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*   V A R I A B I L I A
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*   nummer 42      oktober 1994
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WAARNEMINGSRESULTATEN  
JULI-SEPTEMBER 1994

In het tijdvak juli-september 1994 werden door negen waarnemers 2710 schattingen gedaan. Onderstaande tabel geeft aan hoe de aantallen

per maand over de diverse waarnemers verdeeld zijn.

Bovendien zijn achter / de "inner sanctum" schattingen vermeld. Deze hebben betrekking op de positieve schattingen zwakker dan 13.7 alsmede de negatieve schattingen zwakker dan 14.0.

Waarnemer		JUL	AUG	SEP	totaal
R.J. Bouma	BMU	111	266/8	121/1	498/9
G. Comello	CMG	2	41/6	69/5	112/11
E. van Dijk	VDJ	58/2	64/1	19/1	141/4
H. Feijth	FJH	428/123	750/212	429/151	1607/486
H. v.d. Hil	VDH		3		3
J. Holtrop	HJO	101/2	138/9	75/2	314/13
G. Hoogeveen	HOO		2		2
R. Johanns	JNN	5	6	17	28
A. Scholten	SAQ		5		5
totaal		705	1275	730	2710

OBSERVARIA

Ondanks dat in augustus het weer verslechterde zijn toch nog een redelijk aantal schattingen verricht. Daarbij moeten wij het hebben van koufrontpassages. Het grote voordeel daarbij is dat de lucht dan vaak transparant is ( met name als deze arktisch is ) zodat zwakke schattingen mogelijk zijn in regionen die te kampen hebben met lichtvervuiling. Ook in de afgelopen maanden hebben wij nogal wat waarnemingen kunnen doen aan novae, al is er dan niet een nieuwe op het toneel verschenen. Nova Cassiopeiae is nog steeds in zijn secundaire maximum ( 12.1 ), terwijl nova Cygni 1992 ( V1974 Cyg ) traag afneemt ( helderheid ongeveer 138 eind september ). Nova Sagittarii 1994 Nr2 ver-toonde tussen juni en september variaties tussen 8.8 en 11.2 en deed qua gedrag denken aan PW Vul ( Nova Vulpeculae 1984; type Nb ). Nova Aquilae 1993 is weer aan het afnemen; na het secundaire maximum van ongeveer 13 is de helderheid gedaald tot 13.6 in september.

De dwergnovae blijven steeds interessante objecten om waar te nemen. SS Cygni had een maximum van 8.3 in het begin van september, terwijl SS

Aurigae een maximum van 10.6 had in het begin van augustus. Dat dit maximum goed werd waargenomen is puur te danken aan het feit dat ik ( samen met Peter Bus ) verbleef te Puimichel en met de 254 mm Jones-Bird praktisch tot op de horizon kon waarnemen. Ook werd daar omstreeks 18 augustus voor het eerst een maximum waargenomen van UU Aquilae ( 12.2 ), waarbij de Mistral acte de présence gaf. Verschillende maxima zijn gezien van RX And, AR And, Z Cam, AY Lyr, CY Lyr en TZ Per. Genoemde dwergnovae hebben relatief korte perioden. Dit geldt niet voor DX And en LL Lyr, die slechts één maal per jaar een uitbarsting hebben. DX And had eind september een maximum van 11.5 en LL Lyr ( vlak bij Wega ) een maximum van 13.0 in het begin van september. Beide uitbarstingen zijn goed waargenomen. IP Pegasi had een maximum van 12.2 in het eind van augustus. RU Pegasi fluctueerde onregelmatig tussen 11.5 en 12.7 alvorens een maximum te bereiken van van 10.9 in het begin van oktober. Vermeld zij nog dat U Gem een uitbarsting had omstreeks 1 september; alleen op de dalende tak kon Reinder Bouma nog een paar waarnemingen doen.

Dankzij een circulaire van de AAVSO werden we ook in staat gesteld getuige te zijn van een zeldzame uitbarsting van UZ Bootis. Deze UG-ster ( onder-type SU Uma ) was sinds september 1978 niet meer in uitbarsting geweest ! Het maximum werd omstreeks 18 augustus 1994 bereikt bij een helderheid van 11.6.

Het jaar 1994 is rijk aan waarneembare extragalactische supernovae. Eind juli werd er één ontdekt in NGC 4041 in de Grote Beer, te weten supernova 1994W. Het maximum ( 13.5 ) werd omstreeks 10 augustus bereikt. Ook de supernova was lastig waarneembaar aangezien ook deze een "kernklever" was. R Coronae Borealis is nog steeds in het maximum. In Puimichel kon ik constateren dat RY Sagittarii weer normaal was en dat SU Tauri zich weer op weg is naar het maximum bevindt. Begin oktober was de helderheid 11.7. De Z And-ster AG Draconis nam af van 8.4 begin augustus tot 8.8 eind september.

Van de Mira sterren springt momenteel R Cassiopeiae in het oog; sinds 1966 is R Cas niet meer zo helder geweest. Momenteel ( 16 oktober ) is R Cas gemakkelijk met het blote oog te zien; de helderheid bedraagt ongeveer 5.0 naar waarnemingen van Georg Comello. Vermeldenswaard is nog dat R Andromedae in augustus een zwak minimum (15.3) had evenals R Lacertae ( 15.0 ). Ook R Draconis liet zich niet onbetuigd; het minimum van eind augustus was naar verhouding zeer zwak ( 13.2 ). Zolang als ik deze ster waarneem heb ik deze nog nooit zo zwak gezien. Vermeldenswaard is ook het zwakke minimum ( 11.0 ) van T Cephei in juli. Bij het doornemen van de waarnemingen ( zie verder dit nummer van Variabilia) valt op dat de spreiding in de waarnemingen nogal fors is bij relatief rode sterren zoals T en W Cassiopeiae, V Coronae Borealis en W Pegasi. Daarom is het nodig om niet alleen perifeer te schatten, maar bovendien staren te vermijden. Nooit langer dan een seconde naar zo'n ster kijken !

De unieke veranderlijke FG Sagittae blijft ons verbazen. Eerst nam de ster af van 12.5 in juli tot 14.5 begin september. Daarna weer een toename tot 13.3 begin oktober. Het is dus nodig deze ster nauwlettend in de gaten te houden. Daarbij is een 25 cm kijker én een forse vergroting noodzakelijk.

----- 000451 SS Cas type Mira	----- 001755 T Cas type Mira	004047 U Cas type Mira	608.4 10.9 FJH 623.4 10.1 FJH -----
538.5 13.1 FJH 552.5 13.1 FJH 553.5 12.8 HJO 566.5 13.1 FJH 567.5 13.0 HJO 573.4 12.9 BMU 573.4 13.0 CMG 580.5 12.4 HJO 580.6 12.9 FJH 583.4 12.1 BMU 587.5 11.7 FJH 591.4 11.3 BMU 602.6 10.5 HJO 618.3 10.2 BMU 625.4 10.1 CMG -----	546.5 10.6 FJH 553.5 10.3 HJO 554.5 10.9 FJH 566.5 11.4 FJH 567.5 10.6 HJO 571.4 11.5 FJH 573.4 10.8 CMG 573.4 10.9 BMU 580.5 11.1 HJO 580.6 11.6 FJH 583.4 10.9 BMU 587.5 11.5 FJH 593.4 11.5 FJH 594.4 11.0 BMU 602.6 11.4 HJO 609.3 11.6 FJH 618.3 11.0 BMU 618.4 11.6 FJH 625.4 11.1 CMG -----	554.5 9.7 FJH 568.6 8.8 HJO 571.4 9.2 FJH 573.4 8.7 BMU 573.4 8.9 CMG 580.4 9.0 FJH 583.4 8.6 BMU 583.5 8.5 HJO 584.3 8.9 VDH 591.4 9.0 BMU 593.4 9.2 FJH 608.5 9.7 HJO 618.3 9.8 BMU 625.4 10.4 CMG -----	004746A RV Cas type Mira 539.5 :15.4 FJH 551.5 14.9 FJH 569.6 14.6 FJH 573.4 14.6 BMU 573.4 14.9 CMG 576.4 14.5 FJH 582.5 14.4 FJH 583.5 :13.8 HJO 594.4 13.6 BMU 599.5 13.4 FJH 608.5 11.8 HJO 609.3 11.9 FJH 618.3 10.3 BMU -----
000928 UW And type Mira	609.3 11.6 FJH 618.3 11.0 BMU 618.4 11.6 FJH 625.4 11.1 CMG -----	004132 RW And type Mira	004958 W Cas type Mira
538.5 13.0 FJH 546.5 13.7 FJH 567.5 14.3 FJH 598.6 15.3 FJH 608.4 13.9 FJH 623.4 13.8 FJH -----	001838 R And type Mira	535.6 9.1 FJH 545.5 9.3 FJH 554.5 9.5 FJH 567.5 10.8 FJH 573.5 10.9 FJH 581.5 11.1 FJH 587.5 11.2 FJH 594.4 11.3 FJH 608.4 12.0 FJH 623.4 12.5 FJH -----	568.4 10.3 BMU 568.4 10.7 CMG 569.5 10.2 HJO 571.4 11.1 FJH 573.4 10.7 CMG 581.5 11.2 FJH 583.4 10.4 BMU 583.5 10.6 HJO 587.5 11.1 FJH 594.4 10.9 BMU 594.4 11.3 FJH 608.5 11.3 HJO 609.3 11.6 FJH 618.3 11.1 BMU 625.4 11.3 CMG -----
001046 X And type Mira	539.5 15.1 FJH 551.5 15.2 FJH 566.5 15.1 FJH 573.5 15.1 FJH 581.5 15.2 FJH 598.5 15.3 FJH 607.4 :15.2 FJH 623.4 14.9 FJH -----	004435 V And type Mira	005840 RX And type UGZ
539.5 :15.0 FJH 550.5 14.1 FJH 567.5 13.4 FJH 569.5 13.5 HJO 573.5 13.4 FJH 581.5 12.3 FJH 583.5 11.7 HJO 608.5 10.0 HJO 614.4 9.4 FJH -----	0019-09 S Cet type Mira	535.6 12.1 FJH 545.5 12.4 FJH 551.5 12.9 FJH 567.5 13.2 FJH 573.5 13.4 FJH 581.5 13.5 FJH 592.5 13.8 FJH 599.5 13.9 FJH 608.4 14.1 FJH 623.4 14.6 FJH -----	535.45 11.9 BMU 535.56 11.6 FJH 538.49 11.0 FJH 539.44 10.5 BMU 539.45 10.5 VDJ 539.50 10.7 FJH 543.44 10.9 BMU 543.44 10.7 VDJ 544.45 11.4 BMU 544.45 10.8 VDJ 545.44 12.0 BMU 545.44 11.8 VDJ 545.49 12.3 FJH 546.44 12.5 BMU 546.44 12.0 VDJ
001726 T And type Mira	570.5 10.8 FJH 580.6 10.8 FJH -----	004533 RR And type Mira	
535.6 12.1 FJH 545.5 12.5 FJH 551.5 12.8 FJH 565.6 13.4 HJO 566.5 13.3 FJH 573.5 13.5 FJH 581.5 13.5 FJH 592.5 13.8 FJH 598.5 14.1 FJH 608.4 14.1 FJH 623.4 14.3 FJH	002725A TU And type Mira	538.5 13.6 FJH 545.5 13.0 FJH 551.5 12.7 FJH 567.5 12.1 FJH 573.5 11.9 FJH 581.5 11.8 FJH 587.5 11.4 FJH 594.4 11.1 FJH	
	567.5 8.9 FJH -----		
	003179 Y Cep type Mira		
	539.4 13.1 FJH 550.5 13.3 FJH 568.5 13.7 FJH 576.5 14.0 FJH 601.5 14.6 FJH 623.5 14.7 FJH -----		

