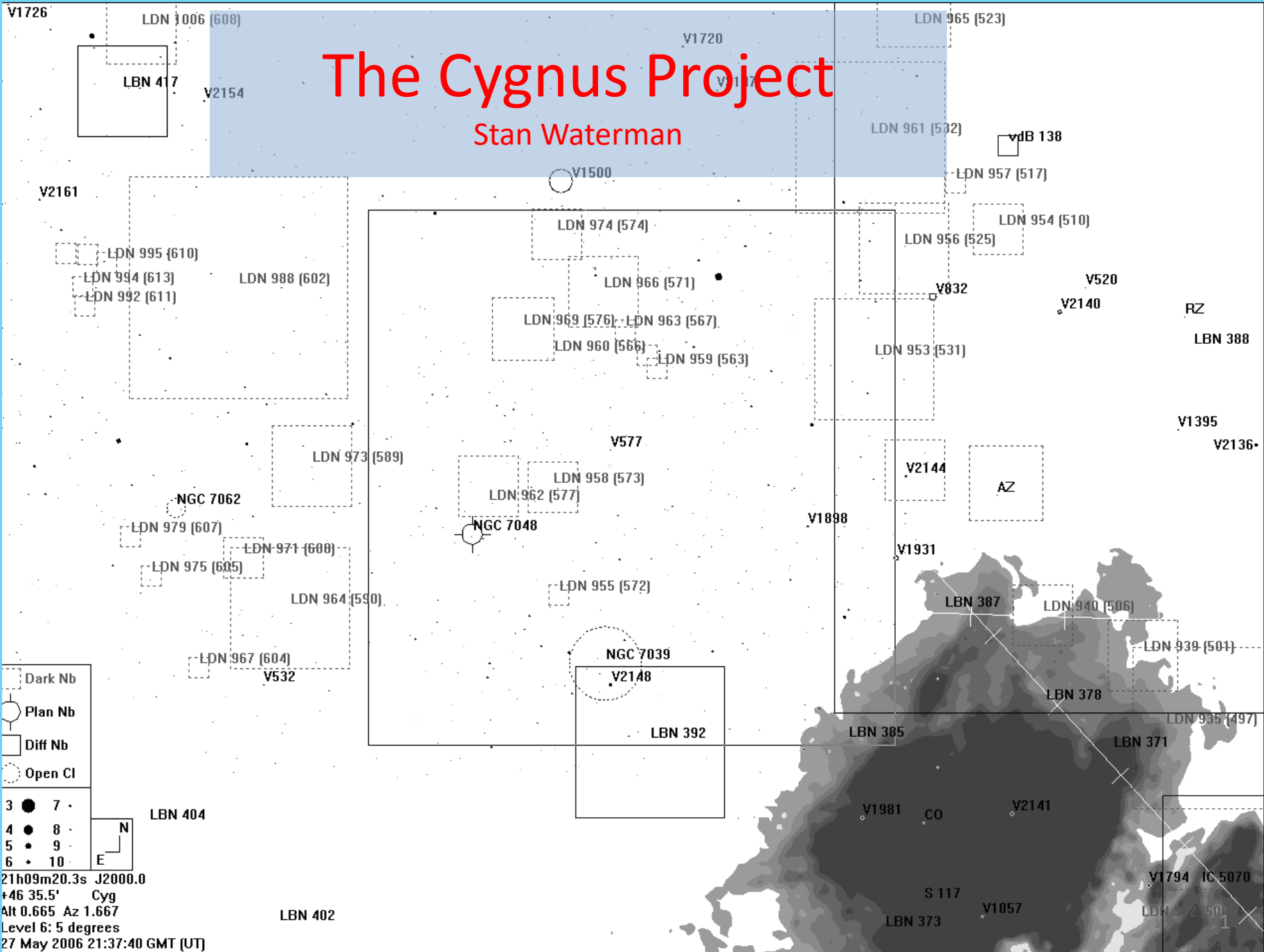


The Cygnus Project

Stan Waterman



- Dark Nb
- Plan Nb
- Diff Nb
- Open Cl

3	●	7	•
4	●	8	•
5	•	9	•
6	•	10	•

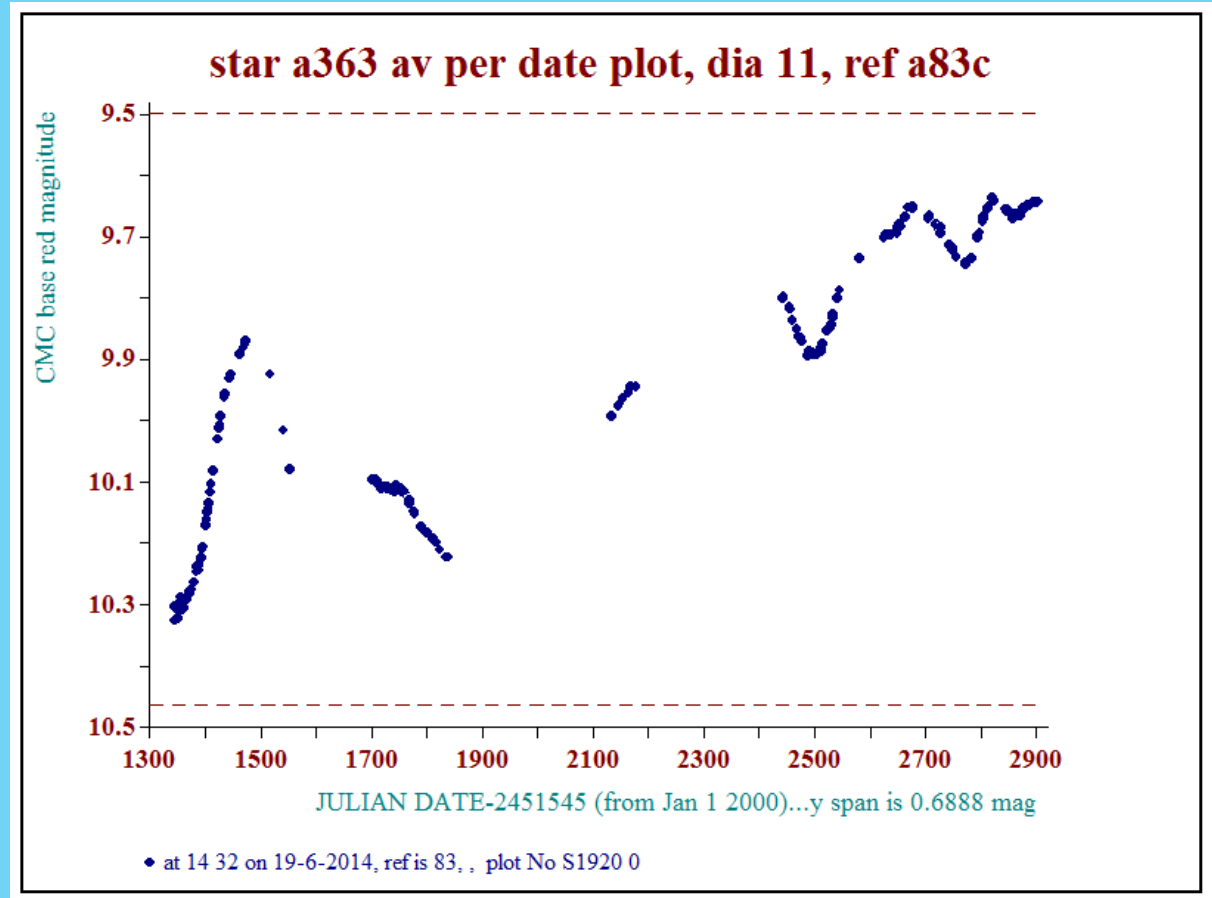
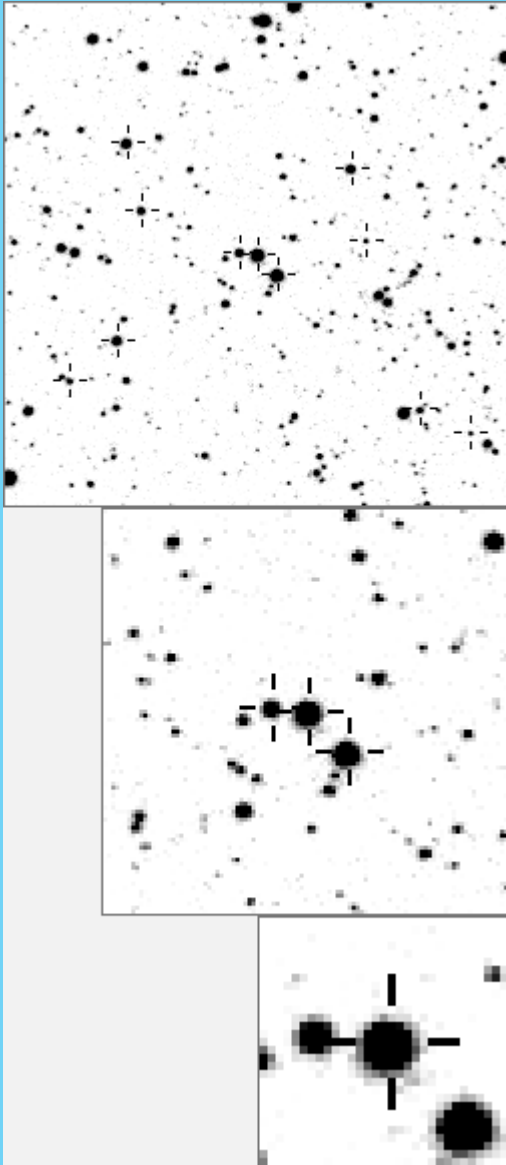
21h09m20.3s J2000.0
 +46 35.5' Cyg
 Alt 0.665 Az 1.667
 Level 6: 5 degrees
 27 May 2006 21:37:40 GMT (UT)

