HOW TO SUBMIT VARIABLE STAR OBSERVATIONS TO THE BAA VSS

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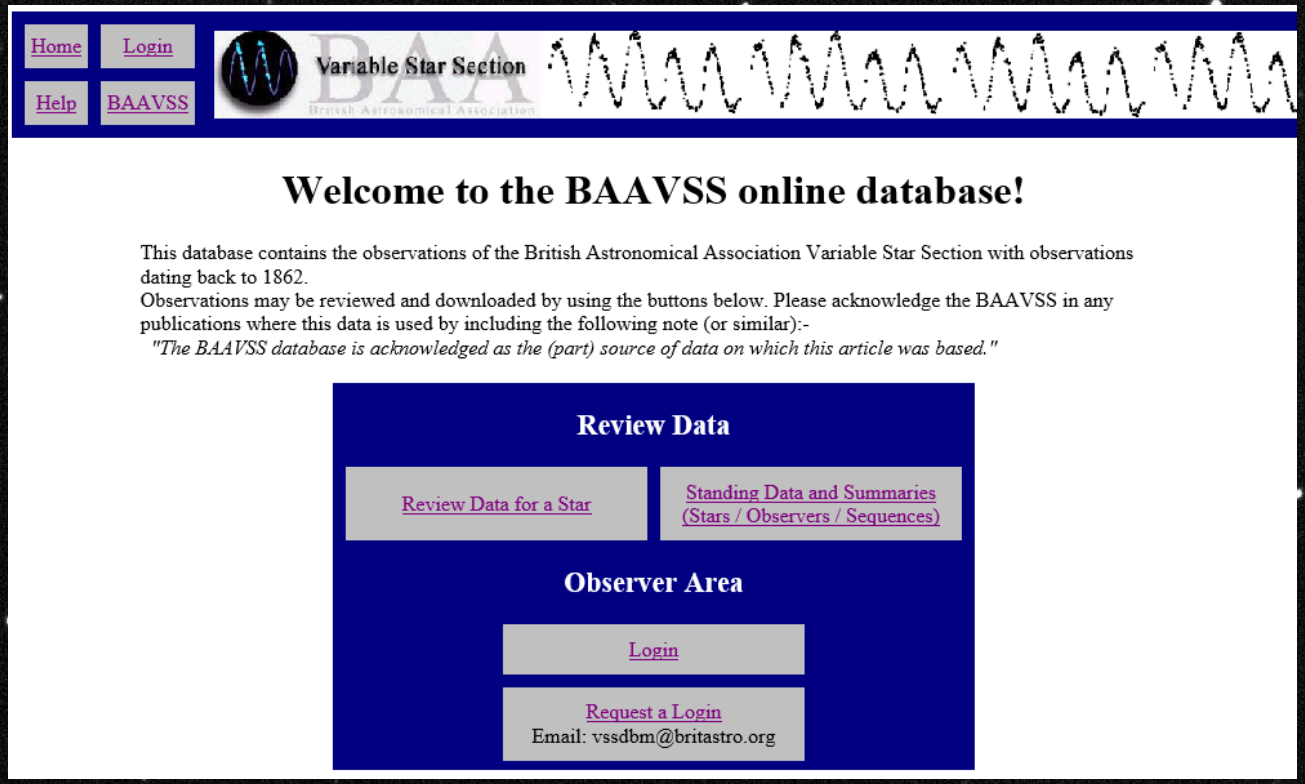
BAA Winchester Weekend
Saturday 8th April 2017

Sessions Overview

- BAA VSS Online Database
- Observation Entry Methods
- Spreadsheet Method
- Reviewing Observations
- Demo if time allows..

BAA VSS Online Database



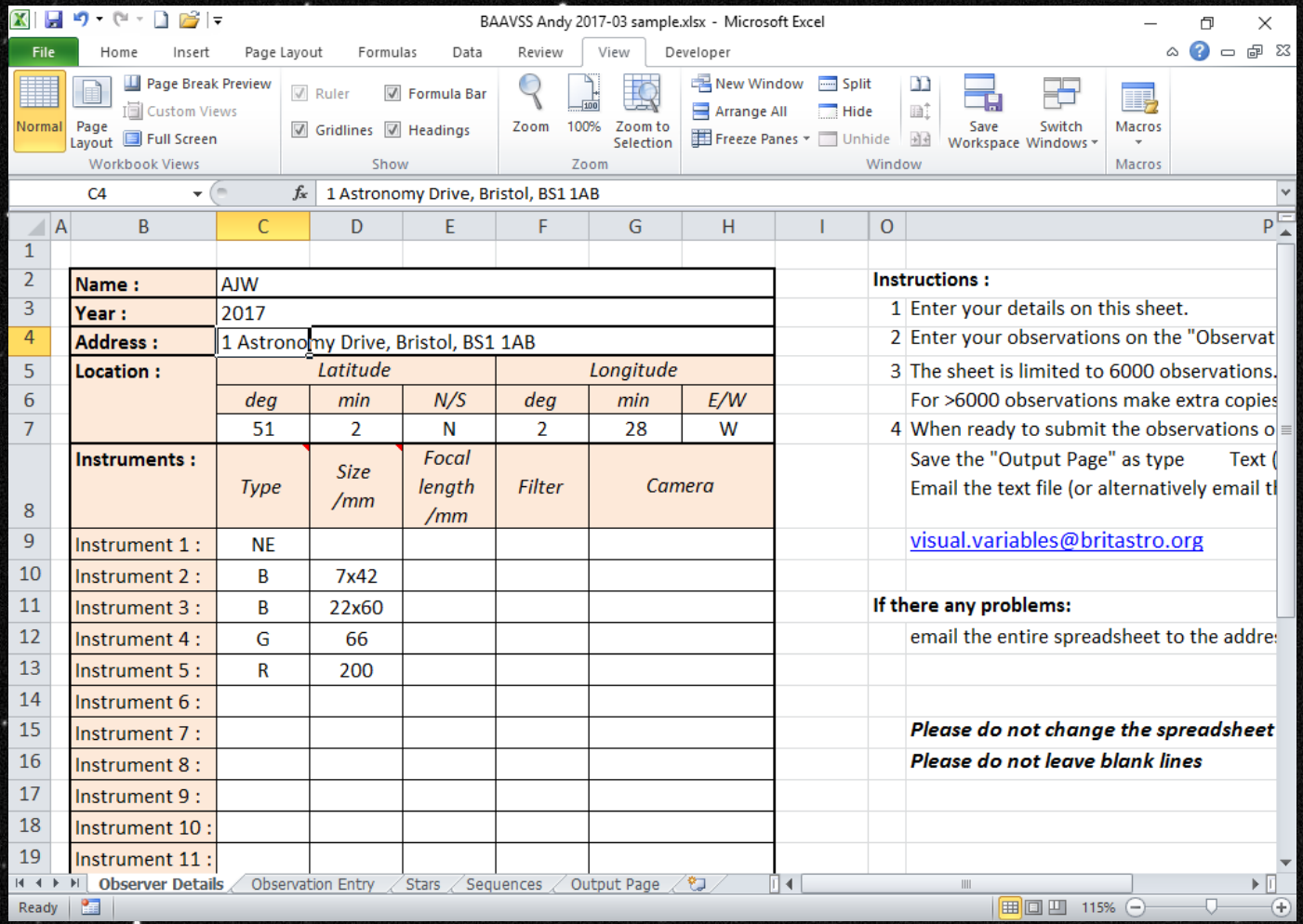
Allows you to upload and review observations