546.48 12.9 FJH	601.45 13.1 JNN	614.4 11.6 FJH	582.5 14.4 FJH
550.46 13.9 FJH	601.45 13.4 FJH	623.4 12.2 FJH	598.5 14.3 FJH
551.47 14.0 FJH	601.57 13.4 HJO	-----	608.4 13.6 FJH
552.46 14.0 FJH	602.45 13.8 FJH	011041A UZ And	623.4 12.8 FJH
554.47 14.2 FJH	602.55 13.6 HJO	type Mira	-----
563.52 14.2 FJH	607.33 14.0 BMU		012020 RX Psc
566.49 14.1 FJH	608.34 13.8 FJH	538.5 13.3 FJH	type Mira
567.45 14.0 FJH	608.47 13.8 HJO	550.5 12.7 FJH	
567.48 14.0 BMU	609.42 13.7 FJH	565.6 11.3 HJO	551.5 10.5 FJH
568.43 13.2 CMG	614.39 11.0 FJH	567.5 12.2 FJH	567.5 11.6 FJH
568.43 13.4 BMU	617.43 11.1 FJH	573.5 11.3 FJH	576.5 12.2 FJH
568.49 13.6 FJH	618.29 11.6 BMU	574.6 10.9 HJO	582.5 12.6 FJH
568.59 13.5 HJO	618.36 11.6 FJH	581.5 11.7 FJH	584.6 12.7 HJO
569.43 11.9 BMU	619.30 12.0 BMU	583.5 11.2 HJO	598.4 12.8 FJH
569.47 12.0 FJH	619.65 11.7 HJO	593.4 11.7 FJH	608.4 14.1 FJH
569.54 11.8 HJO	623.41 13.9 FJH	608.5 11.7 HJO	623.4 14.5 FJH
570.41 11.6 FJH	-----	614.4 12.0 FJH	-----
570.59 10.7 HJO	0101-02 Z Cet	623.4 12.5 FJH	012031 TY Psc
571.44 11.2 FJH	type Mira	-----	type UGSU
571.44 10.8 BMU		011055A VZ Cas	
571.54 11.5 HJO	574.5 11.6 BMU	type Mira	608.40 12.1 FJH
572.38 11.0 FJH	-----		609.42 12.3 FJH
572.40 10.8 BMU	010621A X Psc	550.5 11.4 FJH	-----
572.58 10.5 HJO	type Mira	572.5 10.1 FJH	012746 SX And
573.40 11.1 BMU		573.4 10.0 CMG	type Mira
573.45 11.0 FJH	551.5 14.8 FJH	581.5 9.9 FJH	
574.39 11.4 FJH	567.5 14.9 FJH	587.5 10.0 FJH	535.6 9.2 FJH
574.46 11.3 BMU	575.6 14.5 FJH	594.4 9.9 FJH	571.4 10.7 FJH
574.55 11.2 HJO	598.5 14.7 FJH	609.3 10.1 FJH	582.5 10.8 FJH
575.39 11.7 FJH	608.4 14.2 FJH	-----	594.4 11.1 FJH
576.42 12.5 FJH	623.4 14.2 FJH	011208 S Psc	614.4 12.1 FJH
576.56 13.4 HJO	-----	type Mira	-----
577.39 13.1 FJH	010937 FO And		013050 KT Per
579.42 13.6 BMU	type UG	567.5 14.6 FJH	type UGZ
579.60:13.9 HJO		575.6 14.3 FJH	
580.40 12.7 FJH	551.49<15.4 FJH	582.5 14.3 FJH	550.52 12.4 FJH
580.47 13.5 BMU	572.48 14.5 FJH	598.5 13.7 FJH	551.50 12.6 FJH
581.44 13.5 CMG	573.45 15.1 FJH	608.4 13.6 FJH	563.52 12.4 FJH
581.49 13.6 BMU	608.40 14.4 FJH	623.4 13.1 FJH	570.51 14.0 FJH
581.52 14.0 FJH	609.42<15.4 FJH	-----	572.47:15.0 FJH
582.42 13.8 FJH	623.42<15.4 FJH	011272 S Cas	573.45 14.4 FJH
583.42 14.1 FJH	-----	type Mira	575.40:14.6 FJH
583.52 13.6 HJO	010940 U And		577.54 14.8 FJH
584.58:13.8 HJO	type Mira	538.5 12.8 FJH	608.44 12.6 FJH
587.52:12.1 HJO		550.5 13.1 FJH	609.42 12.2 FJH
592.36 10.9 BMU	538.5 10.7 FJH	566.5 13.4 FJH	-----
592.53 11.0 FJH	550.5 10.5 FJH	573.4 13.4 CMG	013238 RU And
592.56 10.5 HJO	567.5 10.3 FJH	580.6 13.7 FJH	type SRa
593.34 10.8 BMU	573.5 10.6 FJH	599.5 14.1 FJH	
593.36 10.8 FJH	574.5 10.1 BMU	609.4 14.2 FJH	573.5 11.8 FJH
593.53 10.3 HJO	574.6 10.5 HJO	623.4 14.6 FJH	584.6 11.2 HJO
594.34 10.6 BMU	581.5 10.5 BMU	-----	-----
594.37 10.2 CMG	581.5 10.7 FJH	011712 U Psc	013338 Y And
594.37 10.8 FJH	583.5 10.7 HJO	type Mira	type Mira
598.43 11.2 FJH	593.4 11.0 FJH		
599.45 11.2 FJH	594.3 10.7 BMU	567.5 14.4 FJH	535.6 11.0 FJH
599.57 11.4 HJO	608.5 11.6 HJO	576.5 14.4 FJH	545.5 11.8 FJH

551.5 12.3 FJH	623.4 :15.0 FJH	-----	-----
566.5 13.3 FJH	-----	021281 Z Cep	023133 R Tri
571.5 13.6 HJO	020448 RV And	type Mira	type Mira
573.5 13.9 FJH	type SRa		
581.5 14.0 FJH		576.5 15.1 FJH	572.5 9.1 VDJ
592.5 14.2 FJH	599.6 10.7 HJO	-----	572.5 9.2 BMU
598.4 14.3 FJH	-----	0214-03 Mira	572.5 9.7 FJH
608.4 14.7 FJH	020657A TZ Per	type Mira	582.5 10.0 FJH
623.4 14.9 FJH	type UGZ		592.4 9.7 BMU
-----		574.5 6.0 BMU	601.6 10.5 JNN
013937 AR And	550.53 13.4 FJH	582.6 6.1 CMG	601.6 10.6 HJO
type UGSS	563.52 12.8 FJH	602.6 6.9 BMU	614.4 11.4 FJH
	566.54 12.7 FJH	-----	623.5 11.7 FJH
545.50 12.4 FJH	567.54 12.8 FJH	021558 S Per	-----
546.49 12.8 FJH	568.51 12.7 FJH	type SRC	024217 T Ari
550.52<14.9 FJH	569.47 12.9 FJH		type SRa
575.40 13.9 FJH	570.51 12.8 FJH	550.5 12.2 FJH	
576.42 12.3 FJH	571.44 13.0 FJH	568.5 11.7 BMU	601.6 8.4 HJO
577.40 12.9 FJH	572.46 13.2 FJH	568.6 12.2 FJH	-----
580.49<15.0 FJH	573.46 13.7 FJH	580.5 11.6 FJH	030226 Z Ari
608.34 12.3 FJH	575.41 14.2 FJH	580.6 11.7 HJO	type Mira
609.42 12.4 FJH	576.43 14.1 FJH	591.4 11.6 BMU	
-----	577.40 14.2 FJH	591.4 11.6 FJH	575.6 14.7 FJH
014958 X Cas	580.43 13.3 FJH	608.5 11.4 HJO	-----
type Mira	581.52 12.9 FJH	614.4 11.1 FJH	030514 U Ari
	582.48 12.9 FJH	619.3 11.1 BMU	type Mira
573.4 11.1 CMG	598.44 13.4 FJH	-----	
625.4 11.9 CMG	599.46 13.6 FJH	021770 AM Cas	570.5 9.4 FJH
-----	602.46 14.1 FJH	type UGSS	582.5 9.6 FJH
015254 U Per	608.44 13.0 FJH		614.5 10.0 FJH
type Mira	609.42 13.1 FJH	572.53 14.6 FJH	623.5 10.5 FJH
	614.40 13.8 FJH	573.54 12.7 FJH	-----
584.6 8.6 HJO	618.39 14.3 FJH	575.39 13.0 FJH	032043 Y Per
608.5 10.2 HJO	623.44 13.5 FJH	576.53 12.7 FJH	type Mira
619.3 10.5 BMU	-----	580.55 14.3 FJH	
-----	021024 R Ari	-----	573.5 9.1 BMU
015457 V666 Cas	type Mira	0220-00 R Cet	594.4 9.6 BMU
type Mira		type Mira	601.6 9.7 HJO
	570.5 9.1 FJH		619.3 9.6 BMU
572.5 13.1 FJH	582.5 9.2 FJH	574.5 8.2 BMU	-----
573.4 13.4 CMG	584.6 9.1 HJO	-----	032335 R Per
-----	601.5 10.9 JNN	022150 RR Per	type Mira
015912 S Ari	614.4 11.7 FJH	type Mira	
type Mira	623.5 12.4 FJH		572.5 9.3 FJH
	-----	550.5 13.7 FJH	582.5 9.4 FJH
570.5 14.1 FJH	021143A W And	567.5 13.4 FJH	587.5 9.4 FJH
580.5 13.8 FJH	type Mira	576.4 13.0 FJH	601.6 10.2 HJO
598.6 13.2 FJH		599.5 12.4 FJH	608.4 10.7 FJH
614.5 11.4 FJH	546.5 10.5 FJH	614.4 10.3 FJH	614.5 11.4 FJH
623.5 11.5 FJH	566.5 10.9 FJH	-----	623.4 12.5 FJH
-----	573.5 11.4 FJH	022980 RR Cep	-----
020227 Z Tri	580.4 11.6 FJH	type Mira	032443 GK Per
type Mira	587.5 11.8 FJH		type Na
	594.4 11.8 FJH	550.5 :14.9 FJH	
569.6 12.4 FJH	599.6 12.2 HJO	568.5 <15.2 FJH	567.54 13.0 FJH
580.5 13.7 FJH	608.4 12.5 FJH	576.5 15.2 FJH	573.46 13.1 BMU
598.5 14.7 FJH	618.4 12.9 FJH	623.5 :15.0 FJH	573.55 13.0 FJH



582.51 13.1 FJH	582.5 9.3 FJH	575.6 12.1 FJH	577.55 10.9 FJH
594.38 13.1 BMU	587.5 9.9 FJH	580.6 12.4 FJH	580.58 11.3 FJH
614.49 13.0 FJH	594.3 10.2 BMU	598.6 11.3 FJH	581.55 12.1 FJH
-----	594.4 10.7 FJH	601.6 11.9 BMU	582.56 12.3 FJH
034532 RX Per	606.6 11.3 HJO	-----	598.56 14.9 FJH
type Mira	609.4 11.6 FJH	054615A Z Tau	-----
575.6 :16.2 FJH	618.4 12.5 FJH	type Mira	061115 CZ Ori
-----	625.4 12.5 CMG	580.6 13.2 FJH	type UGSS
040150 FO Per	044617 V Tau	-----	580.60 12.0 FJH
type UG	type Mira	054615C RU Tau	-----
575.59:15.8 FJH	573.6 9.6 FJH	type Mira	061275 W Cam
577.56 12.6 FJH	580.6 9.6 FJH	580.6 13.0 FJH	type Mira
580.54 12.7 FJH	-----	-----	625.4 13.4 CMG
581.54 12.8 FJH	050953 R Aur	054920A U Ori	-----
582.53 13.0 FJH	type Mira	type Mira	0617-02 V Mon
599.48 13.0 FJH	574.5 9.3 BMU	569.6 12.2 FJH	type Mira
-----	575.5 9.6 FJH	576.6 12.2 FJH	623.6 7.4 BMU
041916 VX Tau	582.6 9.5 CMG	580.6 12.0 FJH	-----
type Mira	587.5 10.3 FJH	598.6 11.7 FJH	062574 SU Cam
573.6 11.8 FJH	-----	-----	type Mira
598.6 12.6 FJH	052036 W Aur	054974 V Cam	567.4 :15.1 FJH
-----	type Mira	type Mira	575.5 15.5 FJH
042209 R Tau	569.6 13.5 FJH	567.4 14.1 FJH	609.4 13.2 FJH
type Mira	580.5 13.6 FJH	575.5 13.8 FJH	-----
573.6 11.8 FJH	601.6 <13.5 JNN	609.4 14.1 FJH	063159 U Lyn
580.6 11.9 FJH	-----	618.4 13.1 FJH	type Mira
598.6 12.2 FJH	0524-04 S Ori	625.3 12.3 CMG	-----
-----	type Mira	-----	568.6 13.2 FJH
042309 S Tau	601.6 12.2 CMG	055439 AZ Aur	580.6 13.4 FJH
type Mira	-----	type Mira	-----
580.6 <15.0 FJH	053337 RU Aur	576.6 10.6 FJH	063444A AA Aur
598.6 14.7 FJH	type Mira	-----	type Mira
-----	580.6 :14.8 FJH	060246 VY Aur	568.6 9.7 FJH
043065 T Cam	-----	type Mira	580.6 9.7 FJH
type Mira	053531 U Aur	569.6 12.2 FJH	-----
567.4 13.5 FJH	type Mira	580.6 11.2 FJH	063558 S Lyn
575.5 13.7 FJH	573.6 :14.2 FJH	-----	type Mira
599.5 13.7 FJH	580.6 14.2 FJH	060443 RR Aur	569.6 :14.5 FJH
606.6 13.6 HJO	598.6 :14.6 FJH	type Mira	-----
609.4 13.6 FJH	-----	568.6 10.1 FJH	064030 X Gem
625.4 12.7 CMG	053538 SZ Aur	580.6 10.6 FJH	type Mira
-----	type Mira	-----	576.6 8.9 FJH
043274 X Cam	568.6 11.5 FJH	060547 SS Aur	-----
type Mira	580.6 12.3 FJH	type UGSS	070122A R Gem
543.5 9.3 BMU	-----	569.57 12.9 FJH	type Mira
543.5 9.6 VDJ	054319 SU Tau	570.52 11.7 FJH	580.6 11.5 FJH
552.5 8.5 BMU	type RCB	573.54 10.9 FJH	-----
554.5 9.0 FJH	569.6 12.1 FJH	575.59 10.6 FJH	-----
563.4 8.3 BMU	-----	576.52 10.8 FJH	-----
572.4 8.3 BMU	-----	-----	-----