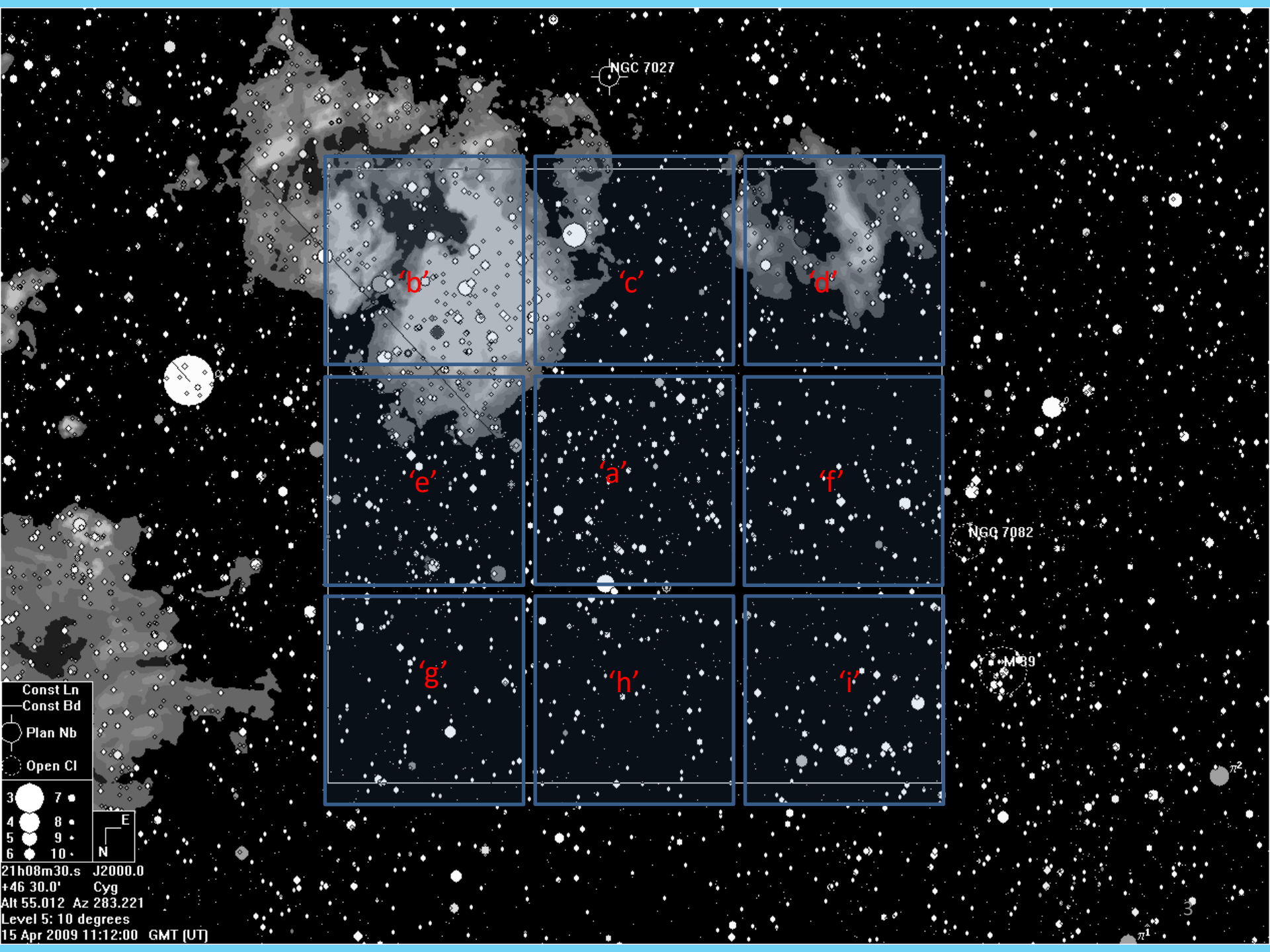
LBN 404

LBN 402

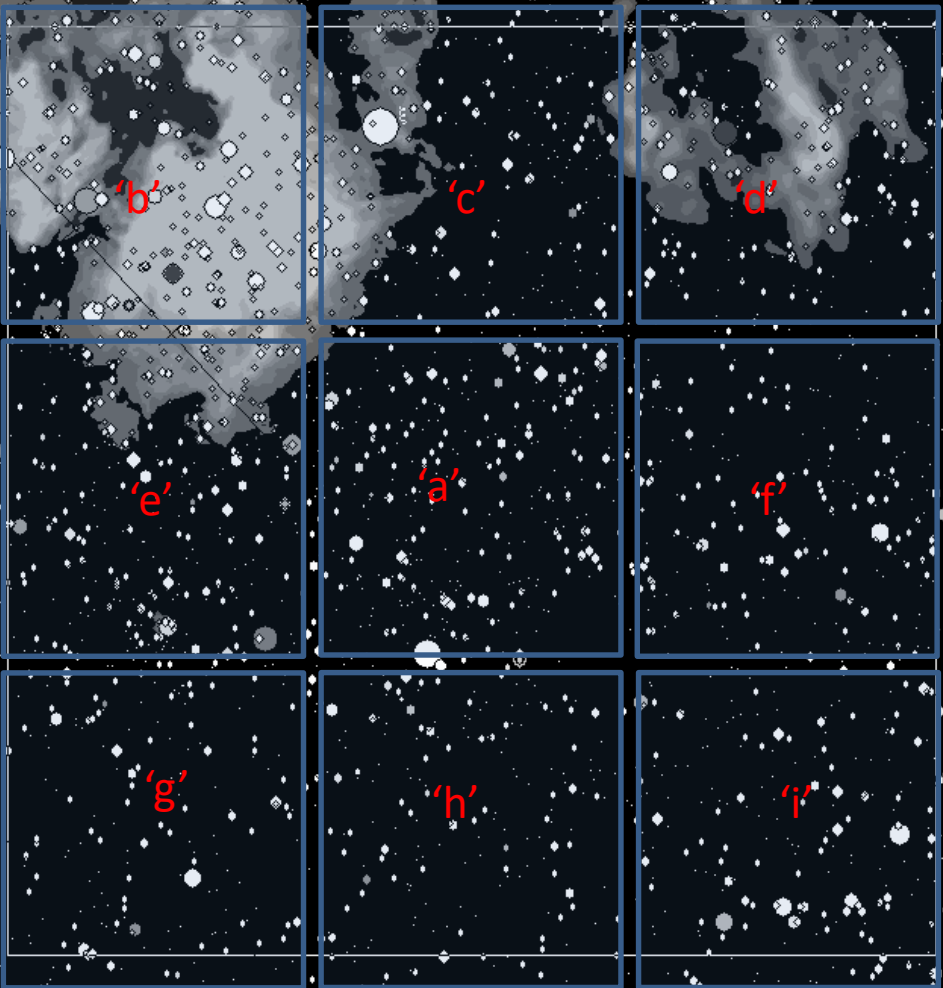
IC 5070

a00363= V577 Cyg





NGC 7027



NGC 7082

M39

Const Ln
Const Bd
Plan Nb
Open Cl

3	7
4	8
5	9
6	10

N E

21h08m30.s J2000.0
+46 30.0' Cyg
Alt 55.012 Az 283.221
Level 5: 10 degrees
15 Apr 2009 11:12:00 GMT [UT]

History so far

- **69,947** quality-filtered images in main Cygnus area (area 'a')
- Some data in 8 contiguous areas in Cygnus (**9,293**) (areas b-i)
- Each 2.8 degrees square, 7.84 sq. degrees
- Plus **20,967** in Auriga (area 'p')
- The area 'a' has more than 220,000 measurable stars
- 70,000 of those have 7 year light curves
- **1023** variable stars found in area 'a', **178** in area 'p' and **1556** in areas b-i

www.stanwaterman.co.uk/variablestars

The screenshot shows a web browser window with the URL <http://www.stanwaterman.co.uk/variablestars/news/>. The browser tabs include "News | Stan Waterman's Vari...", "AOL Mail - New E-mail", and "Google". The website header features a dark space-themed background with the title "Stan Waterman's Variable Stars" and the subtitle "A search for variable stars in Cygnus & Auriga". A navigation menu includes "News", "Website Introduction", "The Cygnus Project- brief description", "The Cygnus Project- more details", "Varlist_a", and a search icon. Below the menu, there are links for "Notes on Variable Star Reports" and "Cygnus A".

News

2017-04-03-

193 variable star reports have now been uploaded, they are to be seen in the Cygnus A page. Many of the stars need more work which I can do on request! You can download a copy of the pdf files or I can send you the Word version, if you prefer.

Please offer opinions and comments here or to stanwaterman@aol.com

Varlist_a is the list of 1022 variable stars I have found in my main study area in Cygnus and I will be adding reports on them to this website during 2017.

Recent News
Progress!

Proudly powered by WordPress

Stan Waterman's Variable Stars

A search for variable stars in Cygnus & Auriga

- News
- Website Introduction
- The Cygnus Project- brief description
- The Cygnus Project- more details
- Variable lists in area 'a'
- Notes on Variable Star Reports
- Categories
- Cygnus A



Latest- April 7th 2017

🕒 April 7, 2017 📁 Uncategorized

Now 349 star files have been uploaded. They are all in .pdf format so please use the back button to exit, not 'x'! They are all to be found under the heading Cygnus A. For details, see categories.

Recent News

Latest- April 7th 2017

Progress!

[← Progress!](#)

Leave a Reply

Your email address will not be published. Required fields are marked *

Comment

Thanks!

Kathy Hall and Richard Stratford

Chris Lloyd and Norman Walker

Roger Pickard and Andy Wilson

Callum Potter

Stan Waterman's Variable Stars

A search for variable stars in Cygnus & Auriga

