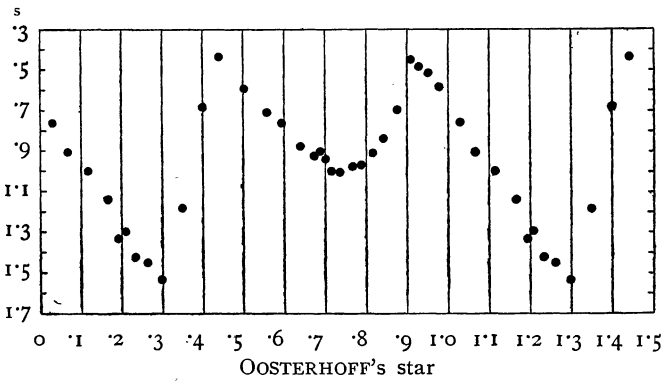
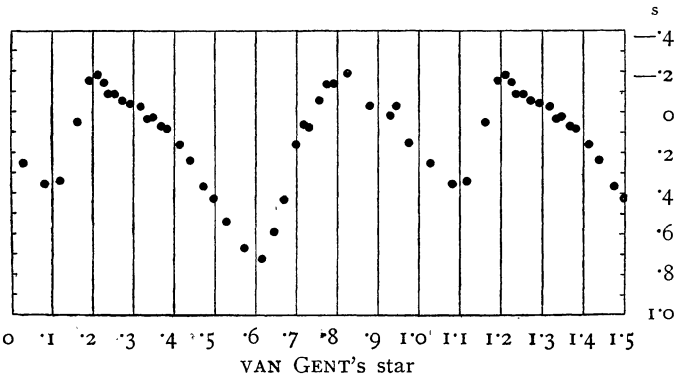
variable RU Centauri of β Lyrae type is not real (*B. A. N.* 146, 161). In that case we may say that the lightcurves apparently behave as if there were a gradual transition between the β Lyrae and the δ Cephei form, but what this behaviour means is another question.

Another new faint variable star found by VAN GENT



in the region of η Carinae is apparently of the pure δ Cephei type with a period of 64½ days. No longer period of a δ Cephei star outside the small Magellanic Cloud (where there are two of periods 65·8 and 127 days respectively) has been found, the next being CG Sagittarii with a period of 64·1 days.

In this connection it is worth while to remember that a few semiregular variable stars with periods of about 4 weeks have been published (FY Car, *B. A. N.* 147 and a star found by OOSTERHOFF, *B. A. N.* 166, 41).



With the exception of AC Herculis, the stars here considered are unfortunately too faint for determinations of radial velocity. But perhaps others of the same interesting kind may be found among brighter variables as yet called irregular.

A peculiar eclipsing variable star found by P. Th. Oosterhoff, estimated and discussed by *Ejnar Hertzsprung.*

By examination in the blinkmicroscope of plates taken at Johannesburg with the Franklin-Adams instrument the star C. P. D. — 59°3241, $9^{m}\cdot1$, $11^{h}9^{m}16^{s}$, — 59°58′·8 (1875) was found by P. TH. OOSTERHOFF to be variable. Using C. P. D. — 60°2730 as the only comparison star, which was taken as zeropoint, I estimated the difference in steps between the two stars on 640 plates. The variable proved to be of the eclipsing type with a range of about half a magnitude and an apparent period of about $1^{d}\cdot2$. The observations near minimum were then plotted separately for each night and epochs of minimum derived, particularly using the descending or ascending branch of the lightcurve for this purpose. In this way the 13 minima given in Table 1 were found.

TABLE 1.

J. D. hel. M. astr. T. Grw.	*E*	*O—C*	J. D. hel. M. astr. T. Grw.	*E*	*O—C*
d		d	d		d
2423828·425	0	— ·020	2423942·263	94	— ·028
3879·279	42	— 34	4172·407	284	0
3885·412	47	+ 44	4201·463	308	— 11
3902·393	61	+ 69	4206·306	312	— 12
3908·365	66	— 15	4263·258	359	+ 15
3913·197	70	— 27	4918·465	900	0
3936·253	89	+ 17			

TABLE 2.