-----	579.41 10.8 VDJ	580.4 10.8 HJO	582.6 12.5 FJH
074323 T Gem	580.43 10.7 BMU	583.4 10.4 BMU	590.4 12.5 FJH
type Mira	580.43 10.9 VDJ	592.4 10.8 BMU	592.4 12.4 HJO
580.6 8.8 FJH	580.58 10.4 FJH	607.3 11.5 BMU	592.4 12.5 BMU
-----	581.44 11.1 CMG	618.3 11.7 BMU	607.3 12.8 BMU
074922 U Gem	581.47 10.9 BMU	625.3 12.0 CMG	618.3 12.9 BMU
type UGSS+E	581.48 11.2 VDJ	-----	625.3 12.9 CMG
601.63 11.1 BMU	581.55 10.9 FJH	115158 Z UMa	-----
602.62 11.6 BMU	582.56 11.2 FJH	type SRb	123366 RV Dra
-----	583.39 10.9 BMU	-----	type Mira
080362 SU UMa	583.39 11.0 VDJ	544.5 7.8 BMU	551.4 12.5 HJO
type UGSU	590.35 12.1 FJH	552.5 7.8 BMU	563.4 12.2 HJO
567.38 14.4 FJH	590.35 12.4 BMU	563.4 7.6 VDJ	566.4 12.6 FJH
576.59 14.4 FJH	591.37 12.8 BMU	563.4 7.8 BMU	572.5 11.9 HJO
580.58 12.0 FJH	591.37 13.0 FJH	573.4 7.9 BMU	580.4 11.7 HJO
581.55 12.8 FJH	592.34 13.0 BMU	583.4 8.0 BMU	582.6 11.3 FJH
582.56 13.0 FJH	594.34 13.3 BMU	592.4 8.2 BMU	592.4 10.6 HJO
-----	594.41 13.0 CMG	607.3 8.2 BMU	625.3 10.6 CMG
081473 Z Cam	602.58 10.6 BMU	607.4 8.4 VDJ	-----
type UGZ	602.58 10.9 VDJ	617.3 8.3 BMU	123459 RS UMa
535.44 11.0 BMU	607.33 10.8 BMU	624.4 8.1 VDJ	type Mira
535.44 11.2 VDJ	607.33 10.8 VDJ	625.3 8.3 CMG	-----
535.52:13.1 HJO	607.34 10.9 CMG	-----	566.4 14.8 FJH
539.44 12.2 BMU	616.36 11.8 CMG	115762 SN94W	568.4 14.5 CMG
539.44 12.3 VDJ	617.30 11.3 BMU	type SN	573.4 14.5 BMU
543.44 13.0 BMU	618.29 11.6 BMU	566.37 13.7 FJH	574.4 14.6 FJH
545.47 13.0 VDJ	619.30 12.0 BMU	567.38 13.0 FJH	583.4 14.2 FJH
545.47 13.2 BMU	624.4 13.1 VDJ	568.4 13.6 BMU	594.4 13.9 BMU
546.44 12.4 VDJ	624.40 13.1 BMU	568.4 13.6 CMG	607.3 12.7 BMU
550.45 13.3 BMU	-----	568.5 13.6 VDJ	607.4 12.8 VDJ
563.39 12.7 BMU	093178 Y Dra	569.38 13.4 FJH	609.4 12.8 HJO
563.39 12.5 VDJ	type Mira	571.4 13.5 BMU	617.3 11.6 BMU
565.39 13.1 BMU	566.4 14.6 FJH	571.4 13.6 VDJ	625.3 11.0 CMG
565.39 13.2 VDJ	574.4 14.8 FJH	572.4 13.6 BMU	-----
567.38 13.4 FJH	625.3 13.7 CMG	572.4 13.6 VDJ	123961 S UMa
567.44 13.0 BMU	-----	573.4 13.8 CMG	type Mira
567.45 13.1 VDJ	093952 EQ UMa	574.5 13.8 BMU	539.4 9.3 HJO
568.40 13.3 BMU	type UG	577.39 13.5 FJH	544.5 8.9 BMU
569.42 13.1 BMU	568.45 12.4 BMU	583.36 13.5 FJH	544.5 8.9 VDJ
569.42 13.3 VDJ	571.44 12.8 BMU	-----	552.5 8.6 BMU
569.57 13.5 FJH	572.41 12.7 BMU	123160 T UMa	558.5 8.6 HJO
570.52 13.3 FJH	573.45 12.8 BMU	type Mira	563.4 8.6 BMU
571.44 13.2 BMU	-----	539.4 10.2 FJH	572.4 8.9 VDJ
571.44 13.1 VDJ	094211 R Leo	539.4 11.1 HJO	572.5 8.4 HJO
572.40 13.0 VDJ	type Mira	544.5 10.5 VDJ	573.4 8.3 BMU
572.40 13.3 BMU	623.6 9.6 BMU	544.5 10.8 BMU	580.4 8.4 HJO
573.39 13.3 BMU	-----	546.4 11.1 FJH	583.4 8.3 BMU
573.44 13.4 FJH	103769 R UMa	552.5 11.2 BMU	583.4 8.4 VDJ
574.37 13.4 FJH	type Mira	558.5 11.6 HJO	591.4 8.0 BMU
574.44 13.3 BMU	539.4 8.9 HJO	563.4 11.5 BMU	592.4 8.2 HJO
576.45 13.0 FJH	551.4 9.2 HJO	563.4 11.5 VDJ	607.3 8.1 BMU
577.55 10.9 FJH	563.4 9.3 BMU	566.4 12.1 FJH	609.4 8.1 HJO
579.41 10.8 BMU	573.4 9.6 BMU	572.5 12.3 HJO	617.3 8.0 BMU
		573.4 12.0 BMU	624.4 8.1 VDJ
		574.4 12.4 FJH	625.3 8.3 CMG

----- 124238 U CVn type Mira	609.4 8.5 HJO 618.3 8.9 BMU 619.3 8.9 CMG -----	1434-17 V Lib type Mira	----- 1515-20 S Lib type Mira
569.4 <14.5 FJH ----- 133273 T UMi type Mira	142205 RS Vir type Mira	570.4 14.5 FJH ----- 143922A UZ Boo type UG	568.4 11.8 FJH 577.3 11.1 FJH ----- 151714 S Ser type Mira
539.4 13.3 FJH 551.5 13.9 FJH 567.4 14.0 FJH 576.5 14.4 FJH 625.3 12.1 CMG -----	566.4 13.8 FJH 574.4 13.7 FJH ----- 142539 V Boo type SRa	584.36 12.1 CMG 590.36 12.5 FJH 590.4 12.5 BMU 591.36 12.6 FJH 591.4 12.7 BMU 592.3 12.7 BMU 593.4 12.8 BMU 594.37 13.1 CMG 594.4 13.0 BMU 594.4 13.1 VDJ -----	625.3 12.3 CMG ----- 151731 S CrB type Mira
134440 R CVn type Mira	539.4 8.9 HJO 573.5 9.1 BMU 592.4 8.9 BMU 618.3 9.1 BMU 619.3 9.1 CMG -----	144339 RR Boo type Mira	535.5 12.6 VDJ 535.5 12.7 BMU 545.4 12.8 FJH 551.4 12.4 HJO 551.5 12.4 BMU 552.4 12.5 FJH 566.4 12.2 FJH 569.4 11.9 BMU 573.4 12.1 FJH 582.4 11.4 FJH 583.4 11.7 BMU 592.4 11.3 BMU 607.4 9.2 VDJ 607.4 9.4 BMU 617.3 8.1 BMU 617.3 8.2 FJH 619.3 7.9 CMG 624.4 7.5 BMU -----
539.4 9.8 HJO 593.3 11.3 BMU ----- 140113 Z Boo type Mira	142584 R Cam type Mira	545.4 12.8 FJH 569.4 13.8 FJH 582.4 13.2 FJH 608.3 13.2 FJH 619.3 12.3 CMG ----- 1500-18 RT Lib type Mira	552.4 12.5 FJH 566.4 12.2 FJH 569.4 11.9 BMU 573.4 12.1 FJH 582.4 11.4 FJH 583.4 11.7 BMU 592.4 11.3 BMU 607.4 9.2 VDJ 607.4 9.4 BMU 617.3 8.1 BMU 617.3 8.2 FJH 619.3 7.9 CMG 624.4 7.5 BMU -----
535.4 10.0 FJH 566.4 12.2 FJH 575.3 12.4 FJH 583.4 12.7 FJH ----- 141567 U UMi type Mira	539.4 12.4 HJO 539.4 12.7 FJH 551.4 11.8 HJO 554.4 11.6 FJH 563.4 10.7 HJO 568.4 10.0 BMU 570.5 10.1 FJH 572.5 9.9 HJO 580.4 9.3 FJH 580.4 9.6 HJO 592.4 8.9 HJO 607.3 8.4 VDJ 607.3 8.6 BMU 609.4 8.3 HJO 614.4 8.7 FJH 617.3 8.3 BMU 624.4 8.3 BMU -----	568.4 10.5 FJH 577.3 10.8 FJH ----- 1506-05 Y Lib type Mira	1518-22 RS Lib type Mira
543.5 10.5 HJO 554.4 10.0 FJH 558.5 10.0 HJO 570.5 10.0 FJH 580.4 10.1 HJO 587.5 9.7 FJH 592.4 9.8 HJO 609.4 9.5 HJO 625.3 9.2 CMG ----- 141954 S Boo type Mira	614.4 8.7 FJH 617.3 8.3 BMU 624.4 8.3 BMU ----- 143227 R Boo type Mira	567.4 9.4 FJH 575.3 9.5 FJH ----- 151083 Z UMi type RCB?	624.4 7.5 BMU ----- 1518-22 RS Lib type Mira
539.4 11.5 HJO 546.4 11.1 FJH 551.4 10.7 HJO 554.4 10.9 FJH 570.5 9.9 FJH 572.5 10.0 HJO 573.5 9.5 BMU 580.4 8.8 HJO 583.4 8.8 BMU 592.4 8.5 BMU 592.4 8.6 HJO 593.3 8.2 FJH	535.4 11.6 FJH 539.4 12.2 HJO 545.4 12.0 FJH 554.4 12.2 FJH 566.4 12.8 FJH 572.4 12.4 JNN 573.5 12.5 BMU 574.4 12.8 FJH 583.4 12.1 FJH 592.4 11.4 BMU 593.3 11.5 FJH 618.3 9.3 BMU 619.3 8.9 CMG -----	550.5 12.6 BMU 563.4 12.4 BMU 568.4 12.3 BMU 572.4 12.1 BMU 580.4 12.1 BMU 591.4 12.2 BMU 607.3 12.6 BMU 617.3 12.5 BMU 624.4 12.4 BMU ----- 151336 RT Boo type Mira	568.4 13.0 FJH 577.3 13.1 FJH ----- 153378A S UMi type Mira
583.4 8.8 HJO 583.4 8.8 BMU 592.4 8.5 BMU 592.4 8.6 HJO 593.3 8.2 FJH	583.4 12.1 FJH 592.4 11.4 BMU 593.3 11.5 FJH 618.3 9.3 BMU 619.3 8.9 CMG -----	619.3 12.2 CMG	543.5 9.0 HJO 554.5 9.1 FJH 558.5 9.8 HJO 580.4 10.0 HJO 587.5 9.8 FJH 592.4 9.9 HJO 609.3 10.7 FJH 609.4 10.8 HJO



