

Photoshop CS4 Stacking Cheat Sheet



Night over El Conte Peak, Smoky Mountains National Park

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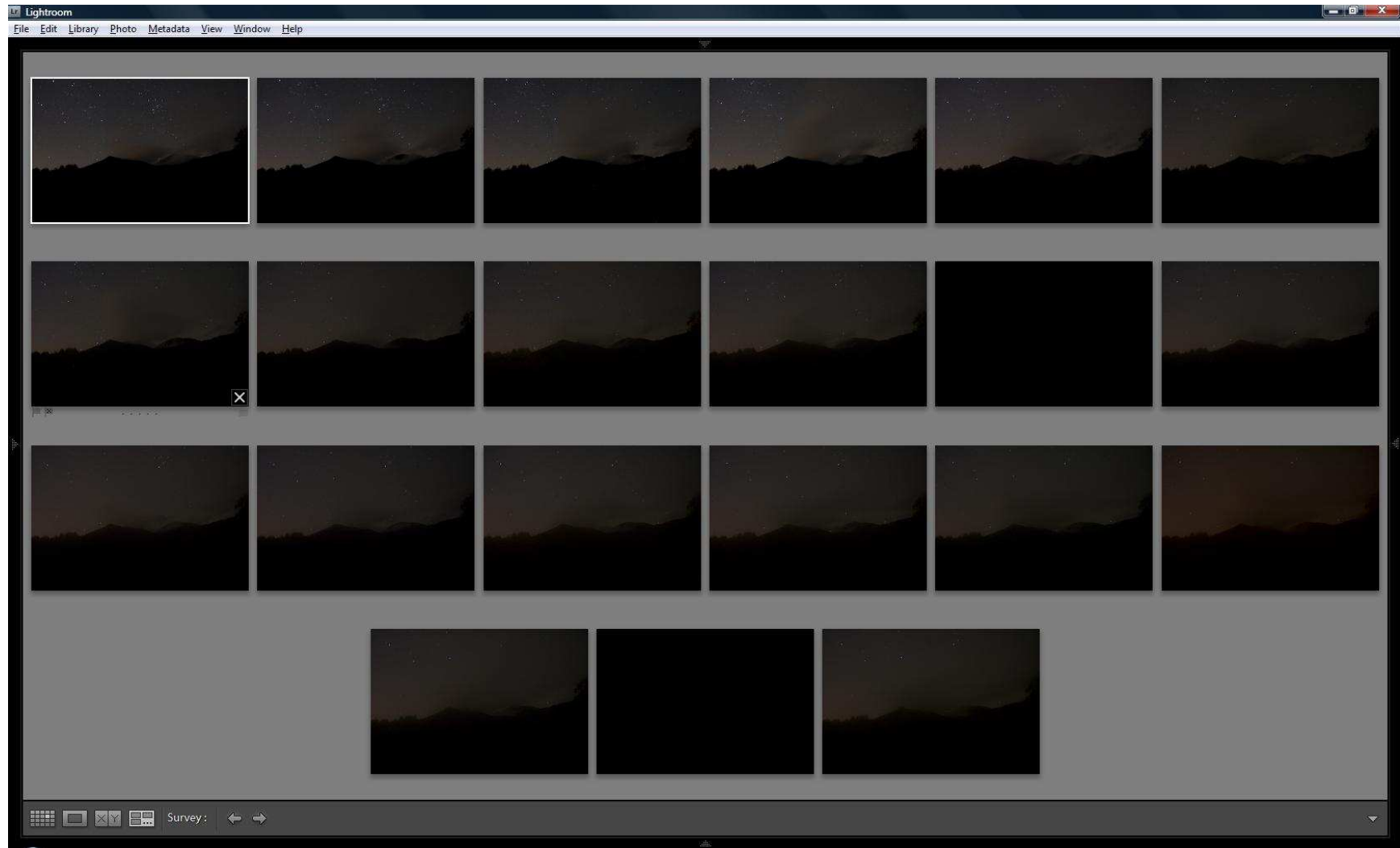
I visited the Great Smoky Mountains National Park in October 2009. Fall colors were at their peak. I wanted to get a night photograph with Star Trails and the fall colors. So I took a series of long exposures and stacked them in Photoshop to get this image. Here are screenshots on how I stacked the images.

