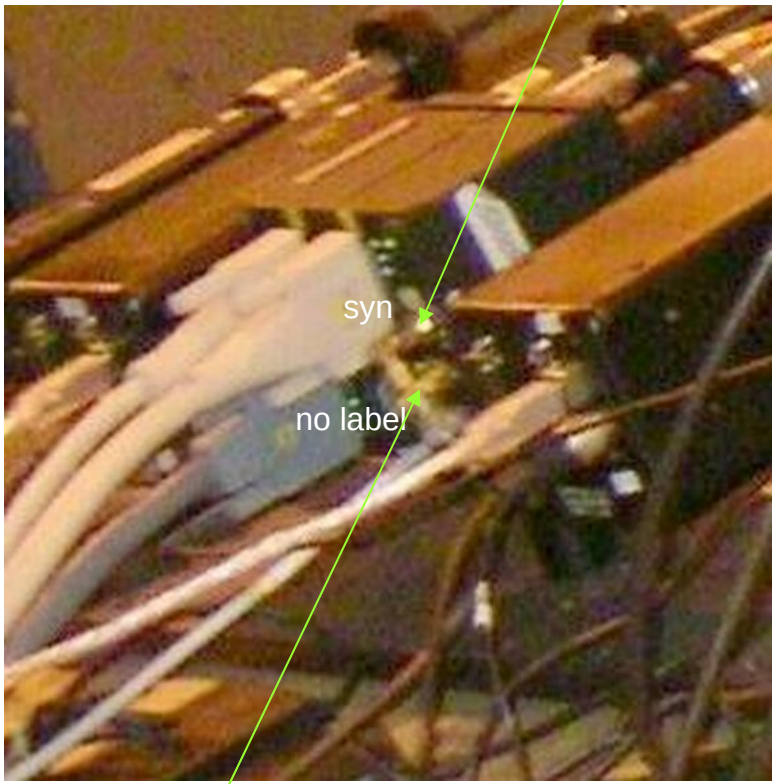
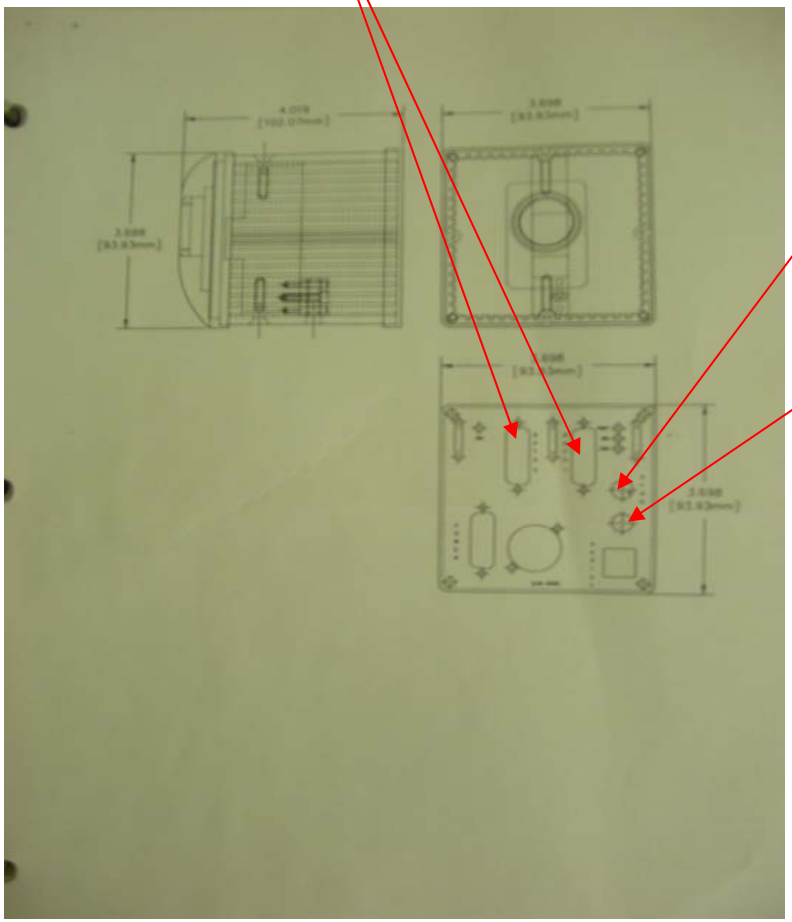
MIT runs

