**Reporting Visual Observations using the new Spreadsheet** (rev. 26/2/14)

**The Spreadsheet**

The new VSS spreadsheet (actually it is a workbook with multiple sheets) has been created to try to reduce the number of errors when uploading observations into the database. The workbook is made up of various sheets and these are as follows:

- **Observer Details** - this is the first sheet in the workbook
  - This records the observer's details; name, address, location and instruments.
- **Observation Entry** – This is the second sheet in the workbook
  - This is where the observations are entered.
- **Stars** – This is the third sheet in the workbook
  - This sheet can be looked at but cannot be edited.
  - This lists stars that are recognised by the VSS database.
  - This lists some alternative names for stars.
- **Sequences** – This is the fourth sheet in the workbook
  - This sheet can be looked at but cannot be edited.
  - This lists sequences that are recognised by the VSS database.
- **Output Page** – This is the fifth and last sheet in the workbook
  - This sheet can be looked at but cannot be edited.
  - This page is built automatically from the details on the "Observer Details" sheet and the "Observation Entry" sheet.
  - When the observations are to be submitted then this sheet is to be saved at a text file and is then submitted to the BAA VSS (or uploaded to the database yourself).

**Step by Step**

**Observer Details**

The sheet looks like below:

| | | | | | | |
|---|---|---|---|---|---|---|
| **Name :** | A N Observer | | | | | |
| **Year :** | 2012 | | | | | |
| **Address :** | 14 Somewhere Road, Plymouth. PL6 7ZZ | | | | | |
| **Location :** | *Latitude* | | | *Longitude* | | |
| | *deg* | *min* | *N/S* | *deg* | *min* | *E/W* |
| | 50 | 26 | N | 4 | 16 | W |
| **Instruments :** | *Type* | *Size /mm* | *Focal length /mm* | *Filter* | *Camera* | |
| Instrument 1 : | NE | | | | | |
| Instrument 2 : | B | 10x50 | | | | |
| Instrument 3 : | G | 100 | 1000 | | | |
| Instrument 4 : | R | 200 | 1800 | | | |
| Instrument 5 : | C | 250 | 2200 | | | |
| Instrument 6 : | | | | | | |
| Instrument 7 : | | | | | | |
| Instrument 8 : | | | | | | |
| Instrument 9 : | | | | | | |
| Instrument 10 : | | | | | | |
| Instrument 11 : | | | | | | |
| Instrument 12 : | | | | | | |

**Instructions :**

1 Enter your details on this sheet.
2 Enter your observations on the "Observation Entry" Sheet.
3 The sheet is limited to 6000 observations.
For >6000 observations make extra copies of the spreadsheet.
4 When ready to submit the observations open the "Output Page".
Save the "Output Page" as type Text (Tab delimited).
Email the text file (or alternatively email the entire spreadsheet) to the BAA at:

visual.variables@britastro.org

**If there any problems:**

email the entire spreadsheet to the address above and describe the problem.

***Please do not change the spreadsheet structure.***
***Please do not leave blank lines***

These details only require filling in once at the beginning of the year.

- Enter your name in the appropriate box
- Enter the Year in the appropriate box.
- Enter your Address in the appropriate box (if you wish).
- Enter the Latitude and Longitude where the observations are made, in the appropriate boxes.
- Enter your instruments in the Instruments boxes. Use the instrument number for each line on the Observation Entry sheet for each observation.

**Observation Entry**

The area for observation entry on the sheet is as shown below:

| Star | Date | Time (UT) | Estimates *(as many as 5 can be used)* | | | | | Calculated mags | | | | | Mag | Class | Sequence | Instrument # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | | | | |
| Z UMi | 2012-01-02 | 20:12 | B+2 | =A | A(1)V(1)B | | | 11.2 | 11.2 | 11.3 | | | 11.2 | 1 | 250.01 | 4 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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To the right of this is a set of flags that report if the workbook detects any errors. It looks like this:

| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| OK | OK | OK | OK | OK | OK |
| | | | | | |
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Entering an observation:

Enter the **star** name in the "Star" (first) column. The workbook checks the star name against the stars in the "Stars" sheet. If it recognises the star then the Flag box under the title "star" will turn green as below:

| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| | | | | | OK |
| | | | | | |
| | | | | | |
| | | | | | |

If the workbook doesn't recognise the star then this box will turn gold as below:

| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| | | | | | Check |
| | | | | | |
| | | | | | |
| | | | | | |

If the box shows an error then refer to the stars listed on the "Stars" sheet to see if the star is listed with a slightly different name. If the star is not recognised but it is a valid star then the error can be ignored. The observation will still be added to the database but it will be filed in a special folder.

