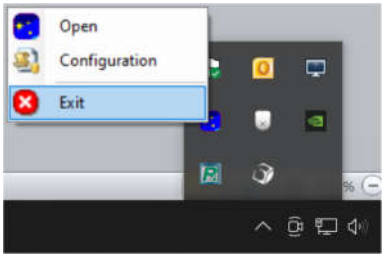
Description of the OccultWatcher add-in SC_Report:

Installation of the add-in SC_Report:

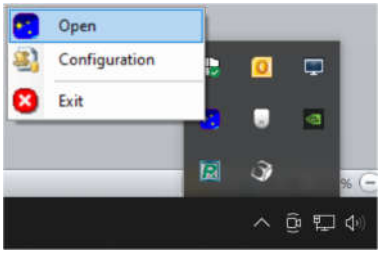
The file “OccultWatcher.SC_report.dll” has to be installed in the same directory as the program “OccultWatcher.exe”.

The new add-in is available only after a re-start of the OccultWatcher software. For that, it is necessary to stop OccultWatcher.

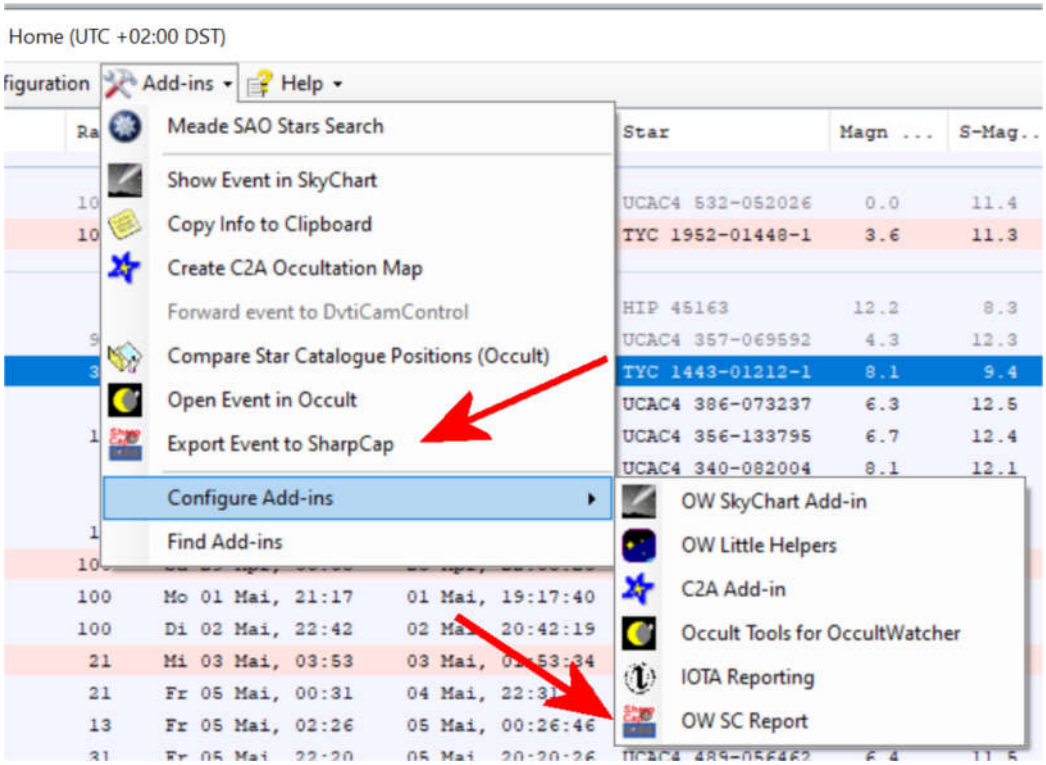
- Close the window of OccultWatcher
- Stop OccultWatcher program running with the Exit button from here:



- Restart OccultWatcher by double click on the “OccultWatcher.exe” program
- If the window does not appear, you can open the window from here:

