

# F3.0 METEORITE NANOFIR

ZACK GAINSFORTH  
26 JULY 2011



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Hi Zack,

The fake meteorite sample is ready as a polished, resin-mounted block. It contains a mixture of:

- 1) San Carlos olivine, mixed < 250 microns (dominant part of the total mass)
- 2) Enstatite BM2005,M318 plus a second enstatite sample < 53 micron
- 3) Diopside fines removed 081117 > 8 micron
- 4) Pyrrhotite > 53 micron 081117 TEMA
- 5) Bytownite feldspar BM2005,M312
- 6) Spinel and Corundum powder BM2005,M314
- 7) Alumina (Logitech) ~ 1 micron
- 8) Ti nitride (Aldrich) < 3 micron
- 9) Ti carbide (Aldrich) < 4 micron
- 10) Si nitride (Aldrich) 325 grade
- 11) Si carbide 1200 grade (NHM abrasive)

Later verbal conversation with Anton:

There is a little bit of talc in there too:  
contamination.

All should have terrestrial isotope signatures.

I've attached an X-ray map to show the typical appearance of a small area on a second sample that I've retained as an archive specimen.

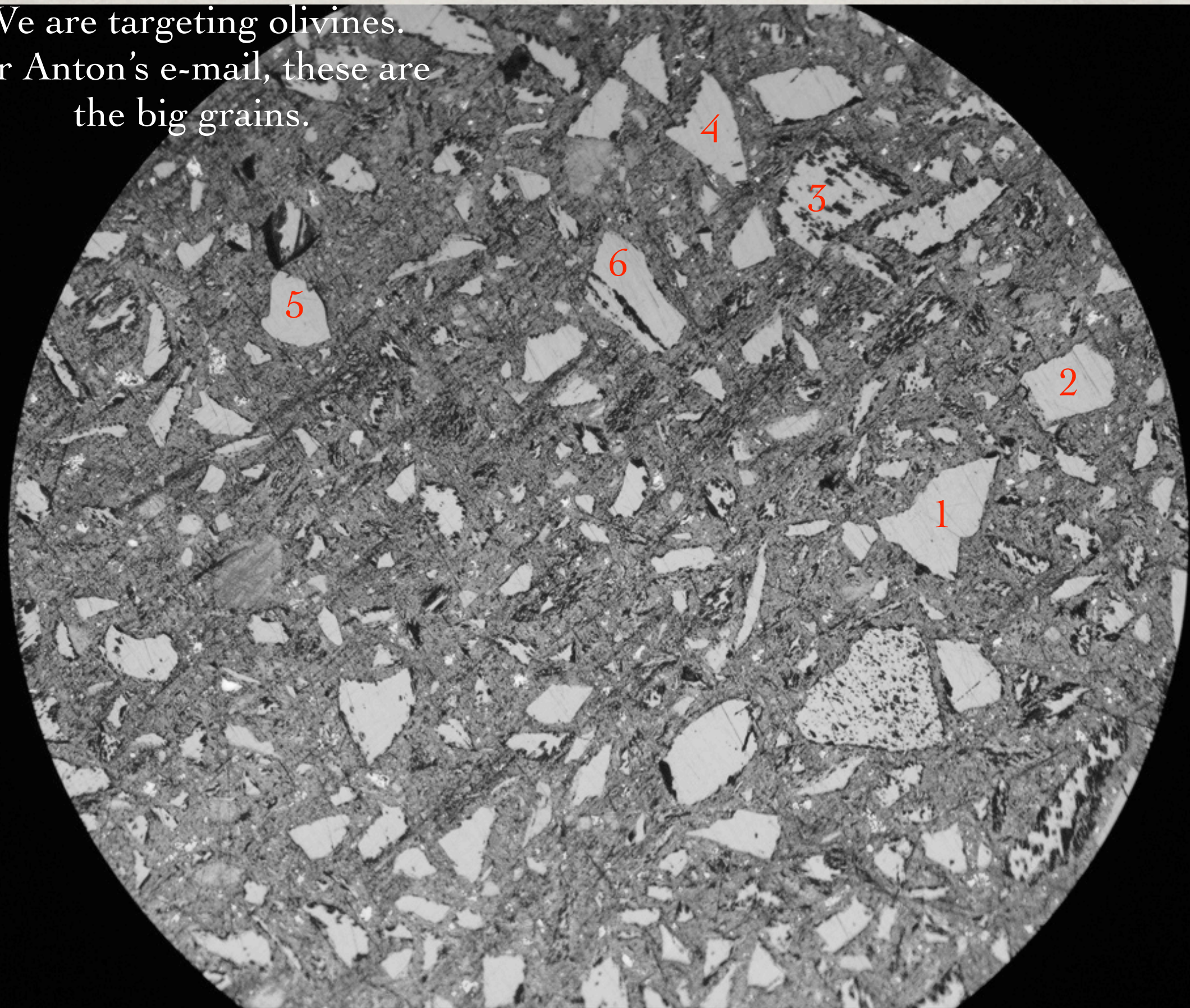
Where would you like the polished block to be sent?