TTL trigger from delay box
CH A to syn



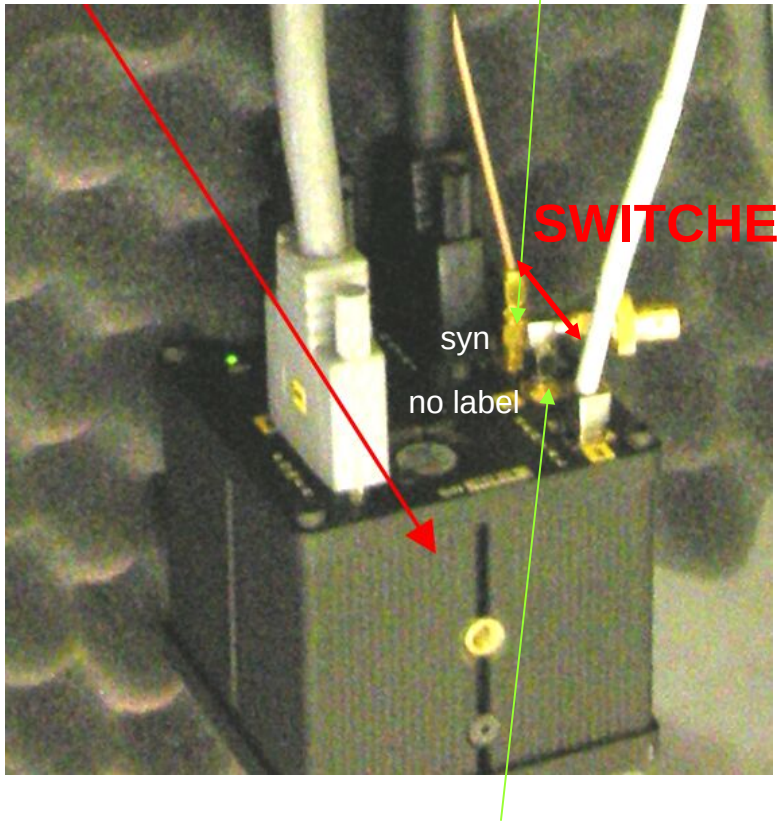
No Label was not connected

SMD Camera Manual Description



RG39 Cable from TTL converter
to “NO LABEL”, NOT “SYNC”

This Photo shows the previous connection when I did “Manual” Triggering.
NOT CURRENT CONFIGURATION

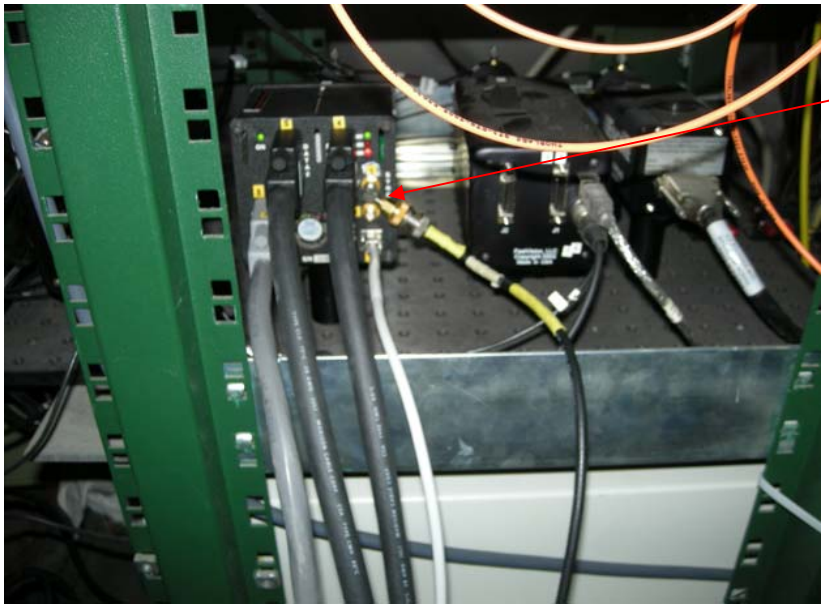


When I received it,
The BNC adaptor was connected to “NO LABELED” SMA connector.
External Triggering did not work.