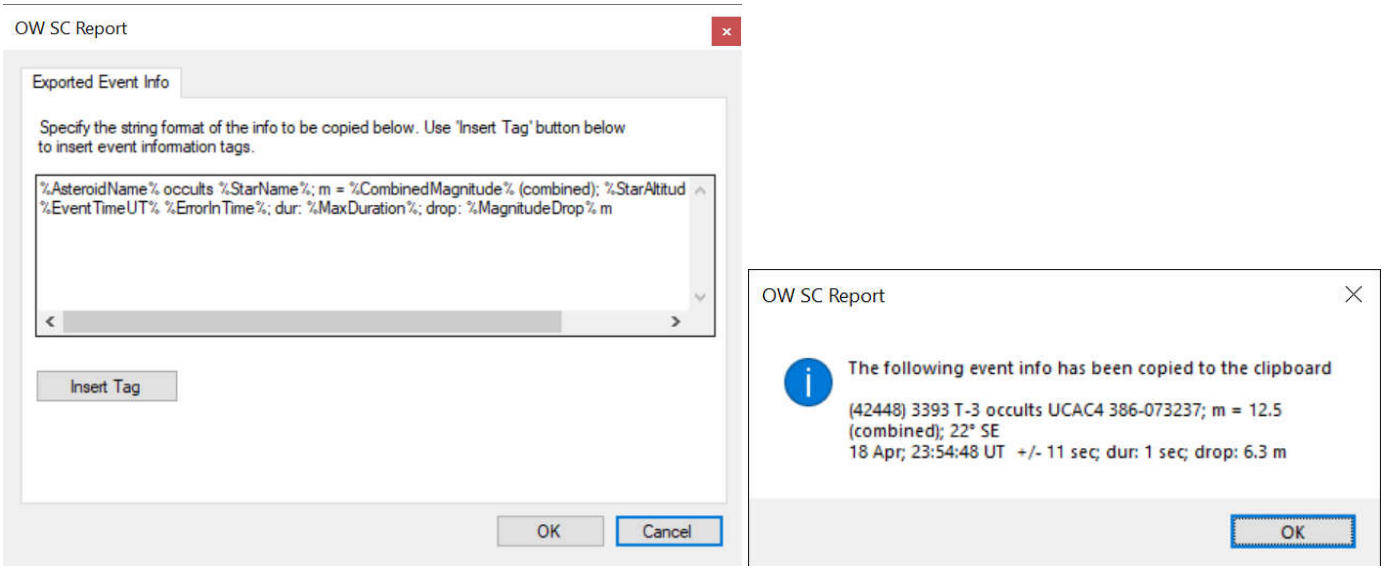


Verify that the new add-in is available:



Preparation of the clipboard export:

Configuration of the add-in OW_SC_Report: click in OccultWatcher menu “Add-ins” – “Configure Add-ins” – “OW_SC_Report”. The window appears:



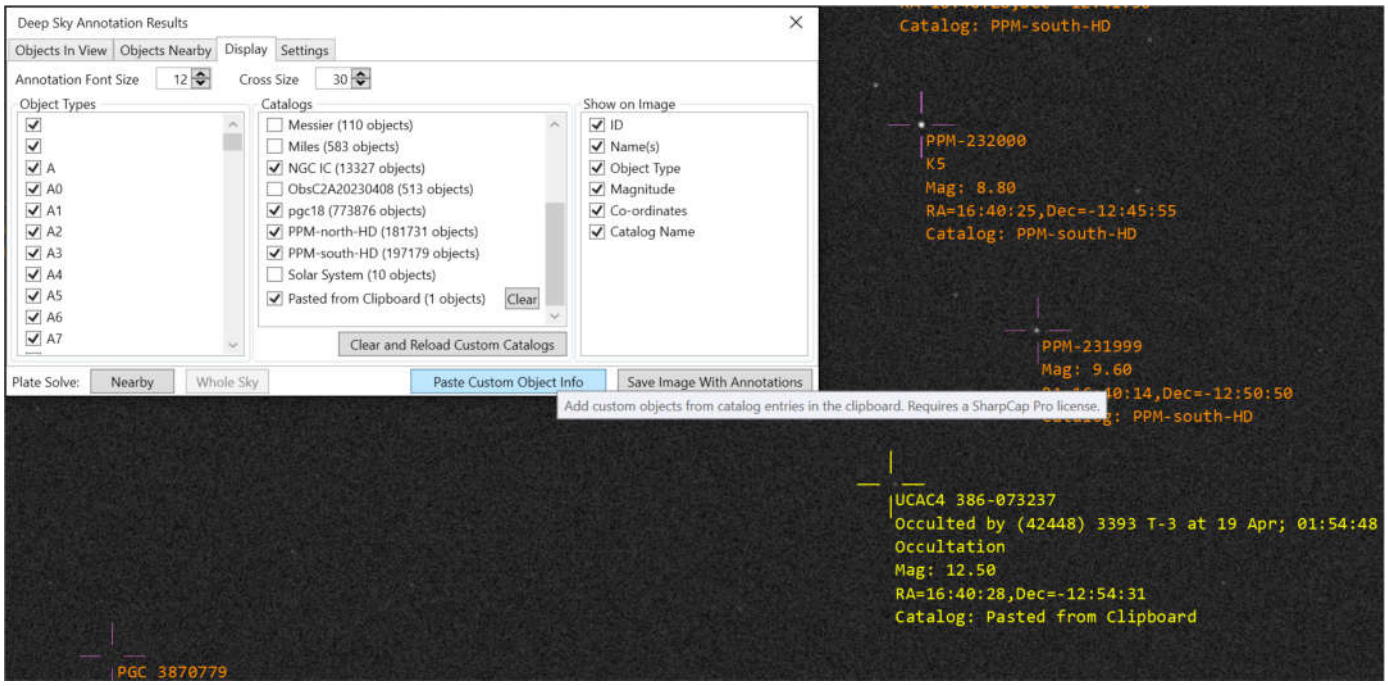
You can insert a new tag with the button 