Best wishes,  
Anton



# NANOFTIR SPOTS

We are targeting olivines.  
Per Anton's e-mail, these are  
the big grains.



900 um

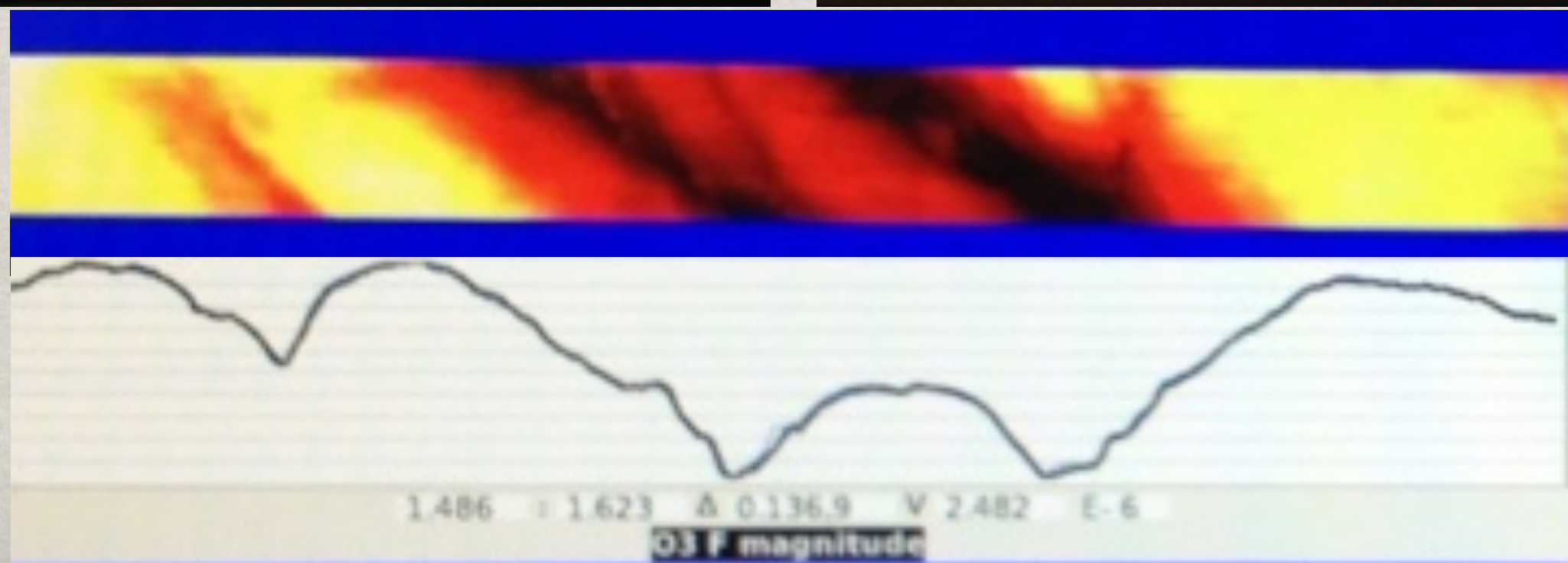