Observation Entry Methods

- Upload file of observations – Best approach!
  - Visual spreadsheet
  - CCD/DSLR
    - AIP4Win and the BAAVSS photometry spreadsheet
    - Or MuniWin
- Direct entry using a webpage - Slow
- On paper - Slow
  - Discouraged as there can be a delay of up to a few months or years while they are typed up and checked

Visual Spreadsheet

Enter your details on the “Observer Details” tab



Visual Spreadsheet

Enter your observations on the “Observation Entry” tab

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Star	Date	Time	Estimates *(as many as 5 can be used)*					Calculated mags					Mag	Class	Sequence	Instrument
2			(UT)	1	2	3	4	5	1	2	3	4	5				#
3	Rho Cas	2017-03-25	20:32	E(1)V(4)H					5.0					5.0	3	64.01	3
4	WZ Cas	2017-03-25	20:45	B(3)V(1)C					7.1					7.1	2	323.01	2
5	V465 Cas	2017-03-25	21:04	=C					6.4					6.4	2	233.02	2
6																	

You only need to enter 1 light estimate per observations. However you can enter up to 5 separate light estimates for a single observation.

	Q	R	S	AA	AB	AC	AD	AE	AF
	Instrument	Notes		Errors					
	#			Date	Maths	Class	Inst't	Sequence	Star
	3			OK	OK	OK	OK	OK	OK
	2			OK	OK	OK	OK	OK	OK
	2			OK	OK	OK	OK	OK	OK

Check columns on the right hand side

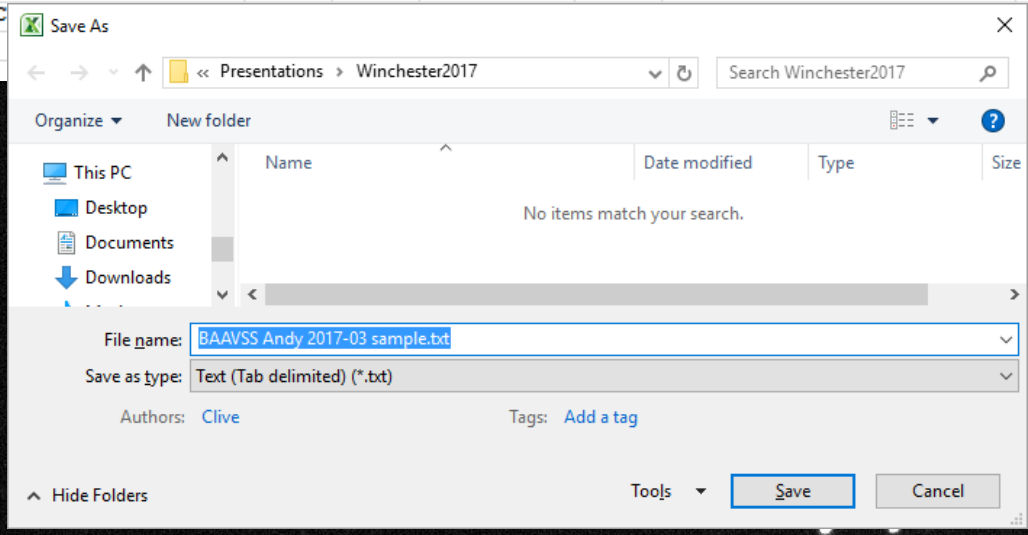
Visual Spreadsheet

The “Output Page” tab is automatically populated with your observations.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Variable Star Observations BAAVSS format 2 version 1.2											
2	Year:	2017										
3	Observer:	AJW										
4	Address:	1 Astronomy Drive, Bristol, BS1 1AB										
5	Location:	51 2N 2 28W										
6	Instrument Code 1= NE,2= B7x42,3= B22x60,4= G66,5= R200											
7						*Data Input Screen*						
8						2450000						
9			U	T								
10	Star	Date	h	m	UT Dec	JD Dec	Estimate	Mag	Cl	Seq.	In	Notes
11	Rho Cas	25-Mar-2017	20	32	25.856	7838.356	E(1)V(4)H	5.0	3	64.01	3	
12	WZ Cas	25-Mar-2017	20	45	25.865	7838.365	B(3)V(1)C					
13	V465 Cas	25-Mar-2017	21	03	25.877	7838.377	=C					
14												

Save this tab as a

“Text (Tab delimited) (*.txt)” file with an appropriate name



Visual File Layout

This text and tab file can then be uploaded into the database.