.
The tags will be copied only in the clipboard.

If you want to add manually an annotation in SharpCap Pro with the tool “Tools” – “Deep Sky Image Annotation”, then change the string in the “Exported Event Info” field with the following:

```
%StarName%|Occulted by %AsteroidName% at
%EventTime%|Occultation|%StarRA%|%StarDE%|%CombinedMagnitude%|||
```

Use the text capture of your PDF software for avoiding a typo error. Delete any “Return” after “AsteroidName% at”.



Preparation of the SODIS template:

The next important preparation is the SODIS template.

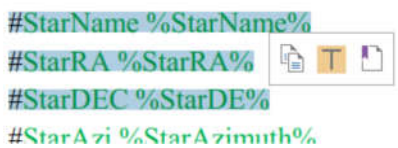
Here an example. In blue the normal tags exported from OccultWatcher, in orange for example your information and in green the additional tags for the OW_SC_Report add-in.

#IOTA-ES ASTEROIDAL OCCULTATION - REPORT FORM 2.03
#Event
#Occultation: xxxxTIVE
#DATE: %EVENT-DATE%
#PREDICTTIME: %EventTimeUT%
#STAR: %STAR%
#ASTEROID: %ASTEROID%
#Nr: %ASTEROID-NO%
#OBSERVER
#Observer1: your name
#Observer2:
#moreObs:
#E-mail: your email address
#Address: your address
#OBSERVING_STATION
#NearestCity: xxxxxx
#Countrycode: xx
#Coordinates LAT +/-DD MM SS.S LON +/-DDD MM SS.S
#Latitude: xx xx xx
#Longitude: xx xx xx
#Altitude: xx
#Datum _blank=WGS84 N=NAD1927 E=ED1950 T=Tokyo G=GB1936 *=unspecified, or other
#Datum:
#Teleskop _=unstated 1=Refractor 2=Newtonian 3=SCT 4=Dobsonian 5=Binoculars 6=Other 7=None 8=eVscope
#Telescope: x
#Aperture in cm
#Aperture: x
#FocalLength in cm
#FocalLength: x
#ObservingMethod _=unspecified a=Analogue & digital video b=Digital SLR-camera video c=Photometer d=Sequential images e=Drift scan f=Visual g=Other
#ObservingMethod: x
#Observation
#StartObs:
#D D=Main Star d=second Star G=satellite main star g=satellite 2nd star N=ring M=non detection +time hh:mm:ss.s
#D:
#Acc_D:
#R R=Main Star r=second Star B=satellite main star b=satellite 2nd star N=ring M=non detection +time hh:mm:ss.s
#R:
#Acc_R:
#EndObs:
#Duration:
#Exp_Time:
#Timesource _=unspecified a=GPS b=NTP c=Telephone (fixed or mobile) d=Radio time signal e=Internal clock of recorder f=Stopwatch g=Other
#Timesource: x

#Camera: xxxxx
#Signal/Noise:
#Weatherconditions
#Wind:
#Temperature:
#Transparency 1=Clear 2=Fog 3=Thin cloud <2 [mag loss <2 mag.] 4=Thick cloud >2 [mag loss >2 mag. 5=Broken opaque cloud [that is, observed thru gaps in the cloud] 6=Star faint 7=By averted vision
#Transparency:
#Stability _=unstated 1=Steady 2=Slight flickering 3=Strong flickering
#Stability:
#Comments:

#StarName %StarName%
#StarRA %StarRA%
#StarDEC %StarDE%
#StarAzi %StarAzimuth%
#StarAlt %StarAltitude%
#StarMag %StarMagnitude%
#Constellation %Constellation%
#AstName %AsteroidName%
#PredictTime %EventTimeUT%
#EventTime %EventTime%
#CenterDistance %CenterDistance%
#ChordOffset %ChordOffset%
#CombinedMagnitude %CombinedMagnitude%
#ErrorInTime %ErrorInTime%
#EventRank %EventRank%
#FeedName %FeedName%
#MaxDuration %MaxDuration%
#MagnitudeDrop %MagnitudeDrop%
#MagnitudeDropR %MagnitudeDropR%
#MoonAltitude %MoonAltitude%
#Probability %Probability%
#ShadowWidth %ShadowWidth%
#StarMagnitudeR %StarMagnitudeR%
#SunAltitude %SunAltitude%
#SunDistance %SunDistance%
#TravelDistance %TravelDistance%
#CenterDistance %CenterDistance%