Enter the **date** of the observation in the "Date" column. This can be entered using the number pad and using the / to separate the numbers. Type the date in the form 2/1/12 followed by enter and the date will appear in the spreadsheet in the format 2012-01-02. If the date is recognised by the workbook then the Date flag will turn green as below:

| Date | Maths | Class | Inst't | Sequence | Star |
|---|---|---|---|---|---|
| OK | | | | | OK |
| | | | | | |
| | | | | | |
| | | | | | |

If the "Date" error flag shows an error (gold) then this means that the date is not recognised and is probably because the year is incorrect.

Enter the **time** of the observation in the "Time" column. This can be entered using the number pad and using the colon " : " to separate the numbers. Type the time in the form 20:12 followed by return and it will appear in the spreadsheet in the format 20:12. The format of the time is not checked by the workbook.

Enter the observation **estimates** in the "Estimates" column. Up to five separate estimates can be input for an observation. The spreadsheet cannot check the format of these estimates. The estimates can be in any of the forms below:

A-2 *Note: Please do not enter =A-1, the "=" sign will cause an error*

B+3 *Note: Please do not enter =B+1, the "=" sign will cause an error*

=C

<D or >D or [D or ]D

A(2)V(3)B

V(2)A(3)B

A(2)B(3)V

Below is an example of some entered estimates:

| Estimates *(as many as 5 can be used)* | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| B+2 | =A | A(1)V(1)B | | |
| | | | | |
| | | | | |

Enter the **magnitudes** that you calculate for each observation in the appropriate "Calculated mags" column. The spreadsheet will automatically average these and put the result in the Grey "Mag" column. This is shown below:

| Calculated mags | | | | | Mag |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | |
| 11.2 | 11.2 | 11.3 | | | 11.2 |
| | | | | | |
| | | | | | |

If the calculated magnitudes are understood by the workbook then the "Maths" flag will show green:

| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| OK | OK | | | | OK |
| | | | | | |
| | | | | | |

If the Maths flag shows gold it can be considered to be an advisory message. It is quite permissible to ignore the message. Calculated and allowable magnitudes that will cause this are <, [, > and ] (eg <11.5 or >10.5). This is because these are text rather than numbers and the checking is looking for numbers.

Enter the **class** of the observation in the "Class" column. The definition of these is as follows:

- Classes are 1, 2 or 3.
    - Class 1 - seeing supports an accuracy of +/-0.1 magnitudes
    - Class 2 - seeing supports an accuracy of +/-0.2 magnitudes
    - Class 3 - poor seeing, eg moon or haze, just about worth reporting

This is shown below:

| Class |
|---|
| 1 |
| |
| |

If the worksheet is happy with the class then the Error Flag for Class will turn green.

Enter the **sequence** that you are using in the "Sequence" column. This is shown below:

| Sequence |
|---|
| 250.01 |
| |
| |

If the workbook recognises the name of the sequence then the error flag called Sequence will turn green as below:

| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| OK | OK | OK | | OK | OK |
| | | | | | |
| | | | | | |

If the Error flag turns gold then the worksheet does not recognise the sequence name. In this case please check the list of sequence names on the "Sequences" worksheet. If an error has been flagged then the following are possible explanations:

- There is an error in the typing of the sequence, e.g. if it should be 250.01 but it is entered as 250,01 or 250.001 etc. In this case referring to the sequence list will identify the correct name.
- A sequence has been used that is valid but not on the list in the Sequences sheet. – In this case please ignore the error. The observation will still enter the database.
- A modern AAVSO sequence name has been used. The AAVSO have moved to a dynamic star chart generator. These dynamic charts are impossible for the BAA database to follow as they change continually. Indeed, just refreshing the web page when looking at an AAVSO chart will result in a new chart name. In this case then enter the chart name as, for example, AAVSO 12345AB, or whatever the numbers and letters are for the specific chart you are using. You can ignore the resulting error as the observation will still enter the database.