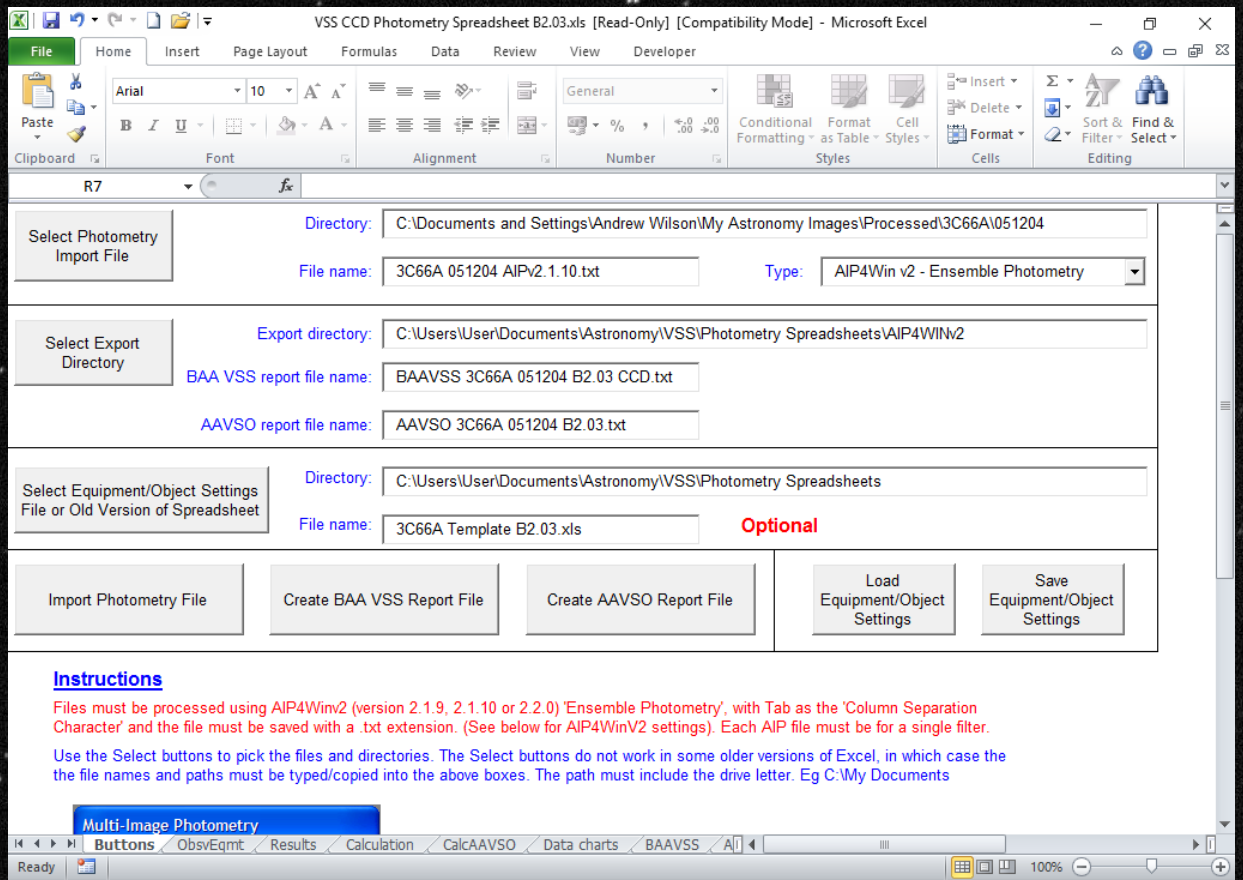
BAAVSS Andy 2017-03 sample.txt - Notepad

File Edit Format View Help

```
Variable Star Observations BAAVSS format 2 version 1.2
Year:   2017
Observer:       AJW
Address:        "1 Astronomy Drive, Bristol, BS1 1AB"
Location:       51 2N  2 28W
"Instrument Code 1= NE,2= B7x42,3= B22x60,4= G66,5= R200"
                                        Data Input Screen
                                        2450000
                U       T
Star    Date    h       m       UT Dec  JD Dec  Estimate        Mag     Cl      Seq.    In      Notes
Rho Cas 25-Mar-2017     20      32      25.856  7838.356        E(1)V(4)H       5.0     3       64.01   3
WZ Cas  25-Mar-2017     20      45      25.865  7838.365        B(3)V(1)C       7.1     2       323.01  2
V465 Cas        25-Mar-2017     21      03      25.877  7838.377        =C      6.4     2       233.02  2
```

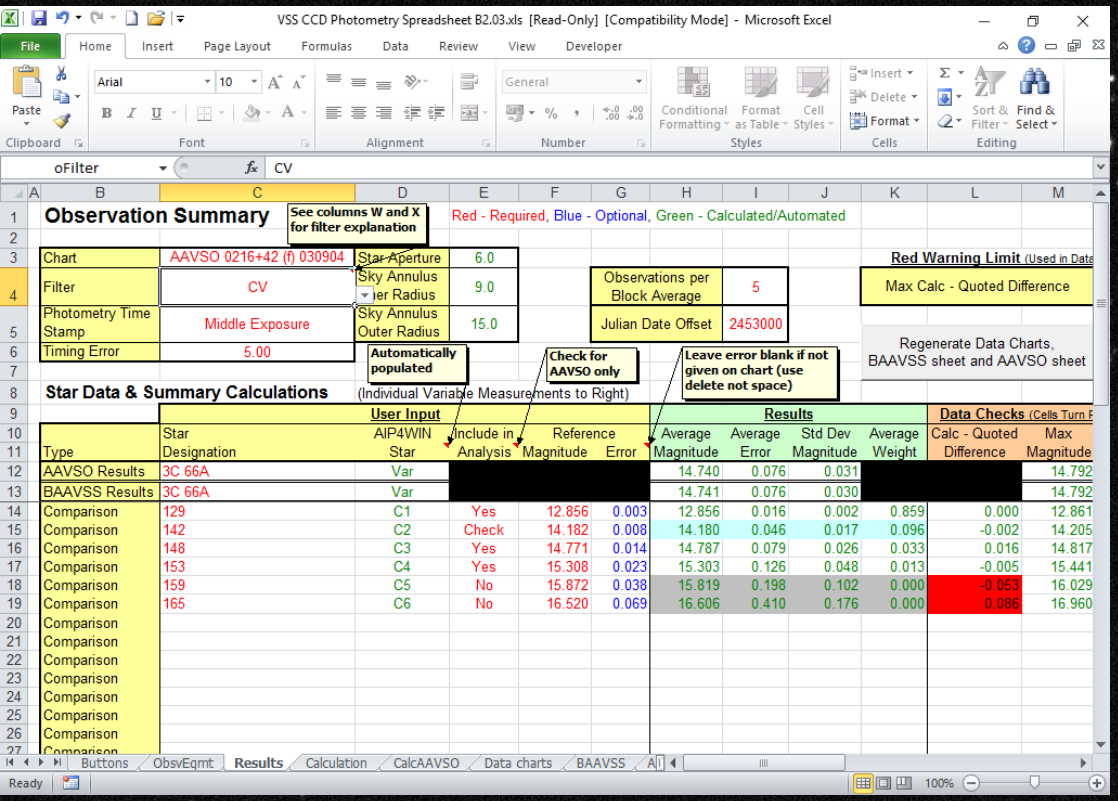
Photometry Spreadsheet

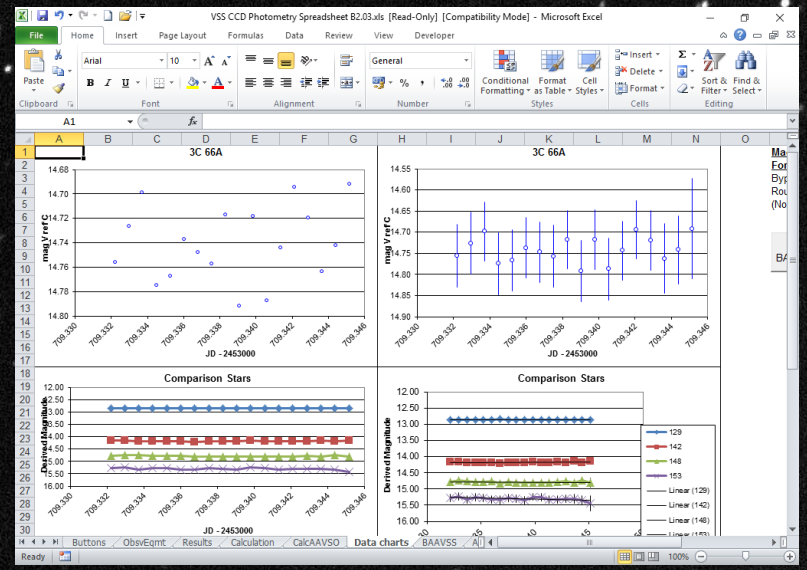
For CCD and DSLR photometry there is the BAA VSS Photometry spreadsheet.