For the details … the line with ":" character is used in the SODIS website. The line without ":" character is ignored by the SODIS webpage, but the line is taken in account by the SharpCap script! So if you write a line in your SODIS template, do not add a character ":" in the "green" lines. Use the text capture of your PDF software for avoiding a typo error.

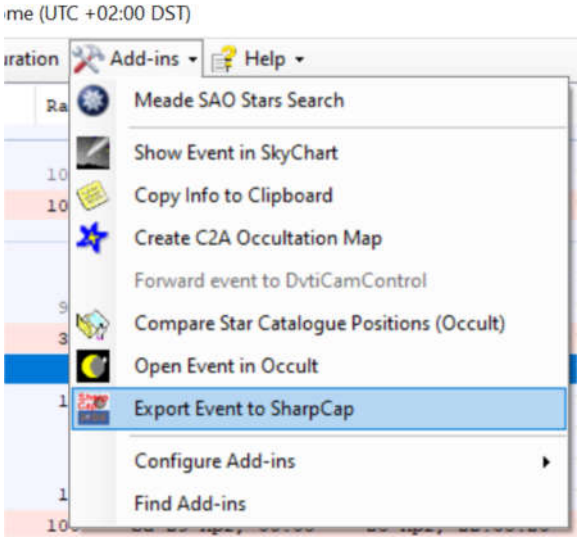


Note that not all the tags are yet used in the SharpCap script, but it is simple to have all the tags now … in case of a future function in the SharpCap script.

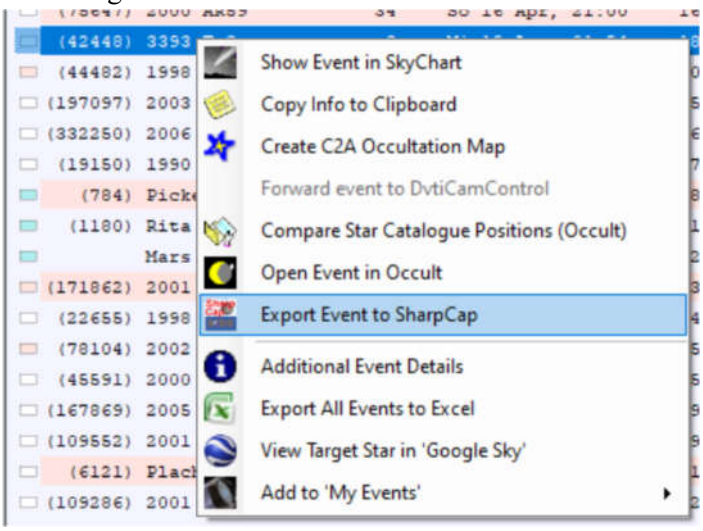
Use of the add-in SC_Report:

The use is simple … with a right click from a future event or from the menu line.

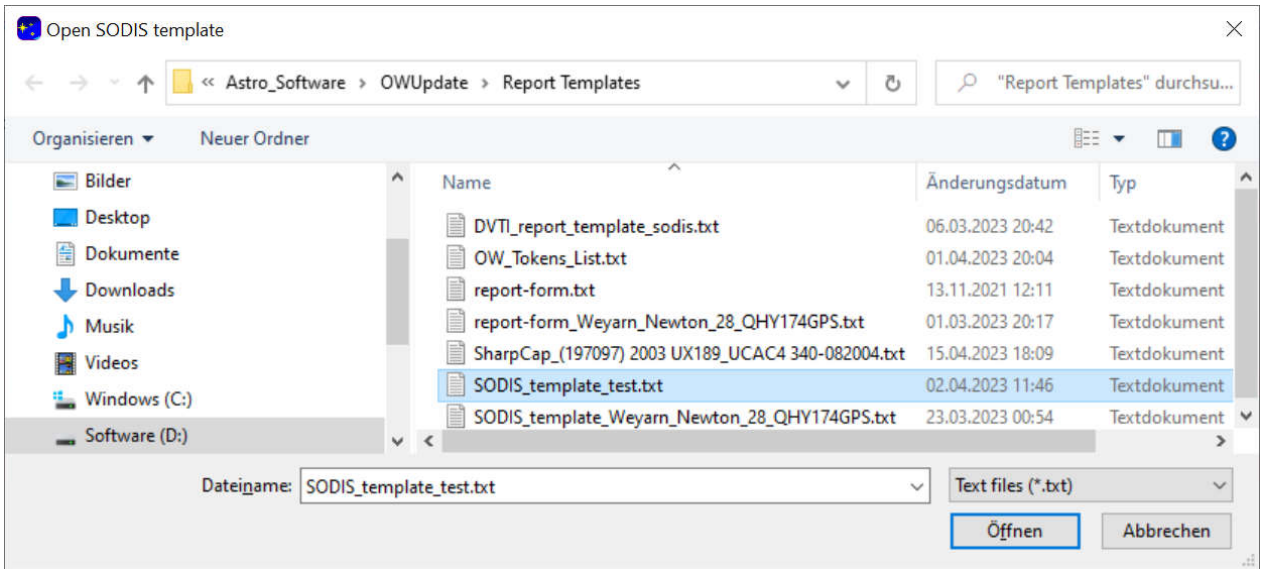
From the menu:



