Contains 7 pages

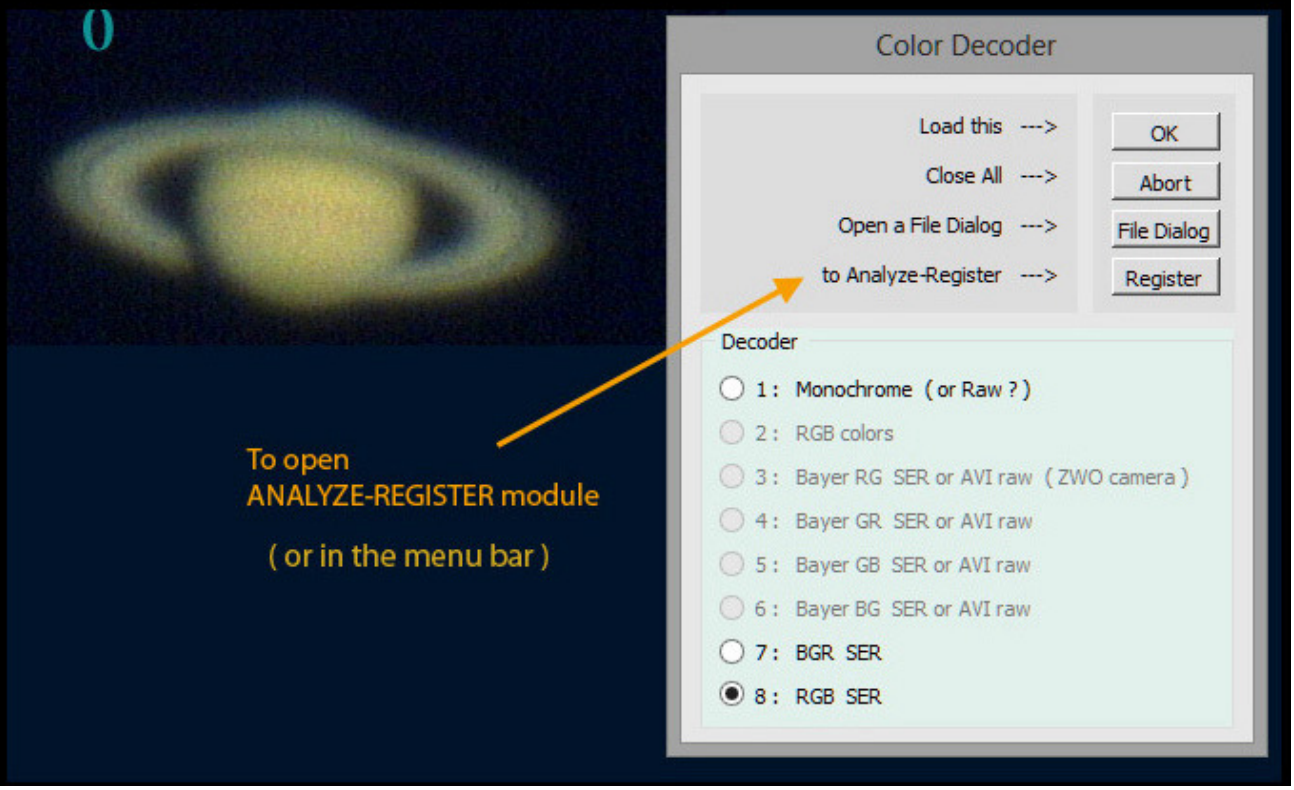
How to ALIGN and Add images in AstroSurface ? Version ERIS

