



Tracking

Signal evolution Tracking data mining plays a very important role in StarTools and understanding it is key to achieving superior results with StarTools.

As soon as you load any data, StarTools will start Tracking the evolution of every pixel in your image, constantly keeping track of things like noise estimates, parameters you use and other statistics.

Tracking makes workflows much less linear and allows for StarTools' engine to "time travel" between different versions of the data as needed, so that it can insert modifications or consult the data in different points in time as needed ('change the past for a new present and future'). It's the primary reason why there is no difference between linear and non-linear data in StarTools, and the reason why you can do things in StarTools that would have otherwise been nonsensical (like deconvolution after stretching your data). If you're not familiar with Tracking and what it means for your images, signal fidelity and simplification of the workflow & UI, please do read up on it!

Tracking how you process your data also allows the noise reduction routines in StarTools to achieve superior results. By the time you get to your end result, the Tracking feature will have data-mined/pin-pointed exactly where (and how much) visible noise grain exists in your image. I therefore 'knows' exactly how much noise reduction to apply in each area of your image.

Noise reduction is applied at the very end, as you switch Tracking off,

because doing it at the very last possible moment will have given StarTools the longest possible amount of time to build and refine its knowledge of where the noise is in your image. This is different from other software, which allow you to reduce noise at any stage, since such software does not track signal evolution and its noise component.

Tracking how you processed your data also allows the Color module to calculate and reverse how the stretching of the luminance information has distorted the color information (such as hue and saturation) in your image, without having to resort to 'hacks'. Due to this capability, color calibration is best done at the end as well, before switching Tracking off. This too is different from other software, which wants you to do your colour calibration before doing any stretching, since it cannot deal with colour correction after the signal has been non-linearly transformed like StarTools can.

The knowledge that Tracking gathers is used in many other ways in StarTools, however, the nice thing about Tracking is that it is very unobtrusive. In fact, it actually helps get you get better results from your data in less time by homing in on parameters in the various modules that it thinks are good defaults, given what Tracking has learnt about your data.



Type of dataset?

Have the pixels in this dataset been

Choose **LINEAR** if the pixels in the

Choose **LINEAR, FROM OSC/DSLR**
with an **RGGB/BGGR Bayer Matrix,**

Choose **NON-LINEAR SRGB SOURCE**
this stretch.

Linear



Advanced image processing software for astrophotography

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