With a right click on an event:

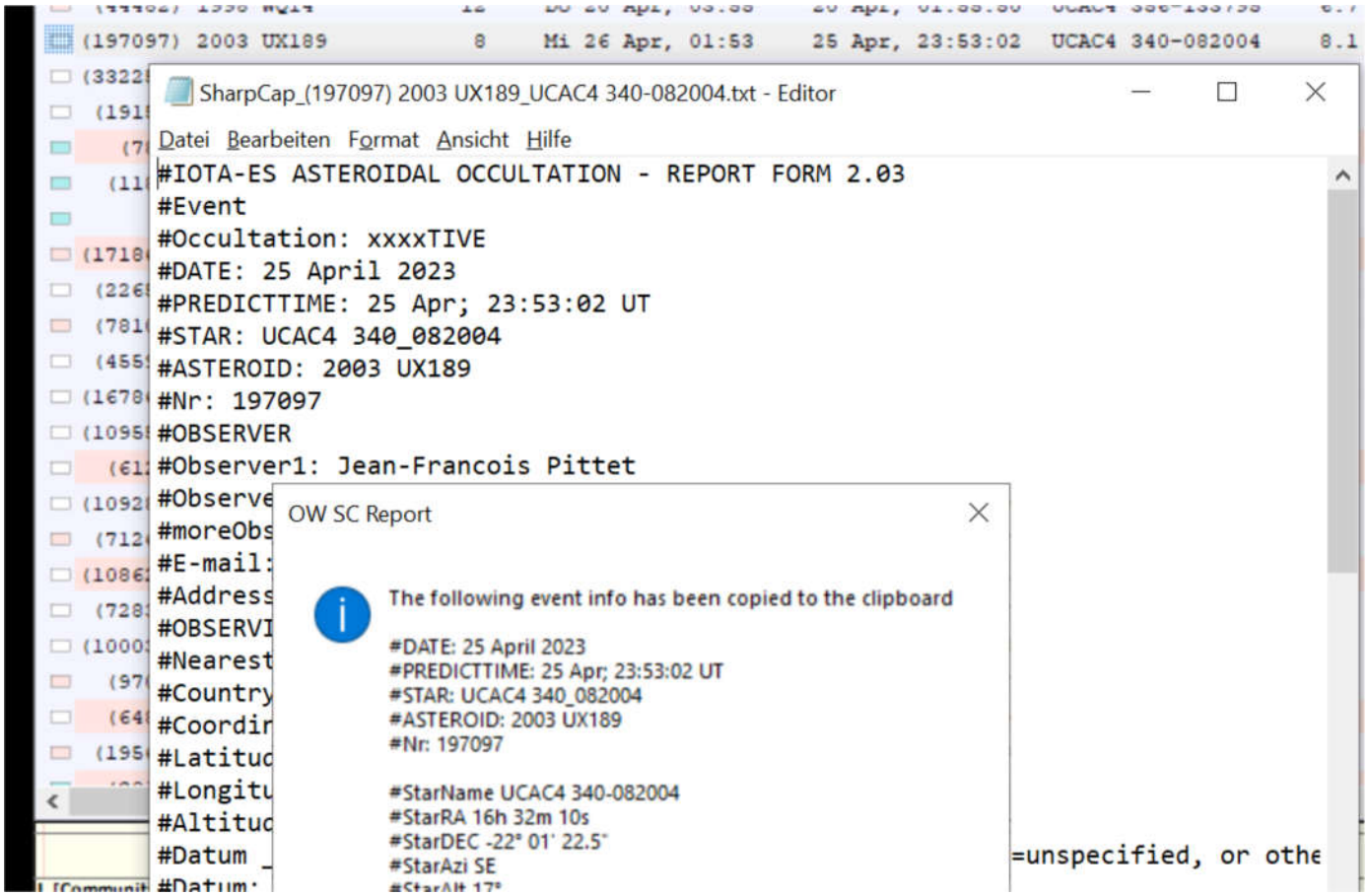


A window appears for the selection of the template. You need to select the path the first time. The path is memorised for the next time.



