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Variabilia verschijnt in principe 4x per jaar.

Contributie : f17.50 per jaar te voldoen op Postbanknummer 489829 tgv

Penningmeester Werkgroep Veranderlijke Sterren, Postbus 800, 9700 AV Groningen.

Variabilia nr.55

WAARNEMER	CODE	APR 98	MEI 98	JUN 98	TOTAAL
Reinder Bouma	BMU	81	184	71	39
Erwin van Ballegoij	BVE	1	21	17	336
Georg Comello	CMG	529	939	722	2190
Holtrop	HJO		18	7	25
Robert Johanns	JRJ	181	207	117	505
Edwin van Dijk	VDE		58	8	66
		792	1427	942	3161

"Zwakker dan" - schattingen, zinloos of zinvol?

G.Comello

Af en toe laait ergens weer een discussie op tussen voor- en tegenstanders van het rapporteren van schattingen "zwakker dan". Hierbij geeft de waarnemer aan dat hij de desbetreffende ster niet heeft gezien. Bijvoorbeeld : W Leo <13.7 wil zeggen dat in het gebruikte instrument W Leo onzichtbaar was. Vaak wordt dan als referentie de zwakst zichtbare vergelijkingsster genomen. Het is dus een negatieve schatting, in tegenstelling tot de positieve waarbij de waarnemer de veranderlijke eenduidig heeft kunnen zien.

Onlangs was deze discussie weer te volgen op vsnet-chat. Ook op de AAVSO-chat pagina heeft een dergelijke discussie als eens plaats gevonden.

Voordat ik een oordeel vel over het nut of niet nuttig zijn van deze negatieve schattingen, moeten we ons naar mijn mening afvragen wat we met onze waarnemingen beogen. Welke informatie geeft een schatting? Naar mijn opvatting willen we iets te weten komen omtrent het gedrag van een ster. Het lijkt weinig relevant om te weten dat een waarnemer een bepaalde ster niet heeft gezien. De bovengenoemde negatieve schatting laat zien dat hij de ster in zijn kijker niet kon zien, maar zegt nog weinig over de helderheid van W zelf op dat moment, hoogstens dat W niet helder maar zwak was. Nu moeten we wel verschil maken tussen de typen veranderlijke sterren. De criteria van langzame veranderlijke sterren als Mira en SR verschillen van die voor snelle, eruptieve veranderlijken als UG, N en SN. Dan kom ik tot de volgende conclusies :

1) Mira's, SR, RV enz :

Negatieve schattingen van deze sterren zijn vrijwel altijd zinloos. Tegenwoordig worden deze sterren door waarnemers met grote instrumenten gedurende vrijwel de gehele lichtwisseling gevolgd. Een schatting van S Cas < 13.5 met een 15-cm kijker is zinloos als iemand anders haar 15.5 met een 31-cm schat. Dat komt veelvuldig voor, we leven niet meer in de jaren '50 toen een 10-cm kijker al groot werd genoemd en 12.5 als heel zwak werd gezien. Veel waarnemers beschikken over kijkers met openingen van 25-cm en groter en nemen de sterren ook in hun minimum waar

Die < 13.5 levert ook geen zinvolle informatie op over het gedrag van S Cas. De waarnemer met de 15-cm kan zich daarom veel beter concentreren op helderder veranderlijken en die welke rond het maximum zijn. Deze zijn weer minder geschikt voor de grotere kijker. De waarnemers doen er daarom goed aan om de z.g "Predictions" van de AAVSO of AFOEV te raadplegen om zich tijd te sparen bij het waarnemen en zinvollere positieve schattingen te doen : sterren genoeg!

2) UG, RCB, N, SN enz., de "snellere" en onvoorspelbare veranderlijken :

In grote lijnen geldt hiervoor hetzelfde, zij het dat bij minder bekende of weinig waargenomen zwakke sterren een negatieve schatting wel een waarde kan hebben. Maar bij de bekende sterren als U Gem, Z Cam, SS Aur, RX And enz. zijn negatieve schattingen weinig zinvol. Bepaald belachelijk vind ik het om U Gem als < 10.9 te rapporteren zoals onlangs gebeurde. Deze ster wordt ook in haar minimum goed gevolgd, net zoals SY en YZ Cnc bijvoorbeeld. Daarbij komt dat dit type sterren meestal meer dan 90% van de tijd in het minimum doorbrengt.

Ter illustratie is de figuur met de lichtkromme van het diepe minimum van RX And van 1997 toegevoegd. In fig. a) zijn alle binnengekomen waarnemingen, dus ook de "zwakker dan", meegenomen. In fig. b), de "gekuiste" versie, nu zijn alle "zwakker dan" weggelaten. Behalve dat de figuur overzichtelijker is, blijkt duidelijk dat de negatieve schattingen niets aan informatie bijdragen. Er zijn voldoende waarnemers met grote instrumenten die voor een gesloten kromme kunnen zorgen, zelfs voor een ster van de 15e grootte.

Als argument voor "zwakker dan" bij eruptieve sterren wordt soms gebruikt dat de snelheid van de helderheidsstijging bij een uitbarsting beter gekend zal zijn, evenals de frequentie. Naar mijn mening valt dit in de praktijk zwaar tegen.

Naschrift

Zelf vind ik het doen van "zwakker dan" - schattingen tijdverspilling. Ik heb wel eens de indruk dat sommige waarnemers door het veelvuldig doen ervan snel willen scoren. Ergerlijk vind ik dat zulke schattingen volwaardig meetellen bij de totaalstellingen.

De Werkgroep accepteert deze negatieve schattingen niet. Een compromis zou zijn om positieve schattingen te scheiden van negatieve en deze laatste bij de totaalstelling tussen haakjes te vermelden, zonder dat ze worden meegenomen bij deze totaalstelling.

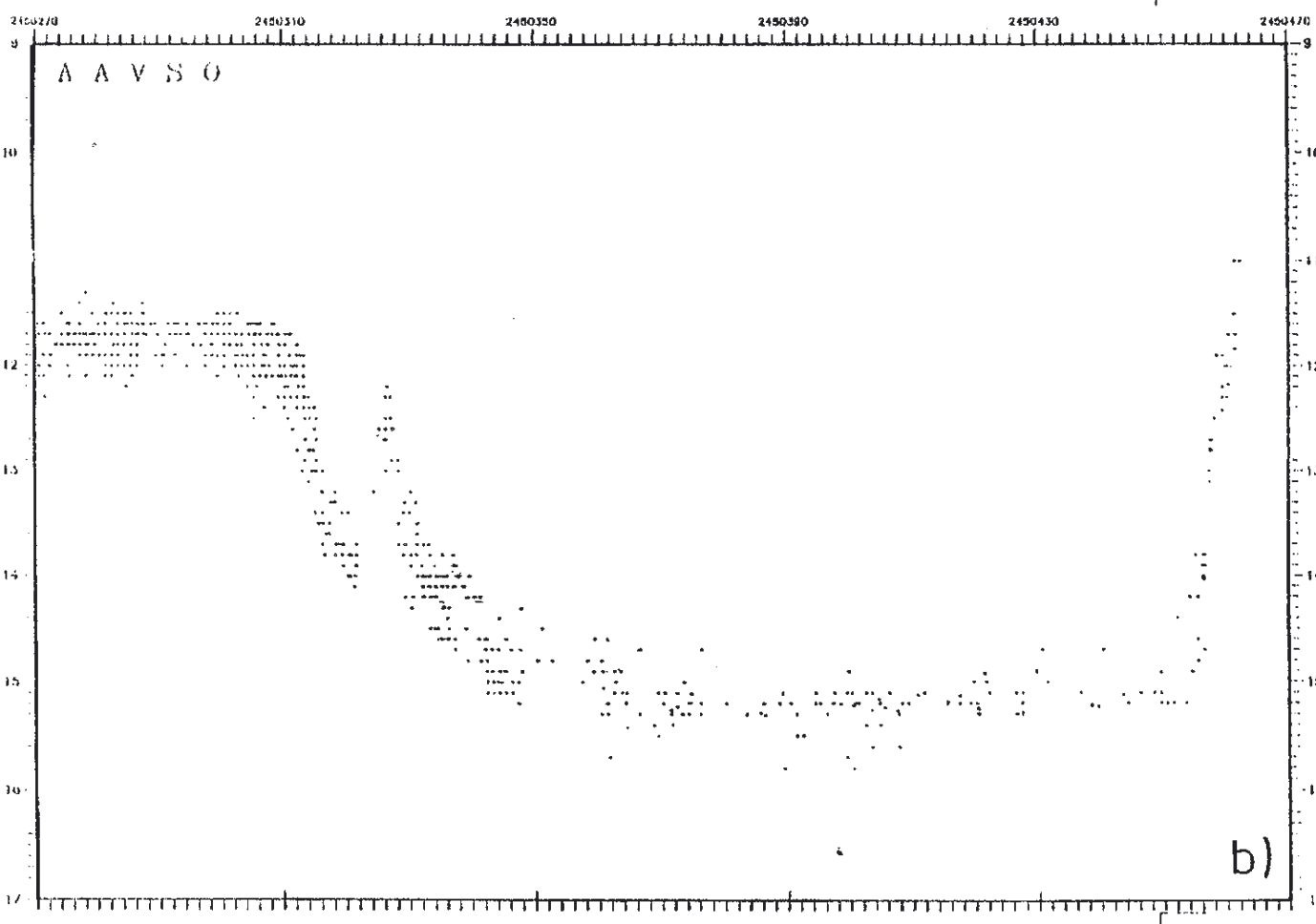
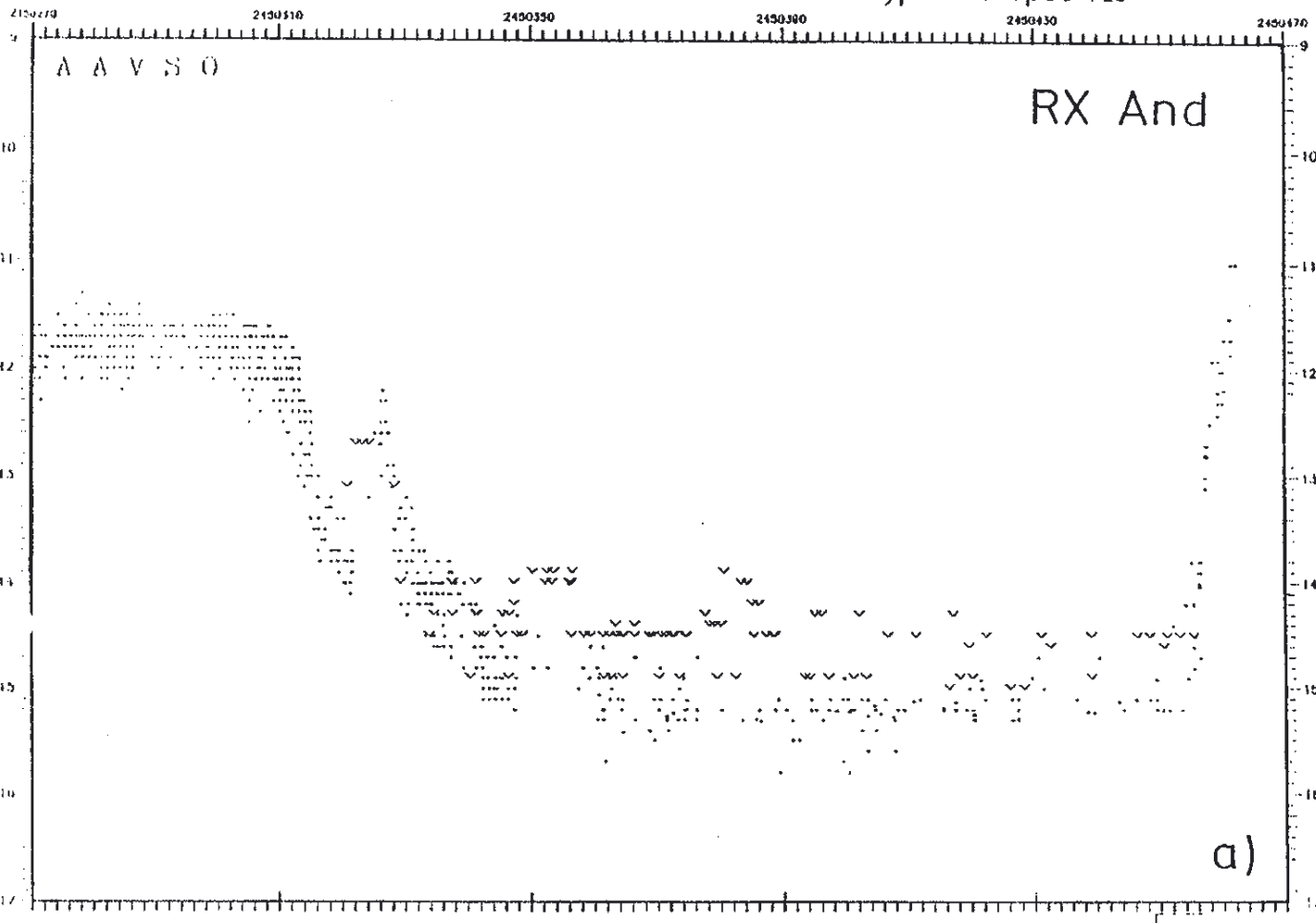
(Eén keer bleken negatieve schattingen wel waarde te hebben gehad. Een uitbarsting van X Leo van waarnemer POY bleek door negatieve schattingen van de waarnemers BMU en CMG onjuist te zijn).

Voor de volledigheid zij vermeld dat er nog een derde type schatting bestaat en wel de "ongeveer-schatting", bijvoorbeeld : W Leo :15.2. Dus de magnitude voorafgegaan door de dubbele punt. Hiermede wil de waarnemer aangeven dat de ster wel is gezien maar dat hij onzeker is van de schatting. Bijvoorbeeld door slechte omstandigheden, het ontbreken van goede vergelijkingssterren, een heldere begeleider of de veranderlijke is aan de grensgrootte van het instrument enz. Deze schattingen zijn wel van waarde, zij het minder dan de positieve en worden wel opgenomen.

Slotopmerking

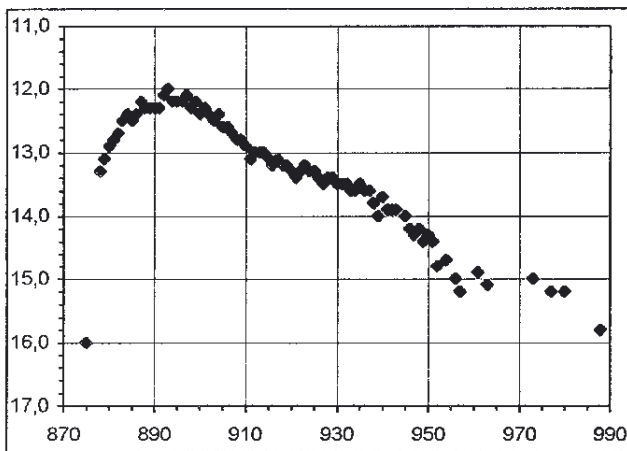
Het staat natuurlijk iedereen vrij om negatieve schattingen te verrichten en deze te noteren, voor het geval dat.... Maar rapporteren naar de Werkgroep moet ten sterkste worden ontraden. Beter is het om zich te concentreren op positieve schattingen. En mocht U een "tekort" aan sterren hebben, dan heb ik hier een goed gevuld kaartenarchief met sterren die dringend meer waargenomen zouden moeten worden.

Met dank aan Reinder Bouma voor nalezen en aanvullende opmerkingen.



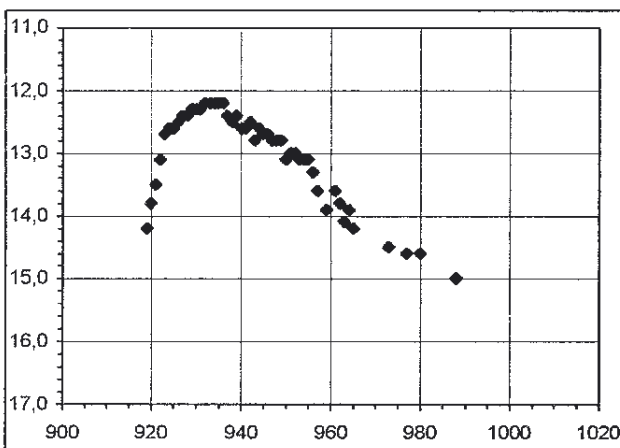
1997.0

Supernovae SN 1998 S in ngc 3877 (UMa), SN 1998 AQ in ngc 3982 (UMa), SN 1998 BU in ngc 3368 (M 96 in Leo), en SN 1998 BP in ngc 6495 (Her) waren halverwege mei allen in één nacht te zien! Nooit eerder is binnen de WVS zo'n groot aantal supernovae in één nacht waargenomen! Van de eerste drie zijn op deze pagina de lichtcurven opgenomen, gebruik makende van data van vs-net (cv-circulaires) SN 1998 BP was dermate zwak en kort zichtbaar dat deze hier is weggelaten.



SN 1998 S in ngc 3877 (UMa).

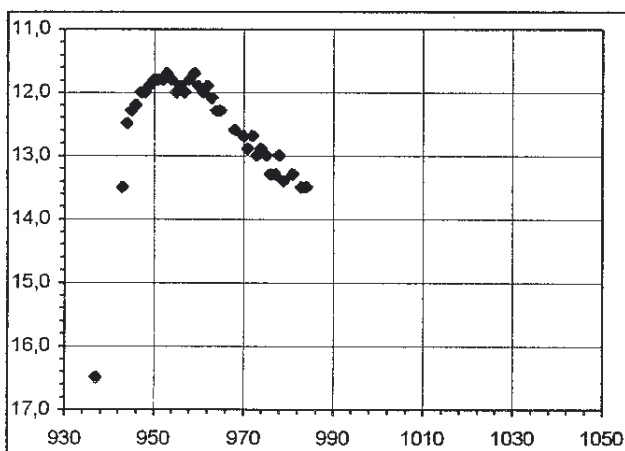
SN 1998 S werd ontdekt door Zhou Wan op een opname van maart 2.68 UT genomen met de 60 cm telescoop op het Beijing Astronomical Observatory als een sterretje van magnitude 15. Naast waarnemingen van amateurs worden ook vele 'grote' kijkers gericht op SN 1998 S. Uit spectra genomen met de Keck-I en 2 blijkt het te gaan om een type II supernova met een 'blauw' continu spectrum waarop H en He emissielijnen staan. Prominent aanwezige He[II] en N[III]/C[III] emissielijnen verdwenen binnen 2 weken, terwijl er diverse absorptielijnen zichtbaar werden, met name P-Cyg achtige absorptielijnen. Ook werden absorptielijnen van Mg[II], C[III], Si[IV], O[I] en N[V] zichtbaar. (IAU 6829/30/31/32/35/41/45/60)



SN 1998 AQ in ngc 3982 (UMa)

SN 1998 AQ is ontdekt door Mark Armstrong op april 13.05 UT met een 26 cm telescoop tijdens een sessie van de U.K. Nova/Supernova Patrol, toen deze magnitude 15 had bereikt. Spectra genomen met diverse grote telescopen toonden eveneens een blauwachtig continu spectrum, echter met brede absorptielijnen van o.a. Si[II], S[II], Fe[II] en Mg[II]. Hieruit blijkt dat SN 1998 AQ van het type Ia is. (IAU Circulaire's 6875/78/80)

"Type SN I wordt doorgaans geassocieerd met Populatie II sterren, daar waar type SN II doorgaans in Populatie I sterren voorkomen"



SN 1998 BU in ngc 3368 (Leo)

SN 1998 BU is op april 9.9 UT ontdekt door Mirko Villi in Italië. Onafhankelijk van deze ontdekking werd SN 1998 BU ook gemeld vanuit Japan, Tsjechië en de V.S. op 10 april. Gelegen in M96 zal deze supernova wel de meest bekeken van de 4 zijn.