[News](#)[Website Introduction](#)[The Cygnus Project- brief description](#)[The Cygnus Project- more details](#)[Variable lists in area 'a'](#)[Notes on Variable Star Reports](#)[Categories](#)[Cygnus A](#)

News

2017-04-03-

More variable star reports have now been uploaded, they are to be seen in the **Cygnus A** page. Many of the stars need more work which I can do on request! You can download a copy of the pdf files or I can send you the Word version, if you prefer.

Under the heading "Variable lists in area 'a' " are three documents:

"Varlist_a" which is the list of 1024 variable stars I have found in my main study area in Cygnus.

Document " Variable Star Lists' is an explanatory note about the varstar lists of which 'a' is the first

Document " eclipsingstars_a " is a 178 long subset of varlist_a .

Only 350 or so star reports have been uploaded so far. A list of them will appear alongside Cygnus A in a page "available stars" within a few days.

Please offer opinions and comments here (Recent News) or to stanwaterman@aol.com

Recent News

Latest- April 7th 2017

Progress!



Stan Waterman's Variable Stars

A search for variable stars in Cygnus & Auriga

- [News](#)
- [Website Introduction](#)
- [The Cygnus Project- brief description](#)
- [The Cygnus Project- detailed description](#)
- [Notes on Variable Star Reports](#)

News

2017-04-03-

193 variable star reports have now been uploaded to the website. A page. Many of the stars need more work which I will be doing in the next few weeks. You can [download a copy of the pdf files](#) or I can send you the files by email.

Please offer opinions and comments here or to stanwaterman@aol.com

Cygnus A	
Variables with Range <0.1 magnitude	
Variables with Range 0.1 to 0.5 magnitude	period <0.2 days
Variables with Range > 0.5 magnitude	period 0.2 to 1 day
	period 1 to 5 days
	period > 5days
	Irregular

Stan Waterman's Variable Stars

A search for variable stars in Cygnus & Auriga

News Website Introduction The Cygnus Project- brief description The Cygnus Project- more details Varlist_a

















Notes on Variable Star Reports [Cygnus A](#)

period 1 to 5 days

Recent News

[Progress!](#)

path: [period_1_to_5d](#)

-  [a05297.pdf](#) 1,38 MB
-  [a10378.pdf](#) 1,36 MB
-  [a10709.pdf](#) 366,91 kb
-  [a10829.pdf](#) 289,17 kb
-  [a12334.pdf](#) 1,17 MB
-  [a12431.pdf](#) 394,81 kb
-  [a16220.pdf](#) 1,37 MB
-  [a18319.pdf](#) 1,28 MB
-  [a18494.pdf](#) 423,32 kb
-  [a18727.pdf](#) 357,57 kb
-  [a18734.pdf](#) 1,20 MB
-  [a19514.pdf](#) 1,13 MB
-  [a19986.pdf](#) 1,20 MB
-  [a20216.pdf](#) 420,35 kb
-  [a20467.pdf](#) 1,18 MB
-  [a20543.pdf](#) 1,15 MB

Cygnus A

Range < 0.1 mag



Period < 0.2d

Period 0.2 to 1d

Period 1 d to 5d

Period > 5d

Irregular

Range 0.1 to 0.5mag



Period < 0.2d

Period 0.2 to 1d

Period 1 d to 5d

Period > 5d

Irregular

Range > 0.5 mag



Period < 0.2d

Period 0.2 to 1d

Period 1 d to 5d

Period > 5d

Irregular

And the same for Cygnus B
and Auriga
eventually!