What equipment did I use?

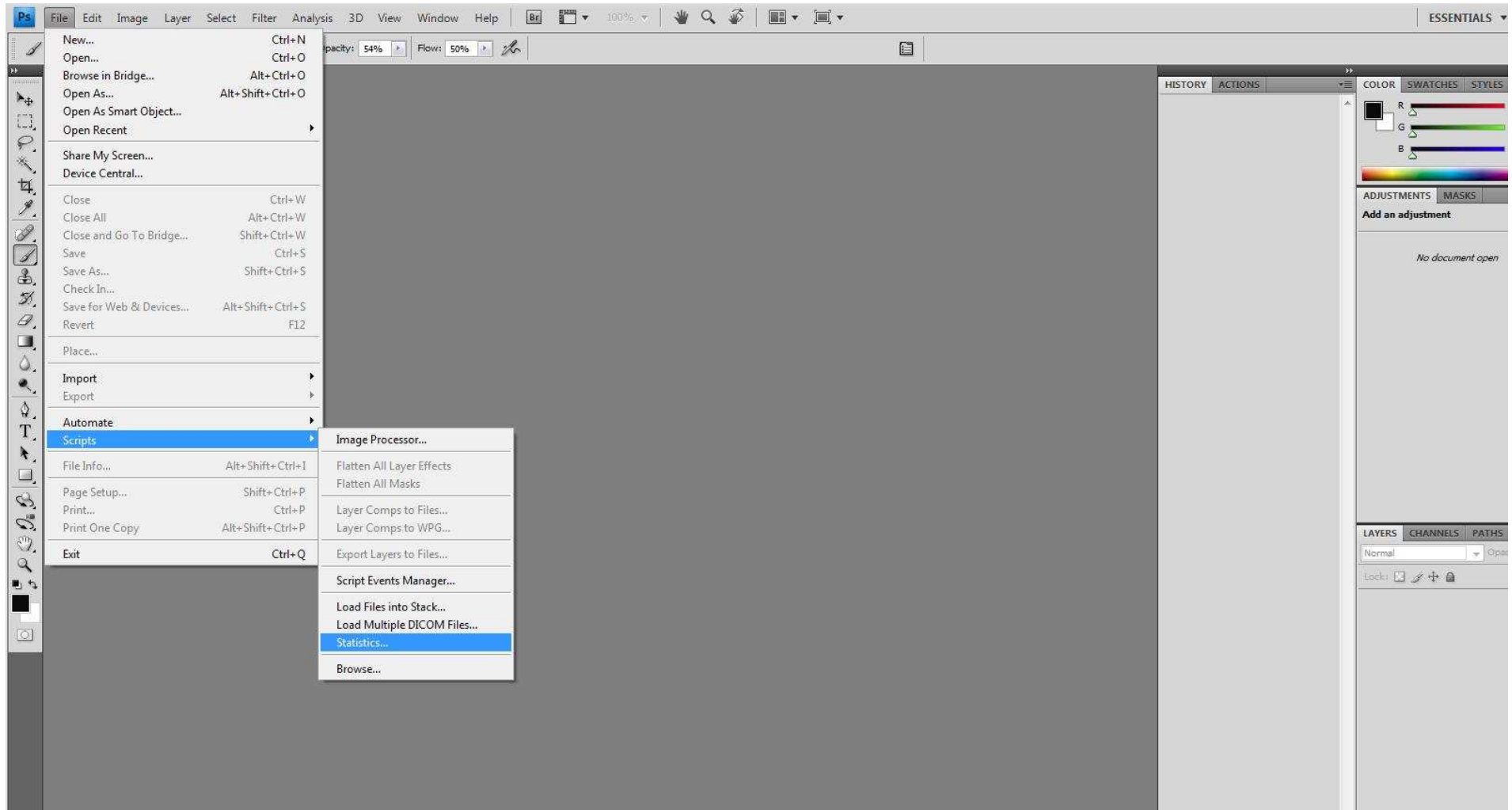
1. Camera with Manual controls (Canon Rebel XT)
2. Remote Cable Release. (A Programmable remote control is the best. I didn't own at the time this photo was made. However, that has been remedied now. See the last page for recommendations / links)
3. Sturdy Tripod
4. Lens Hood (to keep dew , dust off)
5. Flashlight / Headlamp for safe operation in the dark
6. Extra batteries
7. A cup of hot coffee to sip and look at the stars in the cold dark magnificent night.