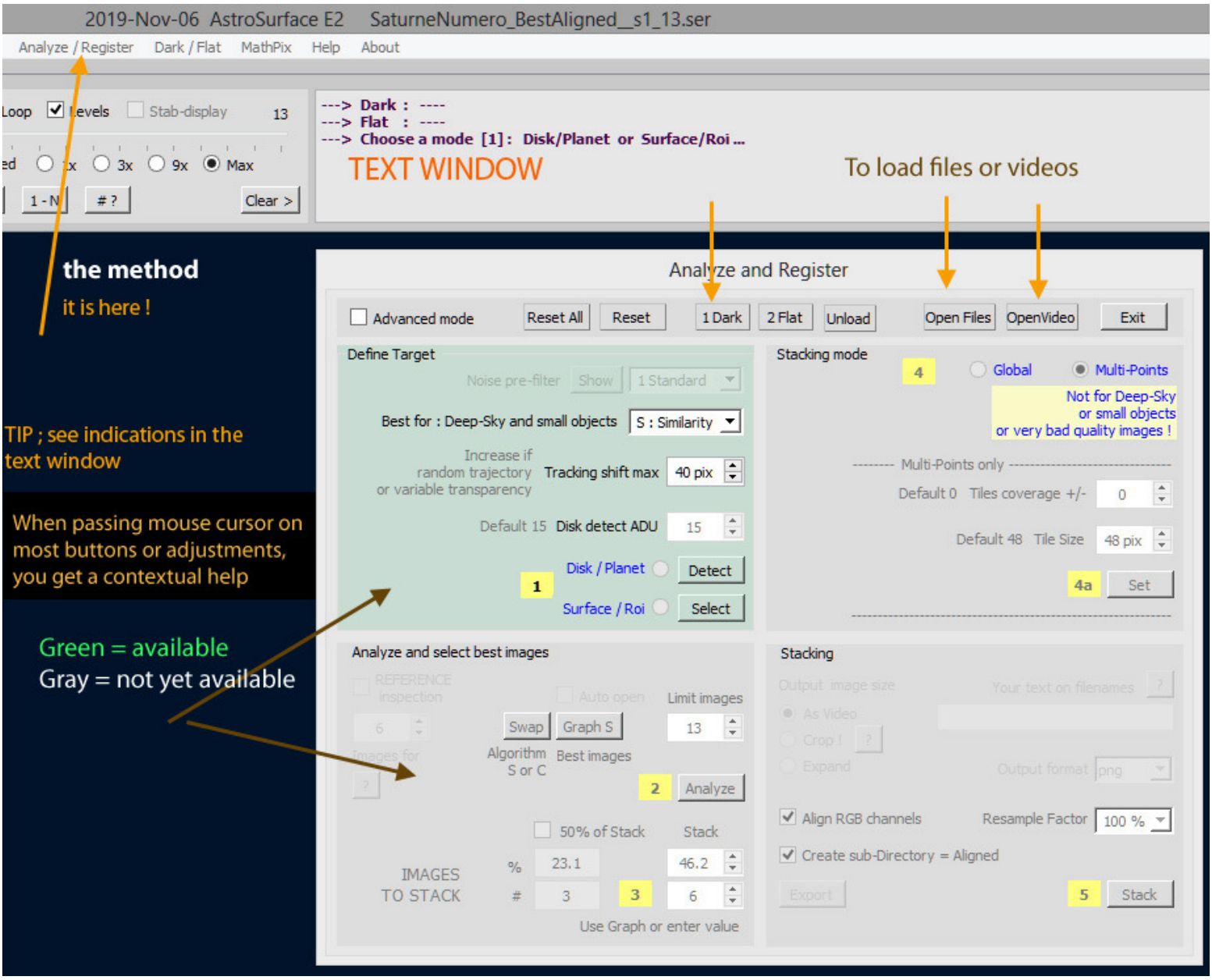
--> we describe the method ANALYZE-REGISTER : for a list of files or AVI or SER videos

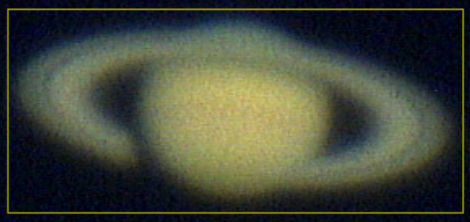
See Analyze-Register in the menu bar, or when the Color Decoder is loaded : button Register (image below)
(NB : The Color-Decoder as below, is in the menu bar at Configure. Il is used to decode Raw SER files)

You can load Files/AVI/SER files **before** ot **after** the method Analyze-Register is loaded.
The method Analyze-Register contains various buttons to do this.

With an optional DARK and FLAT
MasterDark and MasterFlat must be processed before : ready as **single** files with the same format than images !
These files can be loaded in the menubar **Dark / Flat**, or in the method Analyze-Register (see top buttons)
Always load MasterDark if needed **before** masterFlat if needed !