A window of the selected tags is showed and the information is copied in the clipboard.

At the same time Notepad.exe program opens the generated file. You can check the information and you can add or change the location, observer or other information (do not forget to save the file before closing Notepad).
The file is saved in the same directory as the template file.
The file name is for example: “SharpCap_(197097) 2003 UX189_UCAC4 340-082004.txt”, with the asteroid number, the asteroid name and the star name.



The next step is to use the generated file with SharpCap.

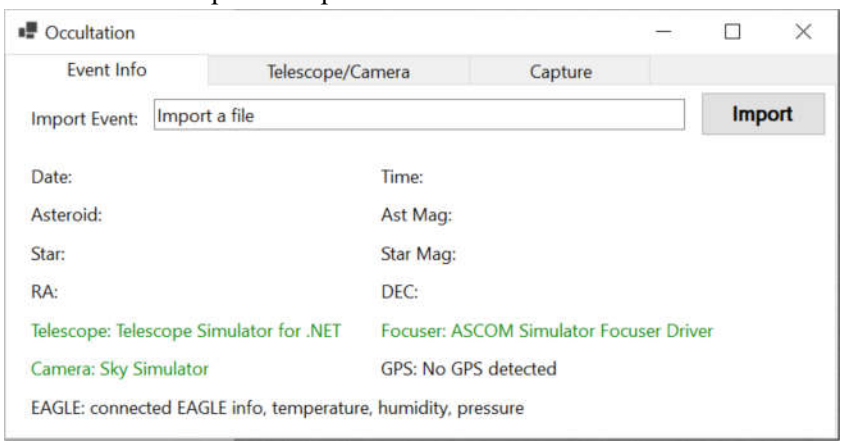
Copy or shift the text file from the preceding step in the directory where you plan to save the film (SER, ADV or FITS images). If you use a different computer, then transfer the file in the observation computer.

Use of the SC_Report with SharpCap:

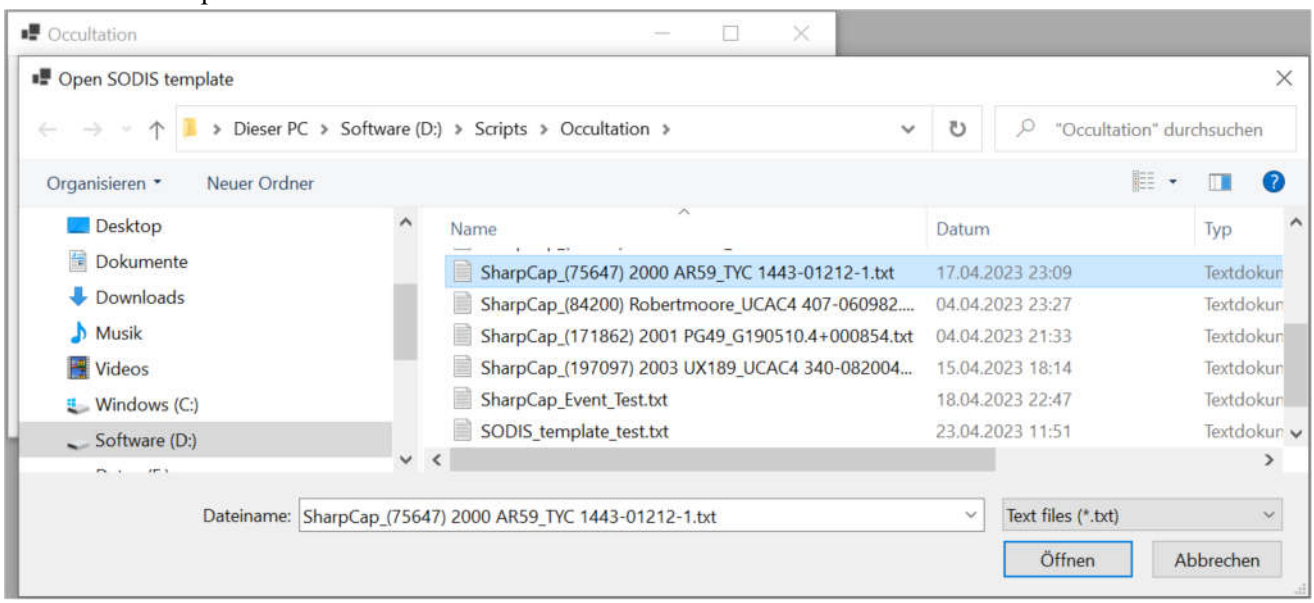
You need for that the SharpCap **Pro** version for the use of the IronPython scripting language.
In addition, it is necessary to use the **4.1** version, while the ASCOM connection changed.