625.3 11.3 CMG	154615 R Ser	590.4 10.5 BMU	546.4 13.6 FJH
-----	type Mira	590.4 10.5 FJH	566.4 :14.8 FJH
1536-20 U Lib		607.3 10.5 FJH	583.4 :14.8 FJH
type Mira	539.4 10.8 HJO	607.4 10.4 BMU	-----
	543.4 11.1 FJH	617.3 10.3 FJH	160625 RU Her
568.4 9.4 FJH	551.5 11.7 FJH	617.3 10.5 BMU	type Mira
577.3 8.9 FJH	566.4 12.4 FJH	-----	
-----	573.4 12.5 FJH	160118 R Her	535.4 13.3 FJH
1540-20 Z Lib	591.4 13.0 FJH	type Mira	545.4 13.4 FJH
type Mira	607.3 13.4 FJH		566.4 13.6 FJH
	625.3 13.6 CMG	543.4 11.8 FJH	582.4 13.7 FJH
570.4 14.3 FJH	-----	551.4 12.6 HJO	607.3 14.0 FJH
-----	154639 V CrB	554.4 12.6 FJH	-----
154428A R CrB	type Mira	568.4 13.3 FJH	161138 W CrB
type RCB		577.3 13.8 FJH	type Mira
	546.4 9.8 FJH	-----	
535.4 5.9 BMU	550.5 9.6 HJO	160167 AG Dra	545.4 13.0 FJH
535.5 6.0 VDJ	554.4 9.9 FJH	type Z And	551.4 :13.0 HJO
539.5 6.0 VDJ	569.4 9.7 BMU		566.4 13.9 FJH
551.5 5.9 BMU	570.5 10.3 FJH	535.5 8.5 BMU	569.4 13.6 BMU
563.4 5.9 BMU	580.4 10.5 FJH	535.5 8.6 VDJ	573.4 14.0 FJH
569.4 5.9 BMU	583.4 10.0 BMU	539.5 8.3 BMU	583.4 13.9 FJH
571.4 6.0 VDJ	592.4 10.2 BMU	539.5 8.7 VDJ	594.4 13.7 BMU
572.4 5.8 BMU	599.4 10.9 FJH	543.5 8.2 BMU	598.4 13.3 FJH
572.4 6.2 JNN	607.3 11.1 FJH	543.5 8.7 VDJ	607.3 12.9 FJH
577.5 5.9 VDH	617.3 10.7 BMU	545.4 8.2 BMU	619.3 12.6 CMG
579.4 5.8 BMU	619.3 10.7 CMG	545.4 8.6 VDJ	-----
583.4 6.0 VDJ	-----	550.5 8.3 BMU	162119 U Her
591.4 5.9 BMU	1550-18 RR Lib	565.4 8.3 BMU	type Mira
591.4 5.9 FJH	type Mira	565.4 8.4 VDJ	
594.4 5.9 CMG		567.5 8.3 BMU	535.4 9.3 HJO
601.4 6.7 JNN	568.4 9.2 FJH	567.5 8.6 VDJ	550.5 9.5 HJO
607.3 6.0 BMU	-----	568.5 8.2 CMG	569.5 9.3 VDJ
607.3 6.0 VDJ	155229 Z CrB	569.4 8.4 BMU	569.5 9.9 BMU
607.3 6.3 CMG	type Mira	571.4 8.5 VDJ	580.4 10.1 HJO
608.4 6.2 CMG		571.4 8.6 BMU	580.5 10.1 BMU
612.3 6.0 BMU	543.4 10.9 FJH	573.4 8.5 BMU	592.4 10.2 BMU
616.4 6.0 CMG	552.4 11.3 FJH	579.4 8.4 BMU	593.3 11.0 FJH
617.3 5.9 BMU	566.4 11.9 FJH	579.5 8.5 VDJ	607.3 10.6 FJH
623.4 6.0 BMU	569.4 11.5 BMU	581.5 8.5 BMU	617.3 10.7 FJH
624.4 6.1 VDJ	573.4 12.1 FJH	581.5 8.6 VDJ	618.3 11.0 BMU
-----	582.4 12.5 FJH	583.4 8.5 BMU	619.3 11.0 CMG
154536 X CrB	592.4 12.6 BMU	583.4 8.6 VDJ	-----
type Mira	607.3 13.0 FJH	590.4 8.4 FJH	162807A SS Her
	-----	590.4 8.5 BMU	type Mira
545.4 12.5 FJH	155526 T CrB	592.3 8.5 BMU	
551.4 12.1 HJO	type Nd	594.4 8.5 CMG	625.3 9.2 CMG
552.4 12.6 FJH		607.3 8.6 VDJ	-----
566.4 13.0 FJH	535.5 10.4 BMU	607.3 8.7 BMU	163137 W Her
569.4 13.0 BMU	546.4 10.5 FJH	618.3 8.6 BMU	type Mira
573.4 13.1 FJH	551.5 10.4 BMU	624.3 8.8 BMU	
574.4 13.4 HJO	554.4 10.6 FJH	625.3 9.0 CMG	550.5 9.4 HJO
582.4 13.4 FJH	569.4 10.6 BMU	-----	554.4 9.2 FJH
594.4 13.8 BMU	570.5 10.9 FJH	160210 U Ser	563.4 9.5 JNN
607.3 13.7 FJH	572.4 11.0 FJH	type Mira	567.4 10.3 HJO
619.3 13.6 CMG	579.5 10.5 BMU		569.5 9.9 VDJ
-----	580.4 10.8 FJH	535.4 13.5 FJH	569.5 10.2 BMU

570.5	10.0	FJH	164715	S	Her				175519	RY	Her
579.4	11.2	HJO	type	Mira		625.3	8.5	CMG	type	Mira	
580.4	10.9	FJH									
580.5	10.8	BMU	535.4	13.2	FJH	171723	RS	Her	536.5	13.7	FJH
580.5	11.1	VDJ	551.5	13.0	HJO	type	Mira		545.4	13.8	FJH
592.4	11.6	BMU	554.4	12.4	FJH				569.4	13.9	FJH
599.4	11.9	FJH	567.4	11.4	HJO	551.5	8.1	HJO	577.3	13.7	FJH
601.4	11.7	JNN	568.4	11.4	FJH	563.4	8.0	JNN	598.4	12.3	FJH
607.3	12.1	HJO	577.3	10.1	FJH	567.4	8.2	HJO	607.3	11.4	FJH
607.3	12.2	FJH	579.4	10.5	HJO	569.5	7.9	VDJ	625.3	10.9	CMG
617.3	12.5	FJH	617.3	9.1	FJH	569.5	8.0	BMU			
618.3	12.5	BMU	619.3	8.7	CMG	579.4	8.0	HJO	175654	V	Dra
						580.5	8.2	BMU	type	Mira	
163266	R	Dra	165631	RV	Her	580.5	8.2	VDJ			
type	Mira		type	Mira		592.4	8.7	BMU	536.5	12.9	FJH
						593.3	8.8	FJH	544.5	13.2	FJH
535.5	12.2	HJO	539.5	14.2	FJH	598.4	9.4	FJH	552.5	13.3	FJH
536.5	12.0	FJH	551.5	14.5	FJH	607.3	9.5	HJO	567.5	13.6	FJH
550.5	12.7	BMU	569.4	15.2	FJH	617.3	9.7	BMU	576.5	14.1	FJH
551.5	13.2	HJO	577.5	15.8	FJH	617.3	10.0	FJH	582.5	14.1	FJH
554.4	12.8	FJH	607.3	:15.1	FJH	619.3	10.0	CMG	592.4	14.3	FJH
567.4	:13.4	HJO	624.3	14.1	FJH				599.4	14.3	FJH
567.5	12.8	FJH				172809A	RU	Oph	609.3	14.3	FJH
570.6	13.5	HJO	165722	SY	Her	type	Mira		625.3	14.6	CMG
573.4	13.3	BMU	type	Mira							
576.5	13.0	FJH				546.4	10.0	FJH	180531	T	Her
579.4	13.4	HJO	543.4	10.4	FJH	558.4	11.0	FJH	type	Mira	
582.5	13.1	FJH	569.5	8.6	BMU	568.4	11.9	FJH			
583.4	13.4	BMU	569.5	8.6	VDJ	582.4	12.1	FJH	199.4	8.6	HJO
591.4	13.2	BMU	580.5	8.7	VDJ	607.3	13.3	FJH	535.4	11.5	HJO
591.4	13.2	FJH	580.5	9.1	BMU				539.5	11.2	HJO
599.4	13.0	FJH	592.4	9.4	BMU	1729-19	N94	Oph	543.4	11.0	FJH
607.3	13.1	BMU	617.3	11.2	BMU	type	N		551.5	9.1	HJO
609.3	12.9	FJH	619.3	11.8	CMG				552.4	9.6	FJH
609.4	13.4	HJO				533.44	11.1	BMU	569.5	8.4	VDJ
618.3	12.9	BMU	170217	VY	Her	535.46	11.2	BMU	569.5	8.5	BMU
619.3	12.7	FJH	type	Mira		535.5	11.0	VDJ	579.4	8.5	HJO
625.3	12.5	CMG				539.46	11.4	BMU	580.5	8.3	VDJ
			535.4	14.3	FJH	539.46	11.4	VDJ	580.5	8.4	BMU
163414	AS	Her	545.4	15.2	FJH	568.39	12.0	FJH	592.4	8.5	BMU
type	Mira		569.4	:15.6	FJH				593.3	8.4	FJH
			583.4	:15.4	FJH	175111	RT	Oph	607.3	8.7	HJO
535.4	10.9	FJH				type	Mira		608.3	9.2	FJH
543.4	10.7	FJH	170627A	RT	Her				617.3	9.4	FJH
568.4	9.4	FJH	type	Mira		538.5	10.1	FJH	618.3	8.7	BMU
619.3	10.0	CMG				546.4	10.2	FJH	625.3	9.3	CMG
			543.4	11.5	FJH	558.4	11.0	FJH			
164012	UV	Her	554.4	10.9	FJH	568.4	11.8	FJH	180565	W	Dra
type	Mira		568.4	10.6	FJH	582.4	11.9	FJH	type	Mira	
			580.4	10.6	FJH	607.3	12.3	FJH			
535.4	9.9	FJH	585.4	10.3	FJH	625.3	12.6	CMG	536.5	13.1	FJH
543.4	10.1	FJH	598.4	10.9	FJH				544.5	13.3	FJH
554.4	10.4	FJH	607.3	11.2	FJH	175458A	T	Dra	552.5	13.7	FJH
568.4	11.0	FJH	617.3	11.3	FJH	type	Mira		567.5	14.0	FJH
577.3	11.5	FJH							576.5	14.3	FJH
607.3	12.1	FJH	171401	Z	Oph	625.3	12.3	CMG	582.5	14.3	FJH
			type	Mira					625.3	14.6	CMG