First page of varlist_a

SW cat number	other ID 1	other ID 2	MAGM (max)	MAGR (range)	Period1 (days)	J 2000 position	
a00002	3592	211701	BD+46°3180	8.11	0.13	?	21 6 3.62 47 10 24.9
a00010	3588	738401	HD 201870	8.27	0.04	0.118	21 10 50.18 46 5 59.4
a00012	3588	756501	BD+45°3379	8.1	0.23	28	21 2 58.93 46 29 28.3
a00026	3589	64201	BD+44°3742	8.2	0.3	31.4	21 13 37.7 45 18 56.4
a00032	3589	547801	HD 202163	8.522	0.011	1.6413	21 12 37.35 45 47 42.2
a00038	3588	790601		8.792	0.008	0.8818	21 7 19.43 45 55 45.1
a00063	3592	79301		9.102	0.011	1.148	21 1 28.02 47 12 20
a00070	3588	403401	V408 Cyg	8.8	0.42	4.255?	21 5 37.96 46 0 8.6
a00072	3588	282501	TYC3588-2825-1	8.76	0.24	26.4	21 8 27.67 45 26 53.8
a00085	0	0		9.23	0.2		21 10 35.66 46 51 2.8
a00093	3589	515701	BD+44°3734	8.995	0.066	1.5446	21 12 2.77 45 29 33.9
a00095	3589	694501	TYC 3589 6945 1	8.95	0.2	26.5	21 15 12.89 45 11 22.2
a00099	3588	326601	BD+45°3406	9.14	0.012	1.203	21 6 32.42 45 51 30.7
a00102	3592	110001	BD+46°3209	9.185	0.023	1.0965	21 10 0.83 46 57 46.8
a00111	3588	929901	PPM60912, HIP104013	9.408	0.015	4.253	21 4 21.2 46 31 5.5
a00120	3592	662101	TYC 3592 6621 1	9.1	0.16	3200	21 6 46.25 47 31 10.2
a00121	3588	1106601	GSC 3588-11066	9.25	0.977	294	21 1 54.98 45 17 20.3
a00131	3588	708901		9.595	0.01	0.6323	21 7 6.78 45 21 50.3
a00136	3588	1044601	NSV13494	9.29	0.155	irr	21 2 56.03 46 16 27.3
a00152	3588	472901	BD+45°3433 10.49	9.546	0.064	12.6	21 10 22.27 45 38 33.2
a00156	3589	244601		10	0.019	0.833	21 11 22.41 45 29 47
a00166	3588	56901		9.680	0.010	0.8345	21 11 0.15 45 21 39.5
a00167	3588	759601	TYC 3588 7596 1	9.15	0.22	80	21 5 25.35 46 9 19.3
a00169	3588	623801	BD+45°3394	9.36	0.03	0.03333	21 5 4.19 46 2 25.5
a00172	3593	349101		9.71	0.006	0.624?	21 15 32.63 47 10 47.4
a00178	3593	128001	TYC 3593-1280-1	9.64	0.11	29.45333	21 12 28.47 47 3 14.6
a00191	3592	283901	TYC 3592-2839-1	9.5	0.038	~60	21 6 25.45 46 58 51.9
a00198	3588	398401	TYC 3588 3984 1	9.41	0.16	60	21 10 40.97 46 51 26.2
a00207	3592	549401	TYC 3592 5494 1	9.67	0.69	irr	21 10 5.45 47 5 57.6
a00210	3588	564201	TYC 3588 5642 1	9.55	0.175	23.18	21 7 7.35 46 0 0.5
a00219	3588	911501	TYC 3588 9115 1	9.8	0.041	1.54727	21 2 53.97 46 37 51.5
a00220	3592	557901		9.83	0.010	?0.7569	21 5 14.95 47 29 22.8
a00228	3589	474901	V582 Cyg (Lb)	9.62	0.29	~46	21 11 51.43 46 34 17.7
a00229	3593	399801	BD+46°3225	9.55	0.013	2.2795	21 12 26.5 46 55 9
a00249	3588	967901		9.977	0.006	0.5338	21 10 58.98 46 36 57.8
a00251	3589	192101		10.16	0.175	irr	21 13 0.17 46 50 38.6
a00255	3593	106701	TYC 3593 1067 1	9.618	0.057	1.57344	21 12 59.85 46 59 2.9

