

PICKARD'S NEW OBSERVATORY

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Following removal to darker skies in Herefordshire, it seemed sensible to say goodbye to the faithful old 16" Newtonian (which was sold to a friend at the Crayford Manor House AS), and purchase one of these all singing all dancing Meades. Unfortunately, there has been a delay in obtaining the Meade, and so I must make do, for the moment, with a smaller set-up. (Note: The Meade arrived just one week before the deadline for this Circular but it will still be a few weeks before I'm observing with it).

The current set-up consists of a camera mounted on an old equatorial head, shown below, (Fullerscope Mk II), which unfortunately does not have any sort of slow motion control be it manual or electric, and was designed for a small (4" or perhaps 6") telescope. The equatorial head is itself mounted on a small tripod.

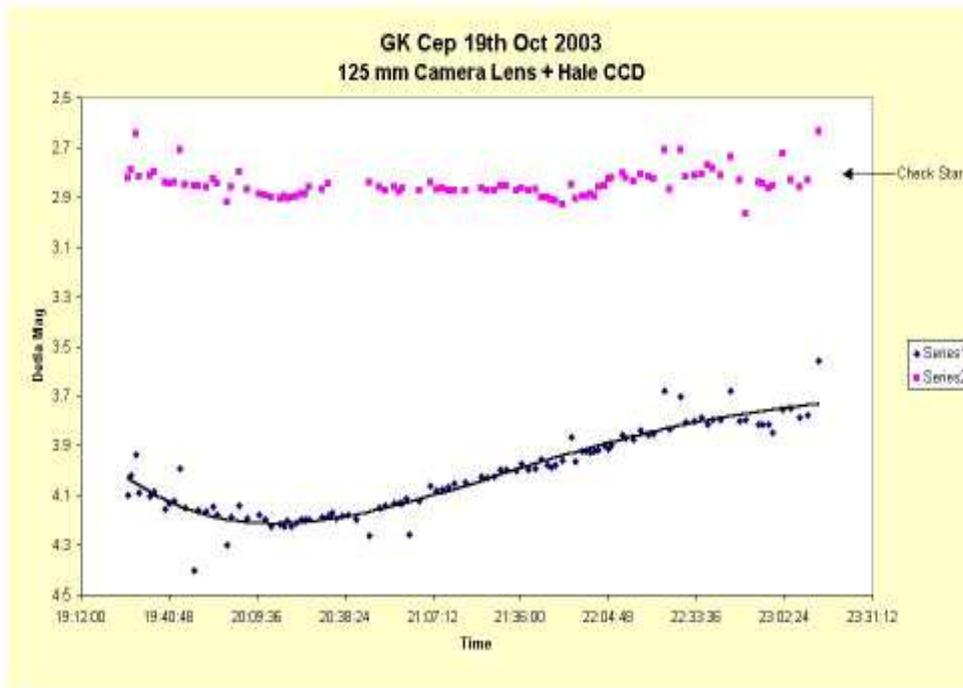


Some comments on the new observatory

I needed something to raise the small tripod to make it easier to find the stars. A table was just one of the many pieces of furniture kindly(?) donated to us by the previous owners. We had taken it along to a boot sale on one occasion but it poured with rain and we never got rid of it. Then we used it for a barbecue one evening and found it quite useful. Finally, when it came in very useful as an astronomical mount, its life was spared. Fortunately, being circular, the table is polar aligned no matter what direction you have it in!

Despite this seeming simplicity, the system is actually quite sophisticated. The equatorial head on the tripod has an expensive CCD camera attached to it, with my original finder scope from the late Henry Wildey next to it - heavens, that's 40 years old now! Tubes lead from the camera to the water cooling supply, whilst wires run to the camera control box and ultimately to a PC, from where the camera is controlled.

To achieve focus on the CCD chip it has proved necessary to use a 2-3X teleconverter operating at about 2.5X with a standard 50 mm camera lens. This means it is effectively operating at about 125 mm focal length. The system also incorporates a Johnson V filter purchased from Norman Walker.



I sit in the *shed* (now renamed the *observatory control room*) whilst taking images, but venture out to move the camera to the next object. I usually take four images of each object, before moving onto the next one, which gives me some idea of the accuracy of my observation. Stars hardly drift at all across the CCD in the time it takes to do this. I only have a small programme of bright binocular objects at the moment, because I know that once I have my main telescope up and running, I will not be able to sustain any larger programme. Therefore, given a few clear nights on the trot, I have finished this programme and am looking for something else to observe. I have now found that if I choose an eclipsing binary near the pole, it will take about an hour for it to drift across the CCD. In readiness for the new telescope, I've also networked the PC in the *control room* to one in the warmth of my study. I now find that I can observe an eclipsing binary near the pole whilst sitting in the warm, and only have to go outside once an hour to move the camera. In between times, I'm reducing all those earlier observations (or replying to emails!). This is really proving to be quite a productive way of observing.

I've included a couple of graphs of some EBs (see below) to show what can be done with a 1" telescope!

It is a bit of a shame that I'm not outside all the time, as I miss the wonders of the night sky - apart from when setting up and closing down, that is, when I take time to look up. But at least I can now observe for longer.