-----	593.4	9.4	BMU	577.3	14.0	FJH	580.43	8.8	VDJ
180666 X Dra	600.5	9.3	JNN	583.4	13.8	FJH	590.36	10.6	BMU
type Mira	607.3	9.0	HJO	598.4	13.1	FJH	590.37	10.7	FJH
	617.3	8.5	BMU	607.3	12.9	FJH	591.37	10.7	BMU
544.5 13.1 FJH	617.4	8.4	FJH	617.3	12.3	FJH	591.38	10.7	FJH
552.5 12.7 FJH	-----			625.3	11.7	CMG	592.34	10.7	BMU
570.5 11.3 FJH	181406 AY Oph			-----			594.34	10.8	BMU
576.5 10.8 FJH	type Mira			182306 T Ser			594.40	10.7	VDJ
582.5 11.2 FJH				type Mira			607.32	10.4	BMU
592.4 11.6 FJH	538.5 10.9 FJH						607.36	10.1	VDJ
599.4 11.7 FJH	546.4 11.1 FJH			538.5 11.3 FJH			617.30	11.1	BMU
609.3 12.1 FJH	-----			546.4 10.9 FJH			618.30	11.1	BMU
619.3 12.4 FJH	181730 TV Lyr			558.4 10.3 FJH			619.31	11.3	BMU
625.3 12.9 CMG	type Mira			568.4 10.1 FJH			-----		
-----				582.4 10.1 FJH			183138 LL Lyr		
181020 YY Her	535.5 :15.1 FJH			-----			type UG		
type Z And	546.5 15.0 FJH			1824-16 SS Sgr					
	567.3 13.6 FJH			type SRb			535.46<15.5	FJH	
625.3 12.9 CMG	580.5 13.1 FJH						546.46<15.5	FJH	
-----	599.4 11.2 FJH			546.5 10.1 BMU			571.44<15.5	FJH	
181031 TV Her	608.3 11.5 FJH			574.5 9.8 BMU			572.48<15.5	FJH	
type Mira	618.3 11.8 FJH			594.3 10.0 BMU			577.50<16.0	FJH	
	-----			-----			601.37	13.0	FJH
199.4 11.2 HJO	182039 TW Lyr			1824-17 Nv Sgr2			602.45	13.1	FJH
539.5 9.9 HJO	type Mira			type N			607.34	13.4	FJH
543.4 10.7 FJH							608.33	13.8	FJH
551.5 10.7 HJO	543.5 12.7 FJH			535.44 10.5 VDJ			609.35	14.5	FJH
552.4 10.8 FJH	552.4 12.9 FJH			535.44 10.7 BMU			-----		
569.5 11.2 VDJ	559.4 13.0 FJH			539.44 10.6 VDJ			183149A SV Dra		
569.5 11.4 BMU	569.4 12.9 FJH			539.44 10.7 BMU			type Mira		
570.5 11.6 FJH	580.5 13.3 FJH			543.45 10.8 BMU					
579.4 12.1 HJO	599.4 13.9 FJH			543.45 10.8 VDJ			539.5 14.3	FJH	
580.4 12.3 FJH	607.3 14.0 FJH			544.46 10.6 BMU			552.5 14.0	FJH	
580.5 12.0 BMU	618.3 14.1 FJH			544.46 10.7 VDJ			567.3 13.1	FJH	
580.5 12.0 VDJ	-----			545.44 10.3 BMU			580.5 12.6	FJH	
592.4 12.6 BMU	182172 RT Dra			545.45 10.1 VDJ			587.5 11.8	FJH	
598.4 13.3 FJH	type Mira			546.45 9.9 BMU			599.4 11.4	FJH	
607.3 13.3 FJH				546.45 9.6 VDJ			617.3 9.7	FJH	
607.3 :13.1 HJO	539.4 14.0 FJH			551.46 10.0 BMU			625.3 9.3	CMG	
624.3 13.7 FJH	552.5 13.6 FJH			552.49 10.2 BMU			-----		
625.3 13.7 CMG	567.4 :13.1 HJO			563.40 10.3 BMU			183225 RZ Her		
-----	568.6 13.2 FJH			563.40 10.2 VDJ			type Mira		
181136 W Lyr	570.6 13.0 HJO			567.45 8.8 BMU					
type Mira	576.5 12.9 FJH			567.45 9.0 VDJ			535.4 12.8	FJH	
	579.4 12.5 HJO			568.43 8.9 BMU			545.4 13.5	FJH	
199.4 11.0 HJO	582.5 12.6 FJH			568.44 9.0 VDJ			569.4 14.8	FJH	
536.4 12.5 FJH	592.4 12.2 FJH			569.43 8.9 BMU			625.3 14.6	CMG	
544.5 12.4 FJH	609.4 11.7 HJO			569.43 9.1 VDJ			-----		
551.5 11.9 HJO	619.3 11.3 FJH			571.40 10.2 BMU			183922 AE Her		
552.4 12.3 FJH	625.3 11.1 CMG			571.41 10.1 VDJ			type Mira		
563.4 12.0 JNN	-----			572.41 10.6 BMU					
566.3 10.9 FJH	182224 SV Her			572.41 10.4 VDJ			199.4 12.8	HJO	
573.4 10.1 VDH	type Mira			573.41 9.2 BMU			535.4 14.4	FJH	
574.5 10.4 BMU				574.44 8.8 BMU			551.5 13.7	FJH	
579.4 10.3 HJO	539.5 14.8 FJH			579.41 8.9 BMU			569.4 11.9	FJH	
580.4 10.3 HOO	551.5 14.7 FJH			579.41 8.9 VDJ			577.3 11.3	FJH	
585.4 9.8 FJH	569.4 14.2 FJH			580.43 9.1 BMU			579.4 11.7	HJO	

585.4 10.8 FJH  
594.3 10.5 FJH  
607.3 10.4 FJH  
607.3 10.6 HJO  
617.3 10.4 FJH

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184134 RY Lyr  
type Mira

199.4 10.0 HJO  
536.5 10.8 FJH  
539.5 10.3 HJO  
543.4 10.1 FJH  
551.5 10.0 HJO  
552.5 9.9 FJH  
567.3 10.2 FJH  
574.5 10.1 BMU  
575.3 10.2 FJH  
579.4 10.2 HJO  
585.4 10.8 FJH  
599.4 11.3 FJH  
607.3 11.5 HJO  
608.3 11.4 FJH  
617.3 11.6 FJH

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184137 AY Lyr  
type UGSU

535.46<15.5 FJH  
538.46 13.5 FJH  
539.45 13.8 FJH  
539.49:13.8 HJO  
546.46<15.5 FJH  
551.49<15.5 FJH  
567.37<15.5 FJH  
570.34<15.5 FJH  
571.44 13.2 FJH  
571.47 13.0 HJO  
572.46:13.8 HJO  
572.48 13.9 FJH  
573.49 15.9 FJH  
577.51<16.2 FJH  
591.38:14.5 FJH  
591.38 14.3 BMU  
598.40 13.5 FJH  
599.35 14.0 FJH  
607.34<15.5 FJH

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1842-05 R Sct  
type RV

539.4 5.6 BMU  
544.5 5.8 BMU  
550.5 6.0 BMU  
563.4 5.3 VDJ  
563.4 5.7 BMU  
563.4 5.9 CMG

568.4 5.9 BMU  
572.4 5.2 VDJ  
572.4 5.7 BMU  
579.4 5.6 BMU  
590.4 5.9 BMU  
594.3 6.1 BMU  
594.4 6.3 CMG  
607.3 6.3 BMU  
617.3 6.8 BMU  
623.4 7.3 BMU

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184243 RW Lyr  
type Mira

545.5 13.5 FJH  
552.5 13.8 FJH  
567.3 14.0 FJH  
575.5 14.4 FJH  
599.4 14.5 FJH  
607.4 14.5 FJH

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184826 CY Lyr  
type UGSS

538.45 13.3 FJH  
539.45 13.2 FJH  
551.48<15.6 FJH  
558.43 13.2 FJH  
559.41 13.2 FJH  
563.51 13.4 FJH  
572.50:16.5 FJH  
575.55 16.6 FJH  
577.51 16.0 FJH  
580.44 13.7 FJH  
581.51 14.3 FJH  
617.33 13.1 FJH  
618.31 13.1 FJH  
619.39 13.3 FJH

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185032 RX Lyr  
type Mira

535.5 14.3 FJH  
545.4 13.7 FJH  
552.5 12.6 FJH  
559.4 12.2 FJH  
567.3 12.1 FJH  
575.3 12.0 FJH  
585.4 12.0 FJH  
599.3 12.3 FJH  
608.3 12.8 FJH  
618.3 13.5 FJH

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185131 SX Lyr  
type Mira

535.5 14.6 FJH

545.4 14.4 FJH  
567.3 14.0 FJH  
580.5 13.9 FJH  
599.4 13.9 FJH  
607.4 13.8 FJH  
618.3 13.7 FJH

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185132 FF Lyr  
type Mira

535.5 14.1 FJH  
545.4 14.1 FJH

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185634 Z Lyr  
type Mira

536.4 11.8 FJH  
543.4 11.6 FJH  
552.4 11.3 FJH  
566.3 11.1 FJH  
575.3 11.3 FJH  
585.4 11.6 FJH  
599.4 12.1 FJH  
608.3 12.5 FJH  
617.3 12.6 FJH

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185737 RT Lyr  
type Mira

543.4 14.0 FJH  
550.5 14.3 FJH  
568.6 14.7 FJH  
577.5 15.0 FJH  
607.4 14.5 FJH  
618.3 14.0 FJH

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185947 WZ Lyr  
type Mira

199.4 13.4 HJO  
545.5 12.7 FJH  
551.5 13.3 HJO  
552.5 13.2 FJH  
567.3 13.7 FJH  
579.5 13.7 HJO  
580.5 13.8 FJH  
599.4 13.8 FJH  
607.3 :14.0 HJO  
607.4 14.2 FJH  
618.3 14.5 FJH

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190108 R Aql  
type Mira

618.3 6.3 BMU

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190333 AB Lyr

type Mira

539.5 :16.0 FJH  
550.5 15.8 FJH  
567.3 14.1 FJH  
575.3 13.9 FJH  
579.5 13.5 HJO  
599.3 11.1 FJH  
607.3 11.0 HJO  
608.3 10.8 FJH  
618.3 10.9 FJH

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190443 MV Lyr  
type NL

536.45 12.2 FJH  
550.43 12.3 FJH  
567.35 12.3 FJH  
580.50 12.3 FJH  
599.37 12.3 FJH  
609.36 12.3 FJH

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190527 TY Lyr  
type Mira

545.4 :15.0 FJH  
551.5 :15.2 FJH  
568.6 :15.5 FJH  
577.5 :15.5 FJH  
607.4 :15.0 FJH  
618.3 14.7 FJH

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190529A V Lyr  
type Mira

535.5 :15.4 FJH  
550.5 :15.6 FJH  
568.6 :15.4 FJH  
576.5 15.4 FJH  
607.4 :14.9 FJH  
618.3 14.2 FJH

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190529B VZ Lyr  
type Mira

607.4 11.8 FJH  
618.3 11.5 FJH

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190643 ST Lyr  
type Mira

536.5 10.8 FJH  
550.4 10.8 FJH  
567.3 11.6 FJH  
580.5 11.7 FJH  
599.4 12.6 FJH  
609.4 13.1 FJH

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190801 N93 Aql	190967 U Dra	618.3 13.1 FJH	193449 R Cyg
type N	type Mira	-----	type Mira
535.47 13.3 BMU	536.5 10.8 FJH	191831 AN Lyr	536.5 13.7 FJH
535.47 13.6 VDJ	546.4 11.3 FJH	type Mira	544.5 13.8 FJH
536.47 13.1 FJH	554.4 11.3 FJH	199.4 12.3 HJO	551.5 :13.8 HJO
539.45 13.4 BMU	568.6 12.4 FJH	536.5 11.0 FJH	568.6 14.2 FJH
539.45 13.6 VDJ	576.5 12.5 FJH	543.4 11.4 FJH	571.5 13.7 BMU
539.48 13.1 FJH	582.5 12.6 FJH	551.5 11.8 HJO	579.5 :13.8 HJO
543.47 13.4 BMU	592.4 12.9 FJH	552.4 11.6 FJH	580.5 14.2 FJH
543.47 13.7 VDJ	599.4 13.0 FJH	559.4 11.9 FJH	593.5 :13.7 HJO
545.46 13.5 BMU	609.3 13.0 FJH	567.3 12.0 FJH	598.4 13.4 FJH
545.46 13.8 VDJ	619.3 13.4 FJH	575.3 12.4 FJH	607.3 13.1 HJO
546.45 13.1 FJH	625.3 13.3 CMG	579.5 13.2 HJO	608.4 12.9 FJH
551.46 13.6 BMU	-----	592.5 13.7 FJH	617.4 12.4 FJH
563.42 13.5 BMU	1910-17 T Sgr	599.4 13.9 FJH	618.4 12.5 BMU
563.43 13.8 VDJ	type Mira	607.4 14.5 FJH	-----
568.41 13.5 BMU	572.4 9.3 FJH	-----	193509 RV Aql
570.47 13.5 FJH	-----	192150 CH Cyg	type Mira
571.41 13.5 BMU	1910-19 R Sgr	type Z And	539.5 14.6 FJH
571.41 13.7 VDJ	type Mira	535.5 7.8 BMU	551.5 14.3 FJH
573.41 13.5 BMU	572.4 8.6 FJH	539.5 7.9 BMU	569.4 13.5 FJH
577.37 13.6 FJH	-----	546.5 8.0 BMU	577.4 12.9 FJH
579.44 13.6 BMU	1910-33 RY Sgr	551.5 7.3 BMU	599.4 10.8 FJH
579.44 13.8 VDJ	type RCB	571.5 8.0 BMU	609.4 10.0 FJH
592.35 13.5 BMU	570.4 7.2 FJH	618.4 8.1 BMU	617.4 9.6 FJH
594.35 13.5 BMU	-----	-----	-----
607.36 13.4 BMU	191046 SS Lyr	192201 TU Aql	194027 YZ Vul
607.36 13.8 VDJ	type Mira	type Mira	type Mira
-----	535.5 15.1 FJH	536.5 13.4 FJH	539.5 :15.6 FJH
190933A RS Lyr	546.5 15.1 FJH	546.5 13.9 FJH	550.5 :15.4 FJH
type Mira	552.5 14.8 FJH	569.4 :14.5 FJH	570.4 14.5 FJH
535.5 13.7 FJH	567.3 15.0 FJH	580.5 :14.5 FJH	579.5 13.5 HJO
543.5 13.5 FJH	580.5 15.1 FJH	-----	599.4 13.8 FJH
551.5 13.5 FJH	599.4 14.2 FJH	192928 TY Cyg	607.3 12.8 HJO
559.4 12.9 FJH	607.4 14.0 FJH	type Mira	609.4 12.9 FJH
567.3 13.0 FJH	618.3 13.7 FJH	536.5 13.1 FJH	617.4 12.0 FJH
575.3 13.0 FJH	-----	544.5 12.6 FJH	-----
592.4 12.9 FJH	1913-21 Z Sgr	558.4 11.7 FJH	194048 RT Cyg
599.4 12.2 FJH	type Mira	572.3 11.6 FJH	type Mira
608.3 11.7 FJH	572.4 :15.0 FJH	599.4 11.0 FJH	199.4 8.5 HJO
617.3 10.6 FJH	-----	609.4 10.8 FJH	539.5 7.8 BMU
-----	191637 U Lyr	-----	551.5 8.1 HJO
190941 RU Lyr	type Mira	193311 RT Aql	551.5 8.2 BMU
type Mira	536.4 13.0 FJH	type Mira	559.4 8.4 FJH
536.5 11.6 FJH	543.4 13.1 FJH	546.5 8.5 FJH	571.5 8.8 BMU
543.4 11.4 FJH	552.4 13.1 FJH	570.5 9.5 FJH	572.3 8.9 FJH
552.4 11.2 FJH	569.4 13.1 FJH	572.4 9.5 JNN	579.5 9.0 HJO
566.4 11.6 FJH	580.5 13.2 FJH	577.4 9.7 FJH	587.5 9.9 FJH
575.5 11.9 FJH	599.4 13.2 FJH	599.4 10.4 FJH	593.5 10.3 HJO
585.4 11.8 FJH	-----	609.4 10.8 FJH	607.3 11.2 HJO
599.4 12.1 FJH	-----	617.4 10.8 FJH	614.5 11.7 FJH
608.3 12.2 FJH	-----	-----	618.4 11.3 BMU
618.3 12.3 FJH	-----	-----	-----