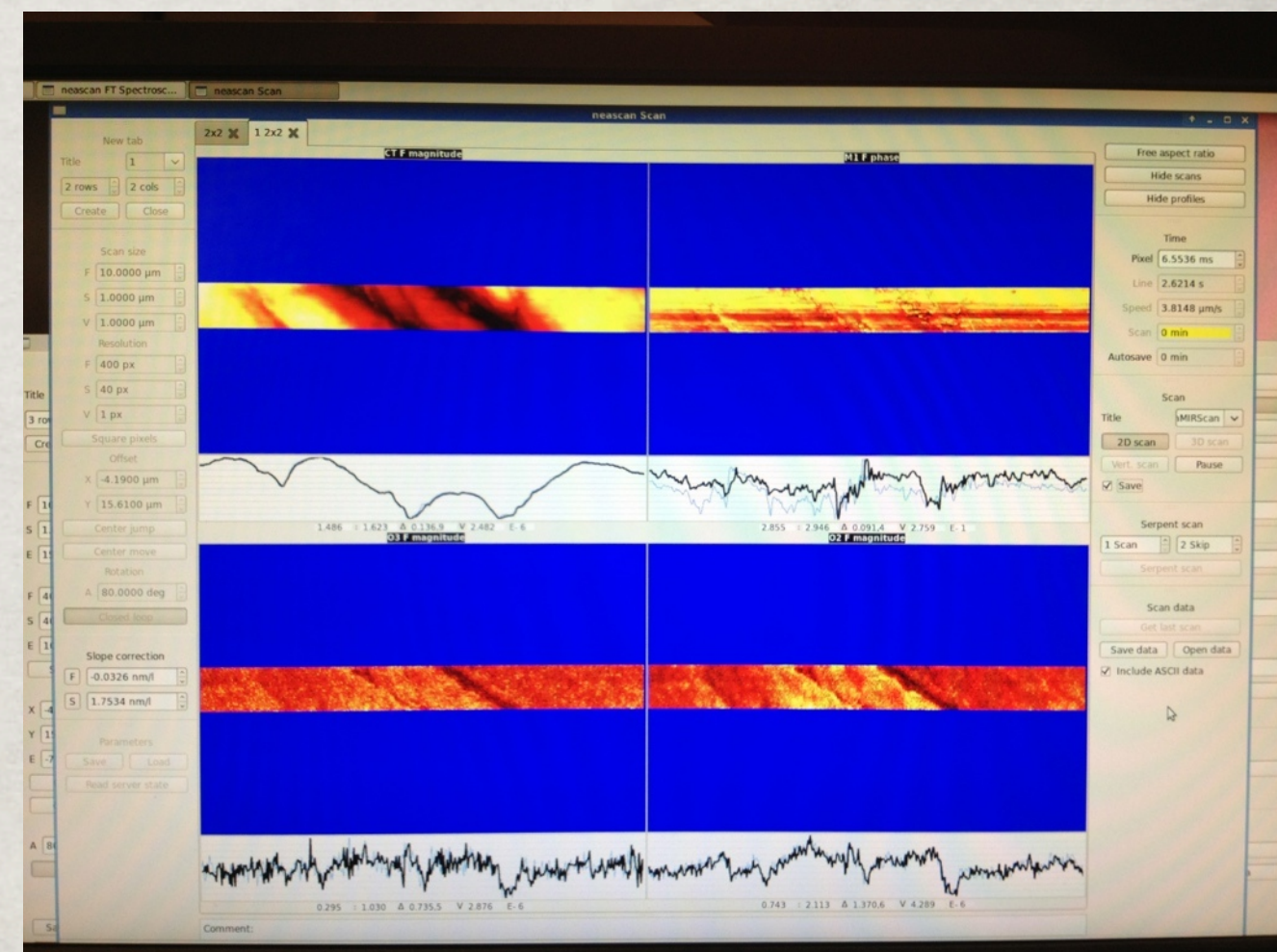
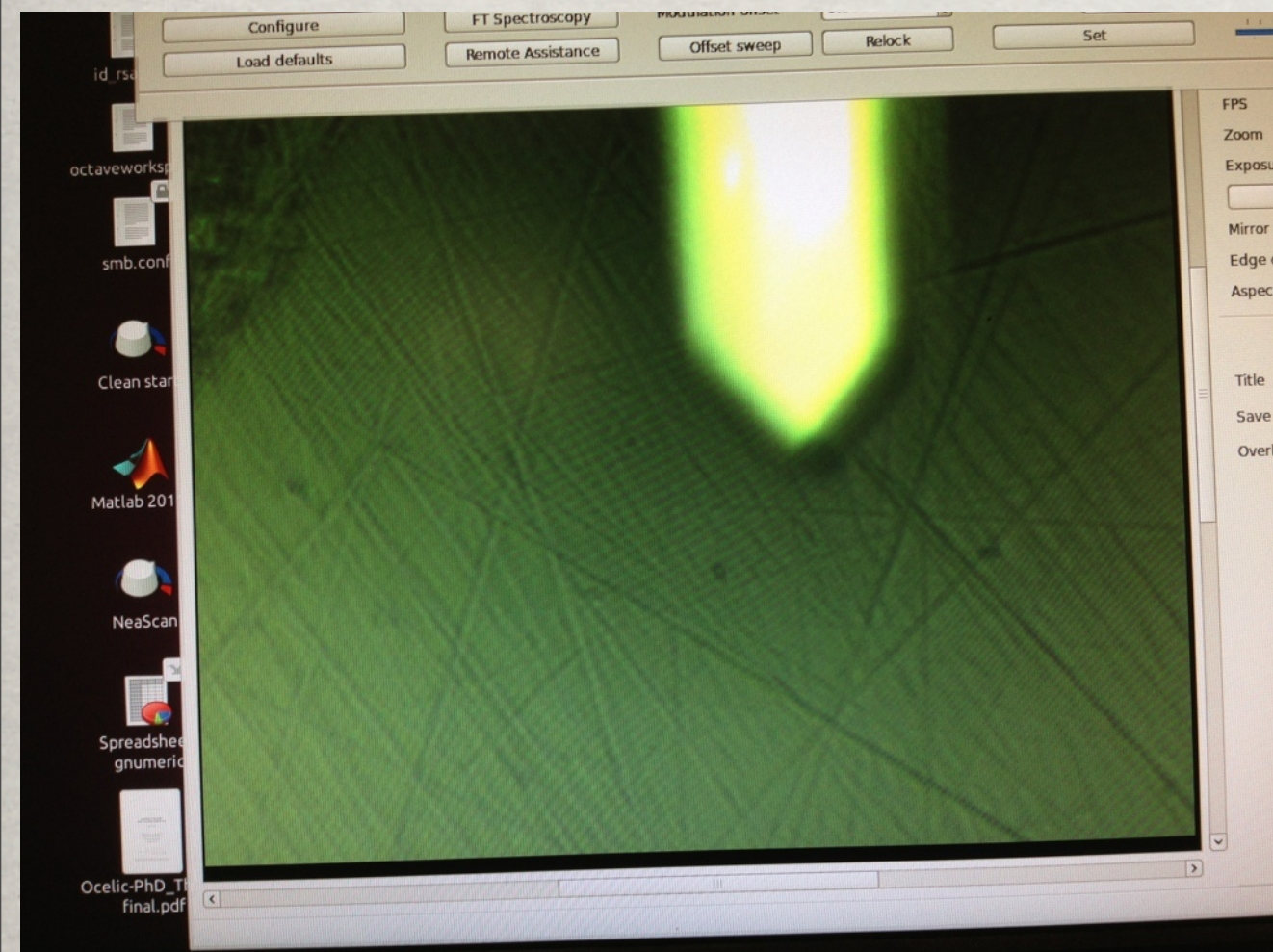
2012-Nov-27, 19:30  
F3.0