Photometry Spreadsheet

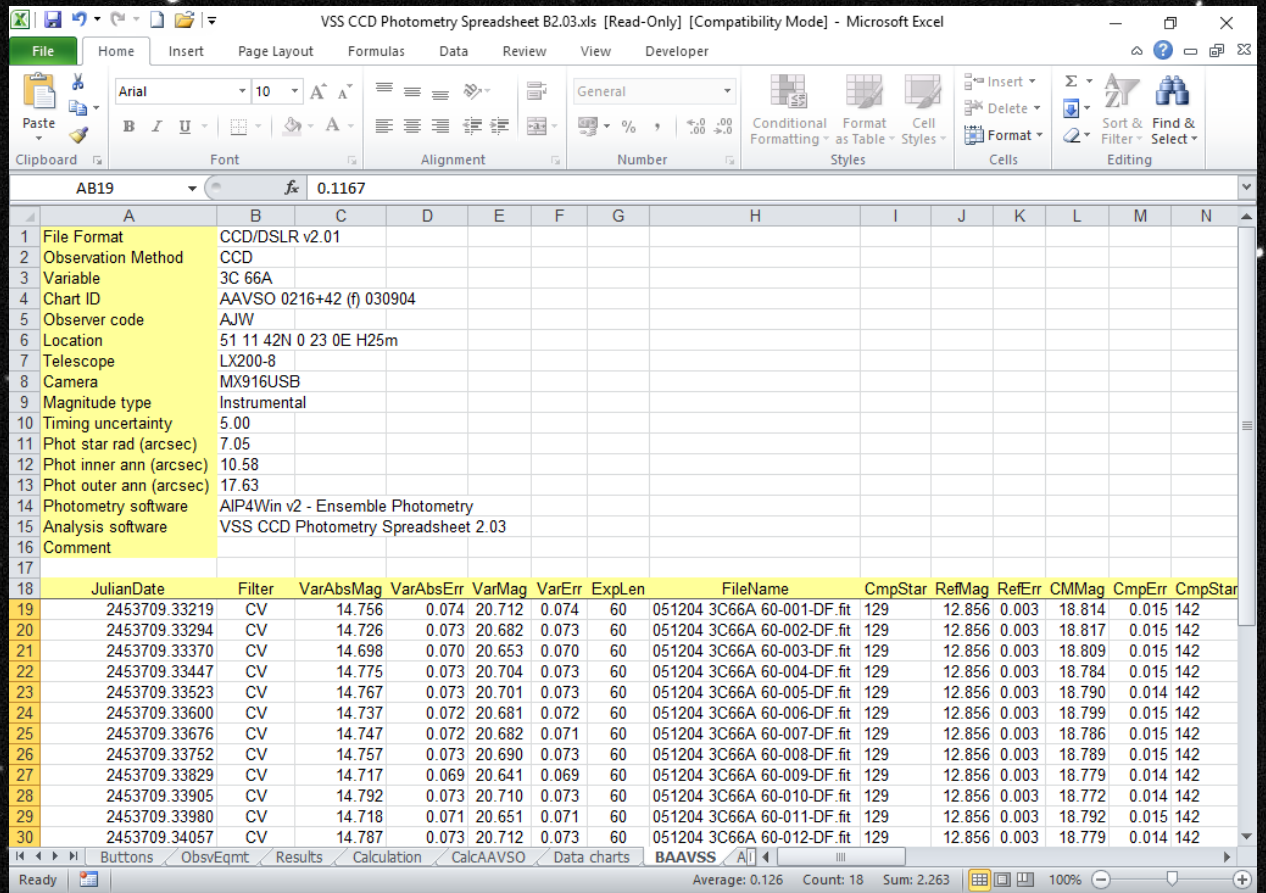
This takes photometry files created by AIP4Win, calculates the variable star magnitude.





Photometry Spreadsheet

It creates files of the required output format at the touch of a button.


VSS CCD Photometry Spreadsheet B2.03.xls [Read-Only] [Compatibility Mode] - Microsoft Excel

1	File Format	CCD/DSLR v2.01
2	Observation Method	CCD
3	Variable	3C 66A
4	Chart ID	AAVSO 0216+42 (f) 030904
5	Observer code	AJW
6	Location	51 11 42N 0 23 0E H25m
7	Telescope	LX200-8
8	Camera	MX916USB
9	Magnitude type	Instrumental
10	Timing uncertainty	5.00
11	Phot star rad (arcsec)	7.05
12	Phot inner ann (arcsec)	10.58
13	Phot outer ann (arcsec)	17.63
14	Photometry software	AIP4Win v2 - Ensemble Photometry
15	Analysis software	VSS CCD Photometry Spreadsheet 2.03
16	Comment	

18	JulianDate	Filter	VarAbsMag	VarAbsErr	VarMag	VarErr	ExpLen	FileName	CmpStar	RefMag	RefErr	CMMag	CmpErr	CmpStar
19	2453709.33219	CV	14.756	0.074	20.712	0.074	60	051204 3C66A 60-001-DF.fit	129	12.856	0.003	18.814	0.015	142
20	2453709.33294	CV	14.726	0.073	20.682	0.073	60	051204 3C66A 60-002-DF.fit	129	12.856	0.003	18.817	0.015	142
21	2453709.33370	CV	14.698	0.070	20.653	0.070	60	051204 3C66A 60-003-DF.fit	129	12.856	0.003	18.809	0.015	142
22	2453709.33447	CV	14.775	0.073	20.704	0.073	60	051204 3C66A 60-004-DF.fit	129	12.856	0.003	18.784	0.015	142
23	2453709.33523	CV	14.767	0.073	20.701	0.073	60	051204 3C66A 60-005-DF.fit	129	12.856	0.003	18.790	0.014	142
24	2453709.33600	CV	14.737	0.072	20.681	0.072	60	051204 3C66A 60-006-DF.fit	129	12.856	0.003	18.799	0.015	142
25	2453709.33676	CV	14.747	0.072	20.682	0.071	60	051204 3C66A 60-007-DF.fit	129	12.856	0.003	18.786	0.015	142
26	2453709.33752	CV	14.757	0.073	20.690	0.073	60	051204 3C66A 60-008-DF.fit	129	12.856	0.003	18.789	0.015	142
27	2453709.33829	CV	14.717	0.069	20.641	0.069	60	051204 3C66A 60-009-DF.fit	129	12.856	0.003	18.779	0.014	142
28	2453709.33905	CV	14.792	0.073	20.710	0.073	60	051204 3C66A 60-010-DF.fit	129	12.856	0.003	18.772	0.014	142
29	2453709.33980	CV	14.718	0.071	20.651	0.071	60	051204 3C66A 60-011-DF.fit	129	12.856	0.003	18.792	0.015	142
30	2453709.34057	CV	14.787	0.073	20.712	0.073	60	051204 3C66A 60-012-DF.fit	129	12.856	0.003	18.779	0.014	142

Photometry File Layout

It is also possible to produce files of the right formatting using a spreadsheet.