A. primary minima. *B. secondary minima.*

J. D. hel. M. astr. T. Grw.	*E*	*O—C*	J. D. hel. M. astr. T. Grw.	*E*	*O—C*
d		d	d		d
2423828·413	0	— ·005	2423788·497	— 16·5	— ·037
·439	0	+ 21	·530	— 16·5	— 4
79·257	21	— 30	3885·412	23·5	— 3
·282	21	— 5	·441	23·5	+ 34
3908·352	33	— 4	3902·390	30·5	— 21
42·262	47	— 7	19·304	37·5	— 19
59·201	54	— 24	·326	37·5	+ 3
·228	54	+ 3	·338	37·5	+ 15
76·205	61	+ 24	36·260	44·5	— 17
4172·422	142	+ 30	·287	44·5	+ 10
4201·456	154	— 4	70·205	58·5	+ 20
06·310	156	+ 5	4263·233	179·5	— 16
86·249	189	+ 7	·250	179·5	+ 1
4918·465	450	— 11			

TABLE 3.

J. D. hel. M. astr. T. Grw.			J. D. hel. M. astr. T. Grw.			J. D. hel. M. astr. T. Grw.			J. D. hel. M. astr. T. Grw.		
d	P	s	d	P	s	d	P	s	d	P	s
2423788·476	·997	+ ·22	2423880·378	·936	— ·01	2423941·282	·079	— ·04	2424206·380	·520	+ ·08
·497	·005	+ ·40	·434	·960	— ·01	42·209	·462	+ ·21	·404	·530	+ ·08
·511	·011	+ ·22	·489	·982	+ ·02	·235	·473	+ ·20	·428	·539	— ·01
·530	·019	+ ·36	84·241	·531	— ·03	·262	·484	+ ·31	·451	·549	— ·01
89·518	·427	— ·02	·299	·555	— ·02	·288	·495	+ ·27	·475	·559	— ·01
·533	·433	·00	·326	·566	— ·05	·321	·508	+ ·27	07·418	·948	·00
99·488	·543	— ·06	85·279	·960	·00	47·208	·526	+ ·02	·434	·955	+ ·19
·509	·551	— ·12	·306	·971	·00	48·227	·947	— ·01	28·287	·564	— ·02
·558	·571	— ·03	·331	·981	+ ·08	·240	·952	— ·06	40·420	·573	— ·03
3816·362	·509	+ ·17	·360	·993	+ ·25	·253	·957	+ ·11	57·272	·530	— ·01
·382	·517	+ ·03	·386	·004	+ ·20	·266	·963	·00	·310	·545	— ·01
·401	·525	+ ·02	·412	·015	+ ·31	58·201	·064	— ·02	58·259	·937	— ·02
·461	·550	— ·01	·441	·027	+ ·36	·228	·075	— ·03	62·221	·573	— ·03
·487	·560	— ·02	·469	·038	+ ·12	59·201	·477	+ ·37	63·210	·981	+ ·15
17·404	·939	— ·01	86·447	·442	+ ·01	·228	·488	+ ·34	·233	·991	+ ·36
·433	·951	+ ·10	3901·238	·548	— ·02	·253	·499	+ ·28	·250	·998	+ ·35
·462	·963	— ·01	02·335	·001	+ ·18	64·203	·542	— ·01	·406	·062	·00
·488	·974	+ ·02	·364	·013	+ ·23	·228	·552	— ·02	·430	·072	— ·07
·512	·984	+ ·13	·390	·024	+ ·35	·253	·562	— ·15	64·326	·442	·00
18·584	·426	— ·01	·416	·035	+ ·27	65·207	·956	+ ·12	·350	·451	·00:
21·377	·579	— ·02	03·386	·435	— ·01	·230	·966	·00	·423	·482	+ ·28
28·334	·451	+ ·01	·413	·446	+ .02	·254	·976	+ ·08	80·195	·993	+ ·22
·362	·462	+ ·14	07·297	·050	+ ·03	70·205	·020	+ ·33	85·215	·065	— ·02
·387	·473	+ ·22	·324	·060	— ·01	·231	·030	+ ·15	·244	·077	+ ·01
·413	·484	+ ·31	·350	·071	— ·02	71·200	·431	— ·01	86·225	·482	+ ·22
·439	·494	+ ·37	08·248	·442	·00	·226	·441	— ·01	·249	·492	+ ·30
·466	·506	+ ·18	·277	·454	·00	76·205	·497	+ ·30	·320	·521	+ ·17
