2000x Microscope
Posted by wickededge - 30 Jun 2012 08:28

The new scope came in Wednesday and I'd hoped to kick off this category with some great hi-res pics, but then was out sick on Thursday and wrapped up in meetings on Friday so I didn't get a really good chance to play with it. I also still need to get a NIST traceable micro-ruler to calibrate it. If anyone knows of one for under $1200, I'd love to hear about it. Even without calibration though, I should be able to start posting some of the pics. At first glance, it looks pretty exciting. I can see the tiniest of scratches from our micro-abrasives really clearly, so with some luck and work, we should be able to learn a whole lot about all the stones and strops.

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Re: 2000x Microscope
Posted by cbwx34 - 30 Jun 2012 09:50

AWESOME!!!!!

cbw

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Re: 2000x Microscope
Posted by PhilipPasteur - 30 Jun 2012 12:11

Yes awesome. I am real anxious to start seeing some evidence of what we are actually doing at the sub micron level.

Phil

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Re: 2000x Microscope
Posted by BobNash - 30 Jun 2012 15:51

Can't wait to see it in action! Thanks for making the investment Clay

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Re: 2000x Microscope
Posted by AnthonyYan - 02 Jul 2012 06:03

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wickededge wrote:

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Hi Clay,

I searched around and found a NIST-traceable stage micrometer for about $500, but I'm not sure it is good enough; I think it only goes down to 0.1mm (100 microns).

"Reticle Calibration Stage Micrometer, NIST traceable NT59-281 $495.00"

www.edmundoptics.com/microscopy/reticles...tage-micrometer/2826

Edmund Optics also has many other calibration targets, so you might also look around at:

www.edmundoptics.com/testing-targets/tes...alysis-test-targets/

www.edmundoptics.com/microscopy/reticles-stage-micrometers/

I also found this company that sells stage micrometers with NIST-traceable certificates. It seems if you buy the stage-micrometer from them, they lower the price for NIST-traceable calibration.

www.aig-imaging.com/NIST-Traceable-Calibration.html

www.aig-imaging.com/Stage-Micrometer-Scales.html

Other places I looked at had fancier stage micrometers, but were very expensive ($1200+ for

NIST-traceable):

www.emsdiasum.com/microscopy/products/magnifier/stage.aspx

www.tedpella.com/calibrat_html/calib.htm

Sincerely,

--Lagrangian

P.S. Another possibility is to get a mechanical microscope stage with micrometers. That is, it is a stage that can move in the X, or X-and-Y directions where each direction is literally moved by a micrometer-head. Presumably, if the micrometer-heads are NIST certified, then the microscope stage is very accurate. It may be expensive, so don't know if it would cost less. And I don't know if they actually are avaiable as NIST-traceable.

www.edmundoptics.com/microscopy/microsco...nslation-stages/3216

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Re: 2000x Microscope
Posted by BassLakeDan - 02 Jul 2012 10:08

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wickededge wrote:

... also still need to get a NIST traceable micro-ruler to calibrate it.....

I have been watching this thread for a while. Just curious why do you feel that you need a traceable standard? That will just add tremendous cost, but I do not see any benifit for you / us? Tell me exactly what you are trying to accomplish here, and I will make an inquiry with a friend who is in the optics measuring business (adcole inc.) as I think there are several work arounds for this if you can take a reference that is not "traceable"

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Re: 2000x Microscope
Posted by BassLakeDan - 02 Jul 2012 10:13

AnthonyYan wrote:

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P.S. Another possibility is to get a mechanical microscope stage with micrometers. That is, it is a stage that can move in the X, or X-and-Y directions where each direction...etc

Yes I agree with Anthony here. In fact you are going to need this to handle even using you new device, as you certainly can not span and observe any item in such a magnified field of view without assistance from an axis controller of some sort.

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Re: 2000x Microscope
Posted by ChristopherStaples - 03 Jul 2012 03:03

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www.anago.co.nz/

unsure what they use but they test our knifes @ work

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Re: 2000x Microscope
Posted by wickededge - 19 Jul 2012 18:58

Starting to have some fun with the new scope.
The stage micrometer came in and I've calibrated it at 800x. I had to send the 100x objective lens back as it was defective, so I can't get up to 2000x yet... So far, the images I'm getting at 800x are great and I'm learning a lot in a short amount of time. I can't wait to share what I'm learning with you guys, just need more hours in the day!

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Re: 2000x Microscope
Posted by AnthonyYan - 19 Jul 2012 22:26

Hi Clay,

Sounds exciting!

I'm curious... which stage micrometer did you end up getting?

Sincerely,

--Lagrangian

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