

Re: Serious camera question

Source: <http://sci.tech-archive.net/Archive/sci.astro.amateur/2005-10/msg00723.html>

- *From:* "Stephen Paul" <smarshallpaul@xxxxxxxxx>
 - *Date:* Sun, 9 Oct 2005 10:37:18 -0400
-

If you're just experimenting, the 300D can be had for around \$500 on Astromart if you keep your eyes peeled.

This is how I got started on the road to a G-11 setup, but the Vixen GP with beefed up tripod. the Vixen GP-DX, the GM-8, or the Advanced Series CG-5 with an F4 or F5 scope can give good 30 second to one minute frames for stacking.

In general, and in my limited experience, if the mount is tracking challenged, then you want to first consider F-speed to keep the exposure times to a minimum, then get the aperture you need to make the focal length you want.

If your mount is not tracking challenged, or you have an auto-guider, then you want to first consider the focal length to get the image scale/resolution that you want, then increase the F-speed to minimize exposure time, while not taxing the mount with an overly large OTA.

For the DSLR, there is no doubt that short bursts (under 5 minute subframes) of 10 to 20 frames, is better than one long exposure, because there's no cooling of the CMOS sensor, (F4 to F5 seems best).

IMO, an excellent inexpensive beginning imagers setup, is the Celestron Advanced Series 8N with a 300D Rebel. Without Bulb mode, the camera is limited to a 30second exposure. This turns out to be plenty for subframes of M42 in the 8" F5 scope, and should avoid the PE of the mount for at least several frames.

The latter point is important to keep in mind. PE is not necessarily a constantly changing animal, but rather comes in bursts. This means that some frames may be useless, but not all of them. Thanks to the technology, you simply toss the ones that you don't want, and keep the rest.

What I do is use a modified TC-80N3 controller for the Rebel. This allows me to program the camera to take as many images as I want, with a timed interval using bulb mode (timed) exposures for as long as I want them to be. I get all setup, take a few 1 minute images to check for gross tracking error (which at this timing is most likely polar alignment error), and then once satisfied, program the controller to take 10 to 20 images with a 30

Re: Serious camera question

second sleep between.

As Uncle Bob points out, the real challenge in the beginning is drift alignment. And, as William Mattil pointed out, this is about an hour long process to get it exact. Fortunately, for those 30 second frames of M42, drift alignment may not be necessary, provided you have aligned your polar alignment scope, and learn how to use it.

Of the three PAS's I've used to date (Celestron, Vixen, and Losmandy), the Vixen has proven to be the most accurate, once properly aligned, and the process of using it understood.

I've yet to master the G-11 PAS, and I've begun to suspect that it's out of alignment. The Vixen on the other hand was so snug in the bore, that it seems it is cemented in there, and once aligned, it held seemingly forever, with excellent results.

To align the PAS, you aim it at a distant object and then rotate the RA axis while making adjustments to keep the object dead center in the scope. I have to do this with the G-11, and in fact, there's no time like the present (I think I'll do it today). I'm not a big fan of spending an hour to drift align the scope, and objects such as globs, opens, and the four brightest nebula I know of (M42, M8, M20, and M17) don't require super long exposures in a fast scope.

Enjoy the experience of learning. Whether you succeed, fail, or simply don't want to make the committment (and it takes committment) in the long run, it is still a blast to try.

"Doink" <skyman102a@xxxxxxx> wrote in message
news:14-dnRkJ08BbNNXeRVn-gQ@xxxxxxxxxxxxxxxx

> Thanks Dave.

>

> Mostly I want good lunar shots. I have an LPI and it works. It's not
> been a great planetary camera though---but I haven't given it a fair
> chance. I want to shoot some DSOs---not super difficult stuff but maybe
> Orion Nebula, Andromeda---top 10 stuff. I don't want to get into 3 hour
> exposures.

>

> Doink

>

>

> "David Nakamoto" <res07oeg@xxxxxxxxxxxx> wrote in message

> [news:xM12f.16039\\$A52.13022@xxxxxxxxxxxx](mailto:news:xM12f.16039$A52.13022@xxxxxxxxxxxx)

>> Depends on what you want to do.

>>

>> Deep sky ability I'll leave to others to discuss. My personal preference
>> is a dedicated cooled CCD camera.

>>

>> Planets I prefer webcam technology, and the DSI certainly fits the bill.

Re: Serious camera question

Re: Serious camera question

>> Hundreds of images have to be collected, selected, stacked, and filtered
>> in order to get decent results. Webcameras generating AVIs and running
>> them through Registax or similar software does this nicely. Hard to
>> replicate this using DSLR technology.

>>
>> If tracking is an issue then the IDS might cure some of your scope's
>> ills. A DSLR won't.

>>
>> Sincerely,
>> ---- Dave
>> --

>> -----

>> Pinprick holes in a colorless sky
>> Let inspired figures of light pass by
>> The Mighty Light of ten thousand suns
>> Challenges infinity, and is soon gone

>>
>> david.nakamoto@xxxxxxxxxxx

>>
>>
>> "Doink" <skyman102a@xxxxxxx> wrote in message
>> news:-audnTOFttLyPdXeRVn-jw@xxxxxxxxxxxxxxxxxxx

>>> Hi group....

>>>
>>> Since I sold my 120 f/8 the \$\$\$\$\$\$ is burning a hole....etc.

>>>
>>> I'm thinking about getting a DSI Pro but the idea of a DSLR and no
>>> laptop needed is very, very appealing. Is there a DSLR around \$500 that
>>> would be better or equal a DSI Pro? The Drizzle thing is a big deal as
>>> I don't have the most accurate tracking mount made but adequate.
>>> Losmandy in the future I suppose.

>>>
>>> Any feedback would be very helpful.

>>>
>>> Thanks

>>>
>>> Doink

>>>
>>
>>
>
>

.

-
- *Follow-Ups:*
 - ◆ *Re: Serious camera question*
 - ◇ *From: George*

Re: Serious camera question

- ◆ **Re: Serious camera question – what it boils down to?**
◇ From: David Nakamoto

• **References:**

- ◆ **Serious camera question**
◇ From: Doink
 - ◆ **Re: Serious camera question**
◇ From: David Nakamoto
 - ◆ **Re: Serious camera question**
◇ From: Doink
-
- Prev by Date: **Re: Scopes that I have owned. Add your list after mine!**
 - Next by Date: **Re: how did the ancient greeks know that the sun (or earth's) orbit was not circular?**
 - Previous by thread: **Re: Serious camera question**
 - Next by thread: **Re: Serious camera question – what it boils down to?**
 - Index(es):
 - ◆ **Date**
 - ◆ **Thread**