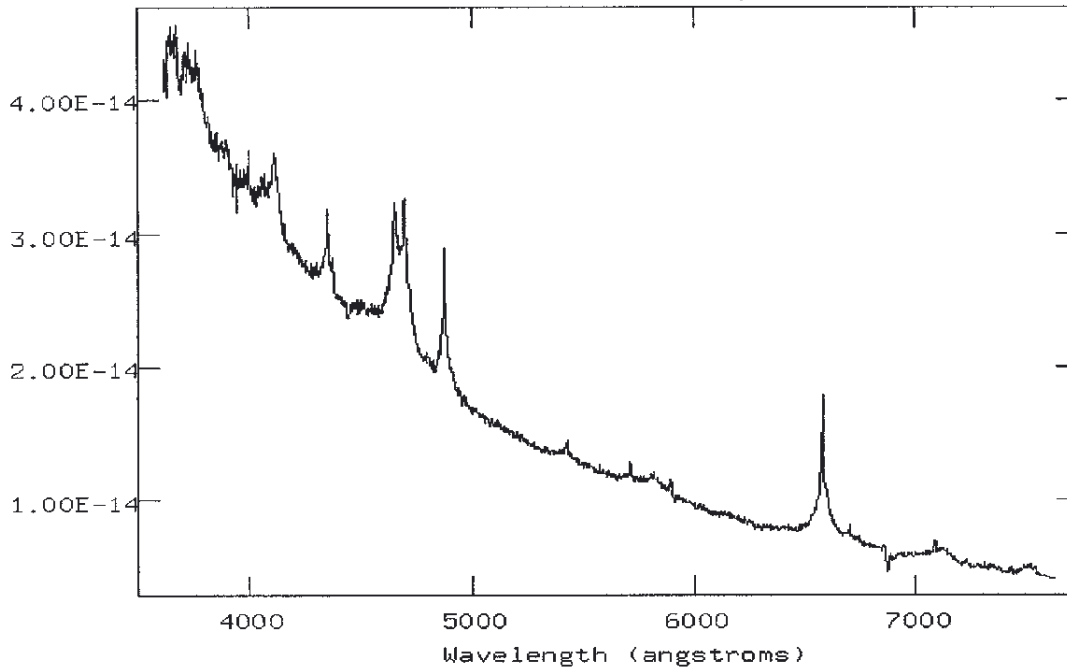
Diverse spectrogrammen geven sterke interstellaire Na[I] absorptielijnen en diepe, brede absorptielijnen van Si[II] te zien. Ook SN 1998 BU is als type SNI geklasseerd. (IAU Circulaire's 6899/6902/05/18/26)

Voor spectra en ccd opnamen van vele supernovae door amateurs en professionals, zie o.a.:

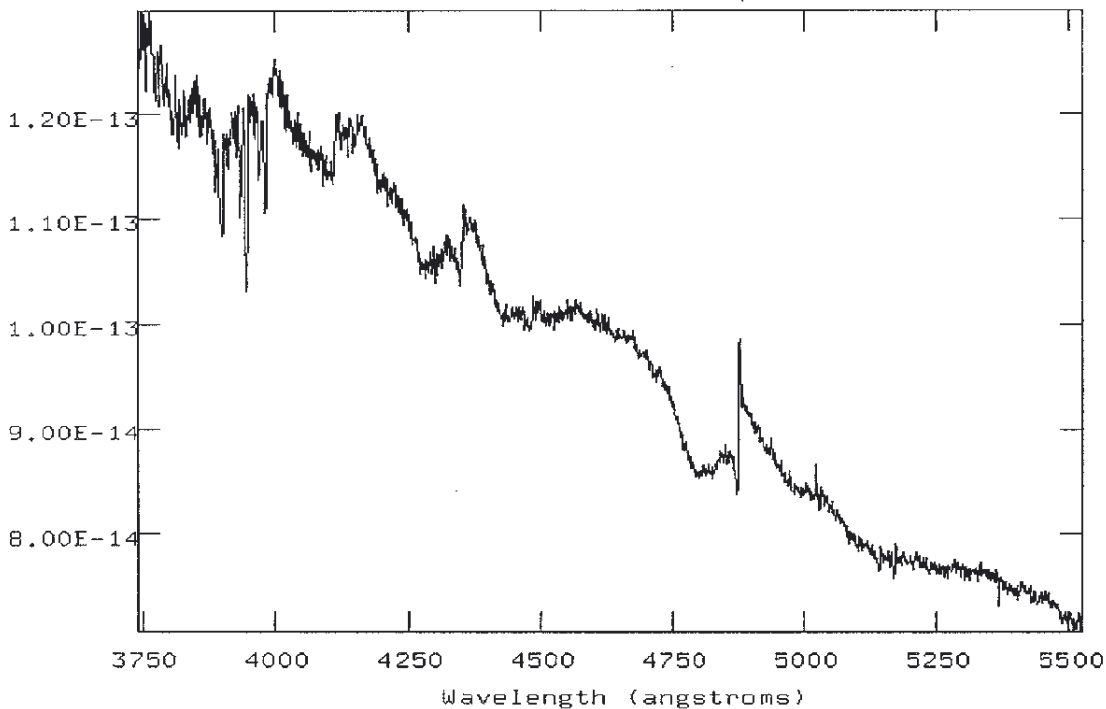
<http://www.supernovae.org/isn.html>

http://www.ifa.hawaii.edu/~dahle/Recent_SN.html

NDAO/IRAF V2.10.4EXPORT peterg@mars Thu 17:35:53 05-Mar-98
[sn98s]: SN1998S 600, ap:1 beam:1



NDAO/IRAF V2.10.4EXPORT peterg@brattle Wed 18:19:59 25-Mar-98
[sn98s]: SN1998S 900, ap:1 beam:1



Het bovenste spectrum van SN 1998 S genomen op 5 maart 1998 toont duidelijk het continue spectrum, welk naar het blauw toe in intensiteit toeneemt. Bovenop dit spectrum staan de emissielijnen van o.a. H α , H β en H γ . Tussen de H β en H γ lijnen zien we een bubbele piek. Deze is afkomstig van He[II] en N[III]/C[III]. De zwakke piekjes tussen de H α en H β lijnen behoren toe aan He[II] en C[IV].

Het onderste spectrum geeft SN 1998 S op 25 maart 1998. Duidelijk zijn nog steeds de H β en H γ emissielijnen. Het paar afkomstig van He[II] en N[III]/C[III] is echter verdwenen. Hetzelfde geldt voor de kleine piekjes van He[II] en C[IV]. Er zijn nu echter vele brede absorptie lijnen zichtbaar geworden.

Chi Cygni

Robert J. Johanns

De mira-ster chi Cygni werd in 1686 ontdekt door de Duitser Gottfried Kirch. In 1603 was de ster echter al opgenomen in de beroemde sterrenatlas van de Duitser Bayer. Op die kaart werd chi als een ster van de 5^e grootte getekend. Het was ook Bayer die de naam chi Cygni gaf aan de ster waarvan pas 83 jaar later werd ontdekt dat ze variabel was.

Nadat in 1596 Omicron Ceti (Mira) was ontdekt door Fabricius, zou het nog vele jaren duren alvorens er meerdere mira-sterren werden ontdekt. Chi Cygni was in 1686 de tweede, gevolgd door R Hydrae (Maraldi ; 1704), R Delphini (Hencke ; 1751), R Leonis (Koch ; 1782) en R Virginis (Harding ; 1809). Tegenwoordig kennen we vele duizenden mira-sterren. Mira en chi Cygni zijn echter de enige twee mira-sterren welke we in het maximum geregeld met het blote oog kunnen zien.

Pulserende rode reuzen

Mira-sterren worden gekenmerkt door hun pulserende heldereid. Ze doen dit met enige regelmaat en hebben perioden uiteenlopend van 100 tot 600 dagen. Ze hebben een verschil tussen maximale en minimale helderheid van 2½ tot 10 magnituden. Chi Cygni heeft een periode van gemiddeld 407 dagen en varieert in helderheid tussen magnitude 5 en 14. Ze haalt soms zelfs een helderheidsverschil van maar liefst 11 magnituden (3-14). Chi Cygni is daarmee absoluut koploper onder de mira-sterren.

Een mira-ster is een rode reus, meestal van spectraal type M. Door niet geheel bekende mechanismen treden in mira-sterren behoorlijke veranderingen op in diameter en oppervlakte temperatuur. De verschillen in diameter kunnen oplopen tot ca. 20%. Temperaturen variëren meest tussen 1600 en 2500 K. Een maximum treedt op wanneer de ster een kleinste diameter heeft met een daarbij behorende hoogste temperatuur. In het minimum is de diameter het grootst en de temperatuur het laagst. Het is dus met name de temperatuur welke de lichtsterkte bepaalt.

Hiernaast is het ook nog zo dat in het maximum emissie van waterstof de lichtsterkte doet toenemen, daar waar in het minimum absorptielijnen van met name TiO de lichtsterkte doet afnemen.

In het specifieke geval van Chi Cygni is het zo dat ze tot de zeldzamere groep mira-sterren van spectraal type S behoort. Bij deze sterren zijn absorptielijnen van ZrO veel opvallender dan die van TiO. Andere mira-sterren van dit S type zijn S Gem, S UMa, R Cyg, S Cas en R Ori.

De rode reuzen stralen in het infrarode gebied van het elektromagnetisch spectrum veel meer energie uit dan in het zichtbaar licht. In het IR is het verschil tussen maximum en minimum echter minder groot dan in het zichtbaar licht.

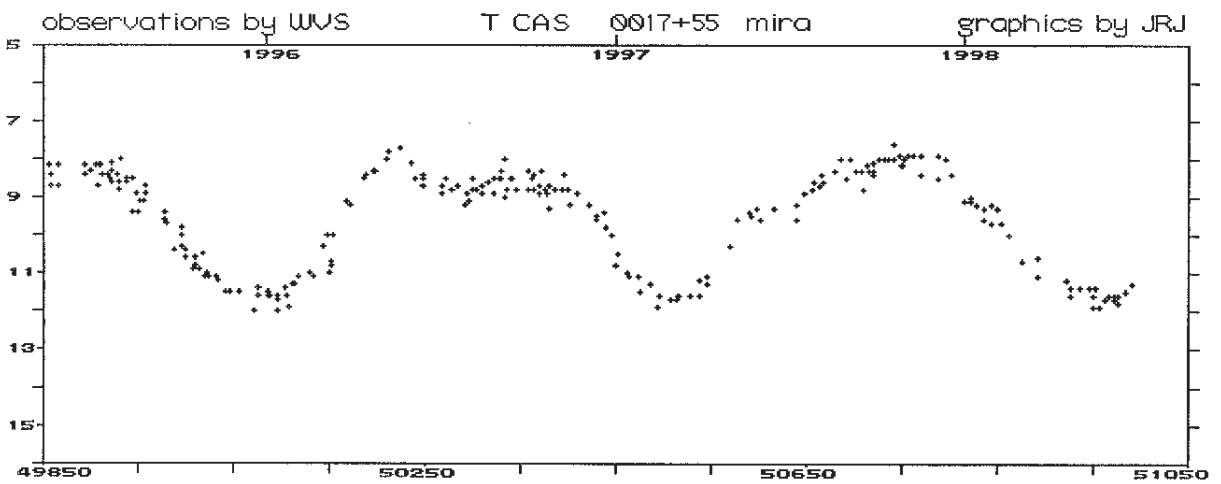
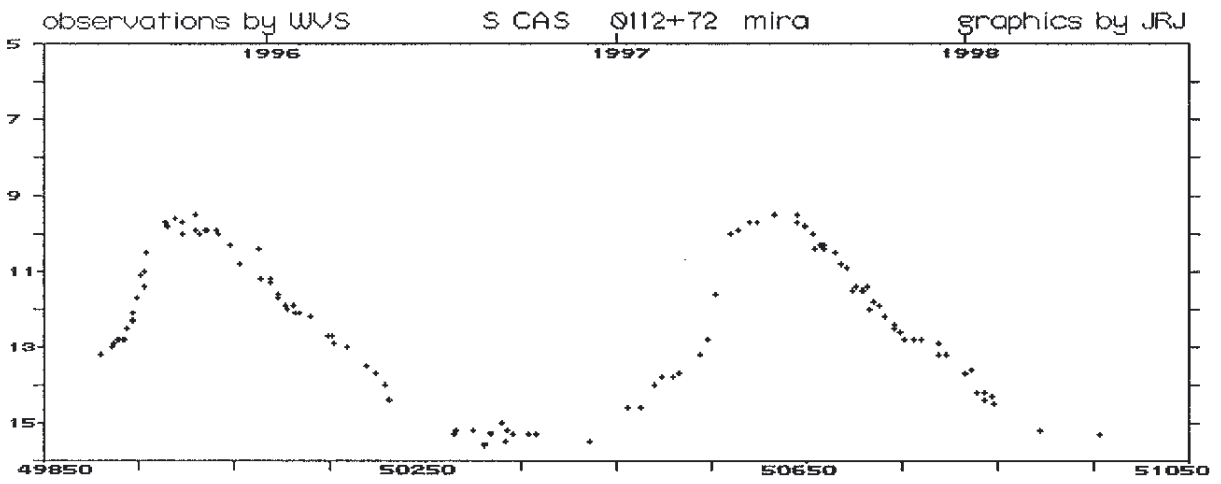
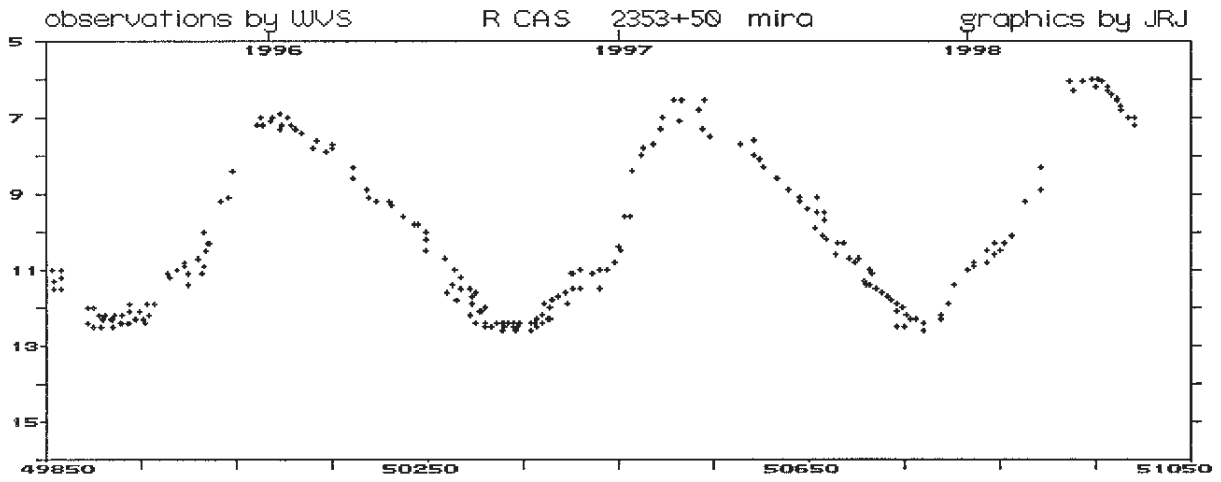
Zelf waarnemen

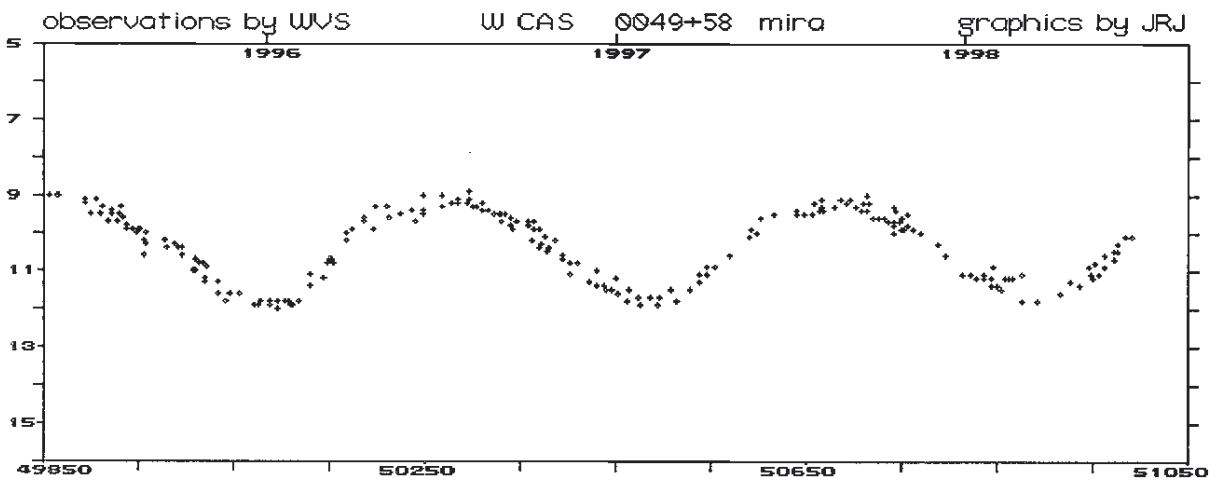
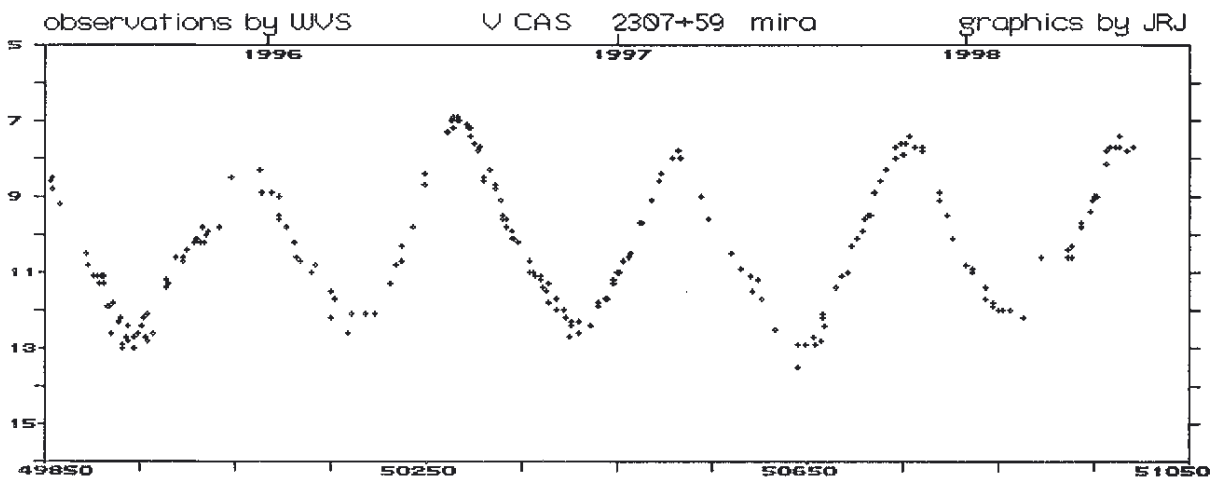
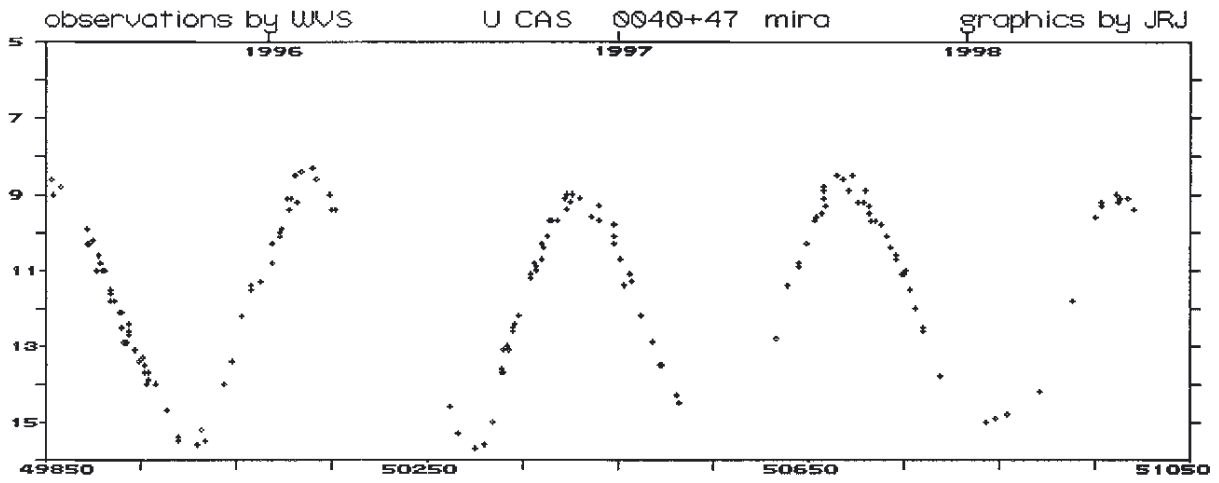
Chi Cygni is te vinden midden in de melkweg. Ze staat ongeveer 2½ graad ten zuiden van de ster eta Cygni. Begin april van dit jaar wordt een minimum verwacht (ca. magnitude 14), en zal ze derhalve moeilijk te vinden zijn. We zullen dan zeker gebruik moeten maken van een e-kaart van de aavso (American Association of Variable Star Observers). Door de vele omringende sterren moeten we zeer zorgvuldig zijn met de identificatie. De te gebruiken aavso-kaart geeft naast de exacte positie van Chi Cygni ook de helderheden van vele omringende sterren welke nodig zijn voor het maken van een goede helderheidschatting. Begin november is de ster in maximum. Ze is dan zeer eenvoudig te vinden. Als het maximum niet te zwak uitvalt moet ze zelfs 'net' met het blote oog te zien zijn, maar een verrekijker of zoeker zal zeker voldoende zijn om Chi Cygni te zien.