This cheat sheet is not going to dwell upon how to take long exposures. After this point, I am going to assume that the reader already has a bunch of long exposures which the reader wants to stack. However, if you want to know more about this aspect, please refer to the very last page where I have some links to excellent tutorials which deal with all aspects of Star Trails.

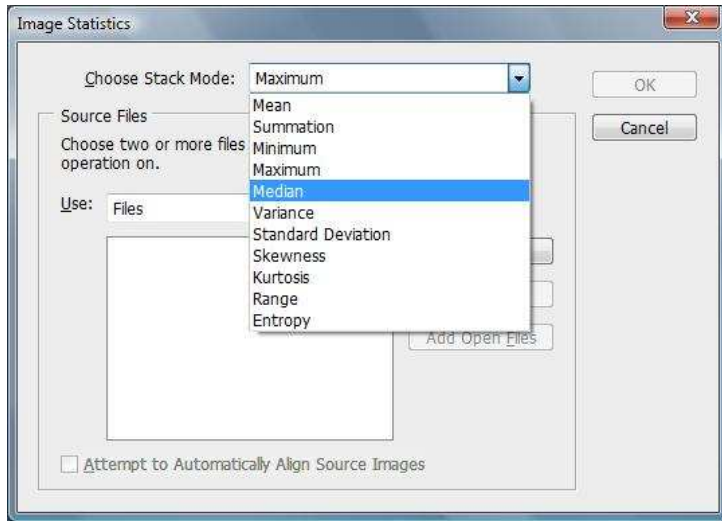
Here is the set of photographs I want to merge. These exposures range from 30secs to 2mins each. I want to combine these exposures so that my final image has Star Trails. I plan to use Adobe Photoshop CS4 Extended. As you can see, these photos are dark and have barely any star light in the sky.



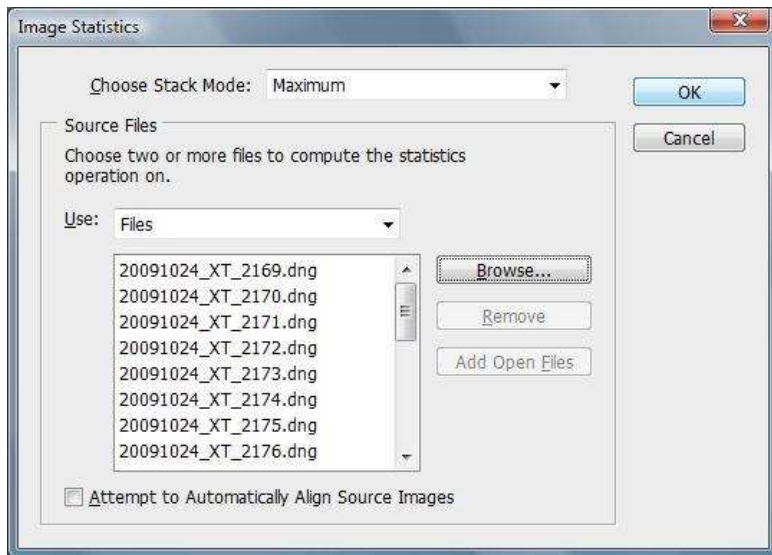
I open Photoshop Cs4, Extended Version and navigate to Files -> Scripts -> Statistics.



Once in the “Image Statistics” window, there are so many options. Which do I choose? Here is where this cheat sheet comes in handy. I will show you what each method gives you so you can go right to it and not waste your time.