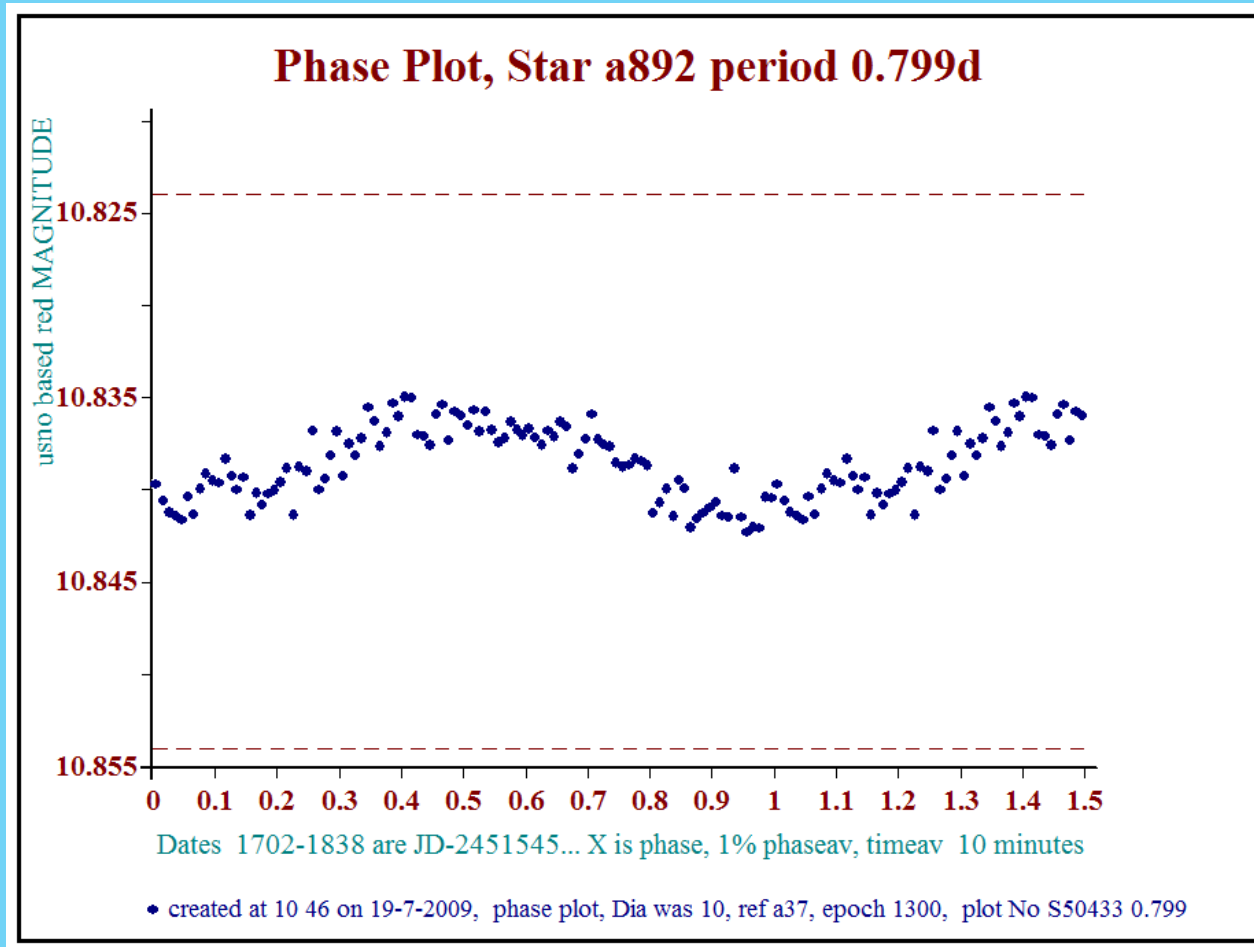
Last page of varlist_a

a20007	1369	441438		14.2	0.3	>2000	21	10	25.82	46	57	56.1	
a20026	1361	393991		14.43	0.06	3.654	21	5	23.64	46	7	26.9	
a20027	0	0					21	6	20.45	47	17	6	
a20036	1361	400528		14.06	0.03	1.321	21	10	17.45	46	7	5.5	
a20050	1356	418709					21	10	44.45	45	39	3	
a20053	1369	444548					21	13	9.83	46	54	49.1	
a20056	1362	393447		14.23	0.076	0.8114	21	4	44.2	46	12	15.1	
a20117	1358	406436					21	8	10.49	45	51	40.6	
a20124	1366	412302					21	12	50.65	46	39	29.9	
a20181	1369	442813	1369-0442813				21	11	42.39	46	58	24.4	
a20216	1364	401636		14.00	0.118	3.514	21	8	12.92	46	27	18.8	
a20250	1371	475286		14.2	0.150	14.886	21	5	46.52	47	10	34.7	
a20255	1371	478751					21	8	36.84	47	9	19.7	
a20258	1370	464871		13.91	0.093	3.876	21	10	42.31	47	1	45.7	
a20264	1371	475098		14.3	0.21	~100	21	5	36.68	47	6	3.4	
a20265	1368	426055		14.37	0.09	3.804	21	6	40.25	46	48	32	
a20271	0	0					21	11	14.12	47	13	14.9	
a20350	1361	396620	GSC 3588-6904		0.280	0.56406	21	7	16.57	46	6	2.9	nr
a20353	1364	402480					21	8	54.77	46	27	29	
a20364	1360	395494					21	8	1.94	46	2	14.7	
a20366	0	0		14.3	0.12	14.5	21	8	12.95	46	13	45.5	
a20410	1373	488121					21	11	50.54	47	19	32.9	
a20435	1364	401341		14.4	0.23	~22	21	7	59.2	46	28	29.6	
a20467	1368	430229		14.01	0.108	2.805	21	10	34.39	46	52	36	
a20483	1373	484643					21	9	1.95	47	22	27.1	
a20495	1365	394964					21	4	46.58	46	33	24.3	
a20503	1363	400988	1350-13486735	13.97	0.23	11.821	21	7	26.16	46	21	25	
a20538	0	0		14.4	0.25	irr	21	11	35.61	46	54	27.7	
a20543	1367	418075	GSC 3588-3364	14.31	0.325	?1.49906	21	8	31.39	46	47	53	
a20558	1360	396853					21	9	21.24	46	5	2.6	
a20570	1368	430356					21	10	41.07	46	52	45.9	
a20592	1366	405379		14.3	0.085	0.2467	21	6	27.49	46	40	17.2	
a20658	1370	458528		13.95	0.15	4.158	21	5	9.1	47	1	32.5	
a20683	1363	400559		14.38	0.056	6.186	21	7	13.88	46	20	44.3	
a20723	0	0					21	8	18.04	46	56	18.1	
a20751	1368	424619					21	5	21.16	46	50	14.1	
a20805	1373	486098		14.46	0.160	0.3339	21	10	27.21	47	21	41.7	
a20889	1368	424729					21	5	28.12	46	49	4.1	
a20926	1370	464119	1350-13568770	14.45	0.4	0.285237	21	10	2.21	47	0	11.2	
a20941	1367	416597		14.26	0.4	?11.6435	21	7	8.93	46	42	3.4	
a21133	1370	466419					21	12	1.17	47	5	43.3	

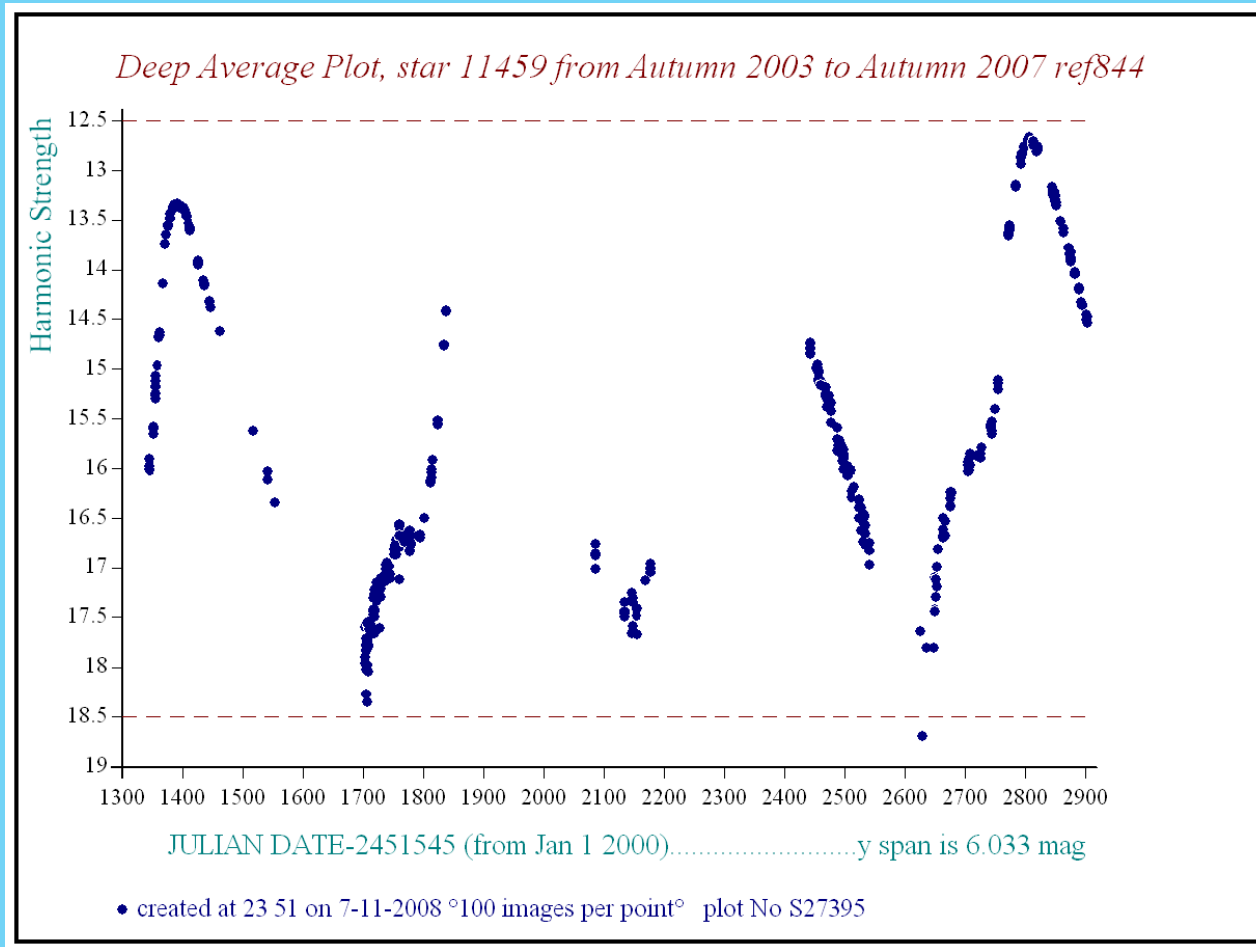
Stats on 577 of 'a' vars

	$\leq 0.1\text{mag}$	0.1 to 0.5 mag	≥ 0.5 mag
$P < 0.2d$	32	1	0
$0.2 \leq p < 1d$	65	14	1
$1 \leq p \leq 5d$	117	35	9
$p > 5d$	92	110	21
Irreg	26	42	12
Total	332	202	43