Enter the number of the **instrument** used in the "Instruments column". This should be consistent with the instrument list on the "Observer Details" sheet. An error will be reported if the instrument number inserted here is outside the range list of instrument numbers.

Enter observational **notes** in the "Notes" column. Use the following codes separated by a comma.

A = Artificial Light

C = Cloud (possible patchy obscuration in the field of the variable)

E = Extrafocal (the estimates made with stars out of focus)

H = Haze (or fog or mist evenly obscuring the field of the variable)

M = Moon (brightening the sky around the variable)

P = Photographic (include details of emulsion and filters)

T = Twilight (Sun brightening the sky around the variable)

L = Object low in sky

Alternatively, verbose notes can be entered if desired.

e.g. A,M,L,Object is red.

In general, the "Errors" section should show a complete set of Green flags:

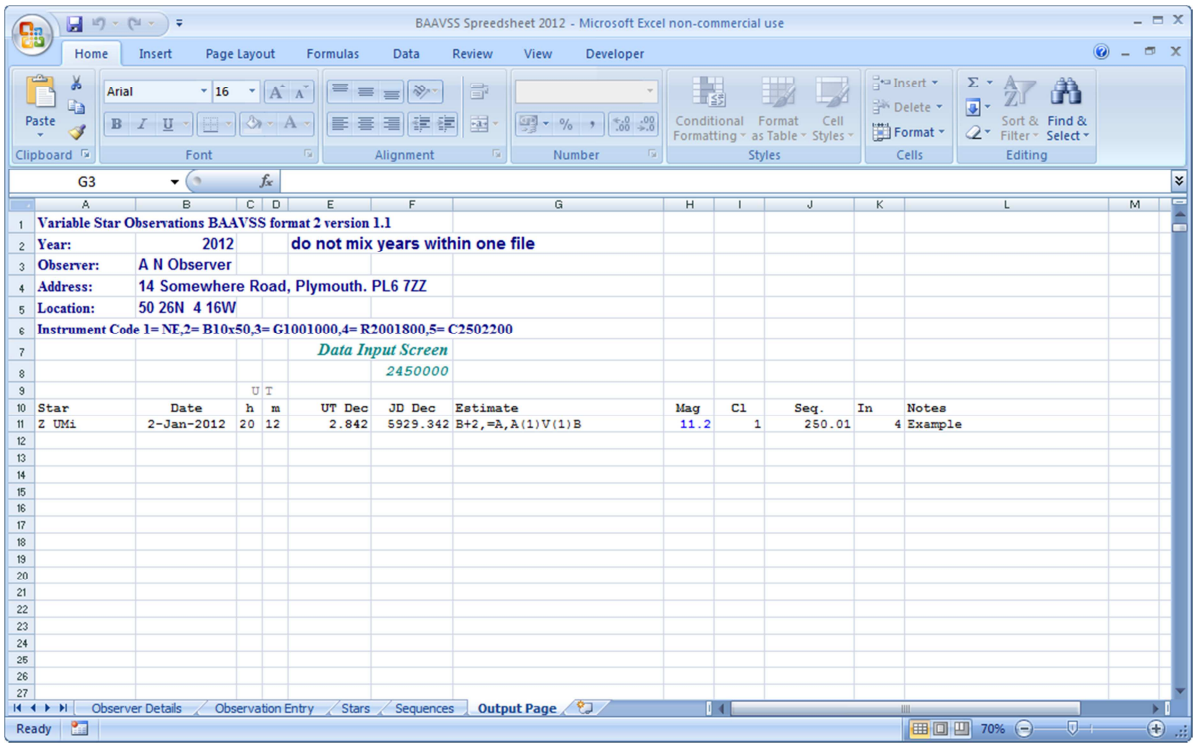
| Errors | | | | | |
|---|---|---|---|---|---|
| Date | Maths | Class | Inst't | Sequence | Star |
| OK | OK | OK | OK | OK | OK |
| | | | | | |
| | | | | | |

In this case it is likely that the observation will enter the BAAVSS visual database without an error. However, it is quite permissible to ignore any error flags and then submit the data. The error flags are purely indicators.