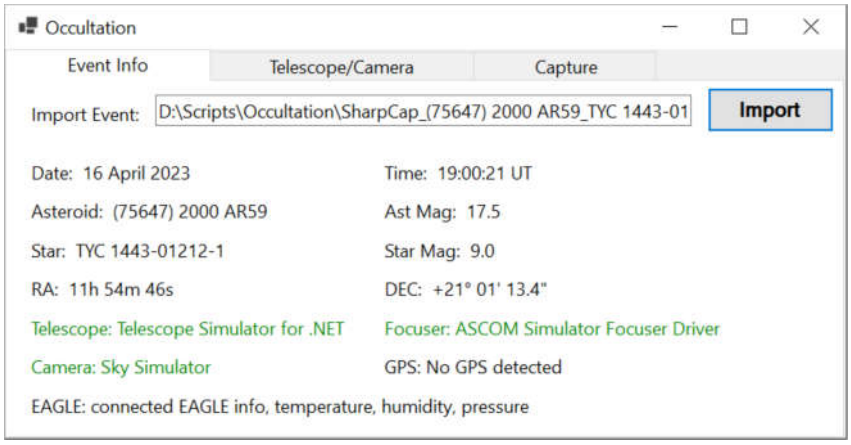
Two files are necessary, one for the script itself, the second for the LED calibration script of the QHY-174 GPS camera in the case you use this camera. Note that you can use the script with each camera that can be connected with SharpCap, but the function “LED Calibration” will work only with QHY-174GPS camera.

The script detects the telescope, the focuser, the camera (if GPS) and an EAGLE computer.
The EAGLE computer is optional.

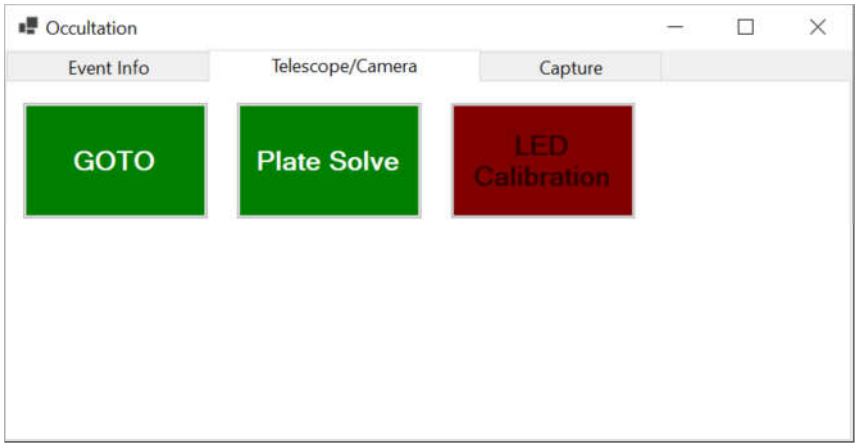


Click on the “Import” button for the selection of the event file:

