

1: Introduction

I have been fortunate in my life to observe several lunar eclipses and one annular solar eclipse. By observe I mean that I watched the entire event in awe. I have also seen one total solar eclipse however I was so young I do not remember anything about it other than it let me get out of class for half a period. I did not appreciate it and I deeply regret that.

I am writing this book as I prepare for the total solar eclipse in 2017 which will be over forty years from the last total solar eclipse I was around for. They don't come often and I will be prepared for this one.

Typically I am just like any other astrophotographer, taking images of objects that move very little. Sure they move across the sky, but my average exposure time on a single object is usually somewhere between five and thirty minutes per image. Then I take between ten and fifty of those images and combine them into a single picture. Eclipses are wildly different although I can use the same equipment.

The eclipse and transit (when something apparently much smaller like the planet Venus moves in front of something that appears much larger like the sun) are the only times us astrophotographers get to photograph objects really moving and changing in minutes, not years or even millions of years.

Taking pictures of a solar or lunar eclipse can be a lot of fun and easy to do. There are many considerations however and since you might be taking pictures of something that you may not get the opportunity to do again in your lifetime, it will help greatly to do a little research before the event.

While a lot of equipment can be used for this task, you certainly do not have to have much just to take some fun pictures. In fact, some amazing images can be taken with what you most likely already have right now.

Of course there are things you can acquire to give you more options should you choose to go that route. We will look at some of those too.

This book aims to show you what you can do with what you have, as well as give you ideas on what you could do with more or different equipment. It is aimed more towards the newcomer to this type of thing and not the seasoned astrophotographer, although both will surely gain something.

Those of you who have already read my other books such as *Getting Started: Long Exposure Astrophotography*, *Getting Started: Budget Astrophotography* or *Getting Started: Visual Astronomy* will notice that some of the information those books is repeated here. This only makes sense as taking a picture of an eclipse is both astrophotography and astronomy.

What this book aims to do differently is to expand on the ways in which you can image an eclipse, and provide more information on the equipment and techniques specific to eclipses. You will not find information on imaging deep space objects here, and you will not find information on changing exposure settings as an eclipse progresses in those other books.

My hope is that whether you snap a quick image with your phone through a piece of solar film or buy a solar telescope complete with computerized mount and high frame rate video camera, you have fun. If this book helps you even a little in that endeavor then I am a happy person.