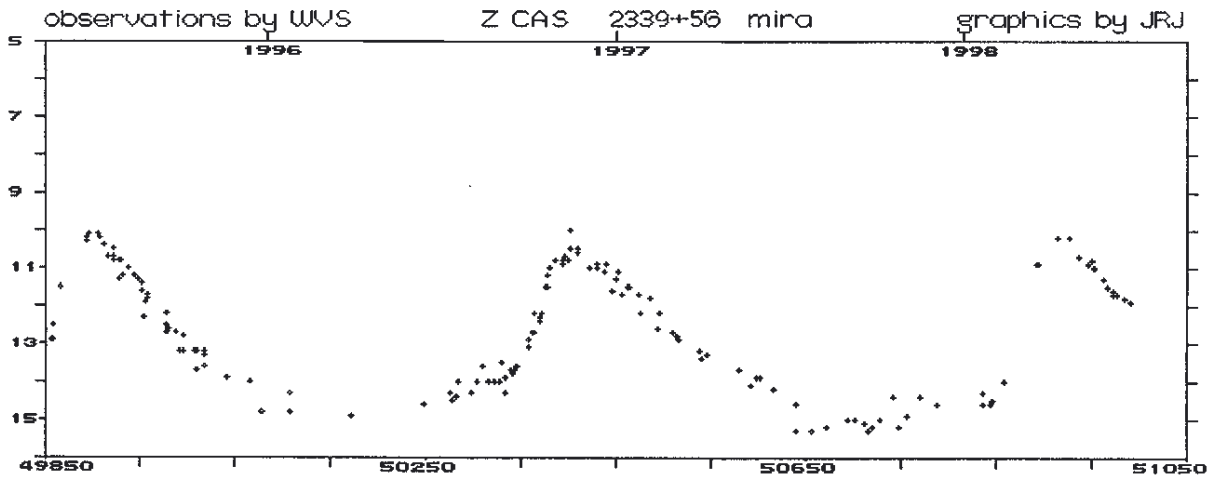
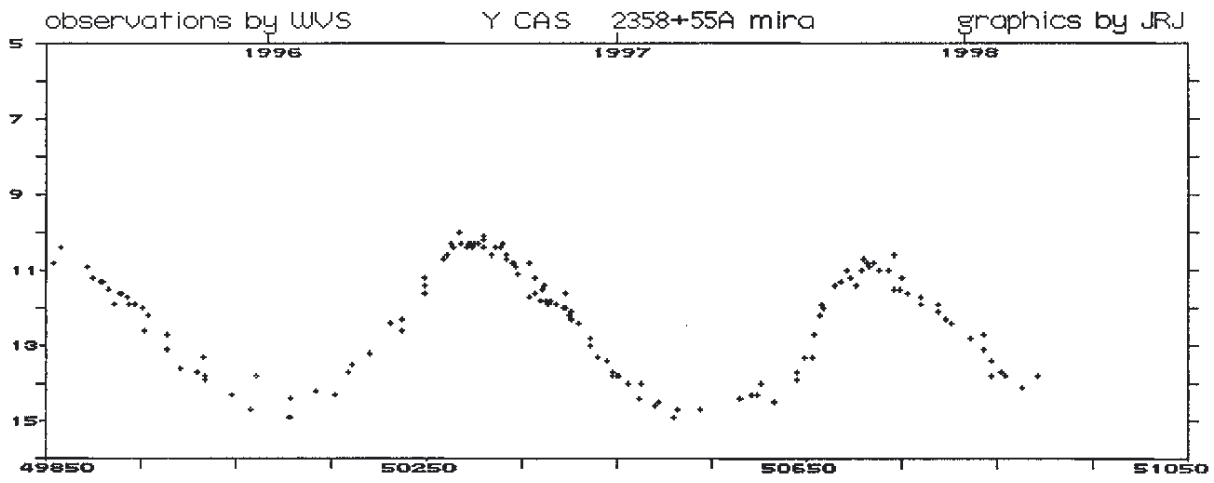
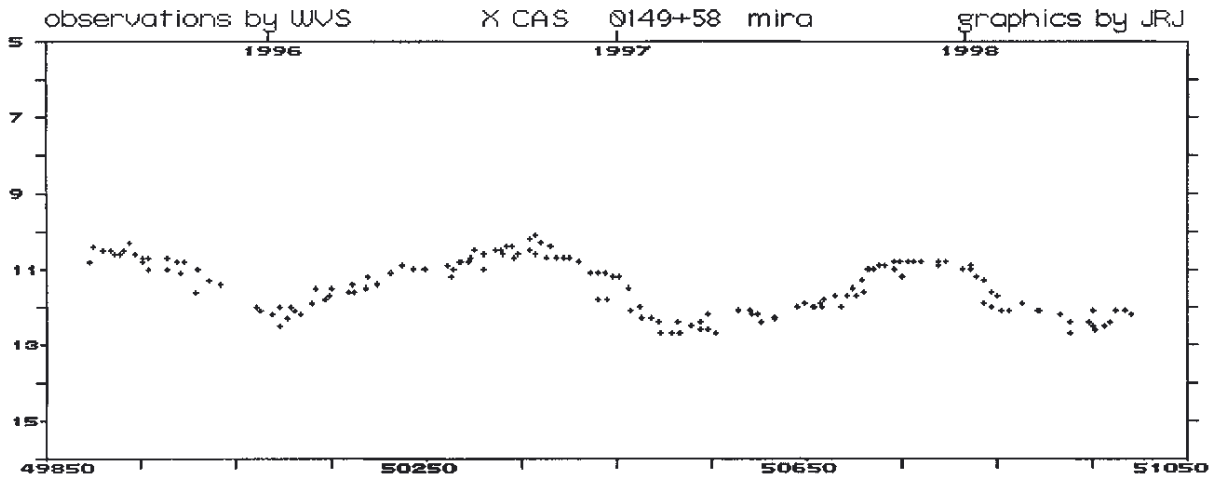
artikel uit Zenit april 1998

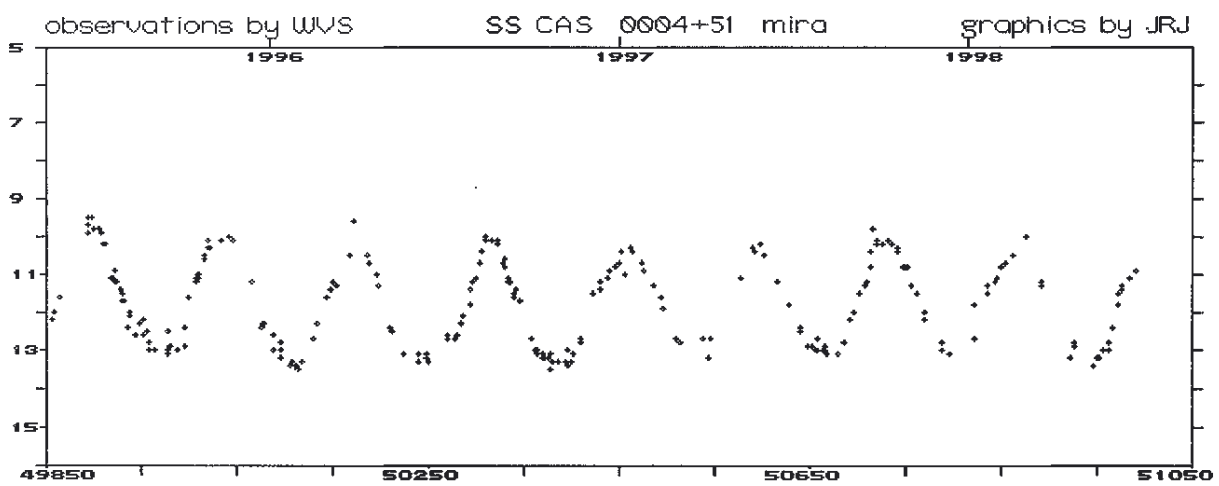
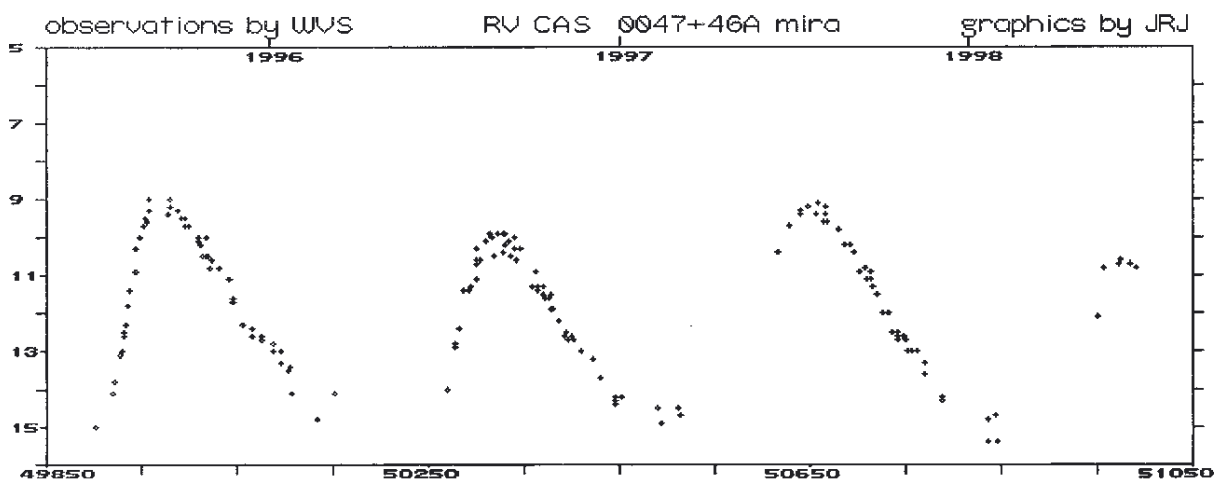
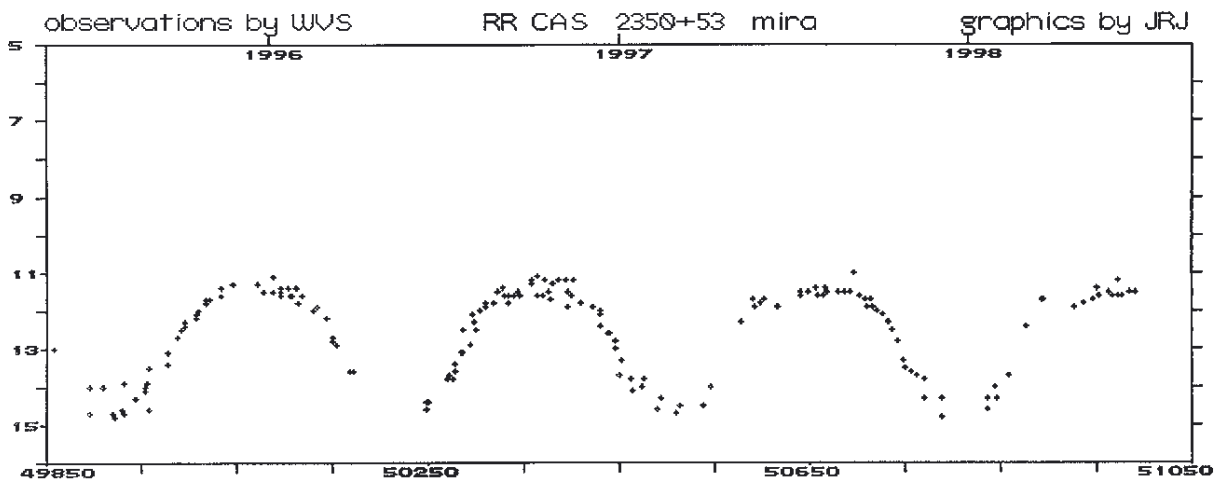
lichtcurve is opgenomen in variabilia nr 52

op het moment van verschijning van deze variabilia is Chi al weer helderder dan magnitude 11.









De nu volgende tabel bevat de waarnemingen uit de periode april - juni 1998.

Elke reeks waarnemingen gedaan aan een ster begint met het Harvard nummer, gevolgd door de naam en het type van de ster.

In de kolommen staan vermeld de Juliaanse Datum , de helderheid en de waarnemer.

Voor de JD geldt $JD = JD + 2.450.000$

0004+51				949.398	12.1	BMU	S PER	sr	0432+74			
SS CAS	mira	0040+47		950.417	12.1	BMU	896.4	11.6	VDE	X CAM	mira	
922.6	13.2	U CAS	mira	950.513	12.1	JRJ	916.3	11.8	CMG	918.3	12.8	CMG
926.5	12.8	926.5	11.8	951.460	11.8	VDE	922.4	12.0	BMU	922.4	12.7	BMU
926.5	12.9	950.5	9.6	951.460	12.0	BMU	949.4	12.2	BMU	922.4	13.0	CMG
947.6	13.4	956.5	9.2	951.514	12.1	CMG				937.4	12.8	CMG
950.4	13.2	956.5	9.3	952.437	12.1	BMU	0228+55			937.5	12.8	BMU
950.5	13.2	972.5	9.0	952.438	11.8	VDE	DY PER	rcb		942.5	12.3	CMG
952.5	13.2	975.5	9.2	956.456	12.0	BMU	922.366	12.4	BMU	947.4	11.8	JRJ
956.5	13.0	977.5	9.1	962.457	12.1	CMG	926.408	12.3	BMU	947.5	11.7	CMG
962.5	12.8	985.5	9.1	962.470	12.1	BMU	949.403	11.8	BMU	948.4	12.0	BMU
962.5	13.0	990.5	9.4	967.448	12.1	CMG	956.462	11.7	BMU	952.4	11.3	CMG
967.4	12.4			972.504	12.1	JRJ				961.4	10.4	CMG
972.5	11.5			972.537	12.1	CMG	0229+80			962.5	10.3	BMU
972.5	11.8	0047+46A		977.463	12.1	BMU	RR CEP	mira		968.5	10.0	CMG
977.5	11.3	RV CAS	mira	977.524	12.2	CMG	916.6	10.8	CMG	975.5	9.5	CMG
977.5	11.4	950.5	12.1	985.473	12.1	CMG	926.4	11.6	CMG	977.4	8.8	BMU
985.5	11.1	956.5	10.8	987.463	12.1	BMU	937.4	12.2	CMG	984.5	8.3	CMG
990.5	10.9	972.5	10.7	990.473	12.3	BMU	943.4	12.4	CMG	987.4	8.3	BMU
		985.5	10.7	990.474	12.4	VDE	947.5	12.4	CMG	990.5	8.3	CMG
		990.5	10.8	990.492	12.2	CMG	952.4	12.7	CMG			
0008+62							961.5	13.2	CMG			
UX CAS	sr						969.5	13.5	CMG	0446+17		
937.4	10.6	0049+58		0110+55A			987.5	13.7	CMG	V TAU	mira	
951.5	10.6	W CAS	mira	VZ CAS	mira					910.3	10.8	CMG
962.5	10.7	916.3	11.6	926.5	10.5	JRJ						
968.5	10.7	926.5	11.3	947.6	10.1	CMG						
985.5	10.8	926.5	11.3	950.5	10.2	JRJ						
		937.4	11.4	962.5	10.5	CMG						
		947.6	10.9	968.5	10.7	CMG						
		949.4	11.1	972.5	10.5	JRJ						
		950.5	11.2	972.5	10.8	CMG						
		952.5	10.8	977.5	11.0	CMG						
		956.5	11.1	985.5	11.4	CMG						
		962.5	10.6	990.5	11.6	CMG						
		962.5	10.9									
		972.5	10.5	0112+72								
		972.5	10.7	S CAS	mira							
		977.5	10.3	956.5	15.3	CMG						
		977.5	10.5									
		984.5	10.1	0149+58								
		985.5	10.1	X CAS	mira							
		990.5	10.1	916.3	12.2	CMG						
				926.5	12.4	BMU						
				926.5	12.7	JRJ						
				947.6	12.4	CMG						
				950.4	12.5	BMU						
				950.5	12.1	JRJ						
				952.4	12.6	CMG						
				962.5	12.5	CMG						
				968.5	12.4	CMG						
				975.5	12.1	CMG						
				985.5	12.1	CMG						
				990.5	12.2	CMG						
				0152+54								
				U PER	mira							
				916.3	11.0	CMG						
				0212+81								
				Z CEP	mira							
				922.4	14.3	CMG						
				951.5	15.6	CMG						
				0215+58								