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194348 TU Cyg
type Mira
199.4 11.1 HJO
535.4 12.6 HJO
538.5 12.7 FJH
551.5 11.8 BMU
551.5 12.0 HJO
559.4 11.2 FJH
571.5 10.4 BMU
572.3 10.0 FJH
579.5 9.3 HJO
581.5 9.2 FJH
593.5 9.1 HJO
607.3 9.2 HJO
614.5 9.1 FJH
618.4 9.6 BMU
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194604 X Aql
type Mira
539.5 13.4 FJH
551.5 13.9 FJH
566.4 14.5 FJH
574.4 14.7 FJH
598.4 14.8 FJH
607.4 :15.1 FJH
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194632 Chi Cyg
type Mira
199.4 9.3 HJO
535.4 7.4 BMU
535.5 7.5 SAQ
551.5 8.1 BMU
563.4 9.2 BMU
563.5 9.2 SAQ
569.5 9.4 BMU
572.3 9.5 FJH
579.5 9.5 HJO
580.4 10.3 HOO
580.5 9.7 BMU
587.4 10.0 FJH
592.4 10.5 BMU
607.3 11.2 HJO
609.4 11.0 FJH
617.3 11.2 BMU
619.4 11.3 FJH
624.3 11.7 BMU
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1949-29 RR Sgr
type Mira
572.4 12.0 FJH
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1951-09 UU Aql
type UGSS
582.57 12.2 FJH
583.38 12.3 FJH
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1953-08 RS Aql
type Mira
569.5 14.5 FJH
577.4 14.5 FJH
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195533 V482 Cyg
type RCB
545.5 11.0 BMU
551.5 10.9 BMU
563.4 11.0 BMU
568.4 11.0 BMU
568.5 11.2 CMG
580.4 11.0 BMU
590.4 10.9 BMU
617.3 10.8 BMU
624.3 10.9 BMU
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195551 CM Cyg
type Mira
544.5 13.6 FJH
569.4 14.0 FJH
580.5 14.0 FJH
599.4 13.6 FJH
609.4 12.6 FJH
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195818 TX Sge
type Mira
536.5 12.4 FJH
550.4 12.4 FJH
569.4 13.2 FJH
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195849 Z Cyg
type Mira
199.4 13.3 HJO
559.4 13.7 FJH
569.4 13.2 FJH
579.5 12.2 HJO
580.5 12.4 FJH
593.5 10.5 HJO
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200317 WZ Sge
type NR
551.51 14.7 FJH
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200357 S Cyg
type Mira
539.5 14.1 FJH
558.4 13.2 FJH
569.4 13.1 FJH
580.5 12.7 FJH
609.4 11.0 FJH
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2005-14 R Cap
type Mira
568.4 12.7 FJH
577.4 13.1 FJH
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200706 TV Aql
type Mira
536.5 13.8 FJH
546.5 13.5 FJH
570.5 12.6 FJH
577.4 12.6 FJH
601.5 10.6 FJH
608.3 10.3 FJH
617.4 10.3 FJH
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200715A S Aql
type SRa
618.3 11.4 BMU
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200720 FG Sge
type uniek
535.5 12.6 FJH
539.5 12.5 FJH
543.5 12.6 FJH
546.5 12.4 FJH
559.4 12.5 FJH
569.4 12.3 FJH
572.5 12.6 FJH
580.4 13.2 FJH
583.4 13.3 FJH
598.4 :14.1 FJH
601.5 :14.2 FJH
607.4 :14.7 FJH
618.3 13.9 FJH
624.3 13.4 FJH
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200720A ST Sge
type Mira
536.5 11.1 FJH
550.4 11.2 FJH
559.4 12.1 FJH
569.4 12.6 FJH
574.4 12.8 FJH
583.4 13.4 FJH
598.4 :14.7 FJH
607.4 :15.1 FJH
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2008-22 X Cap
type Mira
569.5 :14.6 FJH
577.4 :14.8 FJH
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200812 RU Aql
type Mira
536.5 12.7 FJH
546.5 12.6 FJH
570.5 10.6 FJH
577.4 9.6 FJH
599.4 9.1 FJH
617.4 10.0 FJH
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200916 R Sge
type RVB
618.3 9.1 BMU
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201008 R Del
type Mira
568.5 9.7 FJH
575.3 9.7 FJH
587.5 10.6 FJH
594.4 11.2 FJH
600.5 12.0 JNN
601.4 11.3 FJH
601.6 11.4 CMG
608.3 11.8 FJH
618.3 11.6 BMU
618.4 11.9 FJH
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201130 SX Cyg
type Mira
544.5 12.5 FJH
554.5 13.1 FJH
569.4 13.0 FJH
598.4 13.5 FJH
609.4 13.8 FJH
624.3 14.0 FJH
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201559 CN Cyg
type Mira
544.5 10.8 FJH
558.4 10.5 FJH
572.3 10.8 FJH
587.5 10.9 FJH
598.5 11.6 FJH
609.4 12.1 FJH
619.4 12.8 FJH

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201621 PU Vul  
type NL

536.5 12.0 FJH  
539.5 11.7 BMU  
539.5 11.7 VDJ  
545.5 11.6 BMU  
545.5 11.6 VDJ  
551.5 11.7 BMU  
559.4 12.0 FJH  
563.4 11.5 VDJ  
563.4 11.7 BMU  
568.4 11.8 BMU  
570.5 12.2 FJH  
572.4 11.7 BMU  
572.4 11.8 VDJ  
579.4 11.7 BMU  
579.4 11.7 VDJ  
580.4 12.1 FJH  
590.4 11.7 BMU  
590.4 11.9 FJH  
601.5 12.0 FJH  
607.3 11.7 VDJ  
607.3 11.8 BMU  
617.3 11.6 BMU  
624.3 11.5 BMU  
624.3 12.0 FJH

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201647 U Cyg  
type Mira

199.4 9.3 HJO  
535.4 9.1 HJO  
552.5 9.1 HJO  
579.5 8.9 HJO  
587.5 8.5 FJH  
593.5 8.7 HJO

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202343 V503 Cyg  
type UGSS

601.46 14.0 FJH  
602.45 13.9 FJH

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202412 XZ Del  
type Mira

544.5 13.8 FJH  
551.5 14.3 FJH  
572.5 14.0 FJH

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202509 RY Del  
type Mira

536.5 13.6 FJH  
545.5 13.8 FJH

551.5 14.0 FJH  
566.4 14.6 FJH  
575.3 14.9 FJH  
598.4 <15.4 FJH

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202512 RX Del  
type Mira

536.5 10.8 FJH  
544.5 11.0 FJH  
551.5 11.3 FJH  
566.4 12.5 FJH  
575.3 13.7 FJH  
598.4 14.6 FJH  
607.4 14.9 FJH  
623.4 14.7 FJH

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202752 V1974Cyg  
type N

535.47 13.3 BMU  
536.50 13.2 FJH  
539.45 13.4 BMU  
539.45 13.1 VDJ  
539.47 13.6 FJH  
543.47 13.5 FJH  
543.47 13.4 BMU  
543.47 13.2 VDJ  
545.46 13.5 BMU

550.45 13.7 FJH  
551.46 13.5 BMU  
551.55 13.0 HJO

554.48 13.7 FJH  
563.43 13.6 BMU  
568.41 13.5 BMU  
569.4 13.7 FJH  
571.41 13.6 BMU  
573.41 13.6 BMU  
579.44 13.6 BMU

580.53 13.2 FJH  
591.36 13.7 BMU  
591.37 13.6 FJH  
592.35 13.6 BMU  
593.35 13.7 BMU  
594.35 13.6 BMU

601.47 13.6 FJH  
607.36 13.7 BMU  
609.36 13.8 FJH

624.40 13.6 BMU

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202817 Z Del  
type Mira

199.5 11.8 HJO  
538.5 13.4 FJH  
544.5 13.3 FJH  
551.5 12.2 FJH

553.5 12.0 HJO  
572.4 11.0 BMU  
575.3 10.9 FJH  
580.4 10.9 HJO

587.5 10.6 FJH  
594.4 10.4 BMU  
601.4 10.0 FJH  
617.3 9.9 FJH  
618.4 9.6 BMU

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202918 AG Del  
type Mira

539.5 15.8 FJH  
550.5 :16.0 FJH  
575.6 :16.5 FJH

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202962 BF Cep  
type Mira

538.5 14.7 FJH  
552.5 14.7 FJH  
572.3 14.4 FJH  
579.5 13.7 HJO  
598.5 13.5 FJH  
602.6 13.3 HJO  
609.4 13.5 FJH  
619.4 13.5 FJH

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2034-29 R Mic  
type Mira

570.5 10.4 FJH

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203513 SS Del  
type Mira

536.5 13.6 FJH  
544.5 12.4 FJH  
566.4 12.1 FJH  
575.3 12.8 FJH  
598.4 14.4 FJH  
607.4 15.2 FJH  
623.4 15.2 FJH

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203611 Y Del  
type Mira

538.5 14.9 FJH  
550.5 :15.4 FJH  
568.6 :16.0 FJH

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203718 HR Del  
type Nb

536.52 12.0 FJH

203816 S Del  
type Mira

536.5 12.1 FJH  
544.5 11.7 FJH  
563.4 11.5 JNN  
568.5 11.1 FJH  
572.4 10.5 BMU  
572.4 10.8 JNN  
575.3 10.6 FJH  
587.5 10.5 FJH  
594.4 9.7 BMU  
600.5 10.6 JNN  
601.4 10.5 FJH  
618.4 9.0 BMU  
619.4 9.2 FJH

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203847 V Cyg  
type Mira

544.5 10.2 FJH  
572.3 11.1 FJH  
581.5 11.2 FJH  
587.4 11.5 FJH  
609.4 12.0 FJH  
614.5 12.1 FJH

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2039-05 Y Aqr  
type Mira

538.5 9.9 FJH  
546.5 9.9 FJH  
568.5 9.8 FJH  
574.5 9.5 BMU  
576.5 9.8 FJH  
582.5 9.9 FJH  
594.4 9.8 BMU  
594.4 10.3 VDJ  
609.4 10.7 FJH  
618.4 11.0 BMU  
624.3 11.6 FJH