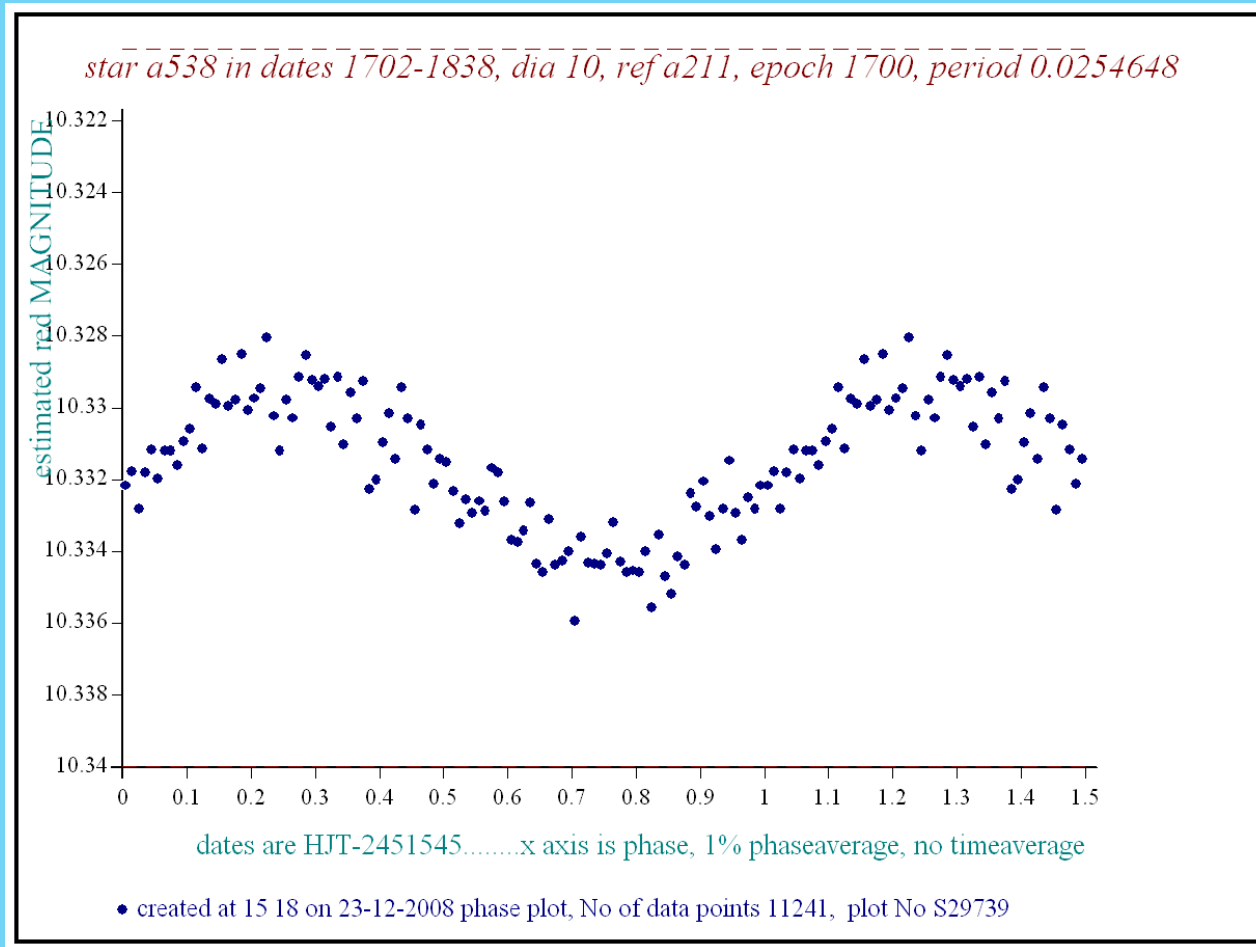
Lowest range– 5.3mmag



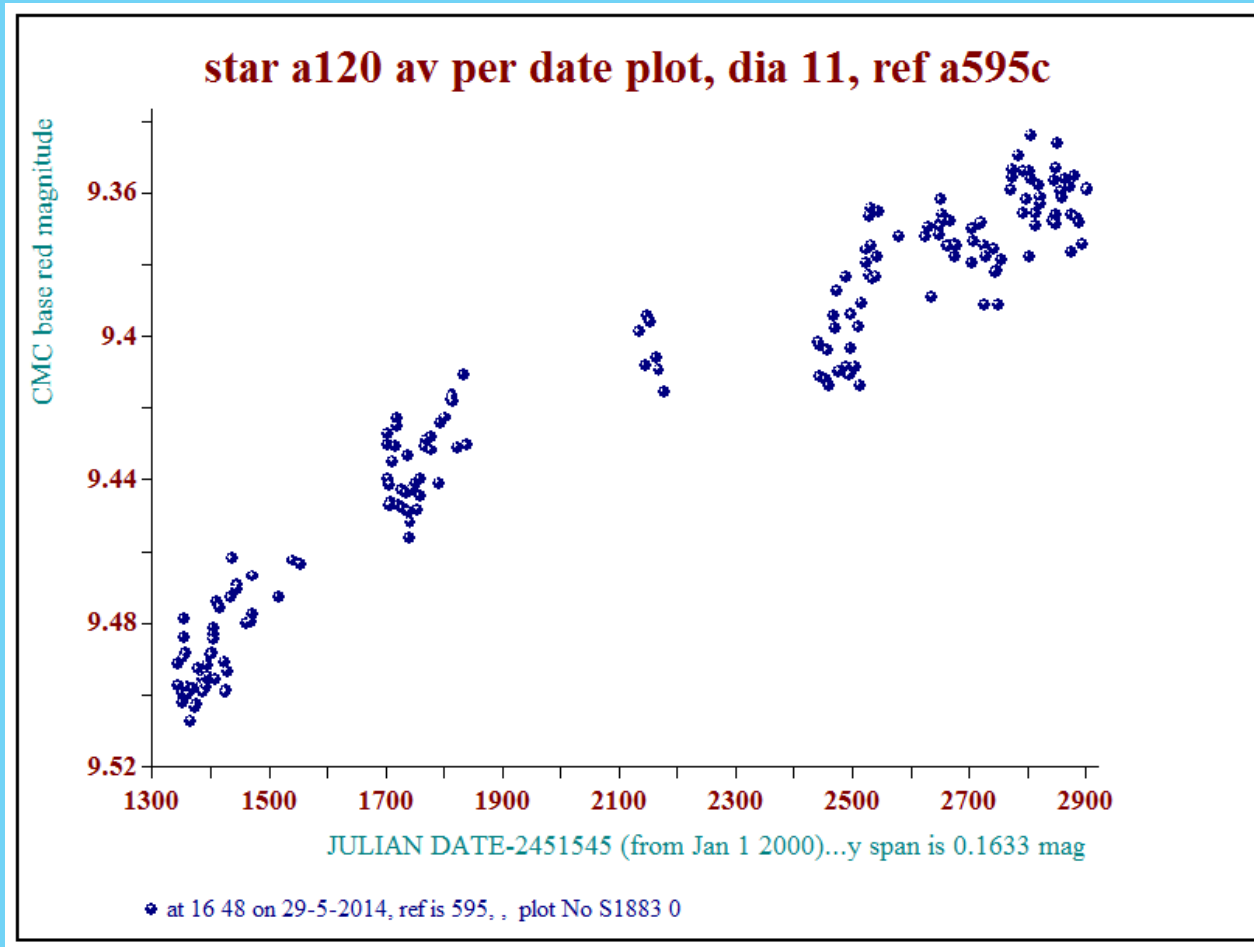
Largest Range- 6.033mag so far



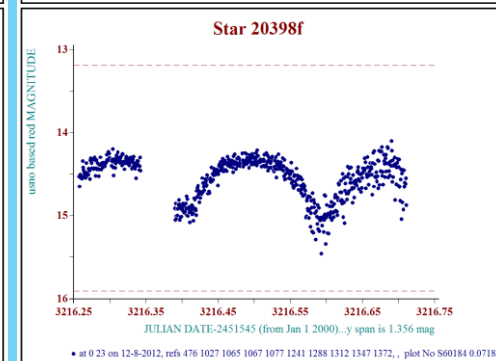
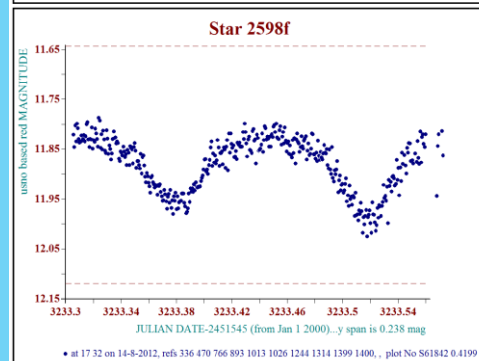
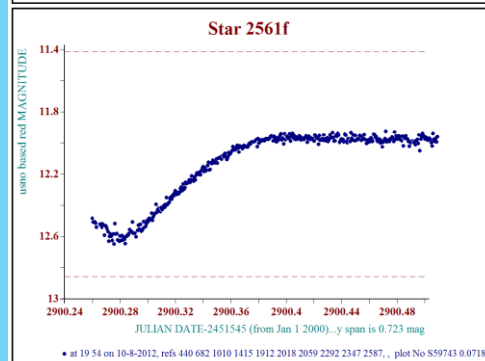