0533+37		0605+47		948.4	14.2	CMG	937.4	11.0	CMG	-----		
RU AUR	mira	SS AUR	ugss	948.4	14.2	JRJ	-----			0737+23		
922.4	14.6	922.372	15.1	-----			0707+14			S GEM	mira	
-----		938.388	10.8	0634+44A			VX GEM	mira		910.3	9.7	CMG
0535+31		939.346	10.7	AA AUR	mira		916.4	11.8	JRJ	915.4	9.7	CMG
U AUR	mira	943.379	10.8	916.3	9.5	CMG	920.4	11.8	CMG	916.4	9.8	JRJ
916.3	12.0	947.390	11.8	916.4	9.6	JRJ	926.4	12.0	JRJ	922.3	9.8	CMG
916.4	12.5	948.388	12.0	922.4	9.6	CMG	-----			926.4	9.7	JRJ
922.4	11.2	949.382	12.5	926.4	9.7	JRJ	0710+26			937.4	10.3	CMG
926.4	10.4	950.393	13.0	937.4	9.8	CMG	WZ GEM	mira		943.4	10.3	JRJ
947.4	9.1	-----		947.4	10.1	JRJ	922.4	14.5	CMG	943.4	10.6	CMG
-----		0607+46A		-----			-----			948.4	10.9	CMG
0535+38		ST AUR	mira	0635+58			0717+13			-----		
SZ AUR	mira	916.3	12.6	S LYN	mira		V GEM	mira		0743+23		
916.4	12.3	916.4	13.4	916.4	9.3	CMG	916.4	9.7	CMG	T GEM	mira	
916.4	12.5	922.4	13.1	922.4	9.5	CMG	916.4	9.7	JRJ	916.3	11.1	CMG
922.4	12.5	-----		938.4	10.1	CMG	922.3	9.5	CMG	916.4	11.0	JRJ
926.4	12.6	0612+75		943.4	10.3	CMG	926.4	8.8	JRJ	922.3	11.0	CMG
-----		W CAM	mira	948.4	10.5	JRJ	937.4	8.4	CMG	926.4	11.0	JRJ
0543+19		922.4	:14.7	948.4	10.6	CMG	-----			937.4	10.5	CMG
SU TAU	rcb	0616+47		-----			0719+33			943.4	10.3	JRJ
922.346	13.2	V AUR	mira	0640+18			KX GEM	mira		943.4	10.4	CMG
926.357	13.2	910.3	10.6	RT GEM	mira		926.3	10.9	CMG	948.4	10.3	CMG
-----		916.3	10.6	922.3	11.4	CMG	937.4	11.3	CMG	-----		
0549+20A		916.4	10.8	-----			942.4	11.7	CMG	0749+22		
U ORI	mira	916.4	10.8	0640+30			-----			U GEM	ugss+e	
922.3	11.2	922.4	10.7	X GEM	mira		0721+41			916.365	14.4	JRJ
-----		926.4	10.9	916.4	8.6	JRJ	VX AUR	mira		922.358	14.5	CMG
0549+74		937.4	11.2	916.4	8.9	CMG	913.3	9.0	CMG	922.371	14.3	BMU
V CAM	mira	943.4	10.9	922.4	9.1	CMG	916.4	9.2	CMG	926.364	14.2	JRJ
922.4	14.4	950.4	11.0	926.4	9.1	JRJ	916.4	9.3	JRJ	926.371	14.5	CMG
947.4	14.4	-----		937.4	9.9	CMG	922.4	9.2	CMG	-----		
-----		0617+25		948.4	9.9	JRJ	939.3	10.3	CMG	0803+62		
0553+53		ZZ GEM	mira	-----			948.4	10.7	JRJ	SU UMA	ugsu	
Z AUR	sr	916.4	11.8	0641+28			-----			920.436	14.3	CMG
910.3	10.9	916.4	12.1	IR GEM	ugsu		0727+08			922.476	14.5	CMG
916.4	10.8	922.3	11.8	916.360	12.9	JRJ	S CMI	mira		926.417	11.9	CMG
916.4	10.9	926.4	11.5	-----			916.4	7.8	JRJ	948.401	14.4	CMG
922.4	11.0	0618+24		0645+16			918.3	7.9	CMG	949.393	14.6	CMG
926.4	10.8	CD GEM	mira	IT GEM	mira		926.3	8.6	CMG	-----		
939.3	10.4	916.4	12.4	922.3	11.3	CMG	926.4	8.7	JRJ	0804+28		
943.4	10.0	922.3	12.9	-----			937.4	9.1	CMG	YZ CNC	ugsu	
-----		0653+55		R LYN	mira		-----			913.340	12.5	CMG
0554+39		916.4	10.0	916.4	10.0	CMG	0728+11			920.362	12.4	CMG
AZ AUR	mira	922.4	10.3	922.4	10.3	CMG	T CMI	mira		922.372	13.1	BMU
916.4	12.6	939.3	10.8	939.3	10.8	CMG	916.4	10.6	JRJ	922.380	13.2	CMG
916.4	12.6	943.4	11.0	943.4	11.0	CMG	918.3	10.1	CMG	926.371	14.7	CMG
922.4	12.6	948.4	11.1	948.4	11.1	CMG	926.3	10.6	CMG	937.374	12.0	CMG
926.4	12.6	948.4	11.1	948.4	11.1	JRJ	926.4	11.0	JRJ	939.376	12.2	CMG
-----		-----		-----			937.4	11.5	CMG	948.382	12.8	CMG
0557+47		0619+47		0701+09			-----			-----		
XZ AUR	sr	GQ AUR	mira	V CMI	mira		0732+34			0805+23		
916.3	10.5	916.3	11.4	916.4	12.8	JRJ	ST GEM	mira		RR CNC	mira	
922.4	10.5	922.4	11.2	918.3	12.7	CMG	915.4	10.4	CMG	920.4	10.9	CMG
939.3	10.6	937.4	11.2	926.3	12.9	CMG	916.4	10.4	JRJ	926.4	10.7	CMG
-----		-----		926.4	12.9	JRJ	916.4	10.5	CMG	943.4	9.9	CMG
0604+43		0625+64		-----			922.3	10.3	CMG	-----		
RR AUR	mira	RT CAM	mira	0701+22A			937.4	9.7	CMG	0807+14		
916.4	13.6	922.4	14.5	R GEM	mira		942.4	9.4	CMG	SU CNC	mira	
922.4	14.3	-----		916.4	10.8	CMG	948.4	9.5	CMG	926.4	10.8	CMG
926.4	14.0	0625+74		916.4	11.0	JRJ	948.4	9.5	JRJ	-----		
-----		SU CAM	mira	922.3	11.3	CMG	-----			0808+37		
0604+50		922.4	13.8	926.4	11.5	JRJ	0733+36			RT LYN	mira	
X AUR	mira	937.4	14.0	937.4	11.7	CMG	RU LYN	mira		922.4	14.6	CMG
910.3	9.5	0630+25		948.4	12.3	JRJ	922.4	:14.8	CMG	-----		
915.4	9.6	BR GEM	mira	-----			-----			0810+40		
916.4	10.2	922.4	11.5	0703+10			0735+08			W LYN	mira	
922.4	10.8	-----		R CMI	mira		U CMI	mira		915.4	11.7	CMG
926.4	11.2	0631+59		916.4	11.0	JRJ	916.4	9.9	JRJ	922.4	11.8	CMG
939.3	11.9	U LYN	mira	918.3	11.1	CMG	918.3	10.0	CMG	948.4	13.1	JRJ
947.4	12.7	916.4	13.7	926.3	11.1	CMG	926.3	9.7	CMG	-----		
950.4	12.6	922.4	14.0	926.3	11.1	CMG	926.4	10.0	JRJ	0811+12		
-----		-----		926.4	11.0	JRJ	937.4	9.9	CMG	R CNC	mira	

918.3	10.9	CMG	0816+33		926.4	9.4	CMG	0947+35		984.4	7.3	CMG		
926.4	10.9	CMG	T LYN	mira	-----	-----	-----	S LMI	mira	990.4	7.3	CMG		
926.4	11.2	JRJ	915.4	10.7	CMG	0931+78		916.3	8.7	CMG	-----	-----		
-----	-----	-----	922.4	10.2	CMG	Y DRA	mira	926.3	9.0	JRJ	1041+12			
0814+73			943.4	9.8	CMG	920.4	13.7	CMG	926.4	8.8	CMG	SN1998BU	sn	
Z CAM	ugz		948.4	9.9	JRJ	926.4	13.5	CMG	937.4	9.6	CMG	947.372	11.9	JRJ
846.460	11.8	VDE	-----	-----	-----	937.4	13.1	CMG	942.4	10.0	CMG	947.405	12.1	BMU
896.319	13.1	VDE	0819+35			942.4	12.8	CMG	943.4	10.2	JRJ	947.408	11.9	VDE
908.410	11.8	CMG	X LYN	mira		947.5	12.4	CMG	947.5	10.2	CMG	947.450	12.2	CMG
910.319	11.7	CMG	915.4	13.4	CMG	952.4	12.3	CMG	949.4	10.4	JRJ	948.392	12.0	BMU
915.375	12.8	CMG	922.4	13.8	CMG	961.4	11.6	CMG	952.4	10.6	CMG	948.393	11.7	VDE
916.385	12.9	CMG	-----	-----	-----	966.4	10.7	CMG	-----	-----	-----	948.400	12.1	CMG
918.347	13.0	CMG	0830+13			972.5	9.4	CMG	0948+36			948.409	12.0	JRJ
920.363	13.1	CMG	UY CNC	mira		977.5	9.0	CMG	U LMI	sr		949.387	12.1	CMG
922.379	13.0	BMU	920.4	11.5	CMG	984.5	8.9	CMG	920.4	11.9	CMG	949.390	12.1	JRJ
922.391	13.2	CMG	926.4	11.4	CMG	990.5	8.5	CMG	926.3	11.8	JRJ	949.417	11.9	BMU
926.411	13.2	BMU	-----	-----	-----	-----	-----	-----	926.4	11.9	CMG	949.419	11.8	VDE
926.442	13.1	CMG	0830+19			0937+20			937.4	11.8	CMG	950.403	12.1	JRJ
937.449	12.4	CMG	U CNC	mira		RS LEO	mira		942.4	11.7	CMG	950.424	11.9	BMU
937.533	12.1	BMU	922.4	14.8	CMG	920.4	14.6	CMG	947.5	11.7	CMG	951.410	12.0	JRJ
939.345	12.9	CMG	926.4	14.5	JRJ	926.3	13.9	JRJ	949.4	11.3	JRJ	951.422	11.8	BMU
942.404	13.0	CMG	-----	-----	-----	926.4	14.8	CMG	952.4	11.4	CMG	951.423	11.7	VDE
943.412	12.9	CMG	0833+50			948.4	14.8	CMG	-----	-----	-----	952.387	12.1	CMG
944.381	13.0	CMG	X UMA	mira		-----	-----	-----	0954+21			952.429	11.8	BMU
947.400	12.3	JRJ	908.4	9.9	CMG	0939+34			V LEO	mira		952.430	11.7	VDE
947.419	12.9	BMU	920.4	9.4	CMG	R LMI	mira		913.3	9.2	CMG	955.399	12.0	JRJ
947.419	13.0	VDE	922.4	9.4	CMG	916.3	13.1	CMG	916.3	9.1	CMG	962.445	11.9	BMU
948.382	12.7	CMG	926.4	9.2	CMG	926.3	13.3	JRJ	916.4	9.3	JRJ	-----	-----	-----
948.400	12.5	BMU	937.4	9.6	CMG	926.4	13.2	CMG	920.4	9.1	CMG	1048+14		
948.401	12.7	VDE	942.4	9.7	CMG	937.4	13.1	CMG	926.3	9.1	JRJ	W LEO	mira	
949.393	11.1	BMU	947.4	9.9	JRJ	942.4	12.9	CMG	926.4	9.1	CMG	926.4	13.9	CMG
949.394	11.3	VDE	948.4	9.9	CMG	947.5	12.9	CMG	937.4	9.0	CMG	947.4	12.9	CMG
949.400	11.3	CMG	952.4	10.5	CMG	949.4	13.0	JRJ	942.4	9.2	CMG	947.4	12.9	JRJ
950.416	10.6	BMU	962.4	10.7	CMG	952.4	12.8	CMG	943.4	9.3	JRJ	952.4	13.0	CMG
950.476	10.2	CMG	-----	-----	-----	-----	-----	-----	947.4	9.1	JRJ	955.4	12.9	JRJ
950.528	10.5	JRJ	0848+03			0939+52			947.4	9.3	CMG	-----	-----	-----
951.408	10.5	JRJ	S HYA	mira		ER UMA	ug		952.4	9.3	CMG	1058+33		
951.417	10.7	BMU	920.4	11.0	CMG	922.394	12.5	BMU	962.4	9.8	CMG	SX LEO	sr	
951.419	10.9	VDE	926.4	10.9	CMG	926.565	12.7	BMU	-----	-----	-----	922.4	9.8	CMG
951.458	10.2	CMG	926.4	11.1	JRJ	948.408	13.5	CMG	0958+14			943.4	10.3	CMG
952.420	10.8	BMU	-----	-----	-----	949.393	15.4	CMG	RY LEO	sr		948.4	10.3	CMG
952.421	10.9	VDE	0850-08			952.424	13.1	BMU	918.3	10.0	CMG	-----	-----	-----
952.443	10.8	CMG	T HYA	mira		-----	-----	-----	926.4	10.0	CMG	1105+06		
956.456	11.7	BMU	922.4	9.3	CMG	0942+11			937.4	10.2	CMG	S LEO	mira	
956.476	12.1	CMG	926.4	9.6	CMG	R LEO	mira		943.4	10.4	CMG	922.4	13.6	CMG
961.433	12.2	CMG	-----	-----	-----	896.3	9.7	VDE	947.4	10.5	CMG	926.3	13.3	JRJ
962.467	12.0	BMU	0853-00			913.3	10.0	CMG	-----	-----	-----	926.4	13.0	CMG
962.499	12.2	CMG	TU HYA	mira		916.3	10.0	CMG	1029+00			937.4	12.2	CMG
966.449	11.6	CMG	922.4	10.5	CMG	916.4	10.0	JRJ	S SEX	mira		943.4	12.0	CMG
967.417	11.6	CMG	926.4	10.1	CMG	922.4	9.9	BMU	920.4	13.0	CMG	947.4	11.8	CMG
968.444	11.7	CMG	-----	-----	-----	926.3	9.9	JRJ	926.4	12.4	JRJ	947.4	11.8	JRJ
969.444	11.7	CMG	0855+18			926.4	10.1	CMG	926.4	12.9	CMG	952.4	11.4	CMG
972.441	12.7	CMG	SY CNC	ugz		937.4	10.0	CMG	949.4	11.2	CMG	-----	-----	-----
975.422	13.0	CMG	916.343	12.8	CMG	942.4	10.0	CMG	-----	-----	-----	1107-06		
977.451	12.9	BMU	920.363	12.0	CMG	943.4	9.9	JRJ	1037+69			U CRT	mira	
977.491	13.1	CMG	922.380	11.9	CMG	947.4	9.6	JRJ	R UMA	mira		920.4	11.8	CMG
984.460	11.8	CMG	926.367	11.8	CMG	947.4	9.9	BMU	908.5	12.3	CMG	926.4	11.6	CMG
985.451	10.9	CMG	926.394	11.3	JRJ	947.4	9.9	CMG	915.4	12.0	CMG	937.4	11.4	CMG
987.421	11.1	CMG	943.410	13.0	CMG	952.4	9.5	VDE	916.3	12.2	JRJ	943.4	11.1	CMG
987.443	10.9	BMU	948.382	12.1	CMG	952.4	9.7	BMU	922.4	11.8	CMG	948.4	11.1	CMG
990.447	11.7	CMG	949.386	11.9	CMG	952.4	9.9	CMG	926.4	11.6	BMU	952.4	10.9	CMG
990.476	11.3	BMU	-----	-----	-----	962.4	9.2	BMU	937.4	10.6	CMG	-----	-----	-----
990.478	11.6	VDE	0904+25			962.4	9.5	CMG	942.4	10.4	CMG	1118+17		
-----	-----	-----	W CNC	mira		-----	-----	-----	947.5	9.9	CMG	TZ LEO	mira	
0816+17			920.4	12.7	CMG	0945+12			948.4	9.4	BMU	908.4	12.8	CMG
V CNC	mira		926.4	11.5	CMG	X LEO	ugss		950.4	9.2	JRJ	920.4	13.0	CMG
913.3	9.1	CMG	926.4	11.6	JRJ	896.298	12.0	VDE	952.4	8.8	CMG	926.4	13.0	CMG
920.4	9.3	CMG	942.4	9.4	CMG	942.399	12.5	CMG	956.5	8.5	BMU	937.4	13.1	CMG
926.4	9.8	CMG	948.4	8.8	CMG	-----	-----	-----	961.4	7.9	CMG	947.4	12.7	CMG
926.4	9.8	JRJ	-----	-----	-----	0945-01			966.4	7.5	CMG	952.4	12.5	CMG
939.4	10.2	CMG	0911-04			W SEX	sr		972.5	7.2	JRJ	962.4	12.0	CMG
948.4	10.5	CMG	UZ HYA	mira		926.4	9.7	JRJ	977.4	7.2	CMG	-----	-----	-----
-----	-----	-----	922.4	9.3	CMG	-----	-----	-----	977.5	7.2	BMU	1133+03		

T LEO	ug	926.4	7.8	BMU	926.5	10.5	JRJ	916.4	11.9	CMG	937.4	14.3	CMG		
920.396	10.8	CMG	937.4	7.7	CMG	937.4	10.3	CMG	922.4	11.1	CMG	947.5	14.4	CMG	
922.387	11.7	BMU	943.4	7.6	CMG	942.4	10.2	CMG	926.4	10.4	BMU	949.4	14.2	JRJ	
926.371	14.6	CMG	947.4	7.7	JRJ	947.5	10.4	CMG	937.4	9.2	CMG	952.4	14.3	CMG	
-----	-----	-----	948.4	7.6	BMU	949.4	10.5	JRJ	942.4	8.9	CMG	975.4	14.3	CMG	
1136+39	-----	-----	956.5	7.4	BMU	951.5	10.5	HJO	947.4	8.5	JRJ	990.4	14.1	CMG	
RU UMA	mira	956.5	7.5	CMG	952.4	10.6	CMG	947.5	8.5	CMG	-----	-----	-----		
922.4	10.0	CMG	961.4	7.6	CMG	961.4	10.8	CMG	948.4	8.6	BMU	1246+06	-----	-----	
937.4	9.5	CMG	968.4	7.6	CMG	967.4	10.9	CMG	948.4	8.6	BVE	U VIR	mira	-----	
943.4	9.4	CMG	972.4	7.6	CMG	975.4	10.9	CMG	948.4	8.7	VDE	908.4	10.4	CMG	
948.4	9.4	CMG	972.5	7.2	JRJ	984.4	10.9	CMG	951.5	8.7	HJO	920.4	9.7	CMG	
972.4	9.5	CMG	977.4	7.5	CMG	990.4	10.8	CMG	952.4	8.7	CMG	926.4	9.4	CMG	
977.4	9.5	CMG	977.5	7.1	BMU	-----	-----	-----	956.5	8.4	BMU	926.4	9.4	JRJ	
987.4	9.7	CMG	990.4	7.7	CMG	-----	-----	-----	961.4	8.5	CMG	937.4	8.9	CMG	
-----	-----	-----	-----	-----	-----	1228-03	-----	-----	966.4	8.6	CMG	947.4	8.5	JRJ	
1140+48	-----	-----	1159+19	-----	-----	Y VIR	mira	-----	969.4	8.6	BVE	947.5	8.5	CMG	
SN1998S	sn	896.3	11.7	VDE	R COM	mira	920.5	14.1	CMG	972.4	8.7	CMG	949.4	8.5	CMG
908.410	12.8	CMG	920.4	13.4	CMG	926.4	14.3	CMG	972.5	8.5	JRJ	952.4	8.4	CMG	
915.373	13.0	CMG	926.4	13.3	CMG	926.4	14.4	JRJ	977.4	8.7	CMG	961.4	8.5	CMG	
916.340	12.9	JRJ	926.5	12.8	JRJ	948.4	13.4	CMG	977.5	8.7	BMU	967.4	8.5	CMG	
920.368	13.1	CMG	937.4	13.4	CMG	952.4	12.9	CMG	984.4	8.9	CMG	977.4	8.5	CMG	
922.403	13.1	BMU	948.4	13.5	CMG	-----	-----	-----	985.4	8.9	BVE	-----	-----	-----	
922.431	13.3	CMG	949.4	13.3	JRJ	1231+60	-----	-----	990.4	8.9	CMG	1302-12	-----	-----	
926.441	13.5	CMG	962.5	13.8	CMG	T UMA	mira	-----	-----	-----	-----	RV VIR	mira	-----	
926.442	13.1	JRJ	-----	-----	-----	908.5	12.7	CMG	1235-17	-----	-----	926.4	11.2	JRJ	
926.445	13.4	BMU	1200+12	-----	-----	916.3	12.8	JRJ	V CRV	mira	-----	-----	-----	-----	
947.410	14.5	JRJ	SU VIR	mira	-----	916.4	12.8	CMG	926.4	12.1	JRJ	1322+62	-----	-----	
949.387	14.8	CMG	908.4	10.1	CMG	922.4	12.8	CMG	-----	-----	-----	RR UMA	mira	-----	
949.426	14.3	BMU	916.3	10.3	CMG	926.4	12.6	BMU	1239+61	-----	-----	922.4	14.7	CMG	
949.429	14.0	VDE	920.4	10.4	CMG	937.4	12.4	CMG	S UMA	mira	-----	926.4	14.6	CMG	
949.479	14.5	JRJ	926.4	10.2	JRJ	942.4	11.9	CMG	896.3	8.4	VDE	-----	-----	-----	
950.426	14.3	BMU	926.4	10.4	CMG	947.4	11.5	JRJ	908.5	8.5	CMG	1322-02	-----	-----	
951.416	14.5	JRJ	937.4	11.0	CMG	947.5	11.4	CMG	916.3	8.3	JRJ	V VIR	mira	-----	
951.431	14.4	BMU	943.4	11.8	CMG	948.4	11.2	BMU	916.4	8.4	CMG	908.4	9.8	CMG	
951.433	14.2	VDE	947.4	12.0	JRJ	948.4	11.2	BVE	922.4	8.4	CMG	920.4	10.3	CMG	
952.433	14.2	VDE	947.5	12.1	CMG	948.4	11.5	VDE	926.4	8.3	BMU	926.4	10.2	CMG	
952.433	14.4	BMU	952.4	12.5	CMG	951.5	11.2	HJO	937.4	8.7	CMG	926.4	10.3	JRJ	
956.498	14.6	CMG	962.4	12.7	CMG	952.4	10.8	CMG	942.4	8.7	CMG	937.4	10.9	CMG	
-----	-----	-----	-----	-----	-----	956.5	10.4	BMU	947.4	8.1	VDE	947.4	11.1	JRJ	
1151+55	-----	-----	1209-05	-----	-----	961.4	10.0	CMG	947.4	8.5	JRJ	947.5	11.1	CMG	
SN1998AQ	sn	920.4	T VIR	mira	-----	966.4	9.6	CMG	947.5	8.5	CMG	952.4	11.4	CMG	
920.368	13.7	CMG	920.4	13.8	CMG	969.4	9.6	BVE	948.4	8.1	BVE	962.4	12.2	CMG	
922.422	13.2	BMU	920.5	13.8	CMG	972.4	9.3	CMG	948.4	8.3	BMU	-----	-----	-----	
922.431	13.5	CMG	926.4	13.9	CMG	972.5	9.0	JRJ	951.5	8.3	HJO	1327-06	-----	-----	
926.441	12.6	CMG	926.4	14.0	JRJ	977.4	8.9	CMG	952.4	8.2	CMG	S VIR	mira	-----	
926.444	12.6	JRJ	948.4	14.3	CMG	977.5	8.7	BMU	956.5	8.2	BMU	908.4	13.3	CMG	
926.449	12.6	BMU	952.4	14.3	CMG	984.4	8.2	CMG	961.4	8.4	CMG	922.4	13.5	CMG	
947.406	12.6	JRJ	-----	-----	-----	985.4	8.0	BVE	969.4	8.2	BVE	926.4	13.3	JRJ	
948.412	12.8	JRJ	1214-18	-----	-----	990.4	8.0	CMG	972.4	8.6	CMG	926.4	13.4	CMG	
948.419	12.7	BMU	R CRV	mira	-----	-----	-----	-----	972.5	8.2	JRJ	937.4	13.6	CMG	
948.420	12.4	VDE	922.4	12.3	CMG	1233+07	-----	-----	977.4	8.5	CMG	947.4	13.5	JRJ	
949.389	12.9	CMG	926.4	11.9	JRJ	R VIR	mira	-----	977.5	8.4	BMU	947.5	13.3	CMG	
949.392	12.8	JRJ	937.4	11.5	CMG	926.4	8.8	JRJ	984.4	8.6	CMG	952.4	13.3	CMG	
949.421	12.8	BMU	947.4	11.5	JRJ	937.4	7.7	CMG	985.4	8.6	BVE	-----	-----	-----	
949.422	12.6	VDE	948.4	11.3	CMG	947.4	7.5	JRJ	990.4	8.8	CMG	1332+73	-----	-----	
950.425	12.8	BMU	-----	-----	-----	947.5	7.1	CMG	-----	-----	-----	T UMI	mira	-----	
951.413	12.9	JRJ	1220+01	-----	-----	949.4	7.0	CMG	1242+04	-----	-----	908.4	13.7	CMG	
951.425	12.9	BMU	SS VIR	sr	-----	952.4	7.0	CMG	RU VIR	mira	-----	915.4	13.4	CMG	
951.426	12.8	VDE	908.4	9.1	CMG	961.4	6.9	CMG	908.4	10.9	CMG	922.4	12.8	CMG	
952.426	12.7	VDE	920.4	9.1	CMG	967.4	6.8	CMG	920.4	10.9	CMG	937.4	11.8	CMG	
952.426	13.0	BMU	926.4	9.0	CMG	977.4	7.3	CMG	926.4	10.9	CMG	942.4	11.8	CMG	
955.401	13.6	JRJ	926.4	9.4	JRJ	-----	-----	-----	937.4	11.2	CMG	950.4	11.6	JRJ	
956.499	13.4	BMU	937.4	8.5	CMG	1233+66	-----	-----	947.4	11.3	JRJ	952.4	11.5	CMG	
956.499	13.7	CMG	947.4	9.0	JRJ	RV DRA	mira	-----	947.5	11.3	CMG	961.4	11.3	CMG	
962.497	13.8	BMU	947.5	8.5	CMG	908.5	12.0	CMG	952.4	11.5	CMG	966.4	10.7	CMG	
-----	-----	-----	952.4	8.4	CMG	918.3	12.5	CMG	961.4	12.0	CMG	972.5	11.0	CMG	
1151+58	-----	-----	952.4	8.4	CMG	956.5	14.6	CMG	967.4	12.1	CMG	977.5	10.8	CMG	
Z UMA	sr	962.4	8.3	CMG	-----	-----	-----	-----	977.4	11.8	CMG	984.4	10.8	CMG	
908.5	8.5	CMG	-----	-----	-----	-----	-----	-----	-----	-----	-----	990.5	10.9	CMG	
916.3	8.3	JRJ	1225+32	-----	-----	1234+59	-----	-----	1242+38	-----	-----	-----	-----	-----	
916.4	8.1	CMG	T CVN	mira:	-----	RS UMA	mira	-----	U CVN	mira	-----	1344+34	-----	-----	
922.4	8.0	CMG	915.4	10.1	CMG	896.3	12.8	VDE	922.4	14.0	CMG	RT CVN	mira	-----	
-----	-----	-----	922.4	9.9	CMG	908.5	12.7	CMG	926.5	14.0	JRJ	915.4	9.9	CMG	
-----	-----	-----	-----	-----	-----	916.3	11.8	JRJ	-----	-----	-----	-----	-----	-----	