More recently the free software MuniWin can process your images and create data ready for uploading into the database.

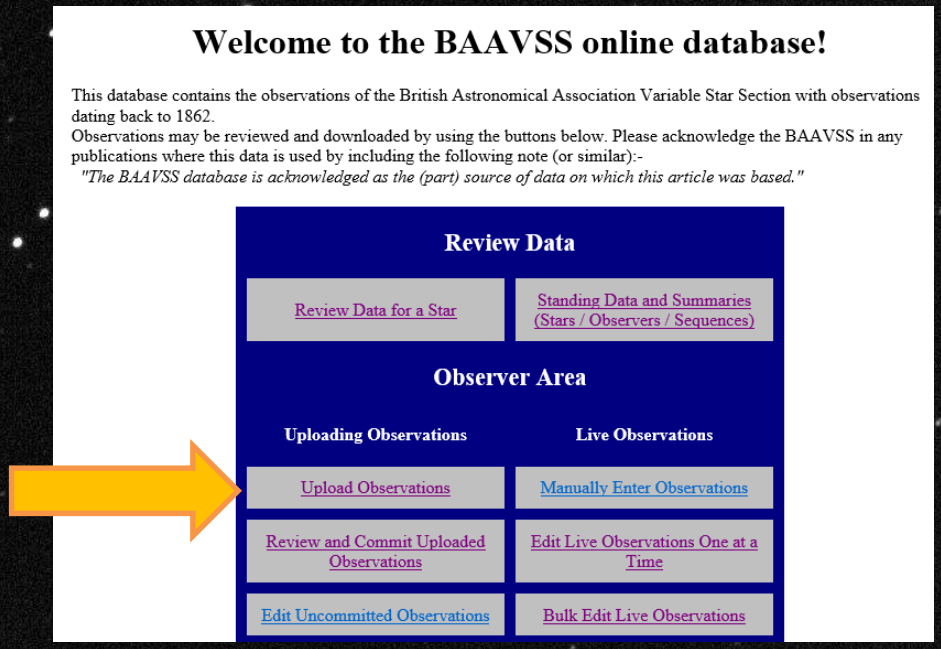
http://c-munipack.sourceforge.net/

```
File Format     CCD/DSLR v2.01
Observation Method      CCD
Variable        QQ Vul
Chart ID        AAVSO 12652H
Observer code   AJW
Location        51 25 40N 2 43 15W H50m
Telescope       Meade 10 LX200
Camera  SXVR-H694
Magnitude type  Instrumental
Timing uncertainty      30.00
Phot star rad (arcsec)  7.55
Phot inner ann (arcsec) 11.33
Phot outer ann (arcsec) 15.10
Photometry software     AIP4Win v2 - Ensemble Photometry
Analysis software       VSS CCD Photometry Spreadsheet 2.03
Comment

JulianDate      Filter  VarAbsMag       VarAbsErr       VarMag  VarErr  ExpLen  FileName        CmpStar RefMag  RefErr  CMMag
2456572.28789   V       15.029  0.043   17.749  0.043   60      Autosave Image -001V-DF.fit     140     13.987  0.008   16.703
2456572.28863   V       15.025  0.044   17.737  0.042   60      Autosave Image -002V-DF.fit     140     13.987  0.008   16.688
2456572.28936   V       15.051  0.045   17.762  0.043   60      Autosave Image -003V-DF.fit     140     13.987  0.008   16.703
2456572.29010   V       15.069  0.045   17.788  0.044   60      Autosave Image -004V-DF.fit     140     13.987  0.008   16.706
2456572.29084   V       15.084  0.047   17.814  0.045   60      Autosave Image -005V-DF.fit     140     13.987  0.008   16.719
```

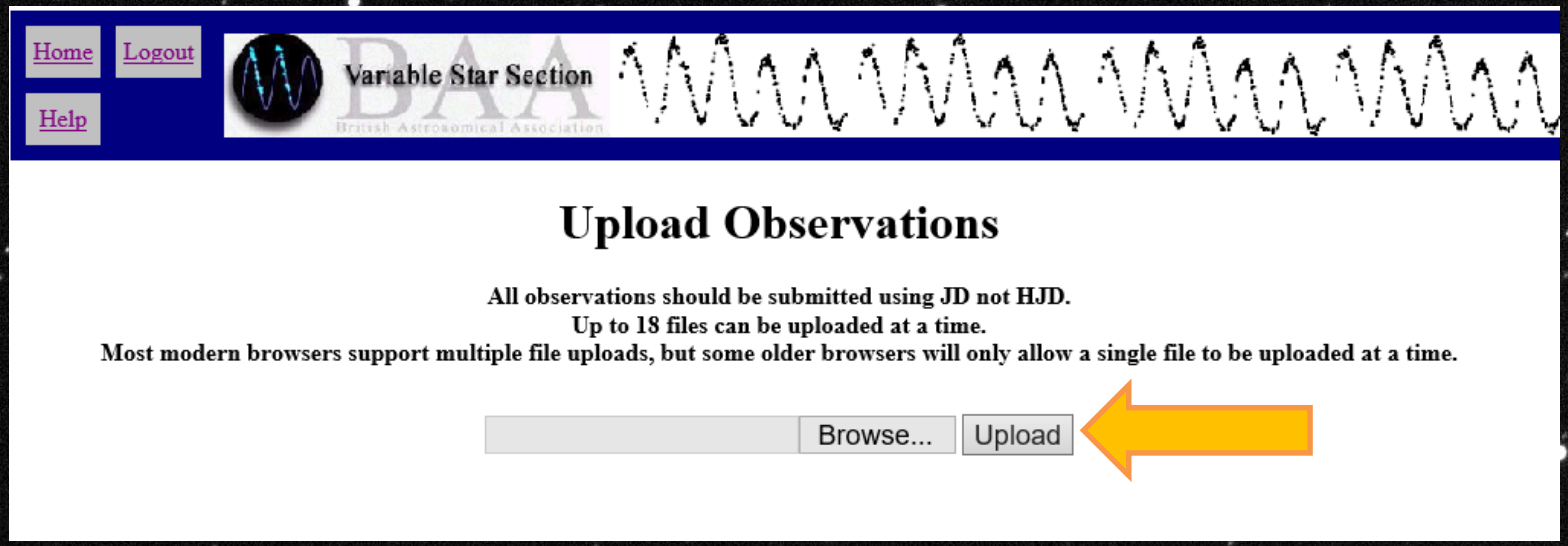
Uploading Observations

- The first step to uploading observations is to request a login from vssdbm@britastro.org
- Once logged in the “Observer Area” will become accessible.