·491	·516	+ ·14	·317	·470	+ ·17	·228	·506	+ ·20	·343	·531	·00
·517	·527	+ ·02	·352	·485	+ ·32	87·201	·036	+ ·17	·367	·541	— ·02
·542	·537	— ·02	13·255	·509	+ ·15	88·198	·448	+ ·02	87·343	·944	·00
·565	·547	— ·05	·284	·521	+ ·02				·367	·954	+ ·02
29·490	·928	— ·03	·311	·532	·00	4172·422	·501	+ ·33	91·250	·557	·00
44·293	·039	+ ·02	·341	·545	— ·16	·441	·509	+ ·22	·274	·567	— ·03
·321	·051	+ ·02	14·311	·945	— ·01	·464	·518	+ ·19	92·248	·969	+ ·27
·340	·059	+ ·06	19·304	·006	+ ·35	·488	·528	·00	·271	·978	+ ·20
45·282	·448	— ·01	·315	·011	+ ·28	·511	·538	·00	·342	·007	+ ·25
·309	·459	+ ·21	·326	·016	+ ·34	77·406	·559	— ·02	·365	·017	+ ·15
57·348	·429	— ·04	·338	·020	+ ·36	·430	·568	— ·03	93·362	·429	·00
68·244	·927	— ·03	30·219	·512	·00	·454	·578	— ·01	97·256	·036	+ ·10
72·243	·578	— ·03	·246	·524	·00	90·408	·926	— ·02	·278	·045	— ·02
74·311	·432	— ·01	·272	·534	— ·02	·430	·935	·00	·302	·055	— ·02
·333	·441	— ·01	·299	·545	— ·03	4200·325	·020	+ ·12	·324	·064	·00
78·239	·053	+ ·03	31·249	·938	— ·06	·348	·030	+ ·03	98·239	·442	— ·01
·269	·066	·00	·276	·949	— ·02	·372	·039	+ ·04			
·293	·076	— ·07	·304	·960	·00	·395	·049	·00	4550·374	·531	+ ·04
79·232	·463	+ ·15	·332	·972	·00	·419	·059	— ·01	·394	·539	— ·01
·257	·474	+ ·31	36·223	·991	+ ·26	·442	·069	— ·02	86·462	·429	— ·02
·282	·484	+ ·35	·260	·006	+ ·39	01·338	·439	·00	·486	·439	— ·01
·307	·494	+ ·20	·287	·017	+ ·40	·362	·448	·00	95·302	·079	— ·04
·332	·505	+ ·11	·314	·029	+ ·29	·386	·458	+ ·02	4642·348	·501	+ ·17
·357	·515	+ ·08	37·266	·421	— ·02	·408	·467	+ ·17	·374	·511	+ ·24
·382	·525	+ ·02	·293	·433	— ·08	·456	·487	+ ·37			
·434	·547	·00	·325	·446	+ ·13	06·310	·491	+ ·35	4918·438	·479	+ ·27
·486	·568	— ·02	41·221	·054	+ ·08	·333	·501	+ ·27	·465	·490	+ ·38
80·352	·926	— ·02	·253	.067	— ·03	·357	·510	+ ·17			

A least square solution gave the period to be $1^d.211133$ leaving the differences $O-C$ given in the last column of Table 1. The differences $O-C$ do not look satisfactory. An inspection of Table 1 shows however that all the 9 even epochs give negative or zero residuals and the 4 odd epochs positive ones. Therefore the period was determined separately from even and odd minima. In this new solution the estimates $^s.3$ or higher were simply taken as epochs of minimum. The provisional period of $1^d.211$ was accordingly doubled to $2^d.422$.

The periods derived according to least squares are

from primary minima	$2^d.422351$	$\pm$ $^d.000041$ (m.e.)
and from secondary minima	$2^d.422014$	$\pm$ $^d.000097$
difference	$^d.000337$	$\pm$ $^d.000106$