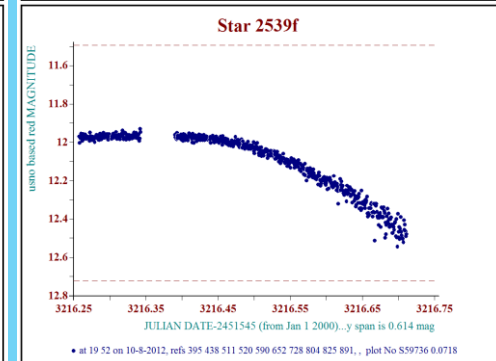
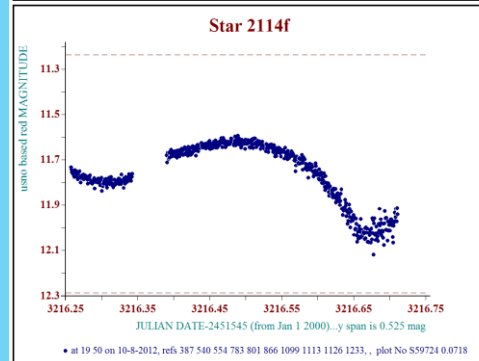
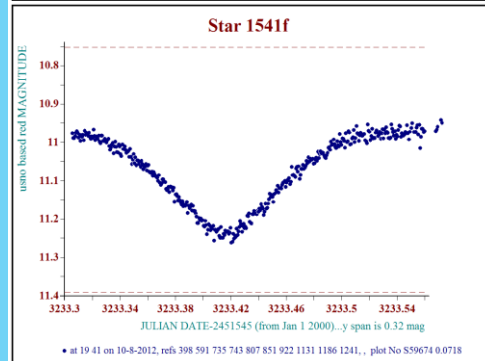
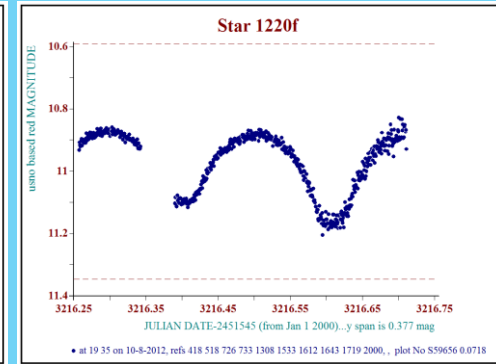
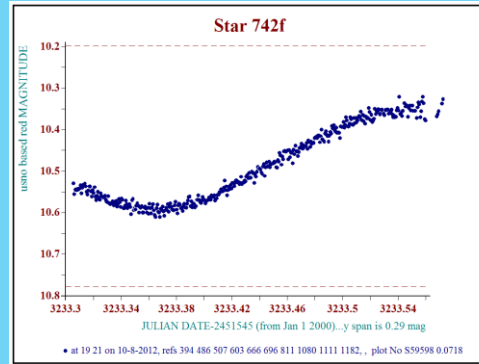
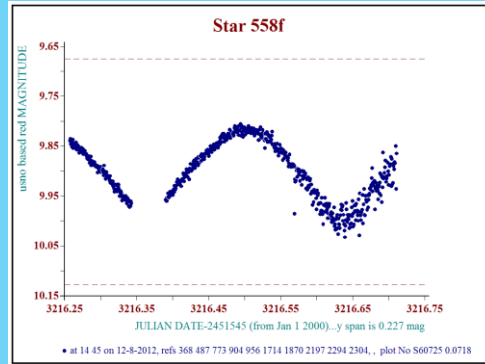
Fastest, $P = 0.0254648\text{d} - 39.27\text{c/d}$