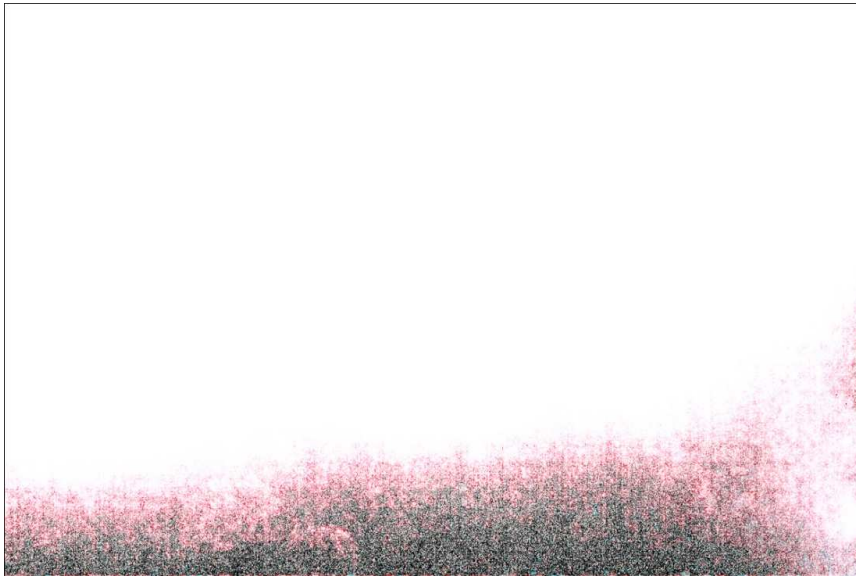
Once I selected the “Stack Mode” to use, I select the images I want to stack together.



You can choose from 11 Stack modes in Photoshop CS4 Extended. In alphabetical order, these choices are Entropy, Kurtosis, Range, Maximum, Mean, Median, Minimum, Skewness, Standard Deviation, Summation and Variance. So what results do each of these stack modes give when merging your photographs?

Below are images which resulted in combining the set of photographs shown earlier in Page 2. The exact same photographs were used in each of the below 11 example images – the only difference was the choice of Stacking Mode.

