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**NEW TYPE AND ELEMENTS FOR THE ECLIPSING BINARY OT Cep**  
(BAV MITTEILUNGEN NO. 142)

AGERER, F.<sup>1,2</sup>

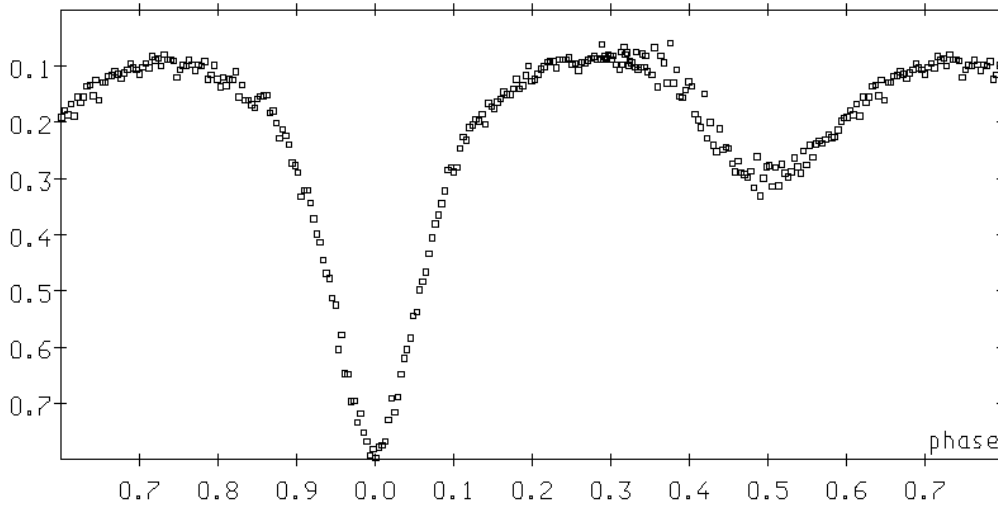
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D-12169 Berlin, Germany

<b>Name of the object:</b>	
OT Cep	
<b>Equatorial coordinates:</b>	<b>Equinox:</b>
R.A. = 0 <sup>h</sup> 29 <sup>m</sup> 18 <sup>s</sup> DEC. = 82°10'9"	2000
<b>Observatory and telescope:</b>	
Private observatory, 20-cm SCT	
<b>Detector:</b>	SBIG ST6 camera
<b>Filter(s):</b>	none
<b>Comparison star(s):</b>	GSC 4504.583
<b>Check star(s):</b>	GSC 4504.663
<b>Transformed to a standard system:</b>	No
<b>Availability of the data:</b>	
upon request	
<b>Type of variability:</b>	EW
<b>Acknowledgements:</b>	
This research made use of the SIMBAD data base, operated by the CDS at Strasbourg, France	
<b>Remarks:</b>	
<p>Several observers tried to improve the elements of OT Cep (Blättler 1999, Nelson 2001). In order to get a complete lightcurve, OT Cep was put on our program. Soon it was clear, that the period has to be halved and it is an eclipsing binary of W UMa-type. The depths of the primary and secondary minima are very different. The light amplitudes are 0<sup>m</sup>.69 and 0<sup>m</sup>.22 respectively. The minimum times are calculated according to the Kwee–van Woerden method (Kwee, van Woerden 1956). A least squares fit to the data given in Table 1 led to the new ephemeris:</p> $\text{Min I} = \text{HJD } 2449169.4362 \pm 3 + 0^{\text{d}}.4812313 \pm 1 \cdot E \quad (1)$	

<b>Times of minima:</b>						
Star name	Time of min. HJD 2400000+	Error	Type	Filter	$O - C$ [day]	Rem.
OT Cep	49169.4354	.0005	I		-0.0008	[1]
	49641.5254	.0003	I		+0.0013	[2]
	50850.3762	.0010	I		-0.0009	[3]
	51363.3704	.0008	I		+0.0007	[4]
	51659.80612	.00005	I		-0.00206	[5]
	51913.4160	.0003	I		-0.0011	this paper
	51913.6596	.0009	II		+0.0019	this paper
	51922.3199	.0020	II		+0.0000	this paper
	51922.5586	.0003	I		-0.0019	this paper
	51955.5257	.0004	II		+0.0009	this paper

[1]: Hübscher, J. et al. 1994, [2]: Agerer, F., Hübscher, J. 1995,  
 [3]: Agerer, F., Hübscher, J. 1999, [4]: Blättler, E. 1999, [5]: Nelson, R.H. 2001



**Figure 1.** Differential light curve of OT Cep

#### References:

- Agerer, F., Hübscher, J., 1995, IBVS 4222  
 Agerer, F., Hübscher, J., 1999, IBVS 4711  
 Blättler, E., 1999, BBSAG Bulletin 120  
 Hübscher, J. et al., 1994, BAVM 68  
 Kwee, K. K., van Woerden, H., 1956, *Bull. Astr. Inst. Netherlands*, **12**, No. 464, 327  
 Nelson, R.H., 2001, IBVS 5040