

Differential Dark Residuals (DDR) --A New Characterization of CMOS Camera Performance

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With the demise of CCD chips, CMOS cameras have made considerable inroads into Astro Imaging and Photometry. Along with this new technology has come a plethora of new options and techniques. Setting the Gain, the Offset and using Stack on the FLI and StackPro are among them. The author has developed a new test for evaluating these options called Differential Dark Residuals (DDR), which appears to be more important than read noise and dark current in the performance of CMOS cameras. Test results of many popular models are presented along with some surprises relative to cost. The author suggests that Differential Dark Residuals is a significant indicator of Camera and Photometry performance, and hopes that DDR stimulates designers and manufacturers to develop better equipment, resulting in better photometry for the community.