50 X



# SPOT 1

Did a linescan overnight. Amazingly these big fat scratches are only about 140 nm dep.



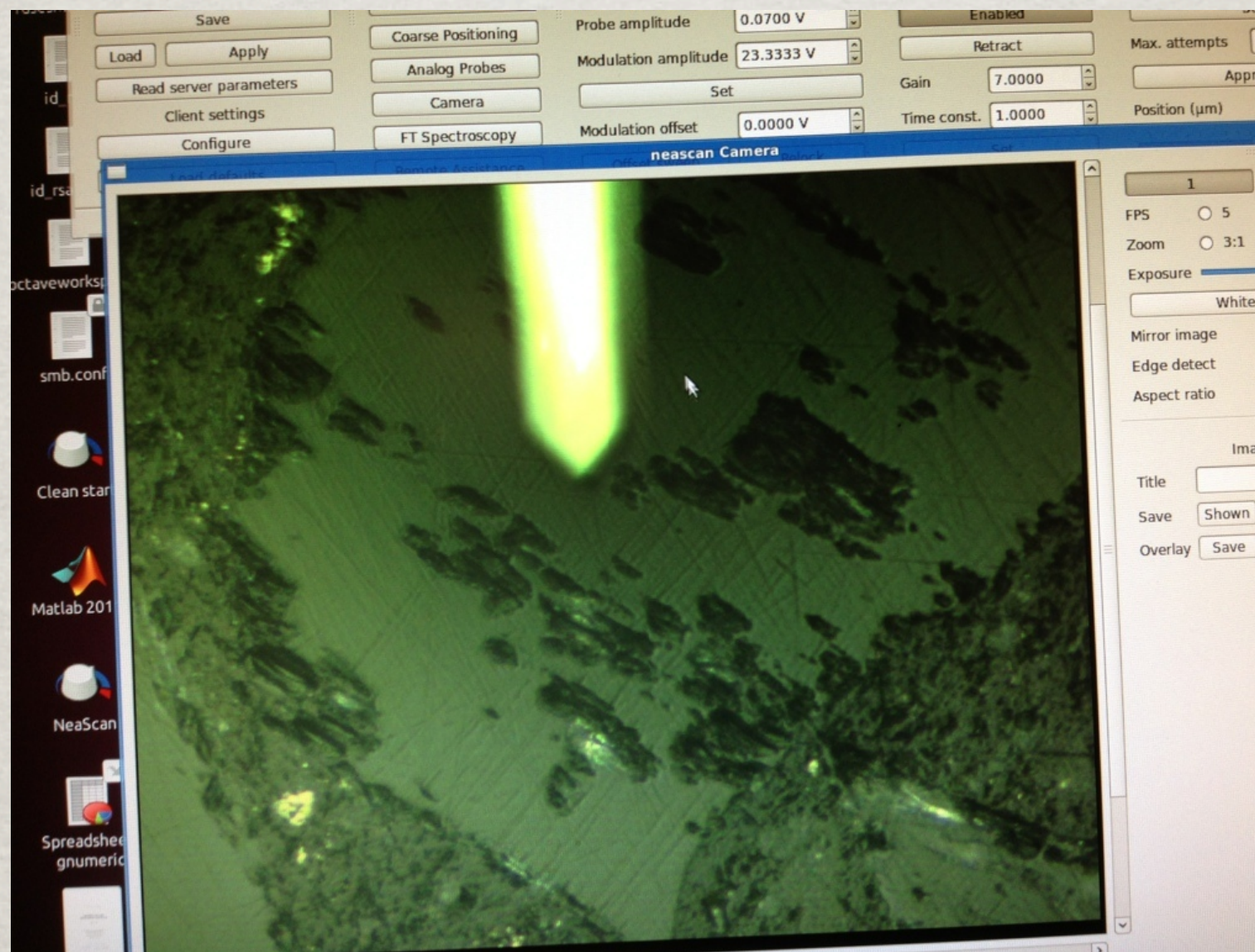


# SPOT 2

Aimed for the center.

