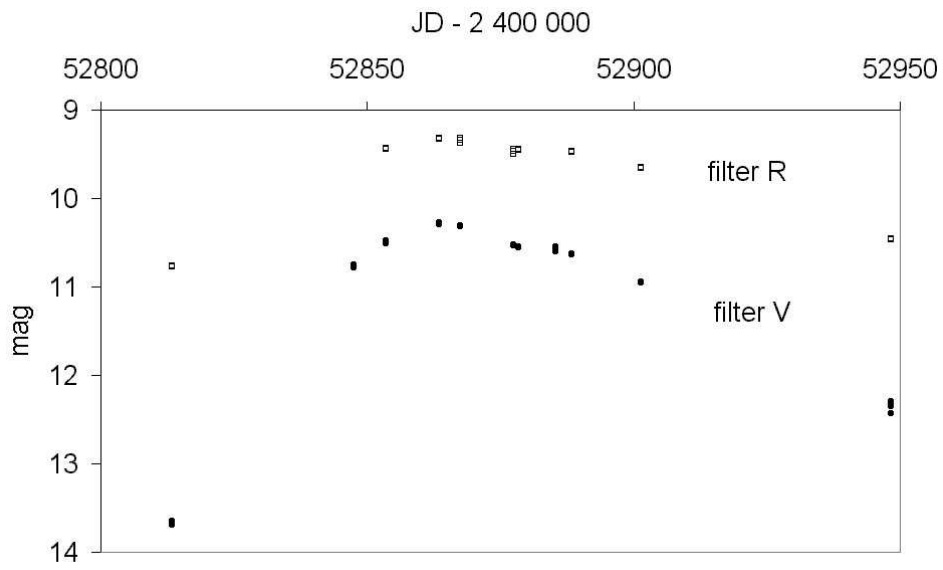


Figure 4. Light curve RU Lyr (filter V,R).

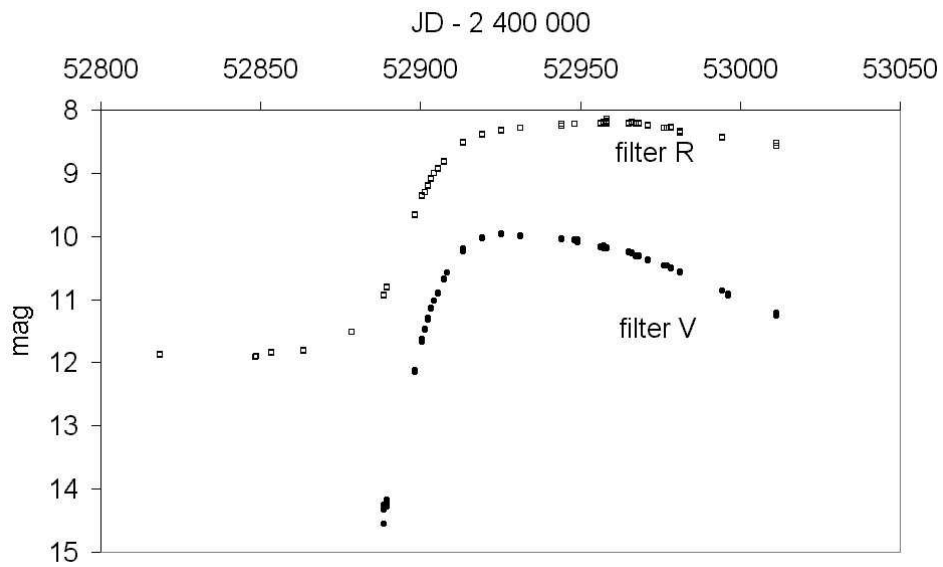


Figure 5. Light curve RV Peg (filter V,R).

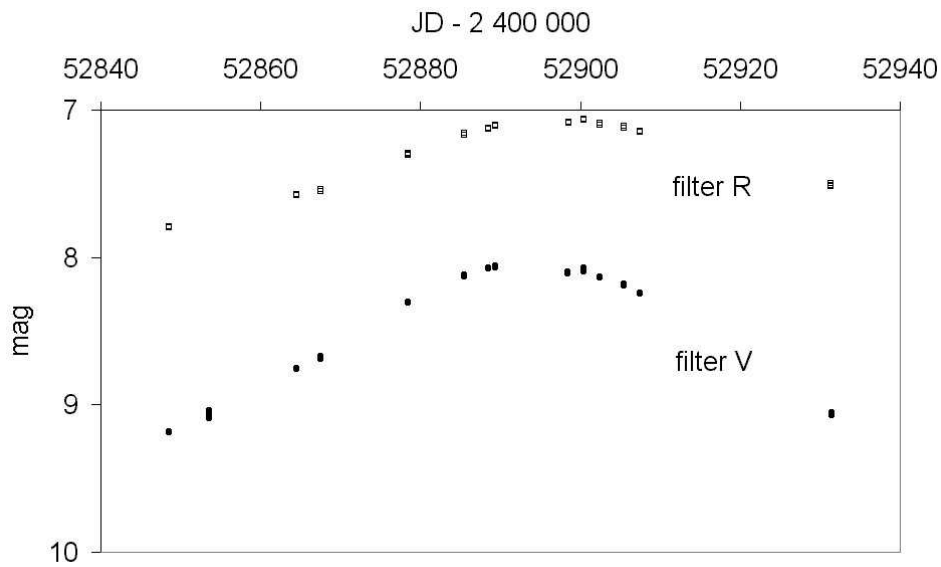


Figure 6. Light curve SX Peg (filter V,R).

Acknowledgements: This work has made use of the SIMBAD database, operated at CDS, Strasbourg, France. The NASA ADS Abstract Service was used to access data and references.

References:

- Barbera, R., 2000, <http://www.astrogea.org/soft/ave/aveint.htm>
Kholopov, P. N. et al., 1985, *General Catalogue of Variable Stars*, 4th edition, Moscow
Kwee, K. K. and Van Woerden, H., 1956, *BAN*, **12**, No. 464, 327