1. Stack Mode: Entropy



2. **Stack Mode: Kurtosis**



3. **Stack Mode: Maximum**



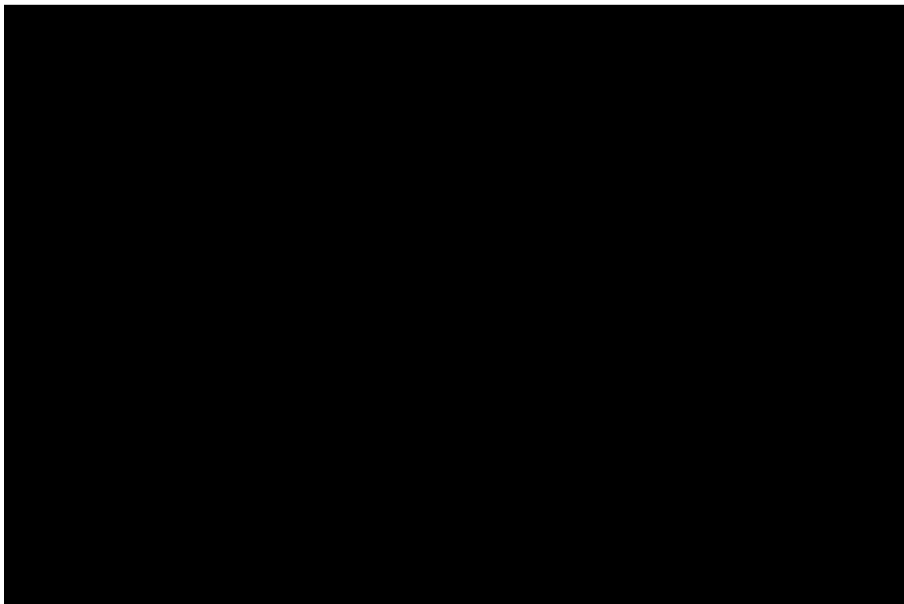
4. **Stack Mode: Mean**



5. **Stack Mode: Median**



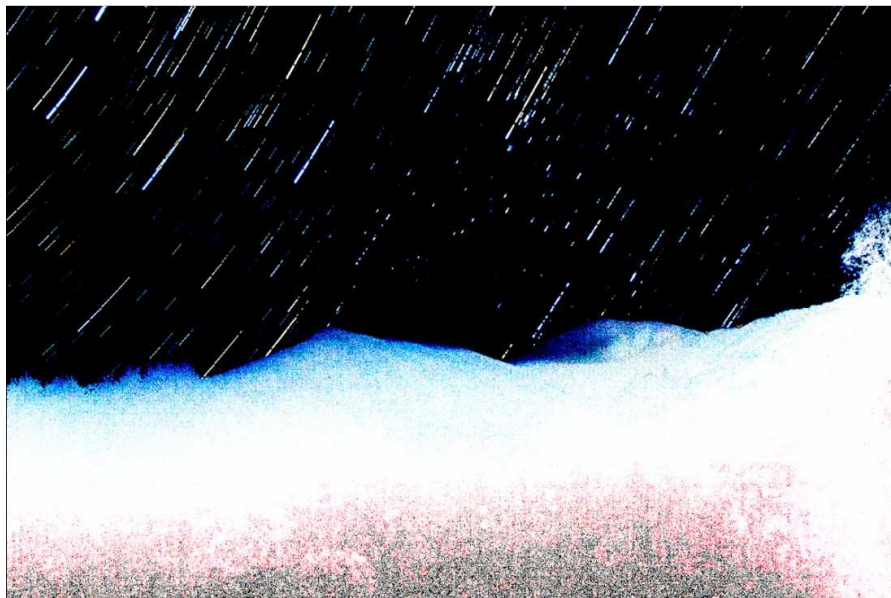
6. **Stack Mode: Minimum**



7. **Stack Mode: Range**



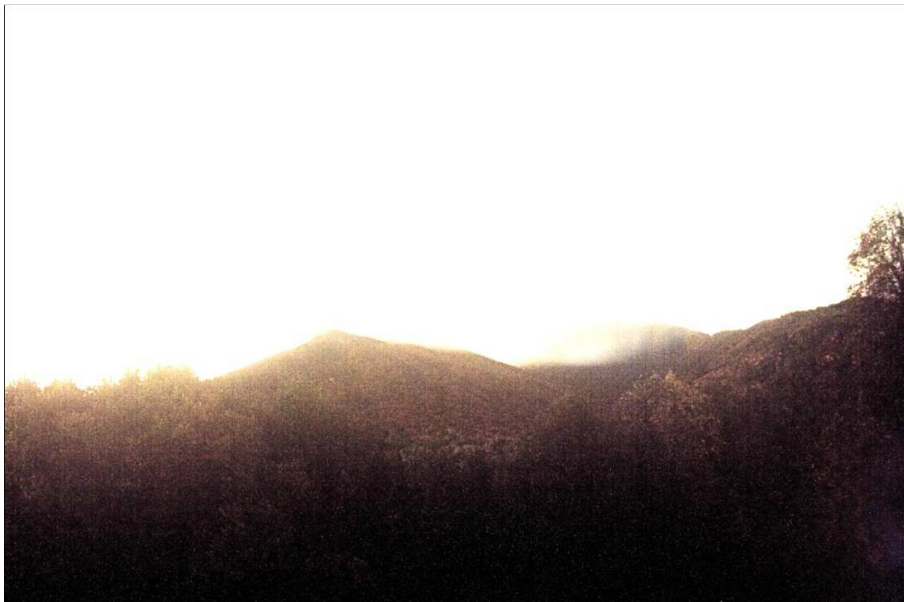
8. Stack Mode: Skewness



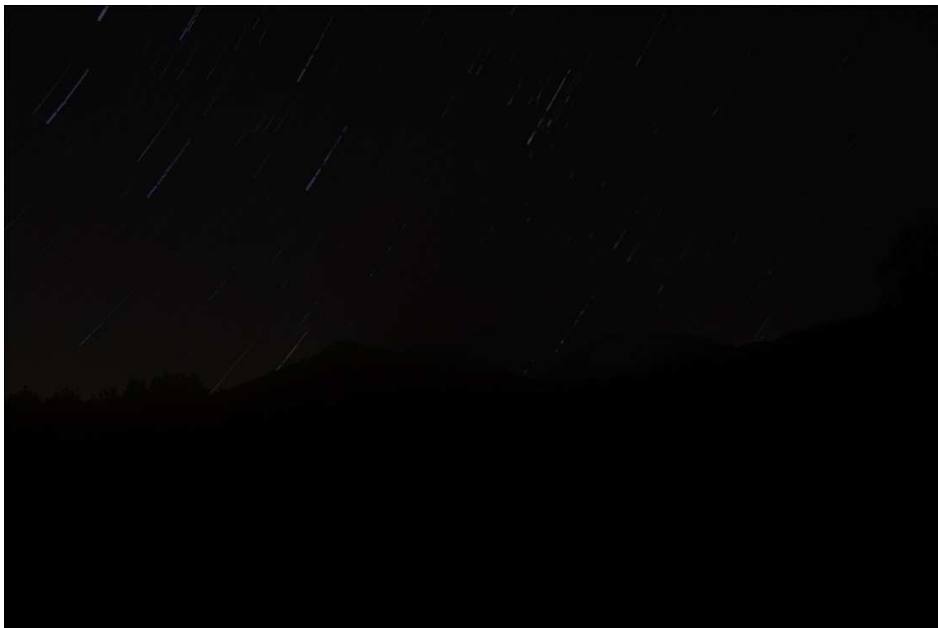
9. Stack Mode: Standard Deviation



10. Stack Mode: Summation



11. Stack Mode: Variance



For the image on Page 1, I used the “Maximum” option to combine the images to get Star Trails. I then hand – blended the stacked image with another version exposed for the foreground to achieve the final image.

Here are some links on the Internet which talk about stacking and star trails.

1. Book Recommendation: Digital Night by Harold Davis - [Creative Night: Digital Photography Tips & Techniques](#)
Great text combined with a lot of inspiring night photographs
2. Tips and Techniques from Harold Davis' Photoblog 2.0 - <http://www.digitalfieldguide.com/blog/1413>
3. Excellent Star Trails Tutorial on www.fredmiranda.com by Floris - <http://www.fredmiranda.com/forum/topic/725769/0>
4. StarTrails.exe Software - <http://www.startrails.de/html/software.html>