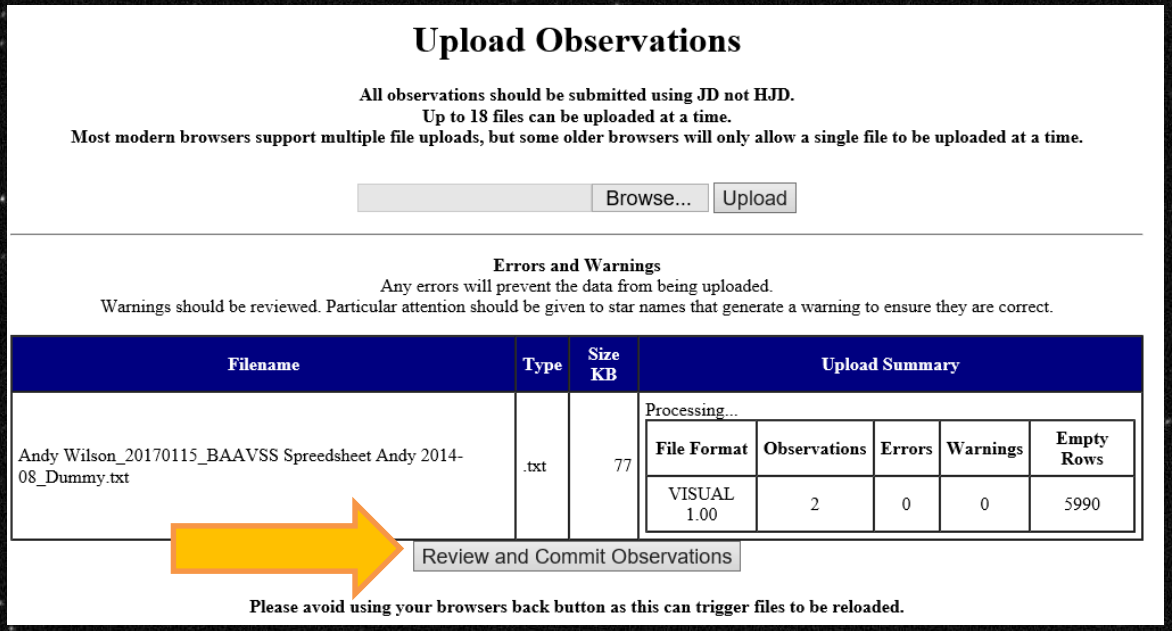
Uploading Observations

Clicking on the “Upload Observations” link will take you to a screen where you can upload observation files.



Uploading Observations

- The screen will show you whether you have successfully uploaded your observation file.
- It will give an explanation if the upload was unsuccessful.
- The next step is to press the “Review and Commit Observations” button.



Upload Observations

All observations should be submitted using JD not HJD.
Up to 18 files can be uploaded at a time.
Most modern browsers support multiple file uploads, but some older browsers will only allow a single file to be uploaded at a time.

Browse... Upload

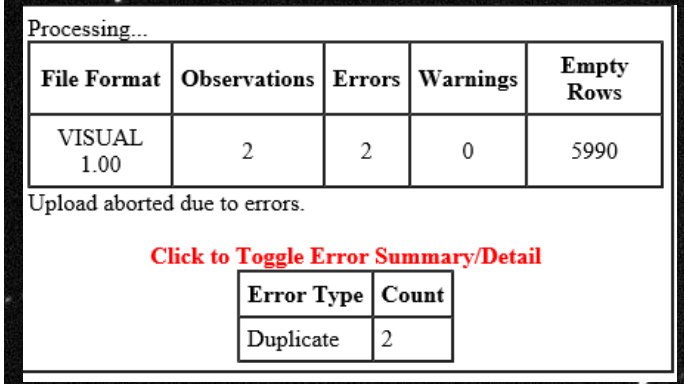
Errors and Warnings
Any errors will prevent the data from being uploaded.
Warnings should be reviewed. Particular attention should be given to star names that generate a warning to ensure they are correct.

Filename	Type	Size KB	Upload Summary
Andy Wilson_20170115_BAAVSS Spreedsheet Andy 2014-08_Dummy.txt	.txt	77	Processing...

File Format	Observations	Errors	Warnings	Empty Rows
VISUAL 1.00	2	0	0	5990

Review and Commit Observations

Please avoid using your browsers back button as this can trigger files to be reloaded.



Processing...

File Format	Observations	Errors	Warnings	Empty Rows
VISUAL 1.00	2	2	0	5990

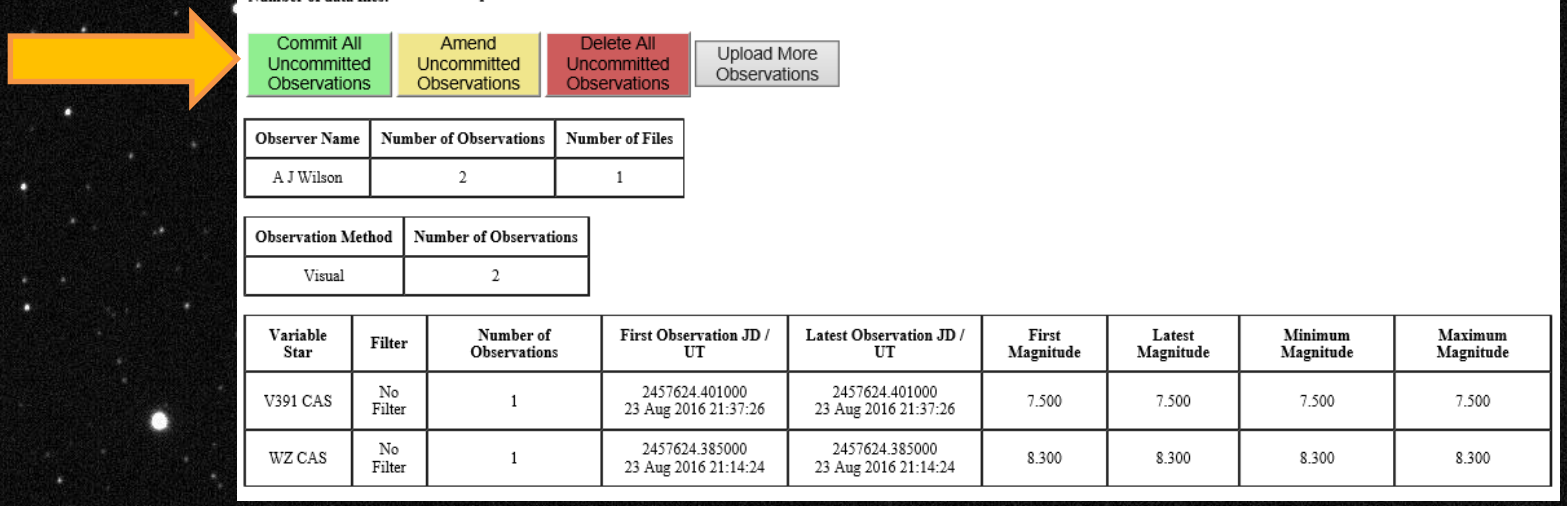
Upload aborted due to errors.