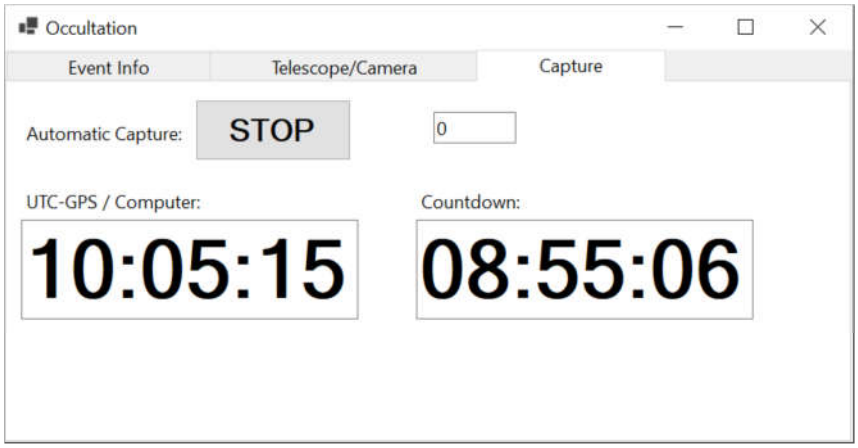




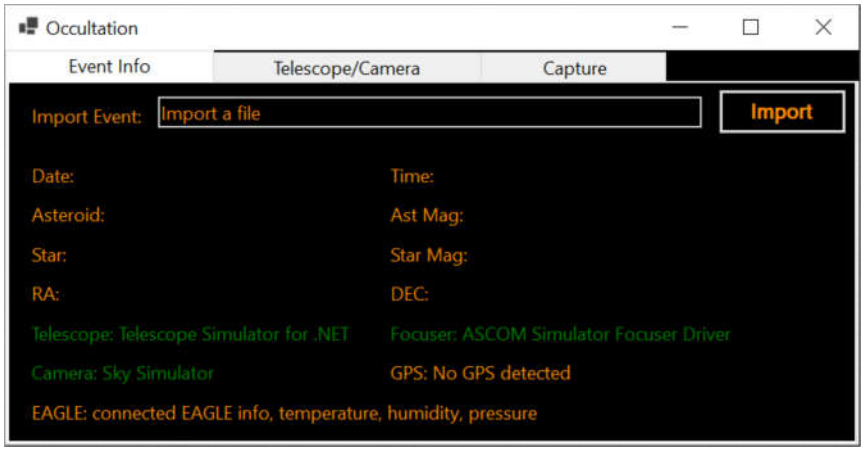
In the second tab:
The script can perform a GOTO to the target star coordinates and then a Plate Solve (if necessary).
With a QHY-174GPS camera, the LED calibration can be performed. The mount has to be controlled by SharpCap for a GOTO and the following Plate Solve.
If you have no GOTO mount or if you do not need the LED calibration … ignore this tab.

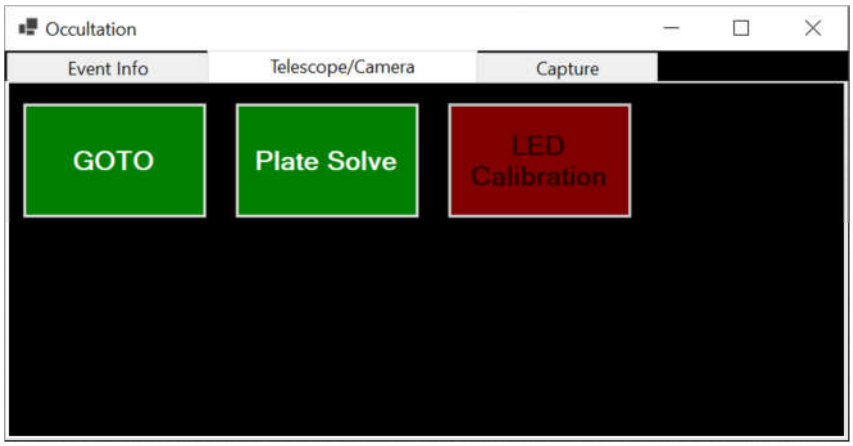


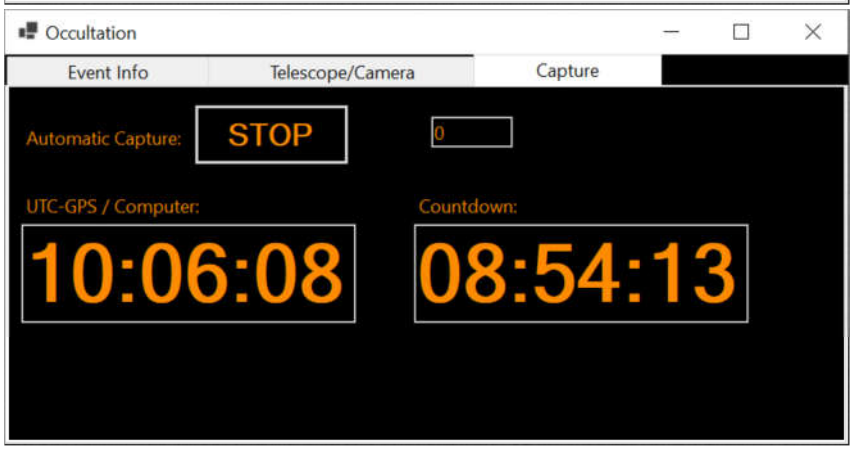
In the third tab:
It will be possible to start the automatic capture at a defined time before the event.



Night Vision Colours:
When SharpCap is in Night Colours mode, then the script will start with the same colours. The script does not change the colours if SharpCap colours changes when the script is running.




Occultation
Event Info
Telescope/Camera
Capture
GOTO
Plate Solve
LED Calibration


Occultation
Event Info
Telescope/Camera
Capture
Automatic Capture:
STOP
0
UTC-GPS / Computer:
10:06:08
Countdown:
08:54:13