920.4	9.8	CMG	937.4	10.7	CMG	943.4	9.0	JRJ	1443+39		920.4	12.8	CMG	
922.4	9.8	CMG	947.4	10.9	JRJ	948.4	8.9	BVE	RR BOO	mira	926.4	12.8	CMG	
937.4	10.8	CMG	947.5	10.6	CMG	949.4	8.8	BMU	908.4	13.4	CMG	926.4	13.0	JRJ
942.4	11.0	CMG	952.4	10.9	CMG	950.5	8.9	CMG	920.4	13.9	CMG	937.4	13.0	CMG
947.5	11.3	CMG	962.4	10.6	CMG	952.4	8.8	CMG	926.4	13.6	JRJ	943.4	13.0	CMG
952.4	11.4	CMG	967.4	10.6	CMG	961.4	8.7	CMG	926.4	13.9	CMG	947.5	12.9	CMG
961.4	11.8	CMG	977.4	10.9	CMG	961.5	8.7	HJO	937.4	14.3	CMG	948.4	12.2	JRJ
969.4	12.4	CMG	-----	-----	-----	962.5	8.7	BMU	947.5	14.3	CMG	952.4	12.5	CMG
975.4	12.6	CMG	1415+67			966.4	8.6	CMG	948.4	14.4	JRJ	961.4	12.2	CMG
984.4	13.3	CMG	U UMI	mira		969.4	8.2	BVE	952.4	14.4	CMG	969.4	11.8	CMG
-----	-----	-----	908.5	8.4	CMG	972.5	8.4	CMG	961.4	14.3	CMG	972.5	11.8	JRJ
1344+40			916.4	8.4	CMG	972.5	8.6	JRJ	969.4	14.1	CMG	977.4	11.8	CMG
R CVN	mira		922.4	8.4	CMG	977.4	8.3	CMG	972.5	13.8	JRJ	984.4	11.5	CMG
915.4	11.2	CMG	937.4	8.6	CMG	977.5	8.6	BMU	977.4	13.6	CMG	985.4	11.5	JRJ
922.4	11.6	CMG	942.4	8.7	CMG	984.4	8.2	CMG	984.4	13.0	CMG	990.4	11.5	CMG
926.5	11.4	JRJ	947.5	8.8	CMG	985.4	8.0	JRJ	985.4	12.5	JRJ	-----	-----	-----
937.4	11.7	CMG	950.4	9.0	JRJ	985.5	8.1	BVE	990.4	12.1	CMG	1515-20		
942.4	12.0	CMG	951.5	9.2	HJO	990.4	8.2	CMG	-----	-----	-----	S LIB	mira	
947.5	12.0	CMG	952.4	9.0	CMG	-----	-----	-----	1506-05			949.5	10.8	JRJ
948.4	12.0	BVE	956.4	9.4	CMG	1425+84			Y LIB	mira		-----	-----	-----
949.4	12.0	JRJ	966.4	9.6	CMG	R CAM	mira		937.4	8.3	CMG	1517+14		
951.4	12.1	BMU	972.5	9.7	CMG	910.3	11.1	CMG	950.5	8.7	JRJ	S SER	mira	
952.4	12.0	CMG	977.5	9.9	CMG	916.4	10.4	CMG	956.5	9.0	CMG	920.4	12.2	CMG
961.4	12.1	CMG	984.4	10.0	CMG	916.4	10.5	JRJ	962.4	9.3	CMG	926.4	12.0	CMG
961.5	11.5	HJO	990.5	10.1	CMG	922.4	10.0	CMG	967.4	9.5	CMG	937.4	11.5	CMG
969.4	12.2	CMG	-----	-----	-----	926.4	9.9	BMU	975.5	9.7	CMG	942.5	11.4	CMG
969.4	11.7	BVE	1419+54			937.4	9.6	CMG	987.4	10.7	CMG	947.5	11.3	CMG
975.4	12.3	CMG	S BOO	mira		942.4	9.5	CMG	-----	-----	-----	948.4	11.3	JRJ
984.4	12.0	CMG	908.4	10.4	CMG	947.5	9.4	CMG	1510+83			952.4	11.1	CMG
990.4	11.7	CMG	915.4	10.1	CMG	949.4	9.3	BMU	Z UMI	rcb		962.4	11.3	CMG
-----	-----	-----	920.4	9.7	CMG	950.4	9.4	JRJ	896.317	13.4	VDE	966.4	9.3	CMG
1344-01			926.4	9.5	CMG	951.6	9.4	HJO	910.319	13.3	CMG	972.5	9.1	CMG
CE VIR	rv:		926.4	9.5	JRJ	961.4	9.3	CMG	916.349	12.7	JRJ	977.4	8.9	CMG
922.392	8.7	BMU	926.5	9.5	BMU	967.4	9.1	CMG	916.597	12.8	CMG	984.4	8.8	CMG
948.4	8.7	VDE	937.4	9.2	CMG	972.5	9.1	CMG	920.392	12.4	CMG	988.4	8.6	JRJ
948.426	8.7	BMU	942.4	8.9	CMG	977.4	8.6	BMU	922.375	12.3	BMU	990.5	8.9	CMG
956.505	9.0	BMU	947.5	8.7	CMG	984.4	9.1	CMG	922.385	12.3	CMG	-----	-----	-----
977.425	9.0	CMG	948.4	7.9	JRJ	987.4	8.6	BMU	926.408	12.2	BMU	1517+31		
-----	-----	-----	949.4	8.4	BMU	990.5	9.1	CMG	926.409	12.5	CMG	S CRB	mira	
1353-04			952.4	8.1	CMG	-----	-----	-----	926.569	12.6	JRJ	908.4	10.5	CMG
SY VIR	mira		961.4	7.9	CMG	1432+27			937.417	12.4	CMG	920.4	11.2	CMG
926.4	14.6	JRJ	961.5	8.2	HJO	R BOO	mira		937.535	12.4	BMU	926.4	11.2	CMG
947.4	13.3	JRJ	962.5	8.2	BMU	908.4	12.1	CMG	942.404	12.7	CMG	926.4	11.3	BMU
948.4	13.6	CMG	966.4	8.0	CMG	916.4	12.0	JRJ	947.422	12.9	VDE	926.4	11.4	JRJ
962.4	12.1	CMG	972.4	8.1	CMG	920.4	12.2	CMG	947.422	13.1	BMU	937.4	11.4	CMG
977.4	10.5	CMG	972.5	8.0	JRJ	926.4	11.9	CMG	947.505	12.7	CMG	942.5	11.4	CMG
-----	-----	-----	977.4	8.2	CMG	926.4	11.9	JRJ	948.403	12.8	BMU	947.5	11.5	CMG
1359-08			977.5	8.2	BMU	926.5	11.8	BMU	948.403	12.8	VDE	948.4	11.8	BMU
RR VIR	mira		985.4	8.6	JRJ	937.4	11.6	CMG	949.395	12.8	BMU	948.4	11.9	JRJ
952.4	14.2	CMG	990.4	8.9	CMG	942.4	10.8	CMG	949.395	13.0	VDE	948.4	11.9	VDE
-----	-----	-----	-----	-----	-----	947.4	10.6	JRJ	949.400	12.8	CMG	948.4	12.0	BVE
1401+13			1422+05			948.4	10.2	BVE	950.415	12.7	JRJ	950.4	12.2	JRJ
Z BOO	mira		RS VIR	mira		949.4	9.8	VDE	950.441	12.8	BMU	951.6	11.9	HJO
908.4	10.0	CMG	920.4	14.1	CMG	949.4	10.1	BMU	952.392	12.7	CMG	952.4	11.6	CMG
920.4	9.5	CMG	926.4	13.8	JRJ	952.4	9.8	CMG	952.422	12.9	BMU	956.5	11.9	BMU
926.4	9.9	CMG	926.4	14.1	CMG	961.4	9.6	CMG	952.423	12.9	VDE	961.4	12.0	CMG
926.4	10.1	JRJ	937.4	14.0	CMG	961.5	9.5	HJO	956.458	12.7	BMU	962.4	12.0	BMU
937.4	10.3	CMG	947.4	13.8	JRJ	962.5	9.4	BMU	961.421	12.4	CMG	966.4	12.2	CMG
943.4	10.3	JRJ	947.5	13.5	CMG	966.4	9.4	CMG	962.465	12.8	BMU	972.4	12.5	CMG
943.4	10.4	CMG	952.4	13.5	CMG	969.4	9.4	BVE	967.424	12.6	CMG	972.4	12.5	JRJ
947.5	10.5	CMG	962.4	13.3	CMG	972.4	9.3	CMG	972.465	12.2	JRJ	977.4	12.5	CMG
952.4	10.9	CMG	969.5	13.4	CMG	972.5	9.3	JRJ	972.486	12.4	CMG	977.5	12.1	BMU
955.5	10.9	HJO	977.4	13.7	CMG	977.4	9.3	CMG	975.514	12.4	CMG	987.4	12.3	BMU
961.4	11.4	CMG	985.4	13.4	CMG	977.5	9.1	BMU	977.448	12.3	BMU	990.5	12.6	CMG
967.4	11.7	CMG	-----	-----	-----	984.4	8.9	CMG	985.473	12.3	CMG	991.5	12.5	JRJ
972.4	12.1	CMG	1425+39			985.4	8.6	JRJ	987.440	12.3	BMU	-----	-----	-----
984.4	12.9	CMG	V BOO	sr		985.5	8.7	BVE	990.459	12.4	CMG	1527+03		
985.4	13.0	JRJ	918.3	8.7	CMG	990.4	8.5	CMG	990.474	12.3	BMU	WW SER	mira	
-----	-----	-----	926.4	9.0	CMG	-----	-----	-----	990.476	12.7	VDE	949.4	14.5	CMG
1405-12			926.4	9.0	JRJ	1434-17			-----	-----	-----	956.5	14.5	CMG
Z VIR	mira		926.5	9.0	BMU	V LIB	mira		1513+36			-----	-----	-----
922.4	11.1	CMG	937.4	9.1	CMG	949.5	13.9	JRJ	RT BOO	mira		1527-14		
926.4	11.0	JRJ	943.4	8.9	CMG	-----	-----	-----	908.4	12.9	CMG	RU LIB	mira	

949.5	12.9	JRJ	942.5	9.0	CMG	1550-18	969.5	13.3	CMG	-----		
-----	-----	-----	943.4	8.5	JRJ	RR LIB	977.4	13.5	CMG	1621+19		
1532-15			947.5	9.0	CMG	mira	985.4	13.6	CMG	U HER		
W LIB	mira		948.4	9.0	BMU	949.5	11.4	JRJ	908.4	12.1	CMG	
949.5	13.9	JRJ	948.4	9.0	VDE	-----	988.4	13.5	JRJ	920.4	12.2	CMG
-----	-----	-----	950.4	9.0	JRJ	1552+29	990.5	13.8	CMG	926.4	12.2	CMG
1533+78A			951.6	9.4	HJO	Z CRB	-----	-----	-----	926.5	12.4	BMU
S UMI	mira		952.4	9.3	CMG	926.4	14.9	CMG	1606+25	926.5	12.4	JRJ
908.4	11.6	CMG	956.5	9.4	BMU	949.4	14.8	CMG	RU HER	937.5	12.4	CMG
915.4	11.6	CMG	961.4	9.4	CMG	975.5	13.6	CMG	mira	942.5	12.4	CMG
922.4	11.7	CMG	962.4	9.6	BMU	987.4	12.9	BMU	908.4	10.8	CMG	
937.4	12.0	CMG	966.4	9.7	CMG	990.5	12.8	CMG	920.4	11.1	CMG	
942.4	11.9	CMG	972.4	10.1	JRJ	991.5	13.0	JRJ	926.4	11.1	CMG	
947.5	12.2	CMG	972.4	10.3	CMG	-----	-----	-----	926.5	11.2	JRJ	
950.4	12.1	JRJ	977.4	10.6	CMG	1555+26	937.5	11.5	CMG	937.5	11.5	CMG
952.4	12.3	CMG	977.5	10.3	BMU	T CRB	942.5	11.4	CMG	942.5	11.4	CMG
961.4	12.3	CMG	984.4	11.3	CMG	nr	947.5	11.6	CMG	947.5	11.6	CMG
966.4	12.4	CMG	987.5	11.1	BMU	920.396	10.1	CMG	948.4	12.0	JRJ	
972.5	12.4	CMG	990.5	11.7	CMG	922.397	10.6	BMU	952.4	11.6	CMG	
977.5	12.4	CMG	991.5	12.2	JRJ	926.391	10.1	CMG	961.5	11.9	CMG	
984.4	12.3	CMG	-----	-----	-----	926.423	10.5	BMU	969.5	11.9	CMG	
990.5	12.2	CMG	-----	-----	-----	926.430	10.5	JRJ	975.4	12.3	CMG	
-----	-----	-----	1546+15			937.417	10.3	CMG	984.4	12.7	CMG	
1544+28A			R SER	mira		937.536	10.4	BMU	988.4	12.4	JRJ	
R CRB	rcb		920.4	8.1	CMG	942.461	10.5	CMG	990.5	12.8	CMG	
908.410	6.0	CMG	926.4	8.2	CMG	943.413	10.3	JRJ	-----	-----	-----	
916.408	6.0	JRJ	937.4	8.7	CMG	947.428	10.5	BMU	1607+10			
920.396	6.0	CMG	942.5	9.1	CMG	947.485	10.5	CMG	DN HER	mira		
922.396	5.9	BMU	947.5	9.4	CMG	950.407	10.4	JRJ	920.4	11.6	CMG	
926.391	6.0	CMG	948.4	9.0	JRJ	951.420	10.5	BMU	937.5	12.7	CMG	
926.422	5.9	BMU	948.5	9.5	BVE	952.392	10.3	CMG	951.5	13.3	CMG	
926.428	5.9	JRJ	951.6	9.4	HJO	956.471	10.5	BMU	-----	-----	-----	
926.512	6.0	BVE	952.4	9.6	CMG	961.403	10.4	CMG	1611+38			
937.417	5.9	CMG	962.4	9.8	CMG	962.447	10.4	BMU	W CRB	mira		
937.535	5.9	BMU	966.4	9.9	CMG	966.420	10.1	CMG	908.4	10.3	CMG	
939.376	5.9	CMG	972.5	10.2	CMG	972.409	10.3	JRJ	920.4	11.2	CMG	
942.461	6.0	CMG	977.4	10.4	CMG	972.441	10.3	CMG	926.4	11.3	CMG	
943.412	6.0	JRJ	984.4	11.1	CMG	977.427	10.4	CMG	926.4	11.4	JRJ	
946.378	6.0	BVE	988.4	11.1	JRJ	977.457	10.4	BMU	926.4	11.5	BMU	
946.510	6.0	CMG	990.5	11.2	CMG	984.427	10.2	CMG	937.4	11.6	CMG	
947.398	5.9	VDE	-----	-----	-----	985.420	10.4	JRJ	942.5	11.8	CMG	
947.408	6.0	BMU	1546+39			987.444	10.3	BMU	943.4	11.8	JRJ	
948.434	5.9	CMG	V CRB	mira		990.459	10.3	CMG	947.5	12.0	CMG	
949.465	6.0	VDE	908.4	9.4	CMG	-----	-----	-----	948.4	12.5	BMU	
950.405	6.0	JRJ	920.4	9.1	CMG	1601+18			950.4	12.7	JRJ	
951.419	5.9	BMU	926.4	8.7	JRJ	R HER	mira		951.6	12.6	HJO	
951.420	5.9	VDE	926.4	8.9	CMG	922.4	14.6	CMG	952.4	12.2	CMG	
951.526	5.9	CMG	926.4	8.9	CMG	926.5	14.6	JRJ	961.4	12.7	CMG	
952.456	5.8	VDE	926.4	9.0	BMU	948.4	14.7	JRJ	962.5	12.8	BMU	
961.403	5.9	CMG	937.4	8.8	CMG	951.5	15.0	CMG	972.4	13.1	JRJ	
962.452	5.9	BMU	942.5	8.8	CMG	988.4	14.5	JRJ	972.4	13.3	CMG	
966.420	6.0	CMG	943.4	8.6	JRJ	990.5	14.6	CMG	977.4	13.6	CMG	
969.438	6.1	BVE	947.5	8.8	CMG	-----	-----	-----	984.4	13.8	CMG	
972.406	6.0	JRJ	948.4	8.8	BMU	1601+67			990.5	14.0	CMG	
972.441	5.9	CMG	948.4	8.8	BVE	AG DRA	zand		991.5	14.0	JRJ	
977.427	6.0	CMG	948.4	8.9	VDE	922.4	9.7	CMG	-----	-----	-----	
977.451	5.9	BMU	950.4	8.7	JRJ	926.481	9.9	BMU	1613+26			
984.427	6.0	CMG	951.6	9.1	HJO	937.4	9.7	CMG	NP HER	mira		
985.419	6.0	JRJ	952.4	8.7	CMG	942.4	9.8	CMG	908.4	11.1	CMG	
985.456	6.1	BVE	961.4	8.7	CMG	947.5	9.8	CMG	920.4	11.0	CMG	
987.447	5.9	BMU	962.5	8.7	BMU	950.463	9.9	BMU	926.4	11.0	CMG	
990.459	5.9	CMG	966.4	8.8	CMG	962.493	9.9	BMU	937.5	11.0	CMG	
990.470	5.9	BMU	972.4	8.8	CMG	972.5	9.8	CMG	942.5	11.0	CMG	
990.472	5.9	VDE	972.4	8.8	JRJ	987.4	9.8	CMG	947.5	11.0	CMG	
-----	-----	-----	977.4	8.9	CMG	-----	-----	-----	952.5	10.9	CMG	
1545+36			977.5	8.7	BMU	1602+10			961.5	10.9	CMG	
X CRB	mira		984.4	9.0	CMG	U SER	mira		969.5	10.7	CMG	
908.4	9.7	CMG	987.5	8.9	BMU	920.4	11.8	CMG	975.4	10.7	CMG	
920.4	9.3	CMG	990.5	9.0	CMG	926.4	11.8	CMG	984.4	10.7	CMG	
926.4	8.5	JRJ	991.5	8.8	JRJ	937.4	12.3	CMG	990.5	10.7	CMG	
926.4	8.8	BMU	-----	-----	-----	947.5	12.7	CMG	-----	-----	-----	
926.4	9.1	CMG	1547-15			948.4	12.9	JRJ	1616-07			
937.4	9.0	CMG	R LIB	mira		951.6	13.1	HJO	W OPH	mira		
-----	-----	-----	949.5	14.6	JRJ	952.4	13.0	CMG	949.4	10.8	JRJ	
-----	-----	-----	-----	-----	-----	962.4	13.1	CMG	988.5	11.0	JRJ	

