

The AAVSO

Guide to CCD Photometry

Version 1.1



AAVSO

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Preface

The *AAVSO Guide to CCD Photometry* has existed in a number of different forms since AAVSO observers first began using CCD cameras in the 1990s. Since that time there has been a dramatic increase in the amount of CCD–acquired data, and these data now account for more than 80 percent of all data submitted to the AAVSO per year. The decreasing cost and increasing usability of consumer–grade CCD systems are leading to this increase, and we expect the amount of CCD data to increase further with time.

The ease with which data can be obtained and extracted from a CCD system does not necessarily indicate the ease with which science can be done with that data. This version of the *AAVSO Guide to CCD Photometry* represents a complete rewriting of the CCD manual with the ultimate goal not being *generating data but enabling science*. While this will still cover elementary use of CCDs and reduction of data, the material will be presented with the aim of helping you generate data that will be as scientifically useful as possible. The AAVSO is renewing its emphasis on the scientific value of data rather than the quantity of data submitted, and CCD observers will need to adapt to this shift as much as visual or other observers do. Ultimately, the scientific utility of your data is of far higher importance than how much of it you collect.

This guide is intended to serve beginner and intermediate CCD observers who want to use their equipment to obtain photometry of variable stars that is of the highest quality possible. It is possible to take photometric data with a small telescope and CCD camera that equal the quality of data taken with professional observatories, and there is in principle no difference between data taken by an amateur observer and data taken by a professional. We aim to reduce those differences even further by helping you take the best data possible. We’ll tell you how to get data out the back end of your system, but we’ll also explain why and how to do this the right way so that your *data* provide researchers with useful *information*.

The *Guide* will always be a work in progress, and we depend on the community to help us develop and document best practices in CCD observing. You may find things in this document that are out of date or unclear. Please give us feedback as to what works for you and what doesn’t.

Please send any feedback or suggestions to aavso@aavso.org.

Clear skies,

Sara Beck, *AAVSO Technical Assistant, Science Team*

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