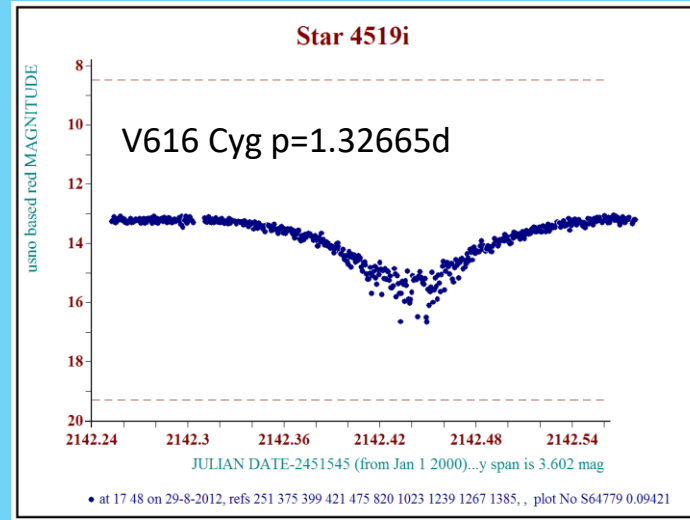
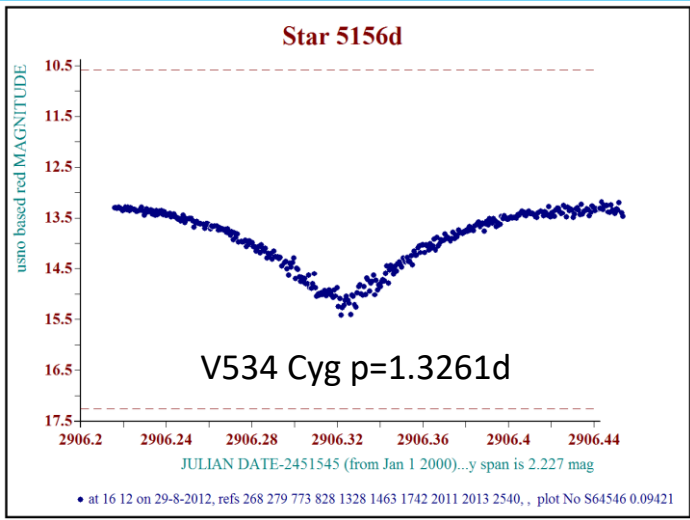
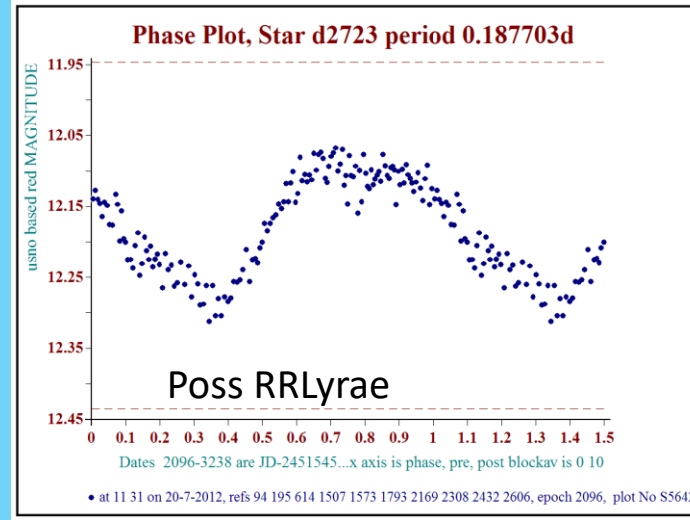
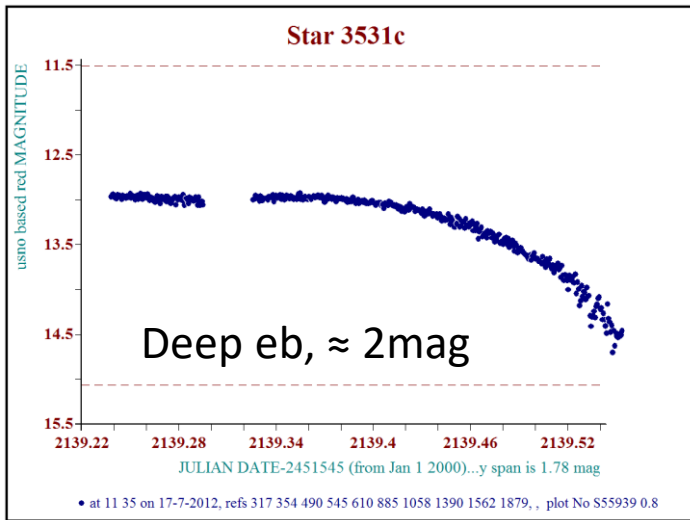
Slowest, $P > 4000d$



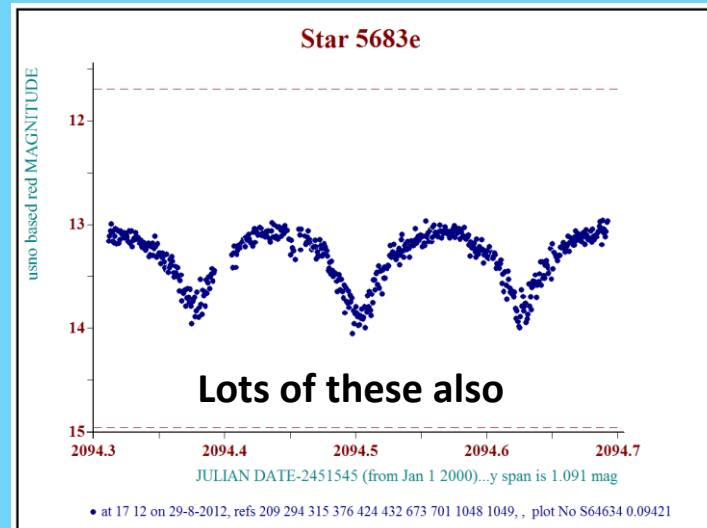
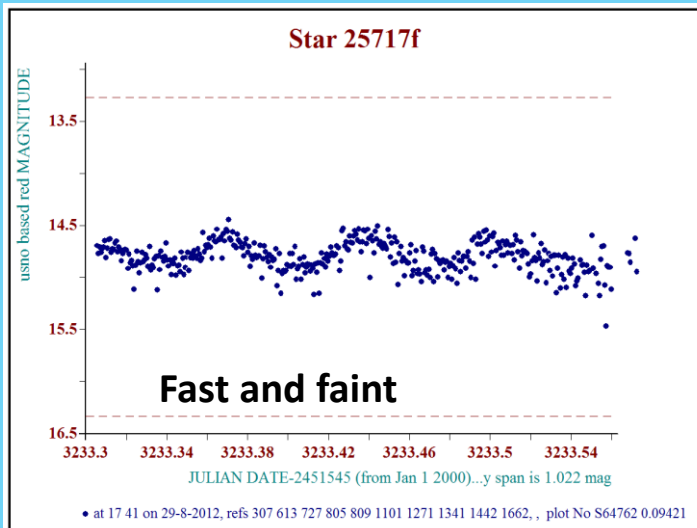
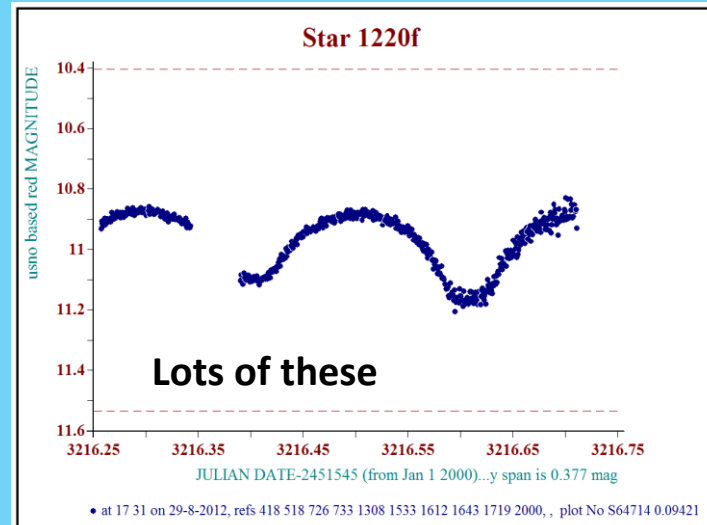
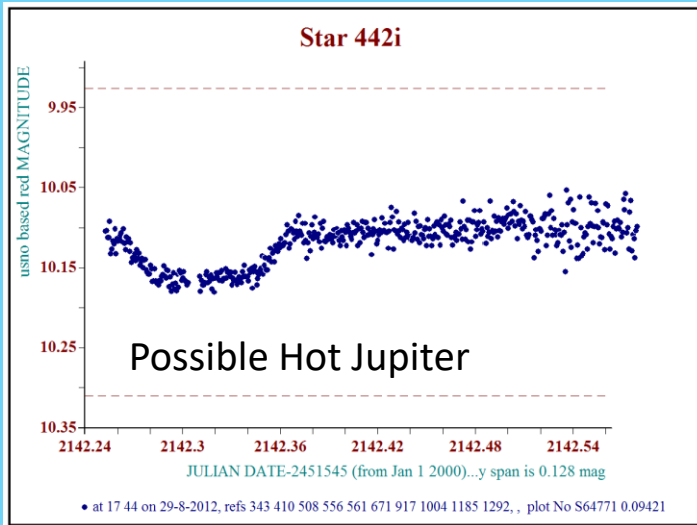
ECstars in area 'f'



A few interesting stars



A few more



www.stanwaterman>co.uk/variablestars

stanwaterman@aol.com