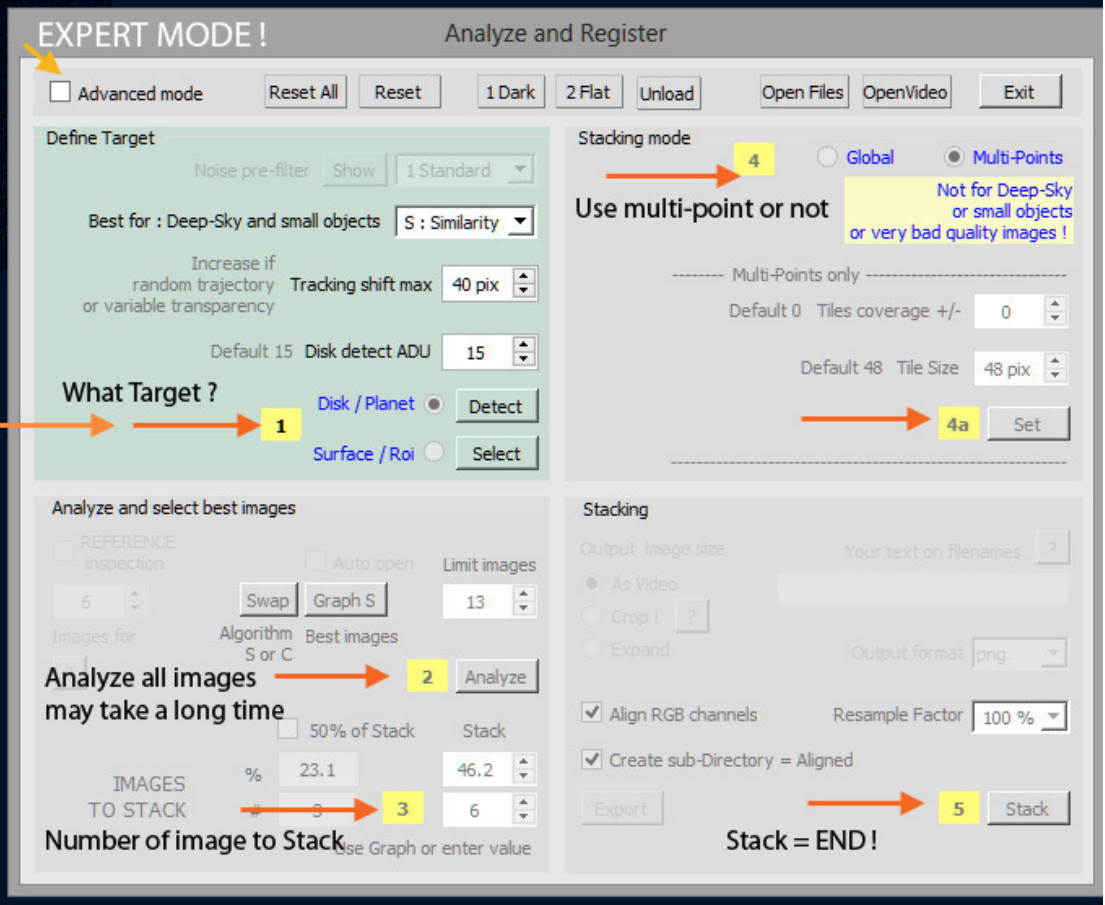

2019-Nov-06 AstroSurface E2 SaturneNumero_BestAligned__s1_13.ser
Analyze / Register
Dark / Flat
MathPix
Help
About
---> Dark : ----
---> Flat : ----
---> Choose a mode [1]: Disk/Planet or Surface/Roi ...
TEXT WINDOW
To load files or videos
the method
it is here !
TIP ; see indications in the text window
When passing mouse cursor on most buttons or adjustments, you get a contextual help
Green = available
Gray = not yet available
Analyze and Register
Advanced mode
Reset All
Reset
1 Dark
2 Flat
Unload
Open Files
OpenVideo
Exit
Define Target
Noise pre-filter
Show
1 Standard
Best for : Deep-Sky and small objects
S : Similarity
Increase if random trajectory or variable transparency
Tracking shift max
40 pix
Default 15
Disk detect ADU
15
Disk / Planet
Detect
1
Surface / Roi
Select
Stacking mode
4
Global
Multi-Points
Not for Deep-Sky or small objects or very bad quality images !
Multi-Points only
Default 0
Tiles coverage +/-
0
Default 48
Tile Size
48 pix
4a
Set
Analyze and select best images
REFERENCE inspection
Auto open
Limit images
Swap
Graph S
13
Algorithm S or C
Best images
2
Analyze
50% of Stack
Stack
IMAGES TO STACK
%
23.1
46.2
#
3
3
6
Use Graph or enter value
Stacking
Output image size
As Video
Crop !
Expand
Your text on filenames
Output format
png
Align RGB channels
Resample Factor
100 %
Create sub-Directory = Aligned
Export
5
Stack



