

Re: WTB Long Working Distance Micro/macroscope

Source: <http://sci.tech-archive.net/Archive/sci.techniques.microscopy/2005-04/msg00141.html>

- *From:* Aaron <nghy@xxxxxxxxxxxx>
 - *Date:* 25 Apr 2005 15:28:02 -0500
-

The catadioptric lenses and come to think of it even other telescope designs are already very long focal length. The Celestrons that I suggested are f10. Stopping them down more will not accomplish anything more than eliminating light that you will need to get sharp clear exposures.

Aaron

On Sun, 24 Apr 2005 19:16:13 +0200, "Klaus D Schmitt"
<kds315@xxxxxxxx> wrote:

>Thanks Aaron for your valuable comments!
>
>Indeed the latter was my idea, to use a catoptric or catadioptric lens
>system – only problem with the latter is the lack of an aperture. The former
>system (sometimes) comes with an aperture, so this would be what I am
>looking for. The Kataptaron LDM-1 had that as had it the Infinity
>MRM-1, the only problem is to find those!!!
>
>A focal length of about 500mm seems to be ideal.
>
>The distance should be several meters, since these objects (insects
>mostly) are very sensitive.
>
>Klaus
>
>
>"Aaron" <nghy@xxxxxxxxxxxx> schrieb im Newsbeitrag
><news:3cbm61dvciEkf098ht7ruprl1qs7kc6k3a@xxxxxxxxxxxx>
>> As you know, the typical macro setup is designed for situations where
>> the subject is close to the camera lens.
>>
>> I suggest you try a telephoto lens with extension rings or an
>> extension bellows. As I mentioned before, I had a Minolta 35mm camera
>> fitted with extension rings and a 135mm telephoto lens, that worked
>> well at three to four feet. I could fill the frame with a small
>> flower. The lens had a diaphragm. In general, this system provided

Re: WTB Long Working Distance Micro/macroscope

>> very natural looking images with little sense that the subject was so
>> removed from the front lens. The same idea can be used with stronger
>> telephoto lenses. The question here is your term "great distance".
>> How far is that?
>>
>> Ultimately, a 35 mm camera can be fitted to spotting scopes, a short
>> tube refracting telescope or a catadioptric telescope. The Celestron
>> C5 or C8 fitted on an altazimuth mount might be good candidates.
>> There are all sorts of adapters and fittings to go between the
>> telescope and the camera back. For subjects as small as those that you
>> want to photograph, I don't think depth of field will be an issue. I
>> found that the out of focus foreground and distant ground helped define the
>> subject.
>>
>> As you increase the distance and magnification, you will need greater
>> light gathering power to maintain resolution and detail. You will
>> need to use very short exposures to get sharp images. This fact of
>> life also mediates towards larger objective lenses. The C8 has a
>> relatively large objective and is just portable. Smaller scopes
>> lose resolution and brightness.
>>
>> Aaron
>> .
>>
>> On Sat, 23 Apr 2005 20:59:41 +0200, "Klaus D Schmitt"
>> <kds315@xxxxxxxx> wrote:
>>
>> >I should have been more precise:
>> >
>> >The lens I am looking for is a macroscopic lens for SLR and 16mm Film
>> >applications, not a microscope lens. It will be used to capture rare and
>> >very
>> >sensitive animals up to 1/8" and smaller from great distance.
>> >
>> >The intended magnification range is between 0.1x and max. 3x, the lens
>> >has to have a built in aperture (iris) to control Depth of Field (DOF).
>> >
>> >All the types I mentioned have this ability
>> >
>> >Thanks to Kevin & Aaron!
>> >
>> >Klaus
>> >
>> >
>> >"Klaus D Schmitt" <kds315@xxxxxxxx> schrieb im Newsbeitrag
>> >[news:d4b3ju\\$92\\$03\\$1@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:kds315@xxxxxxxx)
>> >> Need a macro/microscope lens with widest possible working distance.
>> >> There has been the Katoptaron LDM-1 and the MRM-1 by Infinity Optical
>> >> and the Questar M1.
>> >>
>> >> Any ideas, offers, sources, documents most welcome!!

>>>>
>>>> Thanks
>>>>
>>>> Klaus D Schmitt
>>>>
>>>> kds315 AT yahoo DOT com
>>>>
>>>>
>>>>
>>>
>>
>

• **References:**

- ◆ **WTB Long Working Distance Micro/microscope**
 ◇ From: Klaus D Schmitt
 - ◆ **Re: WTB Long Working Distance Micro/microscope**
 ◇ From: Klaus D Schmitt
 - ◆ **Re: WTB Long Working Distance Micro/microscope**
 ◇ From: Aaron
 - ◆ **Re: WTB Long Working Distance Micro/microscope**
 ◇ From: Klaus D Schmitt
-
- Prev by Date: **Re: What kind of compound microscope a beginner should buy and how to start?**
 - Next by Date: **Re: microtome**
 - Previous by thread: **Re: WTB Long Working Distance Micro/microscope**
 - Next by thread: **Re: WTB Long Working Distance Micro/microscope**
 - Index(es):
 - ◆ **Date**
 - ◆ **Thread**