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203918 ES Del  
type Mira

538.5 :15.0 FJH  
550.5 15.5 FJH  
570.4 15.0 FJH  
575.6 15.4 FJH  
599.4 15.5 FJH  
623.4 14.9 FJH

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204016 T Del  
type Mira

199.5 12.6 HJO  
538.5 12.8 FJH

539.5 :13.5 HJO	551.48 14.5 FJH	-----	618.3 10.0 BMU
544.5 12.8 FJH	563.5 14.7 FJH	205923A R Vul	-----
552.5 13.0 HJO	570.4 <15.5 FJH	type Mira	210612 AN Peg
563.4 12.0 JNN	572.36 13.7 FJH		type Mira
568.5 12.2 FJH	574.39 13.6 FJH	199.5 9.0 HJO	
572.4 10.7 JNN	575.39 13.7 FJH	535.5 8.7 HJO	539.5 11.6 FJH
572.4 11.3 BMU	577.39 13.6 FJH	553.5 8.9 HJO	554.5 11.9 FJH
575.3 10.7 FJH	580.39 13.6 FJH	580.4 10.4 HJO	569.5 12.2 FJH
579.4 10.8 HJO	599.45<15.5 FJH	593.5 11.8 HJO	582.4 12.6 FJH
587.5 10.0 FJH	601.46 14.0 FJH	608.5 12.7 HJO	599.4 13.3 FJH
594.4 9.9 BMU	602.45 14.5 FJH	-----	-----
594.4 9.9 VDJ	623.43 13.9 FJH	2101-24 V Cap	210812 R Equ
594.4 10.1 FJH	624.34 13.8 FJH	type Mira	type Mira
600.5 9.7 JNN	-----		
601.4 10.1 FJH	2044-05 T Aqr	569.5 14.1 FJH	545.5 14.0 FJH
617.3 10.3 FJH	type Mira	577.4 13.9 FJH	551.5 14.2 FJH
618.4 10.7 BMU	-----	-----	567.5 14.4 FJH
-----	538.5 10.9 FJH	2102-21 X Cap	575.4 14.7 FJH
2041-04 W Aqr	546.5 10.7 FJH	type Mira	592.5 14.4 FJH
type Mira	568.5 9.0 FJH		599.4 14.4 FJH
	574.5 9.0 BMU	569.5 :14.5 FJH	609.4 14.3 FJH
538.5 12.9 FJH	576.5 8.7 FJH	577.4 14.0 FJH	618.3 14.2 FJH
546.5 12.9 FJH	582.5 8.1 FJH	-----	-----
568.5 12.6 FJH	594.4 7.8 BMU	210382 X Cep	210818 AS Peg
574.5 13.4 BMU	594.4 7.8 VDJ	type Mira	type Mira
576.5 13.0 FJH	601.4 7.6 FJH		
582.5 13.3 FJH	609.4 7.6 FJH	572.5 15.4 FJH	535.5 14.3 FJH
594.4 13.8 BMU	618.4 7.9 BMU	-----	544.5 13.7 FJH
-----	624.3 8.2 FJH	210405 RR Equ	554.5 12.7 FJH
2042-15 U Cap	-----	type Mira	582.4 10.3 FJH
type Mira	205017 X Del		593.4 10.5 FJH
	type Mira	535.5 <14.6 FJH	601.4 10.4 FJH
569.5 13.2 FJH		550.5 :15.4 FJH	619.3 10.7 FJH
577.4 13.6 FJH	538.5 14.0 FJH	570.5 14.9 FJH	-----
-----	545.5 14.5 FJH	598.4 14.2 FJH	210868 T Cep
204318 V Del	551.5 14.5 FJH	608.3 13.8 FJH	type Mira
type Mira	568.5 14.6 FJH	618.4 13.5 FJH	
	575.4 14.7 FJH	-----	
535.5 13.5 FJH	582.6 15.1 FJH	2105-04 RS Aqr	199.5 10.9 HJO
539.5 :13.2 HJO	607.4 15.0 FJH	type Mira	535.5 11.3 HJO
544.5 13.5 FJH	619.4 14.6 FJH		538.5 10.8 FJH
551.5 13.6 FJH	-----		546.4 10.8 FJH
553.5 :13.6 HJO	205030A UX Cyg	551.5 10.8 FJH	553.5 11.0 HJO
567.5 14.0 FJH	type Mira	568.5 10.0 FJH	572.3 10.7 FJH
575.4 14.1 FJH		574.5 10.2 BMU	573.5 10.7 BMU
582.6 14.5 FJH	199.5 11.3 HJO	576.5 10.1 FJH	579.5 10.7 HJO
598.4 14.9 FJH	535.5 10.3 HJO	582.5 10.0 FJH	581.5 10.6 FJH
607.4 15.0 FJH	553.5 10.8 HJO	594.4 10.4 BMU	587.5 10.5 FJH
623.4 15.4 FJH	579.4 11.5 HJO	594.4 10.4 VDJ	592.4 10.3 BMU
-----	593.5 11.6 HJO	609.4 11.2 FJH	602.6 10.2 HJO
204341 V516 Cyg	608.5 12.2 HJO	618.4 11.4 BMU	618.3 9.7 BMU
type UGSS	-----	624.3 12.3 FJH	625.4 9.7 CMG
	2056-27 RR Cap	-----	-----
536.51 13.7 FJH	type Mira	2105-16 Z Cap	2109-03 RR Aqr
538.48 14.4 FJH		type Mira	type Mira
539.47 15.0 FJH	569.5 :14.7 FJH		
550.44 13.8 FJH	577.4 :14.8 FJH	568.4 12.5 FJH	551.5 12.1 FJH
		577.4 11.6 FJH	568.5 11.7 FJH

574.5	11.1	BMU	594.4	14.0	CMG	552.49	12.0	BMU	594.34	8.3	BMU
576.5	11.7	FJH	599.4	14.3	FJH	553.55	11.9	HJO	594.37	8.3	FJH
582.5	11.6	FJH	608.4	14.1	FJH	554.45	11.8	FJH	594.41	8.4	CMG
594.4	11.2	BMU	618.3	14.0	FJH	558.45	11.8	FJH	597.34	8.7	CMG
594.4	11.4	VDJ	-----			563.39	12.1	BMU	598.38	8.6	FJH
609.4	11.5	FJH	2128-14 Y Cap			563.39	12.0	VDJ	599.37	8.6	FJH
618.4	11.6	BMU	type Mira			563.51	11.8	FJH	599.57	8.7	HJO
624.3	12.0	FJH				565.39	12.0	BMU	601.46	8.6	FJH
-----			569.5 <14.6	FJH		565.39	12.1	VDJ	601.55	8.4	HJO
2116-15 T Cap			577.4 <14.9	FJH		566.35	12.1	FJH	601.56	8.7	CMG
type Mira			-----			567.44	12.0	VDJ	601.56	8.5	BMU
			213678 S Cep			567.44	12.0	BMU	602.54	8.4	HJO
568.4	9.8	FJH	type Mira			568.43	11.7	BMU	602.58	8.6	BMU
577.4	10.0	FJH				568.45	11.9	CMG	602.58	8.4	VDJ
618.3	10.9	BMU	553.5	10.1	HJO	568.59	11.8	HJO	606.62	10.0	HJO
-----			554.5	9.5	FJH	569.35	11.8	FJH	607.32	10.4	BMU
211614 X Peg			567.5	8.9	HJO	569.40	12.0	BMU	607.32	9.8	VDJ
type Mira			572.3	9.3	FJH	570.34	11.8	FJH	607.42	10.5	HJO
			573.5	9.2	BMU	570.59	11.8	HJO	608.42	10.8	HJO
535.5	11.8	FJH	579.5	9.0	HJO	571.43	12.1	FJH	608.44	10.8	FJH
544.5	12.2	FJH	587.5	8.9	FJH	571.43	11.9	BMU	609.36	11.2	FJH
554.5	12.3	FJH	602.6	8.6	HJO	571.43	12.0	VDJ	609.42	11.2	HJO
566.5	13.1	FJH	619.3	8.7	BMU	572.36	12.1	FJH	614.50	11.9	FJH
575.4	13.5	FJH	625.4	8.6	CMG	572.41	12.0	BMU	617.30	12.0	BMU
582.5	13.8	FJH	-----			572.41	12.2	VDJ	617.32	12.2	FJH
592.5	13.8	FJH	213753 RU Cyg			573.41	12.0	BMU	618.30	12.2	BMU
599.4	13.8	FJH	type SR			573.46	12.0	HJO	619.30	12.1	BMU
601.6	13.5	JNN				574.39	12.0	FJH	619.37	11.8	FJH
608.3	13.6	FJH	199.5	8.7	HJO	574.44	12.0	BMU	623.46	11.8	FJH
618.3	13.1	FJH	553.5	8.5	HJO	575.39	12.4	FJH	623.52	11.8	HJO
-----			579.5	8.5	HJO	577.39	12.3	FJH	624.30	12.1	BMU
2120-30 S Mic			602.6	8.4	HJO	578.45	11.9	HJO	-----		
type Mira			-----			579.41	12.1	BMU	214012 TU Peg		
			213843 SS Cyg			579.42	12.4	HJO	type Mira		
577.4	13.6	FJH	type UGSS			580.39	12.3	FJH			
-----						580.43	12.2	BMU	538.5	13.6	FJH
212216 TV Peg			199.46	12.0	HJO	580.45	12.3	HJO	545.5	13.5	FJH
type Mira			535.44	8.4	BMU	581.47	12.2	BMU	566.5	13.0	FJH
			535.44	8.3	VDJ	581.47	12.0	VDJ	574.4	13.0	FJH
535.5	13.9	FJH	535.49	8.4	HJO	582.41	12.2	FJH	582.5	12.4	FJH
545.5	14.3	FJH	539.43	8.5	BMU	582.46	12.3	HJO	593.4	12.1	FJH
550.5	14.6	FJH	539.44	8.2	VDJ	583.39	12.1	BMU	608.4	11.9	FJH
569.5	<15.5	FJH	539.54	8.6	HJO	583.39	12.2	VDJ	619.4	11.2	FJH
576.5	:15.3	FJH	543.43	10.0	BMU	583.41	11.8	FJH	-----		
599.4	15.1	FJH	543.44	10.4	VDJ	583.49	12.3	HJO	214024 RR Peg		
623.4	14.4	FJH	543.47	10.2	HJO	585.40	12.1	FJH	type Mira		
-----			544.45	10.6	BMU	587.48	11.8	FJH			
212610 UU Peg			544.45	10.5	VDJ	590.34	11.8	FJH	538.5	9.6	FJH
type Mira			544.48	10.5	FJH	590.34	12.0	BMU	546.5	9.6	FJH
			545.44	10.9	BMU	591.35	12.0	BMU	572.3	10.6	FJH
535.5	14.5	FJH	545.44	10.8	VDJ	591.37	11.9	FJH	582.4	10.8	FJH
545.5	14.6	FJH	546.44	11.4	BMU	592.33	9.4	BMU	594.3	11.3	FJH
550.5	14.8	FJH	546.44	11.1	VDJ	592.47	8.8	FJH	608.4	12.1	FJH
566.5	14.6	FJH	546.50	11.3	FJH	592.55	8.9	HJO	618.4	12.4	FJH
573.5	14.7	FJH	550.45	12.0	BMU	593.34	8.4	BMU			
582.5	14.4	FJH	550.54	11.8	FJH	593.35	8.2	FJH			
592.5	14.4	FJH	551.45	12.0	BMU	593.50	8.4	HJO			