Click to Toggle Error Summary/Detail

Error Type	Count
Duplicate	2

Committing Observations

- Your observations are not in the database until you press “Commit All Uncommitted Observations”.



Home | Logout | Help

Variable Star Section

Uncommitted Observation Summary

Total uncommitted observations: 2
First observation: JD 2457624.385000 \ 23 Aug 2016 21:14:24 UT
Latest observation: JD 2457624.401000 \ 23 Aug 2016 21:37:26 UT
Number of data files: 1

Commit All Uncommitted Observations | Amend Uncommitted Observations | Delete All Uncommitted Observations | Upload More Observations

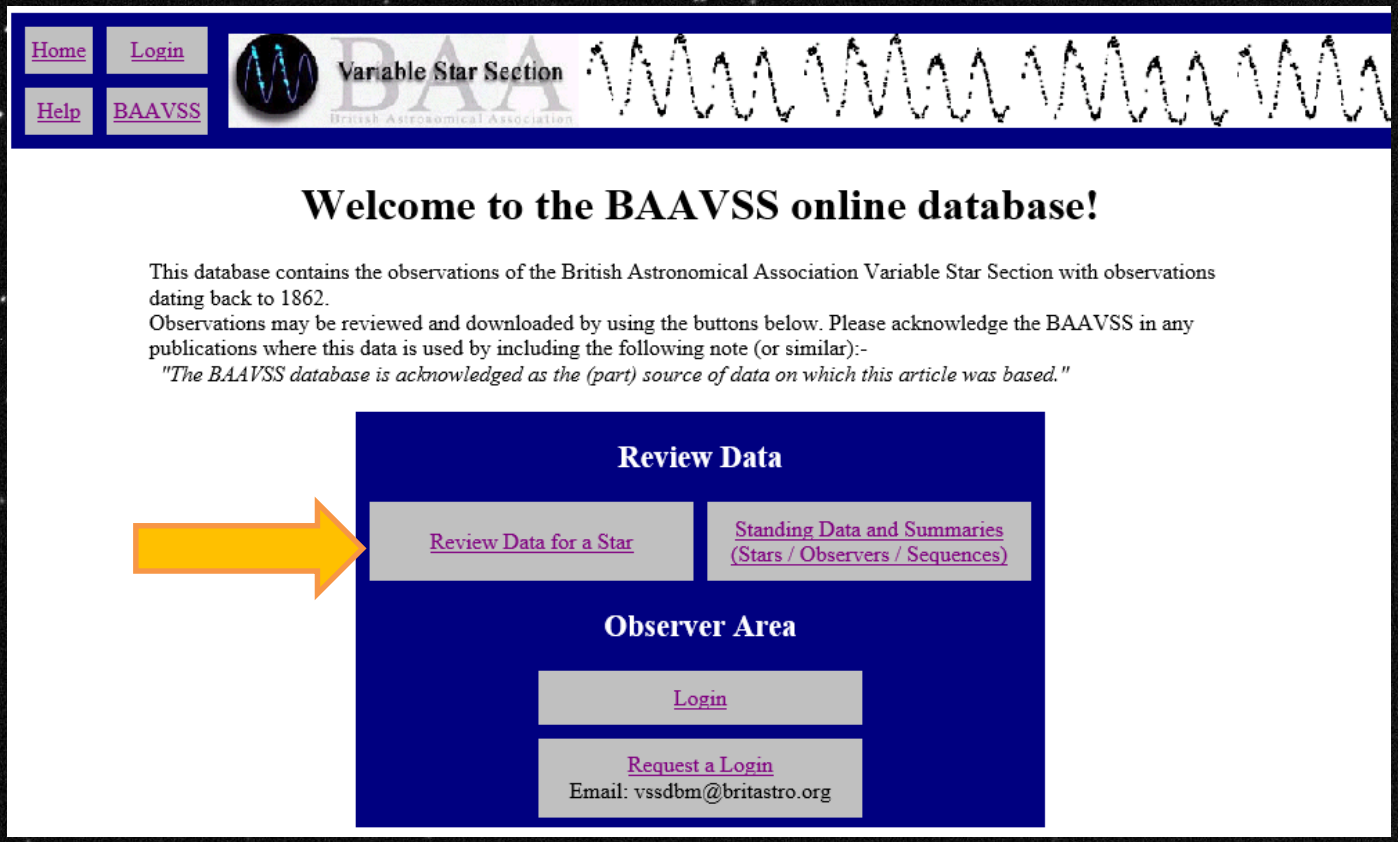
Observer Name	Number of Observations	Number of Files
A J Wilson	2	1

Observation Method	Number of Observations
Visual	2

Variable Star	Filter	Number of Observations	First Observation JD / UT	Latest Observation JD / UT	First Magnitude	Latest Magnitude	Minimum Magnitude	Maximum Magnitude
V391 CAS	No Filter	1	2457624.401000 23 Aug 2016 21:37:26	2457624.401000 23 Aug 2016 21:37:26	7.500	7.500	7.500	7.500
WZ CAS	No Filter	1	2457624.385000 23 Aug 2016 21:14:24	2457624.385000 23 Aug 2016 21:14:24	8.300	8.300	8.300	8.300