5. How to use StraTrails.exe software for Star Trails by Adam Currie - <http://adcuz.co.uk/2009/06/25/how-to-star-trails-stacking-with-startrailsexex/>
6. ImageStacker Software for Stacking - <http://www.tawbaware.com/imgstack.htm>
7. How to Use ImageStacker - http://tawbaware.com/is_help/imgstack_help.htm#introduction
8. Different method of Stacking using Photoshop - <http://photoburner.net/2009/03/19/stacking-star-trails/>
9. LiveWebcast on Youtube – Secrets of Digital Night Photography by Harold Davis - http://www.youtube.com/watch?v=meQyUxwhmQs&feature=player_embedded
10. Canon Remote from Amazon - [Canon TC80N3 Timer Remote Control for EOS D30, D60, D10, 1D, 1V & 20D SLR Cameras](#)
11. Satechi Programmable Remote for Canon Cameras (cheaper than Canon) - [TR-A Timer Remote Control Shutter for Canon EOS-1V/1VHS, EOS-3, EOS-D2000, D30, D60, 1D, 1Ds, EOS-1D Mark II,III, EOS-1Ds Mark II,III, EOS-10D, 20D, 30D,40D, 50D, 5D, 5D Mark II, 7D fully compatible with Canon TC80N3](#)
12. Satechi Programmable Remote for Nikon Cameras - [TR-B Timer Remote Control Shutter for for Nikon D700, D300, D300S, D200, D3S, D3, D2H, D2Hs, D2x, D1, D1H, D1x, F100, F6, F5, F90X and F90 fully compatible with Nikon MC-30](#)

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