-----	type Mira	568.49 12.1 FJH	
214443 WY Cyg		569.47 12.1 FJH	199.5 8.1 HJO
type Mira	535.5 14.1 FJH	569.54 11.5 HJO	554.5 8.3 HJO
	545.5 13.9 FJH	570.35 12.1 FJH	554.5 8.4 FJH
546.5 14.2 FJH	551.5 13.7 FJH	571.44 12.2 FJH	571.4 8.1 FJH
569.4 14.2 FJH	566.5 13.0 FJH	572.36 12.3 FJH	573.5 8.1 HJO
599.5 13.8 FJH	573.5 13.0 FJH	573.49 12.4 FJH	587.5 8.5 FJH
623.5 13.2 FJH	574.5 12.7 BMU	574.40 12.3 FJH	608.4 9.4 HJO
-----	581.5 12.5 FJH	574.48 12.7 BMU	-----
215605 V Peg	593.4 12.5 FJH	575.39 12.5 FJH	222924 SS Peg
type Mira	608.4 11.9 FJH	576.42 12.6 FJH	type Mira
	618.4 11.4 FJH	577.39 12.7 FJH	
535.5 14.4 FJH	619.3 11.3 BMU	579.53 12.6 HJO	544.5 12.0 FJH
545.5 :15.1 FJH	-----	580.40 12.7 FJH	554.5 11.8 HJO
550.5 15.0 FJH	220613 Y Peg	582.53 12.7 FJH	554.5 12.3 FJH
566.5 14.9 FJH	type Mira	591.39 12.6 BMU	566.5 12.8 FJH
573.5 14.3 FJH		591.39 12.8 FJH	568.5 12.6 HJO
581.5 14.4 FJH	535.5 14.0 FJH	592.54 12.6 FJH	574.4 13.1 FJH
598.4 13.3 FJH	545.5 14.5 FJH	593.48 12.7 HJO	581.5 12.7 HJO
600.6 13.6 JNN	551.5 14.7 FJH	594.37 12.6 CMG	581.5 13.0 FJH
608.4 12.9 FJH	568.6 14.9 FJH	598.42 12.1 FJH	592.5 13.1 FJH
618.3 12.0 FJH	576.5 15.1 FJH	599.45 12.1 FJH	594.4 12.8 BMU
619.3 11.5 BMU	598.4 :15.3 FJH	601.38 12.3 FJH	601.6 13.4 HJO
-----	607.4 14.8 FJH	601.56 12.2 HJO	608.4 13.5 HJO
2157-17 U Aqr	619.4 13.8 FJH	602.45 12.3 FJH	618.4 13.6 FJH
type RCB	-----	602.55 12.4 HJO	-----
	220714 RS Peg	607.39 12.7 FJH	223841 R Lac
570.5 12.2 FJH	type Mira	609.33 12.7 FJH	type Mira
-----		619.33 12.2 BMU	
2158-28 S PsA	535.5 13.9 FJH	619.37 12.1 FJH	535.6 14.7 FJH
type Mira	545.5 14.0 FJH	623.39 11.7 FJH	546.5 15.1 FJH
	551.5 14.3 FJH	624.33 11.7 FJH	571.4 14.8 FJH
573.6 12.8 FJH	566.5 14.6 FJH	-----	580.6 14.9 FJH
-----	573.5 14.6 FJH	2212-30 R PsA	592.5 14.5 FJH
215934 RT Peg	581.5 14.7 FJH	type Mira	609.4 14.8 FJH
type Mira	592.5 :15.0 FJH		618.4 14.8 FJH
	598.4 14.9 FJH	573.6 9.1 FJH	-----
539.5 14.4 FJH	607.4 14.9 FJH	-----	2251-20 S Aqr
550.5 14.8 FJH	623.4 14.8 FJH	2213-21 X Aqr	type Mira
570.4 15.0 FJH	-----	type Mira	
599.5 14.6 FJH	220912 RU Peg		570.5 9.0 FJH
623.4 14.0 FJH	type UGSS	567.5 9.1 FJH	-----
-----		-----	225542 SZ And
220133B RZ Peg	535.47 12.2 FJH	222129 RV Peg	type Mira
type Mira	538.48 12.3 FJH	type Mira	
	539.48 12.3 FJH		535.5 14.5 FJH
538.5 11.2 FJH	543.46 12.4 FJH	544.5 13.1 FJH	550.5 15.2 FJH
554.5 10.7 FJH	545.47 12.4 FJH	554.5 13.4 FJH	573.5 15.9 FJH
572.3 9.3 FJH	546.47 12.4 FJH	567.5 13.6 FJH	-----
582.4 9.2 FJH	550.45 12.8 FJH	575.4 13.6 FJH	225914 RW Peg
-----	551.47 12.4 FJH	583.4 13.5 FJH	type Mira
220134 SV Peg	552.46 12.6 FJH	598.5 14.1 FJH	
type SRa	554.46 12.5 FJH	608.4 14.6 FJH	539.5 13.6 FJH
	563.52 12.8 FJH	623.4 14.9 FJH	550.5 14.0 FJH
581.5 13.2 FJH	566.41 11.9 FJH	-----	567.5 15.1 FJH
-----	567.40 11.8 FJH	222439 S Lac	573.5 15.1 FJH
220412 T Peg	568.43 11.8 CMG	type Mira	580.6 15.1 FJH



592.5	14.2	FJH	231508	S Peg	type Mira	543.45	12.1	BMU			
598.4	13.5	FJH				543.46	12.5	VDJ			
600.5	13.2	JNN				543.47	12.1	FJH			
601.6	13.4	HJO	538.5	9.9	FJH	544.46	12.1	BMU			
608.4	12.8	FJH	546.5	10.4	FJH	544.46	12.5	VDJ			
608.4	13.0	HJO	567.5	11.0	FJH	545.45	12.2	BMU			
619.3	11.7	BMU	574.5	11.1	BMU	545.45	12.4	VDJ			
619.4	11.9	FJH	575.4	11.0	FJH	546.44	12.1	BMU			
-----			582.4	11.1	FJH	546.49	12.1	FJH			
230110	R Peg		598.5	12.0	FJH	550.46	12.1	FJH			
	type Mira		600.6	12.1	JNN	550.46	12.1	BMU			
			608.4	12.2	FJH	551.45	12.1	BMU			
538.5	9.0	FJH	618.4	12.4	FJH	551.56	12.1	HJO			
546.5	8.5	FJH	-----			552.49	12.0	BMU			
572.5	8.1	JNN	231539	RY And	type Mira	553.53	12.3	HJO			
574.5	8.2	BMU				554.48	12.1	FJH			
582.4	8.2	FJH				554.55	12.1	HJO			
600.5	8.2	JNN	554.5	10.9	HJO	552.47	14.3	FJH			
619.3	9.0	BMU	568.5	11.5	HJO	567.46	14.4	FJH			
-----			579.5	12.0	HJO	569.47	14.5	FJH			
230759	V Cas		581.4	12.1	CMG	571.44	14.5	FJH			
	type Mira		601.6	12.6	HJO	572.51	14.4	FJH			
			608.4	12.6	HJO	573.54	14.5	FJH			
546.5	10.7	FJH	-----			575.39	14.6	FJH			
554.5	9.9	HJO	231817	IP Peg	type UGSS+E	577.39	14.5	FJH			
567.5	9.6	HJO				592.54	14.4	FJH			
571.4	9.3	FJH				598.54	14.4	FJH			
573.4	8.9	CMG	573.50	15.4	FJH	599.48	14.4	FJH			
573.4	9.0	BMU	575.57:15.7	FJH		601.45	14.6	FJH			
579.5	8.4	HJO	576.54	15.4	FJH	608.43	14.5	FJH			
583.4	8.1	BMU	577.53:16.0	FJH		609.44	14.5	FJH			
583.4	8.2	FJH	591.40	12.4	BMU	619.38	12.6	FJH			
593.4	7.9	FJH	591.40	12.5	FJH	623.41	11.5	FJH			
594.4	7.6	BMU	592.53	12.2	FJH	624.34	11.5	FJH			
602.6	8.1	HJO	598.43	12.8	FJH	-----					
614.4	8.2	FJH	599.45	12.4	FJH	232642	BG And	572.40	12.2	VDJ	
618.3	8.2	BMU	601.45	13.3	FJH		type Mira	573.4	12.2	CMG	
625.4	8.4	CMG	602.45	13.3	FJH			573.40	12.1	BMU	
-----			607.39	14.4	FJH	535.6	14.2	FJH	574.42	12.1	FJH
231425	W Peg		608.44:15.5	FJH		550.5	14.6	FJH	574.44	12.1	BMU
	type Mira		-----			567.5	14.2	FJH	576.44	12.2	FJH
			231839	BU And	type Mira	583.4	12.8	FJH	579.43	12.0	SAQ
538.5	12.7	FJH				592.5	11.8	FJH	579.43	12.1	BMU
567.5	12.6	FJH				608.4	10.5	FJH	579.43	12.2	VDJ
568.5	11.9	HJO	535.6	13.0	FJH	619.4	10.2	FJH	580.40	12.1	FJH
574.5	11.6	BMU	545.5	13.5	FJH	-----			580.44	12.2	BMU
575.4	12.6	FJH	554.5	:13.6	HJO	233656	N93 Cas		580.44	12.2	VDJ
579.5	11.9	HJO	567.5	13.9	FJH		type N		580.57	12.0	HJO
581.5	12.3	FJH	568.5	13.6	HJO				581.4	12.2	CMG
592.3	10.8	BMU	574.4	14.0	FJH	535.45	12.2	BMU	581.48	12.1	BMU
593.4	11.6	FJH	579.5	13.9	HJO	535.45	12.4	VDJ	581.48	12.2	VDJ
601.4	11.3	JNN	583.4	14.2	FJH	535.49	12.0	SAQ	582.48	12.1	FJH
601.6	11.2	HJO	592.5	14.0	FJH	535.52	12.2	HJO	583.39	12.1	BMU
608.4	10.5	HJO	608.4	14.3	FJH	535.56	12.2	FJH	583.44	12.1	VDJ
614.4	10.9	FJH	619.4	14.2	FJH	538.49	12.2	FJH	583.51	12.2	HJO
619.3	10.6	BMU	-----			539.44	12.1	BMU	590.36	12.1	BMU
-----			232144	AL And		539.44	12.5	VDJ	590.37	12.0	FJH

591.36	12.0	BMU	623.4	14.8	FJH	546.5	12.3	FJH
591.37	12.0	FJH	625.4	14.5	CMG	554.5	12.5	FJH
592.34	12.1	BMU	-----			566.5	12.6	FJH
592.61	12.2	HJO	235255	WY Cas		573.4	12.5	CMG
593.34	12.1	BMU	type Mira			576.5	13.1	FJH
594.34	12.0	BMU				582.5	13.6	FJH
599.46	12.2	FJH	538.5	10.0	FJH	592.4	13.8	FJH
601.46	12.2	FJH	546.5	9.3	FJH	609.4	14.2	FJH
602.58	12.1	BMU	572.5	8.8	FJH	623.4	14.3	FJH
602.58	12.2	VDJ	573.4	9.3	CMG	625.4	14.1	CMG
607.32	12.0	BMU	580.4	8.9	FJH	-----		
607.32	12.2	VDJ	587.5	8.9	FJH	235939	SV And	
609.43	12.2	FJH	593.4	9.0	FJH	type Mira		
617.30	12.1	BMU	614.4	9.3	FJH			
618.29	12.0	BMU	625.4	9.4	CMG	545.5	11.8	FJH
618.4	12.0	FJH	-----			554.5	12.2	FJH
619.30	12.1	BMU	235350	R Cas		566.5	12.5	FJH
623.5	12.2	FJH	type Mira			573.5	12.9	FJH
623.53	12.2	HJO				592.5	13.2	FJH
624.30	12.1	BMU	535.5	10.7	BMU	599.5	13.5	FJH
-----			567.5	10.1	HJO	608.4	13.8	FJH
2338-15	R Agr		572.5	10.5	FJH	618.4	13.9	FJH
type Mira			573.4	9.3	BMU			
			573.4	9.3	CMG			
570.5	10.5	FJH	580.5	9.5	HJO			
-----			581.5	10.4	FJH			
233956	Z Cas		583.4	9.2	BMU			
type Mira			587.5	9.7	FJH			
			594.4	8.9	BMU			
535.6	13.2	FJH	602.6	8.6	HJO			
546.5	13.4	FJH	614.4	7.6	FJH			
551.6	13.4	HJO	618.3	6.7	BMU			
554.5	13.4	FJH	625.4	5.8	CMG			
566.5	13.8	FJH	-----					
571.6	13.6	HJO	235525	Z Peg				
573.4	13.8	CMG	type Mira					
576.5	13.9	FJH						
580.6	:13.8	HJO	535.5	12.9	FJH			
582.5	14.0	FJH	545.5	13.2	FJH			
599.5	14.2	FJH	551.5	13.3	FJH			
609.4	14.3	FJH	567.5	13.3	FJH			
623.4	14.5	FJH	571.6	13.3	HJO			
-----			574.5	13.3	BMU			
235053	RR Cas		575.4	13.3	FJH			
type Mira			582.5	13.1	FJH			
			592.5	13.0	FJH			
538.5	12.2	FJH	601.4	12.8	FJH			
546.5	12.4	FJH	601.4	12.9	JNN			
554.5	13.0	FJH	601.6	13.1	HJO			
566.5	13.5	FJH	608.4	12.6	HJO			
571.6	14.1	HJO	614.4	12.7	FJH			
573.4	13.8	CMG	619.3	12.2	BMU			
576.5	13.9	FJH	-----					
580.6	:13.8	HJO	235855A	Y Cas				
582.4	14.1	FJH	type Mira					
599.5	14.4	FJH						
609.4	14.7	FJH	538.5	12.2	FJH			