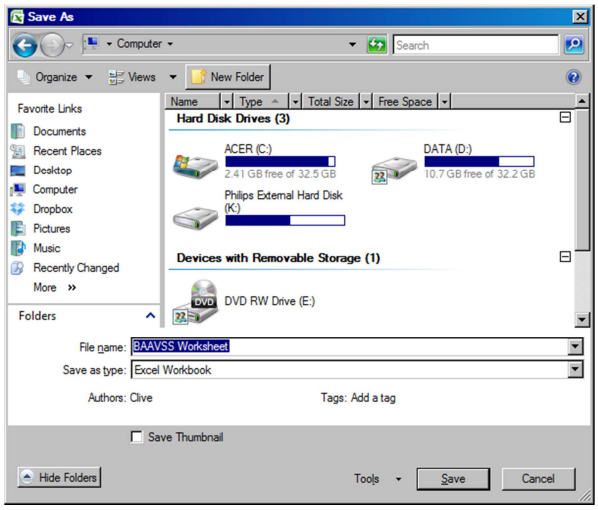
**Submitting the observations**

When ready to submit the observations, (monthly or quarterly or six-monthly or annually, if emailing them to the Secretary) then open the sheet in the workbook called “Output Page”.

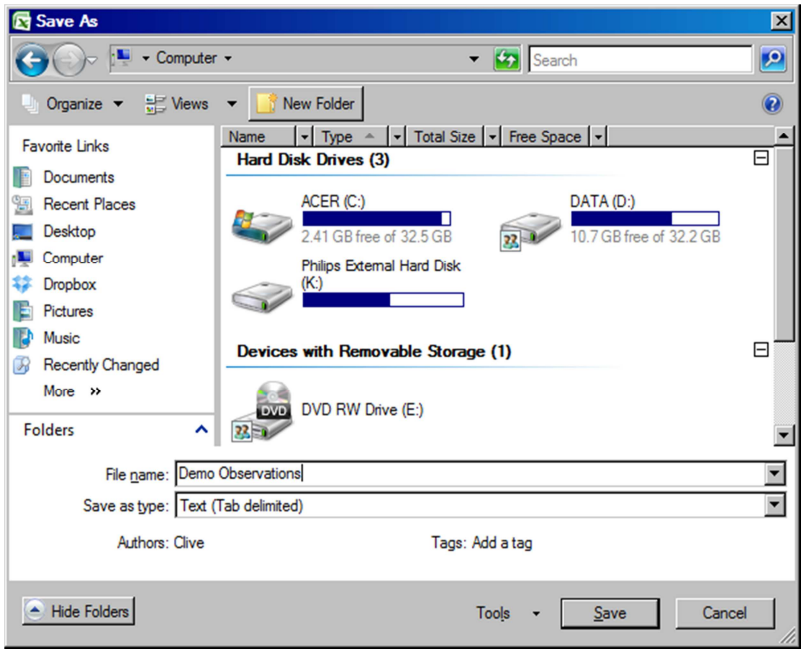
This will look like the example below:




This will look familiar to those who already submit data in spreadsheet form. It has the same format as the existing spreadsheet but has been built automatically from the data entered on the “Observer Details” sheet and the “Observation Entry” sheet. Further, some star names have been automatically changed by the workbook so that they appear on the “Output Page” in a form that will be recognised by the database. This “Output Page” sheet is locked to prevent the structure being changed. To submit the observations recorded on the “Output Page” then perform a “Save As” operation. In Excel 2007 then this is performed by clicking the Office Button in the top left corner. The “Save As” pop-up will appear:



Set the “File name :” field to a name of your choice and then set the “Save as type:” field using the pop-down arrow to type Text (Tab delimited). As below:




And then press Save.

Then either upload the file via the BAAVSS Database website http://britastro.org/vssdb/ by following the instructions there, or email it as an attachment to visual.variables@britastro.org. To obtain a login to the database website simply email the Database Secretary using the "Request a Login" link on the Database homepage.

**If there is any concern over the data then simply email the entire spreadsheet.**