Follow instructions in the text Window
and yellow numbers for basic steps
1 2 3 4 (4a) and 5

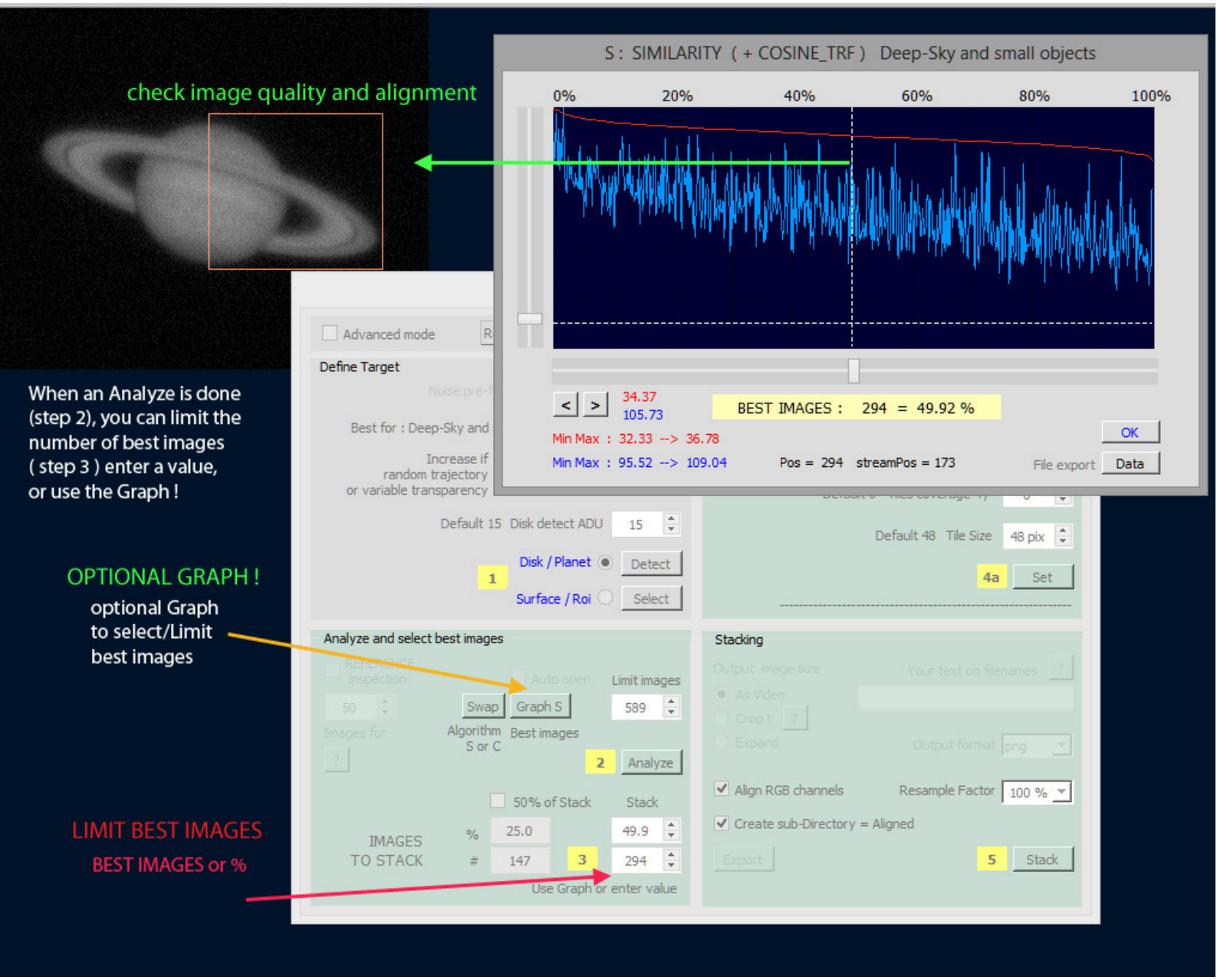
TO START ;
First choose a Target mode 1 :
Disk / Planet or Surface / Roi,
then
follow instructions in the
text window

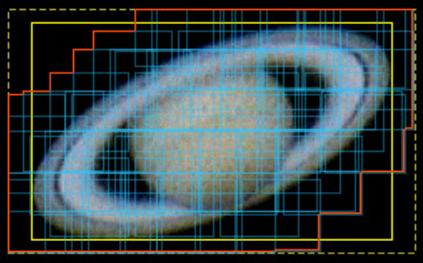
ROI = Region Of Interest if an area often drawn by user in AstroSurface
Well contrasted and unique area !