951.4	9.4	VDE	922.448	12.7	CMG	937.5	11.0	CMG	926.6	9.2	CMG	922.5	9.8	CMG
952.4	9.9	CMG	926.482	12.3	JRJ	942.5	10.6	CMG	937.5	9.1	CMG	926.6	9.6	CMG
961.5	10.3	CMG	937.476	12.0	CMG	947.5	10.3	CMG	943.4	9.0	CMG	937.5	10.1	CMG
966.4	10.6	CMG	947.524	12.7	CMG	948.5	10.0	JRJ	949.4	8.5	CMG	942.5	10.0	CMG
969.4	10.9	BVE	948.427	13.3	CMG	949.4	9.7	VDE	949.4	9.3	JRJ	949.4	10.7	JRJ
975.4	11.2	CMG	949.403	13.8	CMG	949.4	9.8	BMU	952.4	8.8	CMG	952.4	10.8	CMG
977.5	11.5	HJO	951.472	14.1	CMG	949.4	9.9	BVE	962.4	8.5	CMG	961.5	11.4	CMG
984.4	11.7	CMG	956.516	13.3	CMG	952.4	9.9	CMG	967.4	8.4	CMG	967.4	12.1	CMG
988.4	12.3	JRJ	962.419	12.3	CMG	962.4	8.5	CMG	972.5	8.4	CMG	972.5	12.1	CMG
990.5	12.1	CMG	967.439	12.8	CMG	966.4	8.3	CMG	977.4	8.4	CMG	977.4	12.4	CMG
-----	-----	-----	969.459	12.7	CMG	975.4	8.3	CMG	984.5	8.1	CMG	984.5	12.8	CMG
1632+66	-----	-----	975.446	12.9	CMG	984.4	9.0	CMG	988.5	8.4	JRJ	990.5	13.2	CMG
R DRA	mira	-----	984.448	12.7	CMG	988.4	9.6	JRJ	990.5	8.2	CMG	991.5	13.9	JRJ
908.4	9.8	CMG	985.508	12.6	CMG	990.5	9.7	CMG	-----	-----	-----	-----	-----	-----
916.4	9.0	CMG	987.452	12.4	CMG	-----	-----	-----	1717+07	-----	-----	1740+21	-----	-----
922.4	8.2	CMG	990.497	12.4	CMG	1657+52	-----	-----	UZ OPH	rva	-----	CF HER	mira	-----
926.5	8.3	BMU	-----	-----	-----	-----	-----	-----	922.511	11.2	CMG	920.5	9.8	CMG
926.5	8.5	JRJ	1647+15	-----	-----	-----	-----	-----	926.587	11.8	CMG	926.5	9.0	JRJ
937.4	8.0	CMG	S HER	mira	-----	-----	-----	-----	937.490	11.4	CMG	937.5	8.8	CMG
942.4	7.9	CMG	920.4	8.7	CMG	-----	-----	-----	943.438	10.8	CMG	942.5	9.0	CMG
943.4	7.8	JRJ	926.4	8.9	CMG	-----	-----	-----	949.431	10.5	CMG	947.5	9.4	CMG
947.5	8.0	CMG	926.5	9.2	BMU	-----	-----	-----	952.444	10.6	CMG	948.5	9.0	JRJ
948.5	8.1	BVE	926.5	9.2	JRJ	-----	-----	-----	962.424	10.8	CMG	952.4	9.4	CMG
949.4	8.0	JRJ	937.5	9.4	CMG	-----	-----	-----	969.472	11.0	CMG	962.4	9.6	CMG
950.5	8.1	BMU	942.5	9.4	CMG	-----	-----	-----	972.467	11.1	CMG	969.5	9.9	CMG
952.4	8.2	CMG	947.5	9.6	CMG	-----	-----	-----	977.393	11.2	CMG	975.4	10.2	CMG
961.4	8.2	CMG	948.4	9.6	JRJ	-----	-----	-----	984.486	10.7	CMG	984.4	10.9	CMG
962.5	8.5	BMU	951.5	9.7	BMU	-----	-----	-----	990.459	10.6	CMG	990.5	11.2	CMG
966.4	8.4	CMG	951.5	9.7	VDE	-----	-----	-----	-----	-----	-----	-----	-----	-----
969.5	8.2	BVE	952.4	9.8	CMG	-----	-----	-----	1717+23	-----	-----	1744+22	-----	-----
972.4	9.0	JRJ	962.4	10.4	CMG	-----	-----	-----	RS HER	mira	-----	SU HER	mira	-----
972.5	8.8	CMG	966.4	10.6	CMG	-----	-----	-----	908.5	9.2	CMG	920.5	11.4	CMG
977.5	8.8	CMG	975.4	11.1	CMG	-----	-----	-----	920.4	9.5	CMG	926.5	11.1	JRJ
977.5	9.1	HJO	977.5	10.8	HJO	-----	-----	-----	926.4	10.0	CMG	948.5	11.5	JRJ
984.5	9.5	CMG	984.4	11.9	CMG	-----	-----	-----	926.5	10.1	BMU	949.4	11.5	CMG
990.5	9.8	CMG	990.5	11.9	CMG	-----	-----	-----	926.5	10.1	JRJ	952.5	11.4	CMG
-----	-----	-----	991.5	12.2	JRJ	-----	-----	-----	937.5	10.6	CMG	962.4	11.8	CMG
1634+14	-----	-----	-----	-----	-----	-----	-----	-----	942.5	11.0	CMG	969.5	11.8	CMG
AS HER	mira	-----	1652-02	-----	-----	-----	-----	-----	947.5	11.3	CMG	975.4	12.2	CMG
920.4	8.4	CMG	SS OPH	mira	-----	-----	-----	-----	948.5	11.8	JRJ	984.4	12.4	CMG
926.4	8.8	CMG	922.5	14.4	CMG	-----	-----	-----	949.4	11.8	BMU	990.5	12.4	CMG
926.5	9.0	JRJ	937.5	13.0	CMG	-----	-----	-----	952.4	11.4	CMG	-----	-----	-----
937.5	8.6	CMG	949.4	11.8	CMG	-----	-----	-----	962.4	12.2	CMG	1744-06	-----	-----
942.5	8.9	CMG	949.4	11.8	JRJ	-----	-----	-----	967.4	12.3	CMG	RS OPH	nr	-----
947.5	9.0	CMG	952.4	11.8	CMG	-----	-----	-----	975.4	12.5	CMG	926.509	11.0	BMU
948.4	9.8	JRJ	962.4	10.8	CMG	-----	-----	-----	984.4	12.5	CMG	926.576	11.2	CMG
952.4	9.0	CMG	972.5	9.8	CMG	-----	-----	-----	988.4	12.1	JRJ	949.456	11.7	BMU
962.4	10.4	CMG	984.5	9.0	CMG	-----	-----	-----	990.5	12.3	CMG	949.456	11.9	CMG
967.4	10.5	CMG	988.5	8.8	JRJ	-----	-----	-----	-----	-----	-----	949.458	11.7	VDE
975.4	10.8	CMG	990.5	8.8	CMG	-----	-----	-----	-----	-----	-----	950.455	11.5	BMU
984.4	11.3	CMG	-----	-----	-----	-----	-----	-----	1721+03	-----	-----	951.476	11.6	BMU
990.5	11.6	CMG	1656+31	-----	-----	-----	-----	-----	VV OPH	mira	-----	951.479	11.8	VDE
991.5	11.3	JRJ	RV HER	mira	-----	-----	-----	-----	949.4	13.1	CMG	956.468	11.8	BMU
-----	-----	-----	908.4	9.4	CMG	-----	-----	-----	962.5	13.4	CMG	956.507	12.2	CMG
1640+12	-----	-----	920.4	10.2	CMG	-----	-----	-----	-----	-----	-----	962.455	11.7	BMU
UV HER	mira	-----	926.4	10.6	CMG	-----	-----	-----	1722+04	-----	-----	962.469	11.6	CMG
920.4	10.0	CMG	926.5	10.7	JRJ	-----	-----	-----	VW OPH	mira	-----	969.472	11.4	CMG
926.4	10.2	CMG	937.5	11.3	CMG	-----	-----	-----	949.4	15.5	CMG	977.444	11.4	BMU
926.5	9.9	JRJ	947.5	12.1	CMG	-----	-----	-----	-----	-----	-----	990.466	10.9	VDE
937.5	10.4	CMG	948.4	12.0	JRJ	-----	-----	-----	1726+18	-----	-----	990.469	11.2	BMU
942.5	10.4	CMG	952.4	12.5	CMG	-----	-----	-----	UZ HER	mira	-----	990.483	11.4	CMG
947.5	10.6	CMG	962.4	13.2	CMG	-----	-----	-----	926.5	10.7	JRJ	-----	-----	-----
948.4	10.5	JRJ	975.4	13.9	CMG	-----	-----	-----	937.5	10.9	CMG	-----	-----	-----
952.4	11.0	CMG	985.5	14.1	CMG	-----	-----	-----	948.4	11.6	JRJ	1750+18	-----	-----
962.4	11.2	CMG	988.4	14.0	JRJ	-----	-----	-----	948.4	12.1	CMG	SN1998BP	sn	-----
967.4	11.4	CMG	-----	-----	-----	-----	-----	-----	952.5	12.5	CMG	949.415	13.9	CMG
975.4	11.5	CMG	1657+22	-----	-----	-----	-----	-----	962.4	13.4	CMG	949.431	14.3	JRJ
984.4	11.8	CMG	SY HER	mira	-----	-----	-----	-----	969.5	13.4	CMG	950.453	14.4	BMU
990.5	12.4	CMG	908.4	12.5	CMG	-----	-----	-----	975.4	13.7	CMG	951.421	14.3	JRJ
991.5	12.3	JRJ	920.4	12.2	CMG	-----	-----	-----	984.4	13.7	CMG	952.474	14.2	BMU
-----	-----	-----	926.4	11.6	CMG	-----	-----	-----	991.5	14.2	JRJ	952.476	14.2	VDE
1640+25	-----	-----	926.5	11.3	BMU	-----	-----	-----	-----	-----	-----	956.520	14.5	CMG
AH HER	ugz	-----	926.5	11.5	JRJ	-----	-----	-----	1728+09A	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	RU OPH	mira	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1751+11	-----	-----

RT OPH	mira	922.5	13.2	CMG	951.5	13.9	BMU	975.5	12.4	CMG	916.6	9.3	CMG	
926.6	13.9	CMG	951.5	12.5	CMG	952.5	13.6	CMG	985.4	13.0	CMG	922.4	9.3	CMG
949.4	14.4	CMG	-----	-----	-----	969.5	12.8	CMG	990.5	13.1	CMG	926.5	9.5	JRJ
-----	-----	-----	1805+18	-----	-----	975.4	12.4	CMG	-----	-----	-----	937.4	10.1	CMG
1754+23	-----	-----	XZ HER	mira	-----	977.5	12.2	HJO	1818+28	-----	-----	942.5	10.4	CMG
FU HER	mira	926.4	11.5	CMG	984.4	10.8	CMG	AZ HER	mira	-----	-----	947.5	10.5	CMG
922.5	14.7	CMG	937.5	12.3	CMG	991.5	10.3	JRJ	922.4	14.2	CMG	949.4	10.9	JRJ
948.4	12.4	CMG	952.5	13.6	CMG	-----	-----	-----	951.5	15.1	CMG	952.4	11.1	CMG
952.4	12.6	CMG	-----	-----	-----	-----	-----	-----	-----	-----	-----	961.4	11.5	CMG
962.4	12.6	CMG	1805+31	-----	-----	1811+03	-----	-----	1820+39	-----	-----	966.5	11.7	CMG
969.5	12.7	CMG	T HER	mira	-----	RY OPH	mira	-----	TW LYR	mira	-----	972.4	12.0	JRJ
975.4	12.8	CMG	920.5	8.9	CMG	922.5	9.6	CMG	920.5	13.6	CMG	975.5	12.0	CMG
984.4	13.0	CMG	926.4	9.2	CMG	926.6	9.6	CMG	926.4	13.4	CMG	984.5	12.4	CMG
990.5	13.0	CMG	926.5	9.2	JRJ	937.5	10.2	CMG	937.4	12.9	CMG	990.5	12.5	CMG
-----	-----	-----	926.5	9.3	BMU	943.4	11.5	CMG	947.5	12.5	CMG	-----	-----	-----
1754+58A	-----	-----	937.5	9.9	CMG	949.4	11.8	CMG	950.4	12.9	JRJ	1832+25	-----	-----
T DRA	mira	942.5	10.7	CMG	949.4	12.2	JRJ	952.5	12.4	CMG	RZ HER	mira	-----	-----
908.4	11.6	CMG	947.5	11.0	CMG	952.5	12.1	CMG	961.4	11.8	CMG	926.5	14.7	JRJ
916.6	11.7	CMG	948.5	11.3	JRJ	962.4	12.8	CMG	967.4	11.5	CMG	949.4	14.7	CMG
922.4	11.9	CMG	949.4	11.8	BVE	969.5	13.1	CMG	977.4	11.1	CMG	987.4	13.2	CMG
926.5	12.4	JRJ	951.4	11.6	BMU	984.5	13.4	CMG	984.4	11.1	CMG	-----	-----	-----
937.4	12.0	CMG	951.4	11.6	VDE	990.5	13.3	CMG	990.5	10.8	CMG	1832+27	-----	-----
942.5	12.3	CMG	952.4	11.4	CMG	991.5	13.5	JRJ	-----	-----	-----	CE LYR	mira	-----
947.5	12.3	CMG	956.5	12.0	CMG	-----	-----	-----	1821+72	-----	-----	990.4	12.6	CMG
949.4	12.5	JRJ	962.4	12.5	CMG	1811+36	-----	-----	RT DRA	mira	-----	-----	-----	-----
952.4	12.4	CMG	969.5	12.6	CMG	W LYR	mira	-----	916.6	12.9	CMG	1833+08	-----	-----
961.4	12.5	CMG	975.4	12.7	CMG	920.5	12.0	CMG	922.4	12.8	CMG	X OPH	mira	-----
968.5	12.8	CMG	977.5	13.4	HJO	926.4	11.9	CMG	926.5	11.9	JRJ	922.5	8.5	CMG
972.4	12.4	JRJ	984.4	12.8	CMG	926.5	11.8	BMU	937.4	12.2	CMG	937.5	8.5	CMG
975.5	12.7	CMG	990.5	12.7	CMG	937.4	10.6	CMG	942.4	12.6	CMG	943.4	8.5	CMG
984.5	12.9	CMG	991.5	12.9	JRJ	942.4	10.3	CMG	947.5	12.4	CMG	949.4	8.5	CMG
990.5	12.7	CMG	-----	-----	-----	947.5	10.4	CMG	949.4	12.0	JRJ	949.4	9.0	JRJ
-----	-----	-----	1805+65	-----	-----	949.4	9.9	BVE	952.4	12.3	CMG	952.5	8.5	CMG
1755+19	-----	-----	W DRA	mira	-----	950.4	10.3	JRJ	961.4	12.0	CMG	962.4	8.6	CMG
RY HER	mira	908.4	10.9	CMG	952.5	10.0	BMU	967.4	12.0	CMG	969.5	8.5	CMG	
922.5	12.6	CMG	916.4	11.6	CMG	952.5	10.1	CMG	972.4	11.9	JRJ	984.5	8.5	CMG
926.5	12.0	JRJ	920.4	11.7	CMG	961.4	9.8	CMG	972.5	11.7	CMG	990.5	8.4	CMG
937.5	12.0	CMG	926.4	12.0	CMG	966.4	9.3	CMG	977.5	11.6	CMG	991.5	8.2	JRJ
942.5	11.6	CMG	926.5	11.9	JRJ	969.5	9.5	BVE	977.5	11.7	HJO	-----	-----	-----
947.5	11.0	CMG	937.4	12.5	CMG	972.5	9.1	CMG	984.5	11.4	CMG	1839+22	-----	-----
948.5	11.4	JRJ	942.4	12.8	CMG	977.4	9.0	CMG	990.5	11.3	CMG	AE HER	mira	-----
949.4	11.2	BVE	947.5	12.9	CMG	977.5	9.0	HJO	-----	-----	-----	922.5	12.1	CMG
952.5	10.8	CMG	949.4	12.7	JRJ	984.4	8.5	CMG	1822+24	-----	-----	926.5	12.0	JRJ
962.4	10.2	CMG	952.4	13.1	CMG	990.5	8.4	CMG	SV HER	mira	-----	937.5	12.3	CMG
969.5	9.4	CMG	961.4	13.5	CMG	-----	-----	-----	922.4	14.1	CMG	947.5	12.6	CMG
975.4	9.2	CMG	968.5	13.8	CMG	1813+06	-----	-----	926.5	14.0	JRJ	951.5	13.2	CMG
984.4	9.1	CMG	975.5	14.2	CMG	BC OPH	mira	-----	937.5	14.6	CMG	-----	-----	-----
990.5	9.0	CMG	984.5	14.4	CMG	922.5	9.6	CMG	949.4	14.6	CMG	1841+34	-----	-----
-----	-----	-----	-----	-----	-----	926.6	9.5	CMG	987.4	14.6	CMG	RY LYR	mira	-----
1756+54	-----	-----	1806+66	-----	-----	937.5	9.3	CMG	-----	-----	-----	916.6	11.7	CMG
V DRA	mira	-----	X DRA	mira	-----	943.4	9.2	CMG	1823+06	-----	-----	920.5	11.9	CMG
908.4	11.4	CMG	908.4	13.0	CMG	949.4	9.4	CMG	T SER	mira	-----	926.4	11.9	CMG
916.4	11.4	CMG	920.4	13.5	CMG	952.5	9.4	CMG	922.5	9.6	CMG	937.4	12.3	CMG
916.6	11.4	CMG	926.4	13.8	CMG	962.4	10.1	CMG	926.6	9.6	CMG	942.5	12.6	CMG
922.4	11.4	CMG	937.4	14.0	CMG	968.5	10.1	CMG	937.5	9.2	CMG	950.4	12.5	JRJ
926.5	11.5	JRJ	942.4	14.3	CMG	972.5	10.1	CMG	943.4	9.4	CMG	952.5	12.8	CMG
937.4	11.8	CMG	949.5	14.5	CMG	984.5	10.8	CMG	949.4	9.7	JRJ	961.4	13.0	CMG
942.4	11.8	CMG	952.4	14.5	CMG	990.5	10.9	CMG	949.5	9.2	CMG	969.5	13.5	CMG
947.5	12.0	CMG	-----	-----	-----	-----	-----	-----	952.5	9.5	CMG	987.5	14.4	CMG
949.4	11.9	JRJ	1810+20	-----	-----	1815+12	-----	-----	962.4	10.0	CMG	-----	-----	-----
952.4	12.3	CMG	YY HER	zand	-----	V450OPH	mira	-----	968.5	10.0	CMG	1841+37	-----	-----
961.4	12.6	CMG	922.5	13.0	CMG	937.5	12.7	CMG	972.5	10.4	CMG	AY LYR	ugsu	-----
967.4	13.1	CMG	937.5	13.0	CMG	-----	-----	-----	984.5	10.8	CMG	949.481	13.0	JRJ
972.4	13.5	JRJ	947.5	13.1	CMG	1817+30	-----	-----	990.5	11.4	CMG	950.428	12.9	JRJ
975.5	13.7	CMG	952.4	13.0	CMG	TV LYR	mira	-----	991.5	11.0	JRJ	951.424	12.9	JRJ
984.5	13.7	CMG	962.4	13.0	CMG	922.5	10.6	CMG	-----	-----	-----	-----	-----	-----
-----	-----	-----	969.5	13.1	CMG	937.4	10.6	CMG	1829+16	-----	-----	1842+43	-----	-----
1757+18	-----	-----	984.4	13.0	CMG	942.5	10.9	CMG	DS HER	mira	-----	RW LYR	mira	-----
WZ HER	mira	-----	-----	-----	-----	947.5	11.1	CMG	951.5	11.0	CMG	926.6	15.5	CMG
952.5	14.8	CMG	1810+31	-----	-----	950.4	11.2	JRJ	987.5	11.4	CMG	949.4	13.5	CMG
-----	-----	-----	TV HER	mira	-----	952.5	11.3	CMG	-----	-----	-----	962.4	13.4	CMG
1802+20B	-----	-----	922.5	14.4	CMG	961.4	11.3	CMG	1831+49A	-----	-----	969.5	13.5	CMG
DF HER	mira	-----	948.4	13.7	CMG	968.5	12.1	CMG	SV DRA	mira	-----	985.4	13.4	CMG