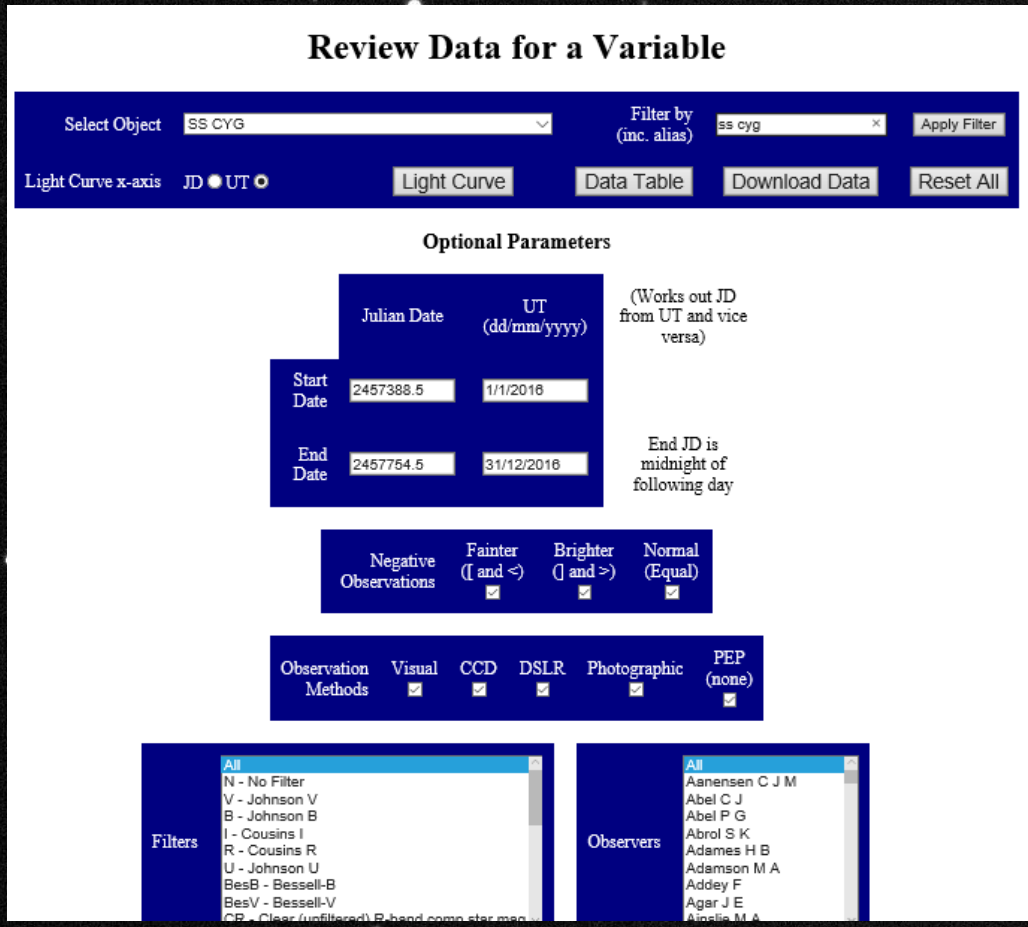
Reviewing Observations

To review observations click “Review Data for a Star” from the BAA VSS Database homepage.



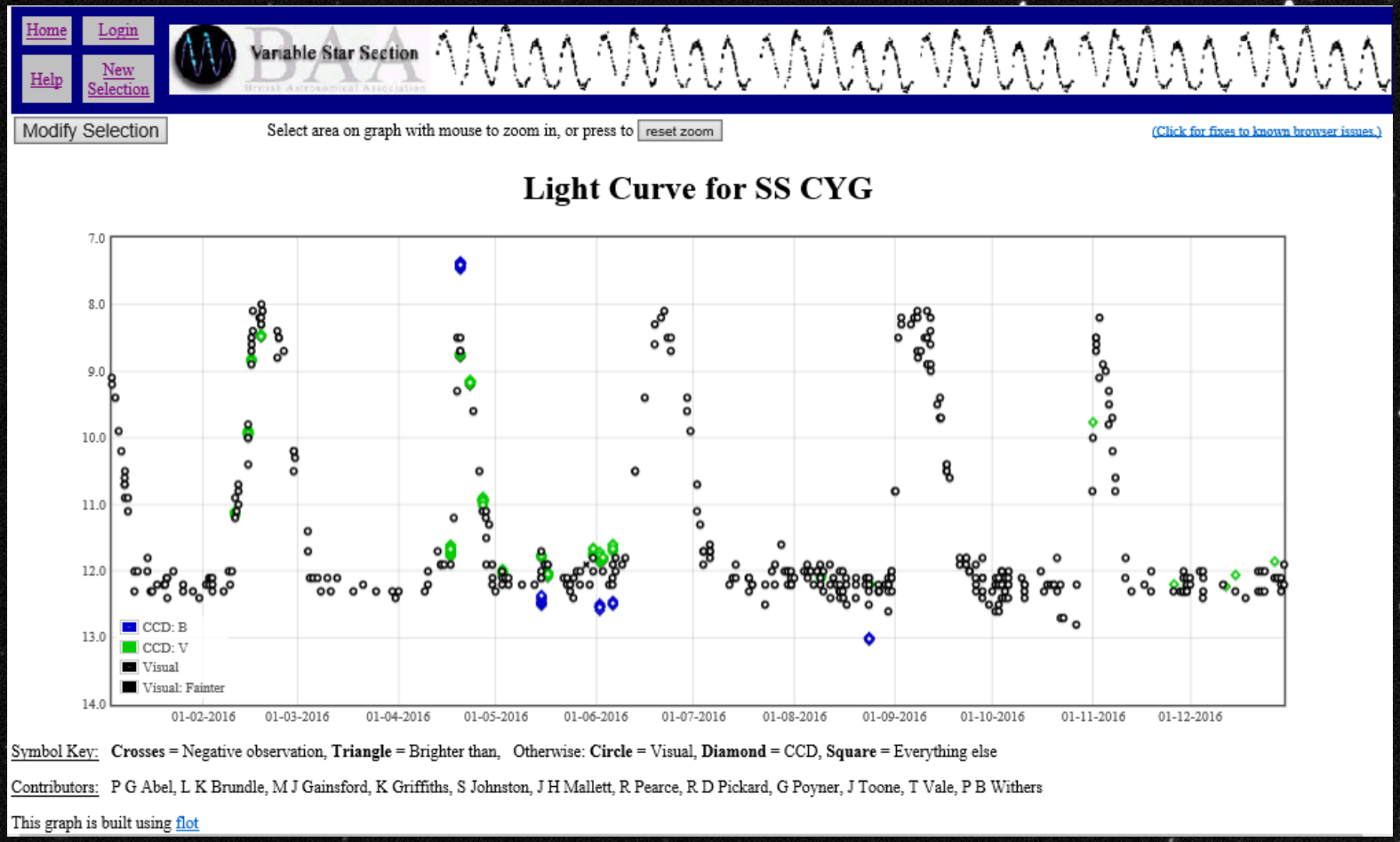
Reviewing Observations

- Type the name of the star in the “Filter by” box and click “Apply Filter”
- Add optional parameters like start and end date.



Reviewing Observations

Now click on “Light Curve” or “Data Table”



Further Information

- BAA VSS Online Database
  - http://britastro.org/vssdb/index.php
- BAA VSS main web pages
  - http://www.britastro.org/vss/
- Information on file formats and uploading observations

http://www.britastro.org/vss/data_submission.htm

- MuniWin

http://c-munipack.sourceforge.net/