Disk / Planet : if for objects with a Disk entirely in the image and not too big !
Surface / Roi : is for Deep Sky, Stars, or full images of Moon or Sun...

When detected just Double-Click on it
You have to draw a ROI on image


check image quality and alignment
S : SIMILARITY (+ COSINE_TRF) Deep-Sky and small objects
0%
20%
40%
60%
80%
100%
BEST IMAGES : 294 = 49.92 %
OK
When an Analyze is done (step 2), you can limit the number of best images (step 3) enter a value, or use the Graph !
OPTIONAL GRAPH !
optional Graph to select/Limit best images
LIMIT BEST IMAGES
BEST IMAGES or %
Define Target
Analyze and select best images
Stacking
Use Graph or enter value



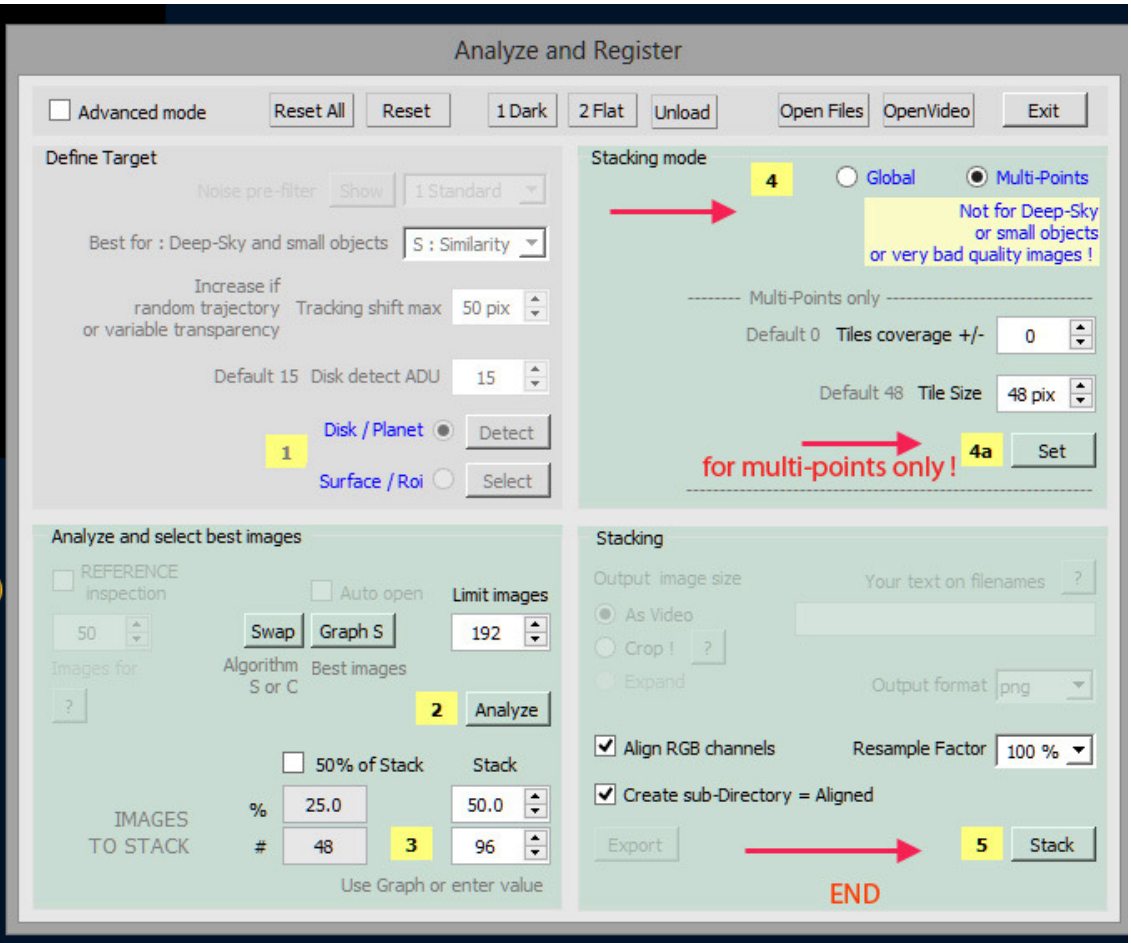
TILES MULTI-POINTS

After step 3 (Limit Best Images) choose an alignment mode for images : step 4 (4A)