-----	926.6	9.1	CMG	985.4	13.0	CMG	972.4	9.0	JRJ	985.5	12.3	CMG		
1842-05	937.5	9.1	CMG	990.5	13.1	CMG	972.5	9.2	CMG	-----				
R SCT rva	946.5	8.5	CMG	-----			977.438	9.2	BMU	1934+28				
926.510	5.4	BMU	950.5	8.3	CMG	1909+67	977.5	9.3	CMG	BG CYG	mira			
926.576	5.7	CMG	951.5	8.1	BMU	U DRA	987.457	8.8	BMU	916.6	10.3	CMG		
950.469	6.0	BMU	962.5	7.7	CMG	908.4	-----			922.5	10.3	CMG		
951.525	6.0	CMG	968.5	7.0	CMG	922.4	13.8	CMG	1922+01	926.6	10.8	JRJ		
951.537	5.4	VDE	972.5	7.1	JRJ	926.5	13.9	JRJ	TU AQL	mira	937.5	10.1	CMG	
952.455	5.6	VDE	975.5	6.9	CMG	937.4	14.1	CMG	950.5	14.5	CMG	942.5	10.1	CMG
962.453	6.7	BMU	985.4	6.7	CMG	947.5	14.2	CMG	-----		947.5	10.1	CMG	
962.490	6.5	CMG	990.5	6.7	CMG	949.4	14.0	JRJ	1923+33		950.5	10.0	JRJ	
969.478	7.0	CMG	-----			952.4	14.3	CMG	FL CYG	mira	952.5	10.1	CMG	
972.521	7.1	JRJ	1901+27			961.4	14.3	CMG	922.5	12.8	CMG	961.5	10.1	CMG
972.537	7.0	CMG	UU LZR	mira		972.4	13.8	JRJ	937.5	12.2	CMG	968.5	10.0	CMG
977.443	6.7	BMU	956.5	11.5	CMG	975.5	13.7	CMG	943.4	12.0	CMG	972.5	9.9	JRJ
985.429	5.8	CMG	961.4	11.5	CMG	984.5	13.4	CMG	949.4	12.0	CMG	977.5	10.0	CMG
987.448	5.8	BMU	966.4	11.6	CMG	990.5	13.1	CMG	962.4	11.9	CMG	984.5	10.0	CMG
990.469	5.6	BMU	972.4	11.5	CMG	-----			969.5	11.9	CMG	-----		
990.480	5.3	VDE	977.5	11.5	CMG	1910+46			977.5	12.0	CMG	1934+49		
990.546	5.6	CMG	985.4	11.6	CMG	SS LZR	mira		985.5	12.1	CMG	R CYG	mira	
991.498	5.5	JRJ	990.5	11.7	CMG	922.5	14.3	CMG	-----			916.6	12.8	CMG
-----			-----			948.4	14.6	CMG	1927+34			922.4	12.4	CMG
1850+36			1903+17			952.5	14.4	CMG	DD CYG	mira		922.4	12.5	BMU
SU LZR	mira		SV SGE	rcb		962.4	14.5	CMG	916.6	10.2	CMG	926.5	12.5	JRJ
920.5	13.7	CMG	922.530	14.6	CMG	987.5	14.2	CMG	922.5	10.3	CMG	937.5	11.3	BMU
948.4	14.4	CMG	926.576	14.6	CMG	-----			926.5	9.8	JRJ	937.5	11.5	CMG
-----			951.501	14.5	CMG	1910-07			926.5	9.9	BMU	942.4	11.0	CMG
1856+34			-----			W AQL	mira		937.5	10.2	CMG	947.4	9.9	BMU
Z LZR	mira		1904+43			926.6	11.4	CMG	942.5	10.2	CMG	947.5	10.2	CMG
937.4	12.3	CMG	MV LZR	nl		950.5	12.0	CMG	947.5	10.3	CMG	949.5	9.7	BVE
942.5	11.9	CMG	926.552	15.5	CMG	962.5	12.2	CMG	950.5	10.0	JRJ	950.5	9.8	JRJ
947.5	11.8	CMG	950.476	15.5	CMG	972.5	12.0	JRJ	950.5	10.2	BMU	952.5	9.9	CMG
950.4	11.3	JRJ	-----			972.5	12.3	CMG	952.5	10.6	CMG	956.5	9.5	BMU
952.5	11.8	CMG	1905+29A			987.5	12.4	CMG	961.5	10.8	CMG	961.5	9.4	CMG
961.4	11.3	CMG	V LZR	mira		-----			962.5	10.7	BMU	962.5	9.1	BMU
966.4	11.0	CMG	922.5	12.8	CMG	1915+17			968.5	10.8	CMG	966.4	9.0	CMG
972.5	10.6	CMG	950.4	13.3	JRJ	W SGE	mira		972.5	11.1	CMG	972.4	8.7	JRJ
977.4	10.3	CMG	951.5	13.5	CMG	926.6	14.4	CMG	972.5	11.2	JRJ	972.5	8.7	CMG
984.4	10.4	CMG	990.5	14.5	CMG	950.5	14.9	CMG	977.4	11.4	BMU	977.4	8.8	BMU
990.5	10.4	CMG	-----			-----			977.5	11.3	CMG	977.5	8.6	CMG
-----			1905+29B			1916+37			984.5	11.7	CMG	984.5	8.7	CMG
1857+37			VZ LZR	mira		U LZR	mira		987.5	11.9	BMU	987.5	8.8	BMU
RT LZR	mira		950.4	12.7	JRJ	922.5	11.4	CMG	990.5	12.4	CMG	990.5	8.7	CMG
922.5	11.1	CMG	-----			937.4	12.1	CMG	-----			-----		
937.4	10.4	CMG	1906+43			942.5	12.2	CMG	1929+28			1935+09		
942.5	10.3	CMG	ST LZR	mira		947.5	12.3	CMG	TY CYG	mira		RV AQL	mira	
947.5	10.1	CMG	926.6	15.2	CMG	950.4	12.8	JRJ	926.6	13.8	JRJ	916.6	10.9	CMG
950.4	9.8	JRJ	948.4	14.8	CMG	952.5	12.2	CMG	950.5	14.4	JRJ	926.6	9.4	CMG
952.5	10.2	CMG	987.5	13.5	CMG	961.4	12.3	CMG	951.5	14.6	CMG	937.5	8.8	CMG
961.4	10.4	CMG	-----			969.5	12.3	CMG	972.5	13.5	JRJ	946.5	9.0	CMG
966.4	10.5	CMG	1909+25			985.4	12.0	CMG	987.5	12.8	CMG	950.5	9.0	CMG
972.5	10.6	CMG	S LZR	mira		990.5	11.6	CMG	-----			962.5	9.3	CMG
977.5	10.8	CMG	926.6	13.7	CMG	-----			1933+11			972.5	9.8	JRJ
984.4	11.1	CMG	950.4	14.0	JRJ	1921+50			RT AQL	mira		975.5	9.8	CMG
990.5	11.6	CMG	951.5	15.5	CMG	CH CYG	zand		916.6	10.9	CMG	985.5	10.2	CMG
-----			-----			922.4	9.2	CMG	926.6	11.3	CMG	990.5	10.5	CMG
1859+47			1909+33A			922.407	9.0	BMU	937.5	11.8	CMG	-----		
WZ LZR	mira		RS LZR	mira		926.483	9.1	BMU	950.5	12.2	CMG	1937+31		
922.5	14.3	CMG	926.6	12.4	CMG	926.5	9.2	JRJ	962.5	12.9	CMG	FU CYG	mira	
948.4	12.8	CMG	937.4	13.0	CMG	937.5	9.3	CMG	969.5	12.9	CMG	949.4	14.0	CMG
950.4	12.5	JRJ	947.5	13.3	CMG	937.527	9.2	BMU	972.5	12.9	JRJ	962.4	13.4	CMG
952.5	12.6	CMG	950.4	13.2	JRJ	942.4	9.3	CMG	977.5	13.0	CMG	969.5	12.0	CMG
962.4	12.2	CMG	952.5	13.5	CMG	947.4	9.2	VDE	985.5	13.1	CMG	977.5	11.8	CMG
966.5	11.9	CMG	962.4	13.9	CMG	947.415	9.2	BMU	-----			985.5	12.0	CMG
972.4	11.3	CMG	987.5	14.5	CMG	947.5	9.4	CMG	1934+11			-----		
977.5	11.3	CMG	-----			950.5	9.3	JRJ	SV AQL	mira		1939+54		
985.4	11.4	CMG	1909+41			951.4	9.2	VDE	926.6	11.9	CMG	V369CYG	mira	
990.5	11.5	CMG	RU LZR	mira		951.440	9.3	BMU	937.5	12.2	CMG	916.6	10.5	CMG
-----			926.6	14.9	CMG	952.5	9.4	CMG	950.5	12.3	CMG	922.4	11.1	CMG
1901+08			948.4	14.0	CMG	956.452	9.3	BMU	962.5	11.8	CMG	937.5	12.8	CMG
R AQL	mira		952.5	14.0	CMG	962.4	9.3	CMG	969.5	11.8	CMG	942.5	13.1	CMG
916.6	8.8	CMG	962.4	14.2	CMG	962.460	9.2	BMU	972.5	12.2	JRJ	947.5	13.6	CMG
926.6	8.8	BMU	977.5	13.6	CMG	966.4	9.3	CMG	977.5	12.2	CMG	950.5	14.0	JRJ

952.5	14.0	CMG	947.4	11.1	BMU	987.4	13.2	CMG	962.5	12.8	CMG	926.552	9.4	CMG
961.5	14.1	CMG	947.5	11.2	CMG	-----	-----	-----	969.5	13.0	CMG	937.552	9.6	CMG
969.4	12.7	CMG	949.5	11.6	BVE	1952-02			985.5	13.1	CMG	946.542	9.1	CMG
972.5	12.4	CMG	950.5	11.1	JRJ	RR AQL	mira		-----	-----	-----	950.476	9.0	CMG
972.5	12.5	JRJ	952.5	11.2	CMG	969.5	10.9	CMG	2002+50			962.479	9.2	CMG
977.5	12.0	CMG	956.5	11.3	BMU	972.5	10.8	JRJ	BU CYG	mira		969.481	9.4	CMG
984.5	11.8	CMG	961.5	11.8	CMG	985.5	11.0	CMG	922.4	11.9	CMG	975.489	9.4	CMG
990.5	11.4	CMG	962.5	11.7	BMU	-----	-----	-----	937.5	10.3	CMG	985.451	9.2	CMG
-----	-----	-----	968.4	12.2	CMG	1953-08			942.4	10.1	CMG	-----	-----	-----
1940+48			972.4	12.4	JRJ	RS AQL	mira		950.5	11.5	JRJ	2009-06		
RT CYG	mira		972.5	12.3	CMG	969.5	13.0	CMG	952.5	10.8	CMG	Z AQL	mira	
916.6	9.3	CMG	977.4	12.7	BMU	972.5	13.2	JRJ	961.5	11.5	CMG	969.5	14.3	CMG
922.4	9.7	BMU	977.5	12.6	CMG	-----	-----	-----	968.5	11.5	CMG	972.5	13.8	JRJ
922.4	10.0	CMG	985.5	13.0	CMG	1955+33			972.4	11.8	JRJ	-----	-----	-----
926.5	9.8	JRJ	987.5	13.3	BMU	V482CYG	rob		972.5	12.0	CMG	2010+08		
937.5	11.0	BMU	990.5	13.4	CMG	922.511	11.2	CMG	977.5	12.2	CMG	R DEL	mira	
937.5	11.1	CMG	-----	-----	-----	926.419	10.9	BMU	985.5	12.2	CMG	926.6	9.0	JRJ
942.4	11.5	CMG	1946+04			926.545	11.0	JRJ	990.5	12.4	CMG	926.6	9.3	CMG
947.4	11.3	BMU	X AQL	mira		937.525	11.0	BMU	-----	-----	-----	937.5	8.3	CMG
947.5	11.8	CMG	926.6	14.4	CMG	943.438	11.3	CMG	2003+57			937.5	8.3	CMG
950.5	11.6	JRJ	950.5	14.6	CMG	947.544	11.2	CMG	S CYG	mira		947.6	8.6	CMG
952.5	12.0	CMG	-----	-----	-----	948.395	10.9	BMU	916.6	11.2	CMG	952.5	8.4	CMG
956.5	11.8	BMU	1946+32			950.456	10.9	BMU	922.4	11.4	CMG	962.5	8.9	CMG
961.5	12.0	CMG	CHICYG	mira		950.456	11.0	JRJ	926.6	11.3	JRJ	969.5	9.3	CMG
962.5	11.8	BMU	916.6	13.2	CMG	956.451	11.0	BMU	937.5	11.2	CMG	975.5	9.3	CMG
968.4	11.9	CMG	922.5	13.5	CMG	962.424	11.1	CMG	942.4	11.2	CMG	985.5	9.6	CMG
972.4	11.4	JRJ	926.5	13.3	JRJ	962.456	11.0	BMU	947.5	11.3	CMG	990.5	9.5	CMG
972.5	11.4	CMG	926.5	13.6	BMU	969.470	11.2	CMG	950.5	11.6	JRJ	-----	-----	-----
977.4	10.8	BMU	937.5	13.6	CMG	972.479	11.0	JRJ	952.5	11.4	CMG	2011+30		
977.5	10.9	CMG	947.5	13.7	CMG	975.514	11.1	CMG	961.5	12.0	CMG	SX CYG	mira	
984.5	10.1	CMG	950.5	13.4	CMG	977.433	11.0	BMU	968.5	12.2	CMG	926.6	13.8	JRJ
987.5	9.5	BMU	950.5	13.5	BMU	985.433	11.0	JRJ	972.4	12.2	JRJ	949.4	14.5	CMG
990.5	9.5	CMG	950.5	14.0	JRJ	985.467	11.1	CMG	972.5	12.2	CMG	950.5	13.9	JRJ
-----	-----	-----	952.5	13.4	CMG	987.453	11.0	BMU	977.5	12.3	CMG	972.5	13.7	JRJ
1940+67			962.4	13.3	CMG	-----	-----	-----	985.5	12.6	CMG	977.5	13.8	CMG
ZZ DRA	mira		962.5	13.4	BMU	1955+51			990.5	12.7	CMG	985.5	13.5	CMG
908.4	10.7	CMG	968.5	13.1	CMG	CM CYG	mira		-----	-----	-----	-----	-----	-----
916.6	10.7	CMG	972.5	12.8	JRJ	922.4	12.0	CMG	2007+06			2013+76		
922.4	10.8	CMG	972.5	13.1	CMG	937.5	11.3	CMG	TV AQL	mira		SZ CEP	mira	
926.5	10.7	JRJ	977.4	12.9	BMU	942.5	11.2	CMG	950.5	13.7	CMG	920.4	12.4	CMG
937.4	10.9	CMG	977.5	13.0	CMG	947.5	11.5	CMG	962.5	13.5	CMG	926.4	12.3	CMG
942.4	10.8	CMG	984.5	12.3	CMG	950.5	11.3	JRJ	-----	-----	-----	937.4	12.6	CMG
947.5	11.0	CMG	987.5	12.3	BMU	952.5	10.8	CMG	2007+15A			942.5	13.0	CMG
949.4	10.6	JRJ	-----	-----	-----	961.5	10.6	CMG	S AQL	sr		947.5	13.0	CMG
952.4	11.2	CMG	1947+38			968.5	10.4	CMG	916.6	9.3	CMG	952.4	13.3	CMG
961.4	11.7	CMG	FZ CYG	mira		972.5	10.4	CMG	926.6	9.7	CMG	961.5	13.6	CMG
968.5	12.1	CMG	922.5	11.5	CMG	972.5	10.4	JRJ	937.5	10.3	CMG	969.5	13.9	CMG
975.5	12.1	CMG	937.5	11.7	CMG	977.5	10.4	CMG	946.5	10.5	CMG	977.5	14.0	CMG
984.5	12.7	CMG	943.4	12.2	CMG	990.5	11.1	CMG	962.5	10.4	CMG	987.5	14.3	CMG
990.5	12.7	CMG	949.4	12.0	CMG	-----	-----	-----	969.5	10.5	CMG	-----	-----	-----
-----	-----	-----	-----	-----	-----	1958+49			972.5	10.5	JRJ	2014+34		
1943+11			1950+55			Z CYG	mira		975.5	10.8	CMG	AU CYG	mira	
RY AQL	mira		CU CYG	mira		922.4	10.4	CMG	985.5	10.9	CMG	922.5	13.8	CMG
916.6	12.1	CMG	922.4	14.2	CMG	926.5	10.5	JRJ	990.5	10.9	CMG	937.5	13.0	CMG
926.6	11.6	CMG	937.5	14.0	CMG	937.5	10.2	CMG	-----	-----	-----	949.4	12.2	CMG
937.5	10.8	CMG	950.5	13.7	JRJ	942.4	10.0	CMG	2007+20A			961.5	11.2	CMG
946.5	10.3	CMG	952.5	13.7	CMG	947.5	10.3	CMG	ST SGE	mira		966.4	11.3	CMG
950.5	10.3	CMG	962.4	13.0	CMG	950.5	10.5	JRJ	926.6	13.7	CMG	972.5	11.4	CMG
962.5	10.3	CMG	968.5	12.9	CMG	952.5	10.4	CMG	951.5	14.4	CMG	977.5	11.4	CMG
969.5	10.3	CMG	972.4	12.7	JRJ	961.5	10.3	CMG	-----	-----	-----	984.5	11.5	CMG
972.5	10.7	JRJ	972.5	12.7	CMG	966.4	10.0	CMG	2008+12			990.5	11.6	CMG
975.5	10.4	CMG	977.5	12.7	CMG	972.4	9.6	JRJ	RU AQL	mira		-----	-----	-----
985.4	10.5	CMG	987.4	12.1	CMG	972.5	10.0	CMG	926.6	12.2	CMG	2014+37B		
990.5	10.5	CMG	990.5	11.9	CMG	977.5	9.8	CMG	937.5	11.6	CMG	WX CYG	mira	
-----	-----	-----	-----	-----	-----	984.5	9.8	CMG	950.5	10.2	CMG	922.4	12.4	CMG
1943+48			1951+36A			990.5	9.8	CMG	962.5	9.5	CMG	937.5	12.4	CMG
TU CYG	mira		IZ CYG	mira		-----	-----	-----	969.5	9.6	CMG	947.6	12.3	CMG
922.4	10.9	BMU	916.6	12.2	CMG	2002+12			975.5	9.6	CMG	950.5	12.4	JRJ
922.4	10.9	CMG	922.5	12.2	CMG	SY AQL	mira		985.5	9.8	CMG	952.5	12.0	CMG
926.5	11.1	JRJ	937.5	12.7	CMG	916.6	11.9	CMG	990.5	9.8	CMG	961.5	11.8	CMG
937.5	10.8	BMU	943.4	12.8	CMG	926.6	12.0	CMG	-----	-----	-----	966.4	11.6	CMG
937.5	11.2	CMG	949.4	13.0	CMG	937.5	12.5	CMG	2009+16			972.5	11.6	CMG
942.4	11.2	CMG	969.5	13.1	CMG	950.5	12.4	CMG	R SGE	rvb		972.5	11.7	JRJ