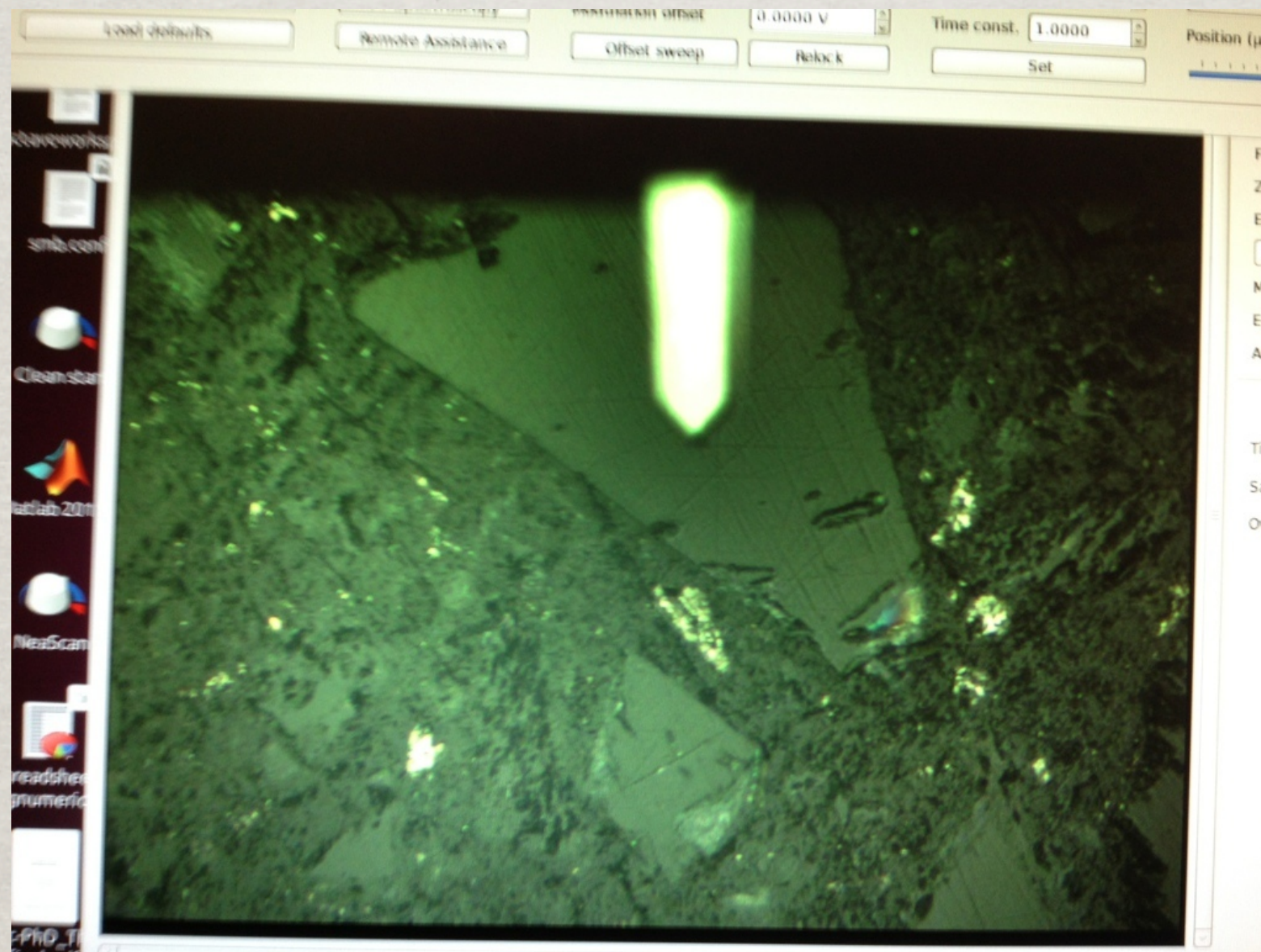


# SPOT 3





# SPOT 4





# SPOT 5