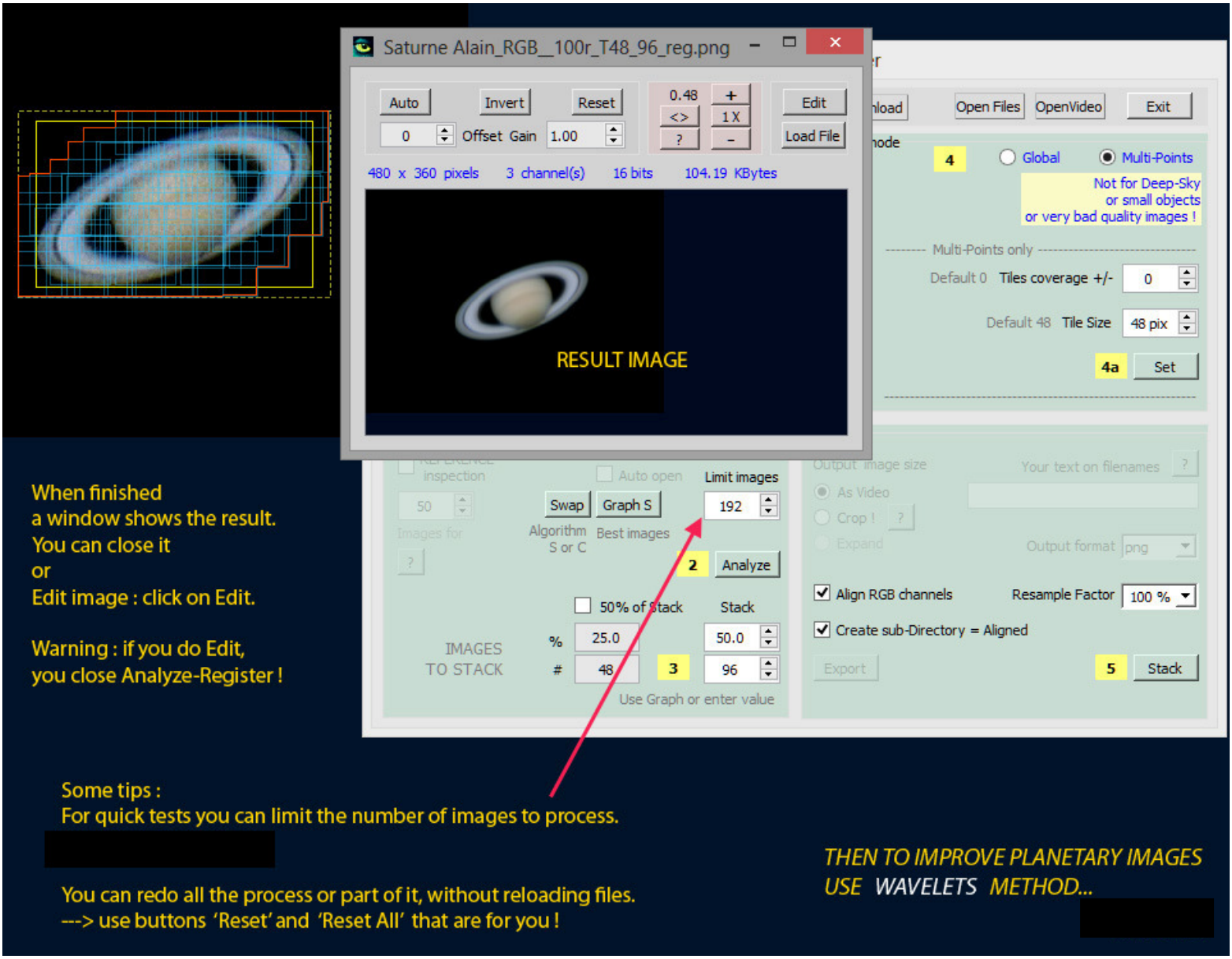
For Planetary/Lunar/Solar images click multipoints then Set (4a)... (Tiles are drawn to cover the planet)