977.5	11.5	CMG	926.6	11.4	CMG	937.5	12.9	CMG	987.5	13.8	CMG	R EQU	mira	
984.5	11.4	CMG	926.6	11.6	JRJ	942.4	12.9	CMG	-----	-----	-----	950.5	12.9	CMG
990.5	11.3	CMG	937.5	11.8	CMG	947.5	12.9	CMG	2055+47			969.5	11.5	CMG
-----	-----	-----	947.6	13.0	CMG	950.5	13.2	JRJ	DH CYG	mira		985.5	10.2	CMG
2015+20			952.5	12.7	CMG	952.5	13.0	CMG	916.6	11.7	CMG	990.5	9.7	CMG
V SGE	nl + e		987.5	14.4	CMG	969.4	12.9	CMG	922.4	11.6	CMG	-----	-----	-----
922.530	10.9	CMG	-----	-----	-----	972.4	12.8	JRJ	937.5	11.4	CMG	2108+36		
926.563	11.2	BMU	2029+54			977.5	12.9	CMG	942.5	11.4	CMG	DU CYG	mira	
926.576	11.2	CMG	ST CYG	mira		984.5	12.9	CMG	947.6	11.2	CMG	916.6	11.1	CMG
937.552	11.3	CMG	920.5	12.6	CMG	990.5	12.8	CMG	952.5	11.0	CMG	922.5	11.1	CMG
947.578	11.3	CMG	926.4	12.8	CMG	-----	-----	-----	961.5	10.9	CMG	926.5	11.0	BMU
950.476	11.6	CMG	926.6	13.1	JRJ	2039+37			969.5	10.9	CMG	926.6	11.4	JRJ
950.483	11.9	BMU	937.5	13.1	CMG	DR CYG	mira		977.5	10.9	CMG	937.5	11.1	CMG
952.517	11.8	CMG	947.5	13.3	CMG	922.5	12.7	CMG	984.5	10.9	CMG	946.5	11.4	CMG
956.470	11.3	BMU	950.5	13.1	JRJ	926.5	11.5	JRJ	990.5	10.9	CMG	950.5	11.4	JRJ
962.453	11.5	CMG	952.5	13.4	CMG	937.5	10.3	CMG	-----	-----	-----	952.5	11.4	CMG
962.475	11.5	BMU	962.4	13.5	CMG	942.5	10.0	CMG	2059+23A			961.5	11.6	CMG
969.481	12.8	CMG	969.5	13.6	CMG	947.6	9.9	CMG	R VUL	mira		969.5	11.5	CMG
972.537	12.8	CMG	972.4	13.7	JRJ	950.5	10.2	JRJ	916.6	8.4	CMG	972.5	12.0	JRJ
975.490	12.2	CMG	977.5	13.6	CMG	952.5	9.4	CMG	922.6	8.4	CMG	977.5	11.5	CMG
977.447	12.2	BMU	985.5	13.6	CMG	961.5	9.3	CMG	926.6	8.8	JRJ	984.5	11.5	CMG
977.514	12.0	CMG	-----	-----	-----	968.5	9.3	CMG	937.5	9.2	CMG	990.5	12.4	CMG
984.481	12.2	CMG	2029+62			972.5	9.5	JRJ	946.5	9.8	CMG	-----	-----	-----
985.505	12.2	CMG	BF CEP	mira		977.5	9.1	CMG	950.5	9.9	JRJ	2108+68		
987.466	13.4	CMG	920.5	13.2	CMG	984.5	9.1	CMG	950.5	10.5	CMG	T CEP	mira	
990.506	12.4	BMU	926.4	13.2	CMG	990.5	9.1	CMG	962.5	11.9	CMG	908.4	7.4	CMG
990.525	12.7	CMG	937.5	13.0	CMG	-----	-----	-----	968.5	12.2	CMG	916.4	7.0	CMG
-----	-----	-----	942.5	13.0	CMG	2040+16			975.5	12.7	CMG	926.4	6.7	CMG
2015+59			947.5	13.0	CMG	T DEL	mira		985.5	12.6	CMG	926.5	6.5	BMU
CN CYG	mira		952.4	13.0	CMG	922.6	9.7	CMG	-----	-----	-----	937.4	6.5	CMG
920.5	10.6	CMG	961.5	12.5	CMG	926.6	9.7	JRJ	2101+29			942.4	6.1	CMG
926.4	10.3	CMG	968.5	12.6	CMG	937.5	10.4	CMG	TW CYG	mira		947.4	6.3	BMU
937.5	10.1	CMG	975.5	12.2	CMG	946.5	10.6	CMG	922.5	12.4	CMG	947.5	6.2	CMG
942.5	10.1	CMG	984.5	11.4	CMG	952.5	10.7	CMG	922.5	12.8	CMG	949.5	6.5	BVE
947.5	10.0	CMG	-----	-----	-----	962.5	11.3	CMG	926.6	12.7	JRJ	952.4	6.2	CMG
952.5	9.6	CMG	2035+13			969.5	11.7	CMG	937.5	12.9	CMG	961.5	6.4	CMG
966.4	9.5	CMG	SS DEL	mira		975.5	11.9	CMG	947.6	13.3	CMG	962.5	6.4	BMU
972.5	9.3	JRJ	926.6	11.8	CMG	985.5	12.4	CMG	950.5	13.4	JRJ	966.4	6.5	CMG
972.5	9.6	CMG	-----	-----	-----	-----	-----	-----	952.5	13.3	CMG	969.5	6.5	BVE
977.5	9.6	CMG	2035+37			2043+18			962.5	13.4	CMG	972.5	6.6	CMG
984.5	10.1	CMG	FF CYG	mira		V DEL	mira		972.5	13.6	CMG	977.5	6.7	BMU
990.5	10.3	CMG	922.5	10.2	CMG	926.6	11.8	CMG	987.4	14.3	CMG	984.5	7.0	CMG
-----	-----	-----	937.5	10.2	CMG	926.6	12.1	JRJ	-----	-----	-----	990.5	7.0	BMU
2016+21			942.5	10.1	CMG	937.6	11.1	CMG	2103+82			990.5	7.3	CMG
PV VUL	n		947.6	10.0	CMG	947.6	10.7	CMG	X CEP	mira		-----	-----	-----
926.560	11.7	BMU	952.5	10.0	CMG	952.5	10.4	CMG	920.4	11.4	CMG	2116+14		
950.480	11.6	BMU	961.5	9.4	CMG	962.5	10.4	CMG	926.4	11.5	CMG	X PEG	mira	
956.469	11.7	BMU	968.5	9.4	CMG	969.5	11.0	CMG	937.4	11.5	CMG	950.5	12.2	CMG
962.474	11.7	BMU	977.5	9.6	CMG	975.5	11.2	CMG	942.4	11.8	CMG	969.5	13.2	CMG
977.445	11.6	BMU	984.5	9.7	CMG	985.5	11.3	CMG	947.5	11.8	CMG	-----	-----	-----
990.503	11.6	BMU	990.5	9.9	CMG	-----	-----	-----	952.4	12.0	CMG	2122+16		
990.505	11.6	VDE	-----	-----	-----	2048+46			961.5	12.1	CMG	TV PEG	mira	
-----	-----	-----	2037+18			RZ CYG	sr		967.4	12.4	CMG	950.5	10.6	CMG
2016+47			HR DEL	nb		922.5	11.6	CMG	972.5	12.5	CMG	-----	-----	-----
U CYG	mira		926.580	12.0	JRJ	937.5	12.2	CMG	984.5	12.6	CMG	2136+78		
916.6	9.5	CMG	-----	-----	-----	943.4	12.1	CMG	-----	-----	-----	S CEP	mira	
922.4	9.5	CMG	2038+16			947.6	12.5	CMG	2104+05			908.4	10.1	CMG
926.5	9.6	JRJ	S DEL	mira		952.5	12.2	CMG	RR EQU	mira		916.6	10.1	CMG
937.5	9.5	CMG	922.6	11.9	CMG	962.5	12.3	CMG	990.5	9.6	CMG	926.4	10.1	CMG
942.4	9.4	CMG	926.6	11.9	JRJ	969.5	12.4	CMG	-----	-----	-----	926.5	9.9	BMU
947.5	9.5	CMG	937.5	11.8	CMG	977.5	12.3	CMG	2104+15			937.4	10.0	CMG
949.5	9.0	BVE	946.5	11.3	CMG	985.5	12.3	CMG	TZ PEG	mira		942.4	10.1	CMG
950.5	10.2	JRJ	952.5	11.1	CMG	990.5	12.3	CMG	969.5	10.6	CMG	947.5	10.1	CMG
952.5	9.6	CMG	962.5	10.4	CMG	-----	-----	-----	975.5	10.8	CMG	949.5	9.6	BVE
961.5	9.5	CMG	969.5	10.2	CMG	2050+17			985.5	11.6	CMG	950.4	9.8	BMU
972.4	10.0	JRJ	975.5	10.0	CMG	X DEL	mira		-----	-----	-----	952.4	10.2	CMG
972.5	9.4	CMG	984.5	9.2	CMG	926.6	12.5	CMG	2105+87			961.5	10.1	CMG
977.5	9.4	CMG	990.5	9.0	CMG	926.6	12.5	JRJ	X UMI	mira		962.5	9.8	BMU
984.5	9.3	CMG	-----	-----	-----	937.5	12.7	CMG	916.6	14.2	CMG	966.4	10.0	CMG
990.5	9.2	CMG	2038+47			947.6	12.8	CMG	922.4	14.4	CMG	972.5	9.9	CMG
-----	-----	-----	V CYG	mira		952.5	13.0	CMG	949.4	15.2	CMG	977.5	9.6	BMU
2028+17			922.4	12.6	CMG	962.5	13.5	CMG	-----	-----	-----	984.5	9.8	CMG
Z DEL	mira		926.5	13.0	JRJ	969.5	13.8	CMG	2108+12			990.5	9.7	CMG

-----	985.4	13.3	CMG	952.5	11.6	CMG	984.5	10.4	CMG	990.5	7.2	CMG		
2138+43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
SS CYG	ugsa	2145+37		962.5	10.2	CMG	2328+48			2355+25				
916.637	11.2	CMG	RT CEP	mira	969.5	9.6	CMG	Z AND	zand	Z PEG	mira			
922.511	11.4	CMG	947.5	10.4	CMG	975.5	9.3	CMG	926.538	10.9	BMU	977.5	12.6	CMG
926.503	11.7	BMU	952.4	10.7	CMG	985.5	8.8	CMG	950.476	10.9	BMU	-----	-----	-----
926.515	11.6	JRJ	966.4	11.4	CMG	-----	-----	-----	951.5	10.6	CMG	-----	-----	-----
926.607	12.0	CMG	975.5	11.8	CMG	2229+24			969.5	10.8	CMG	0411 +55		
937.510	11.3	CMG	984.5	12.0	CMG	SS PEG	mira		977.485	10.9	BMU	CI CAM	zand	
937.524	11.5	BMU	-----	-----	-----	969.5	12.3	CMG	977.5	10.8	CMG	922.401	11.6	BMU
942.438	9.4	CMG	2152+47A			-----	-----	-----	985.5	10.7	CMG	926.413	11.7	BMU
943.438	9.3	CMG	LX CYG	mira		2238+41			-----	-----	-----	950.419	11.8	BMU
946.510	8.7	CMG	922.5	10.1	CMG	R LAC	mira		2336+56			-----	-----	-----
947.412	8.6	BMU	937.5	10.1	CMG	947.6	11.4	CMG	V705CAS	n		-----	-----	-----
947.413	8.7	VDE	943.4	10.1	CMG	952.5	12.0	CMG	952.518	:14.8	CMG	-----	-----	-----
947.434	8.8	JRJ	947.6	10.1	CMG	962.5	12.4	CMG	-----	-----	-----	-----	-----	-----
947.544	9.1	CMG	961.5	10.3	CMG	969.5	12.8	CMG	2339+56			-----	-----	-----
948.396	9.3	BMU	968.5	10.3	CMG	975.5	13.1	CMG	Z CAS	mira		-----	-----	-----
948.397	9.5	VDE	972.5	10.2	CMG	987.5	13.8	CMG	915.4	10.2	CMG	-----	-----	-----
948.456	9.5	JRJ	977.5	10.3	CMG	-----	-----	-----	926.5	10.2	JRJ	-----	-----	-----
949.392	9.9	VDE	984.5	10.4	CMG	2258+59			937.5	10.7	CMG	-----	-----	-----
949.392	10.0	BMU	-----	-----	-----	UV CAS	rcb		947.6	10.9	CMG	-----	-----	-----
949.411	10.0	JRJ	2152+47B			922.414	10.9	BMU	950.5	10.8	JRJ	-----	-----	-----
949.420	10.2	CMG	LY CYG	mira		926.467	11.0	BMU	952.5	11.0	CMG	-----	-----	-----
950.415	10.5	BMU	972.5	12.6	CMG	937.544	10.9	BMU	962.5	11.3	CMG	-----	-----	-----
950.426	10.2	JRJ	-----	-----	-----	949.442	11.0	BMU	967.4	11.5	CMG	-----	-----	-----
950.522	10.5	CMG	2159+34			952.438	11.0	BMU	972.5	11.6	CMG	-----	-----	-----
951.415	10.7	BMU	RT PEG	mira		962.473	11.0	BMU	972.5	11.7	JRJ	-----	-----	-----
951.416	10.5	VDE	956.5	12.7	CMG	977.467	11.0	BMU	977.5	11.7	CMG	-----	-----	-----
951.423	10.6	JRJ	969.5	12.5	CMG	-----	-----	-----	985.5	11.8	CMG	-----	-----	-----
951.514	10.7	CMG	975.5	12.7	CMG	2259+14			990.5	11.9	CMG	-----	-----	-----
952.419	11.0	BMU	985.5	12.7	CMG	RW PEG	mira		-----	-----	-----	-----	-----	-----
952.419	11.2	VDE	-----	-----	-----	985.5	13.0	CMG	-----	-----	-----	-----	-----	-----
952.444	11.3	CMG	2201+33B			-----	-----	-----	2350+53			-----	-----	-----
956.451	11.6	BMU	RZ PEG	mira		2307+59			RR CAS	mira		-----	-----	-----
956.477	11.7	CMG	947.6	9.5	CMG	V CAS	mira		926.5	11.9	JRJ	-----	-----	-----
961.459	12.0	CMG	950.5	9.2	CMG	922.4	10.6	BMU	937.5	11.8	CMG	-----	-----	-----
962.451	12.1	CMG	969.5	9.3	CMG	922.5	10.4	CMG	947.6	11.7	CMG	-----	-----	-----
962.464	11.6	BMU	975.5	9.4	CMG	926.5	10.3	JRJ	950.5	11.4	JRJ	-----	-----	-----
966.449	10.5	CMG	985.5	9.5	CMG	926.5	10.6	BMU	952.5	11.6	CMG	-----	-----	-----
967.426	10.7	CMG	-----	-----	-----	937.5	9.7	CMG	962.5	11.5	CMG	-----	-----	-----
968.451	10.6	CMG	2203+37			937.5	9.8	BMU	967.4	11.6	CMG	-----	-----	-----
969.453	10.3	CMG	W LAC	mira		947.6	9.4	CMG	972.5	11.2	JRJ	-----	-----	-----
972.442	9.5	JRJ	950.5	11.1	CMG	949.4	9.1	BMU	972.5	11.6	CMG	-----	-----	-----
972.493	9.9	CMG	969.5	11.6	CMG	950.5	9.0	JRJ	977.5	11.6	CMG	-----	-----	-----
975.420	8.8	CMG	975.5	12.2	CMG	952.5	9.0	CMG	985.5	11.5	CMG	-----	-----	-----
977.393	10.0	CMG	987.5	12.9	CMG	962.5	7.8	CMG	990.5	11.5	CMG	-----	-----	-----
977.432	9.4	BMU	-----	-----	-----	962.5	8.2	BMU	-----	-----	-----	-----	-----	-----
984.481	12.2	CMG	2207+14			967.4	7.7	CMG	2352+55			-----	-----	-----
985.429	12.1	CMG	RS PEG	mira		972.5	7.7	CMG	WY CAS	mira		-----	-----	-----
985.432	12.0	JRJ	969.5	12.3	CMG	972.5	7.7	JRJ	977.5	9.1	CMG	-----	-----	-----
987.441	12.1	CMG	975.5	12.3	CMG	977.5	7.4	BMU	985.5	9.1	CMG	-----	-----	-----
987.456	12.0	BMU	985.5	11.9	CMG	977.5	7.7	CMG	990.5	8.8	CMG	-----	-----	-----
990.469	11.8	VDE	-----	-----	-----	984.5	7.8	CMG	-----	-----	-----	-----	-----	-----
990.471	11.9	BMU	2207+54			990.5	7.7	CMG	2353+50			-----	-----	-----
990.519	12.1	CMG	AB CEP	mira		-----	-----	-----	R CAS	mira		-----	-----	-----
-----	-----	-----	975.5	14.8	CMG	2314+25			922.5	6.1	CMG	-----	-----	-----
2140+24			-----	-----	-----	W PEG	mira		926.5	6.3	BMU	-----	-----	-----
RR PEG	mira	2209+12				969.5	10.0	CMG	926.5	6.3	JRJ	-----	-----	-----
950.5	13.8	CMG	RU PEG	ugsa+zz		975.5	9.8	CMG	937.5	6.1	CMG	-----	-----	-----
-----	-----	-----	969.524	11.4	CMG	985.5	9.5	CMG	947.4	6.0	BMU	-----	-----	-----
2144+43			975.522	12.5	CMG	990.5	9.4	CMG	947.6	6.0	CMG	-----	-----	-----
WY CYG	mira	985.511	12.6	CMG	-----	-----	-----	-----	950.5	6.2	JRJ	-----	-----	-----
916.6	9.8	CMG	-----	-----	-----	2318+78			952.5	6.0	CMG	-----	-----	-----
922.5	10.2	CMG	2221+29			RY CEP	mira		956.5	6.1	BMU	-----	-----	-----
937.5	10.9	CMG	RV PEG	mira		916.6	11.1	CMG	962.5	6.2	CMG	-----	-----	-----
943.4	11.3	CMG	950.5	12.3	CMG	926.4	10.5	CMG	962.5	6.3	BMU	-----	-----	-----
947.6	11.2	CMG	975.5	11.1	CMG	937.4	10.3	CMG	967.4	6.4	CMG	-----	-----	-----
950.5	11.4	CMG	985.5	11.0	CMG	942.4	10.3	CMG	972.5	6.5	JRJ	-----	-----	-----
956.5	11.8	CMG	-----	-----	-----	947.5	10.3	CMG	972.5	6.6	CMG	-----	-----	-----
962.5	12.0	CMG	2224+39			952.4	10.3	CMG	977.5	6.7	CMG	-----	-----	-----
968.5	12.5	CMG	S LAC	mira		961.5	10.3	CMG	977.5	6.8	BMU	-----	-----	-----
977.4	12.6	CMG	947.6	12.0	CMG	966.4	10.3	CMG	985.5	7.0	CMG	-----	-----	-----
-----	-----	-----	-----	-----	-----	975.5	10.3	CMG	990.5	7.0	BMU	-----	-----	-----