CLASSIFICATION OF PULSATING VARIABLES
BY LIGHT GRADIENTS

The gradient diagrams $(G_u = dU/dB,\quad G_v = dV/dB)$ of cepheids, Mira-stars, semi-regular and RV Tau type variables were investigated in papers (9-11). It was found that they form two sequences elongated along the G_u axis and located one over the other. Apart from this we have for the variables

	RR	$G_u \lesssim 1.06$
lower sequence	CW	$1.06 \lesssim G_u \lesssim 1.16$
	Cδ	$G_u \gtrsim 1.16$
upper sequence	M, SR	$G_u < 1.15$
	RV	$G_u > 1.15$

This fact may be used for classification of pulsation variables. This classification was carried out for the stars given in the Table. Here, in the second and third columns the gradients obtained are given, in the fourth one the type of the variable defined by gradients, in the fifth column the type given in the new edition of GCVS (3) are included. Finally remarks on individual variables and references to papers containing series of UBV-magnitudes are given.

TABLE

Star	GU	GV	Type	GCVS	Remarks	Source
DI Car	1.35:	0.79:	Cδ	Ins		5
V419 Cen	1.21	0.69	Cδ	Cep		6
V659 Cen	1.13	0.71	CW	Cep		6
EP Cyg	1.26	0.72	Cδ	Cδ		1
EU Cyg	1.03:	0.75	CW	Cδ		1
EX Cyg	1.31	0.70	Cδ	Cδ		1
EZ Cyg	1.40	0.64:	Cδ	Cδ		1
GH Cyg	1.29	0.69	Cδ	Cδ		1
GI Cyg	1.41:	0.59	Cδ	Cδ		1
GL Cyg	1.18	0.72	Cδ	Cep	According to gradients it may be CW. Eggen (1) also assumes it may be CW	1
IU Cyg	1.16	0.72	CW	Cδ	Eggen (1) assumes it may be CW	1
IY Cyg	1.24	0.74:	Cδ	Cδ		1
QY Cyg	1.09	0.72	CW	Cep	Eggen (1) assumes it may be CW	
V 336 Cyg	1.43	0.63	Cδ	CW	According to Eggen (1) it may be CW	
V 343 Cyg	1.30	0.63	Cδ	Cep	Eggen (1) assumes it may be CW	1
V 383 Cyg	1.35	0.67	Cδ	CW?		1
V 547 Cyg	1.42	0.69	Cδ	Cδ		1
V 714 Cyg	1.03	0.73	CW	CW		1
V 924 Cyg	1.16	0.60	Cδ	Cδ		1
V 1025 Cyg	1.42	0.62	Cδ	Cδ		1
BX Del	1.08	0.63	CW	Cep		1,2
AT Her	1.48	1.02	RV	Isb?	The gradients obtained by short series of UBV-magnitudes	8
SV Mon	1.52	0.51:	Cδ	Cδ		1
SZ Mon	0.90:	1.00:	SR	Cδ	Stobie (6) assumes it may be RV	6,7
VW Mon	1.17:	0.66:	Cδ	RRab		1
XX Mon	1.28	0.72	Cδ	Cδ		1
YY Mon	1.31	0.76	Cδ	Cδ		1
AC Mon	1.28	0.62	Cδ	Cδ		1
CS Mon	1.14	0.61	Cδ	Cep	Value of G_u such as for a CW but G_v is typical for Cδ	1
CU Mon	1.37	0.70	Cδ	Cep		7
EK Mon	1.25	0.68	Cδ	Cδ		1
FI Mon	1.35	0.67	Cδ	Cδ		1

TABLE

Star	GU	GV	Type	GCVS	Remarks	Source
FT Mon	1.17	0.70	Cδ	Cδ		1
V636 Sco	1.27	0.67	Cδ	Cep		6
AH Vel	1.13	0.68	CW	Cep		6
S Vul	1.67	0.63	Cδ	SRd		4

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