For Deep-Sky or Very small objects click Global

Final Addition is done by step 5 = Stack = END



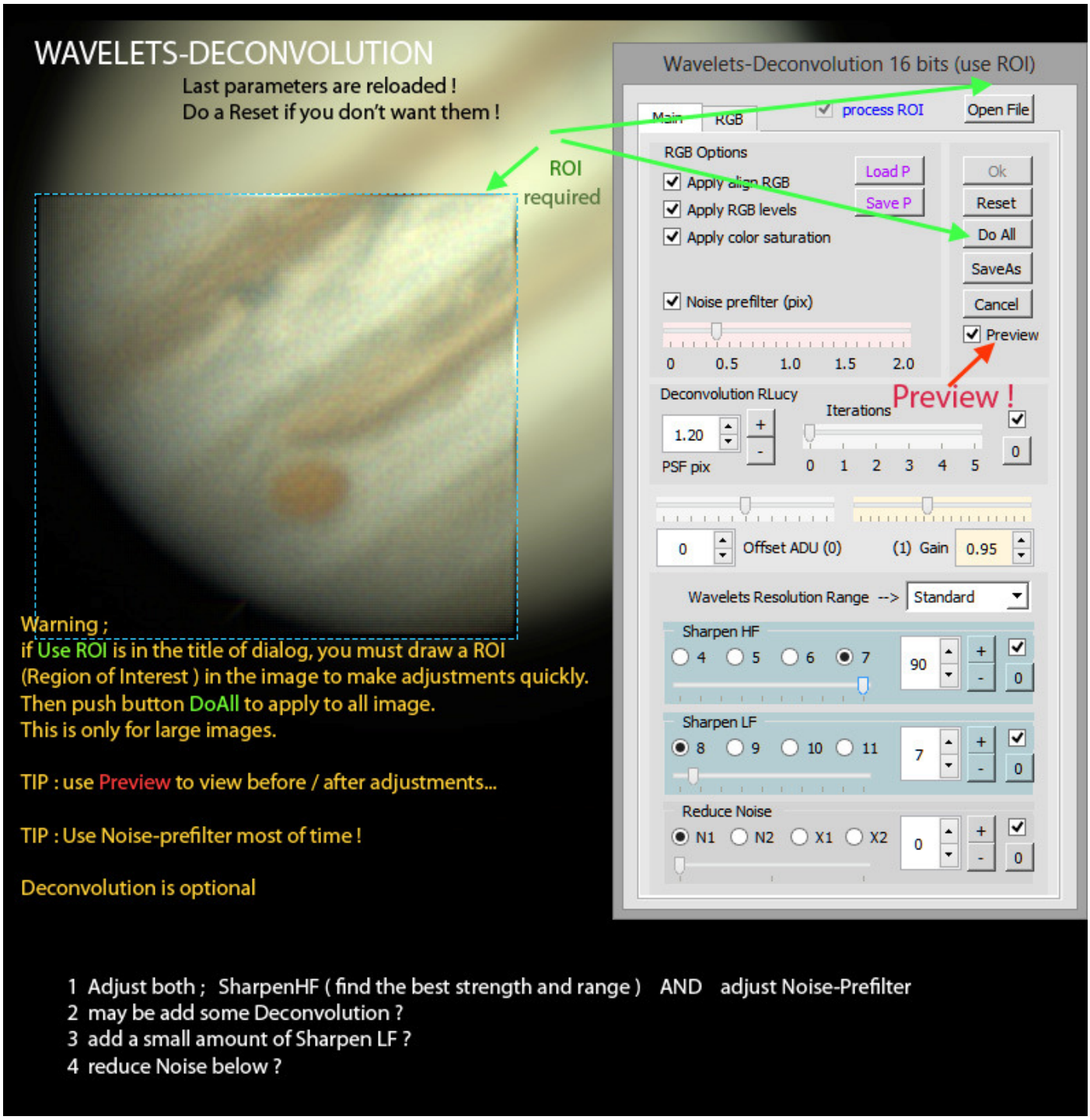
NB : to get more options, click Advanced Mode (top left)



WAVELETS-DECONVOLUTION
To improve stacked images

This method is in menu bar Filters
or directly in the Button Wavelets near the Text Window
(Not during video mode)

see below :



You have many other methods :

Align channels,
Adjust White-Balance
Contrast
Rotation
Crop…
Conversions…