

Inside PixInsight

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Patrick Moore Practical Astronomy Series - Springer Nature

First Edition - Sept. 19, 2016 - ISBN 978-3-319-25680-1

-Amendments 10/10/17-

Dear reader,

Please forgive any inaccuracies that escaped the book's editing process. I am deeply regretful that it fell short of its intended perfection. This document will be periodically updated with amendments as issues are found.

- The third to last bullet point on pg 25 (ImageCalibration of Light Frames) states "The dark master will be bias subtracted, and very importantly, *scaled to the master flat.*" If you followed my recommended workflow, the italicized portion is incorrect. Scaling would only be performed if the master flat's Calibrate option were selected. If you did not follow my earlier recommendation to calibrate the flats (pg 21) prior to master flat integration, the option to calibrate the master flat should now be enabled, and the scaling statement would be correct. Bottom line, follow my recommended workflow and ignore the italicized statement.
- Pg 58 (BatchPreprocessing Script) introduces the Add Custom feature for clarifying the nature of files misapplied by the BPP script. What should also have been covered is Add Custom's ability to create processing subgroups. If, for example, you had two sets of luminance lights that needed to be matched to their corresponding set of calibration frames, you could give them unique identifier names (i.e. Lum_2016 and Lum_2017). BPP would then match Lum_2016 lights with Lum_2016 flats, etc. There seems to be a limit to the number of masters (subsets) that can be successfully produced by the script, but in most cases, you should be able to avoid the multiple runs recommended (pg 24) and preprocess sets with disparate attributes during the same run.
- If you purchased your book early from a source other than me directly, it may not contain the update to the DSLR RAW section (pg 58). You do not need to use Add Custom for DSLR RAW files. Simply choose the appropriate file-type button at the bottom of the dialog- use 'Add Lights' to add light frames, etc. This is because RAW does not contain self-identifying file-type information in a textual header as do FITS and XISF.

- In pg 52's presentation of ImageIntegration's Pixel Rejection (2) sliders, I state, "You might start at the highest low and high settings for a given algorithm and evaluate the results." Also stated is "In practice, you may find that very high settings (tolerant) are appropriate for the low slider..." I no longer espouse this. Being too permissive on the low end can result in dark, blotchy background noise, rather than a good, Gaussian 'salt and pepper' distribution. Final, best settings for both the low and high rejection sliders are likely to fall closer to the dialog's default settings (2.0-5.0), than the highest settings of 10/10.
- Pg 6 refers to a default 'X' that marks a file loaded to the Blink process. The 'X' has since been changed to a check mark.
- Pg 39 is dismissive of the SplitCFA process. What could have been covered is its usefulness for narrowband data taken with a one-shot color camera. When OSC files are debayered using the SuperPixel method, SplitCFA (or the BatchChannelExtraction script) can be applied, keeping only red for Ha, or green, or green and blue for OIII. In this way, no noise contribution is made by the 'dead' channels.
- In Pg 22's presentation of light frame calibration, the option to calibrate the master bias was not covered to keep things simple. If a sensor's Overscan region(s) is defined in ImageCalibration, the Calibrate option can be enabled for the master bias.
- Chapter 9 Pg 84's reference to '(Chap. 15)' should be (Chap. 12).
- On August 3, 2017, PixInsight 1.8.5 was released, bringing about several changes and improvements to the program. I am documenting these for inclusion in a possible 'updated edition,' though a 'second edition' is not likely to be published before late 2019. Meantime, these items will be covered in the PixInsight Reloaded video series, available at www.ip4ap.com. Thus far, the new features are not earthshaking but are significant, with several other important changes to follow in the next PI update. Research the following additions on the PI Forum: Large-Scale Pixel Rejection, PhotometricColorCalibration, and LocalNormalization. While these will add a few more steps to your current workflow, you may see even better preprocessing results!
- Beginning on Pg 306, the SHO-AIP script for assembling Narrowband masters into a trichromatic, color image is detailed. In June of 2017, I was informed by Juan that the AIP scripts were being pulled from version 1.8.5 due to the issues I described in the book. A beta tester has offered to clean up the poor UI and defective code, and it's my hope that at some point, they'll be reinstated since they are useful. The AIP scripts continue to appear in the older version 1.8. You should be able to save them out of that 1.8 program folder, and place them in the new installation of version 1.8.5's script folder.