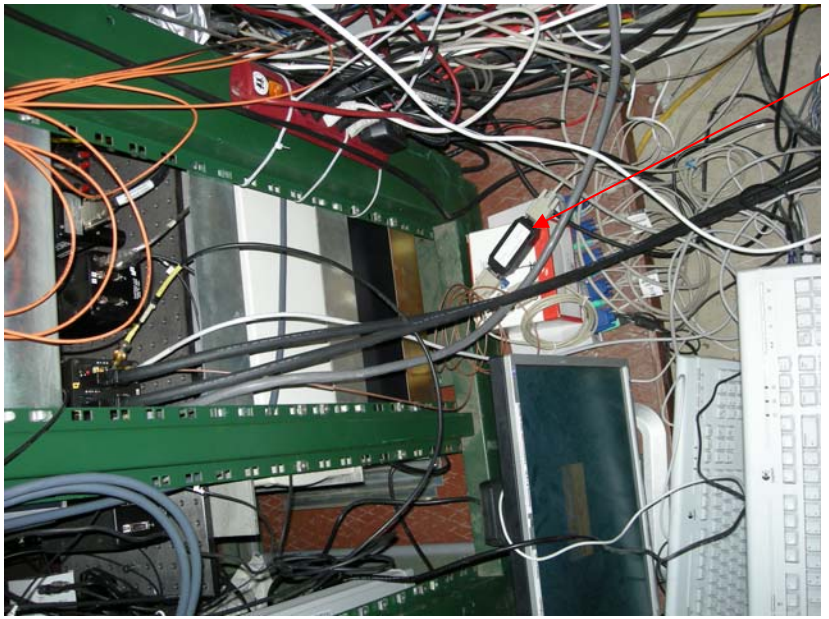
CONFIRMATION :
Currently the BNC adapter is switched to “SYNC”
External Triggering did work.

TTL trigger from delay box
CH A to “SYNC”, NOT “No Label”

Current Configuration in Tunnel



One BNC adaptor to “SYNC”

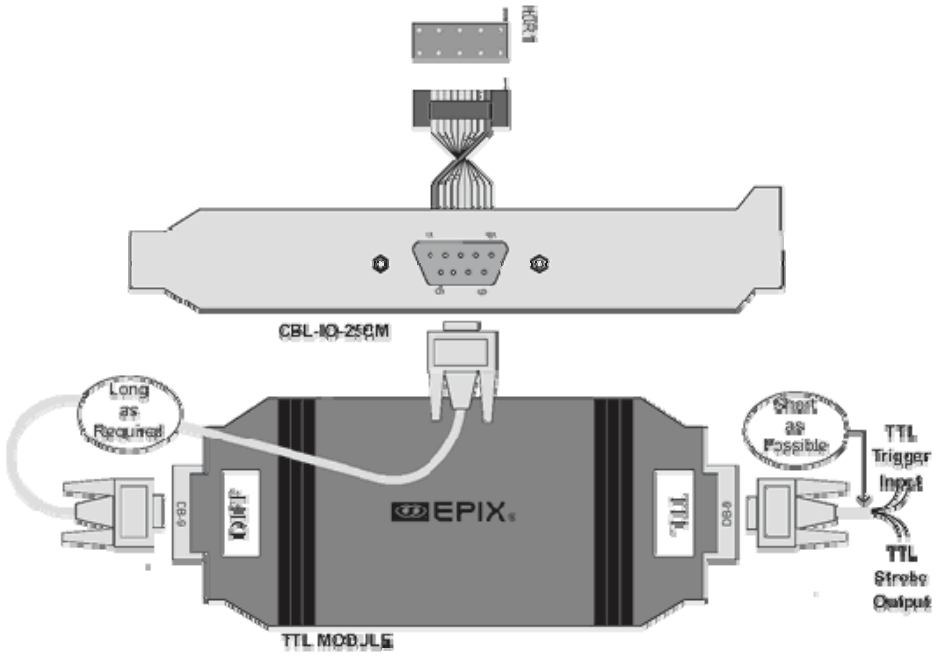


TTL Module is disconnected

http://www.epixinc.com/products/ttlmod.htm

Converts TTL Trigger to Differential for input into PIXCI Board

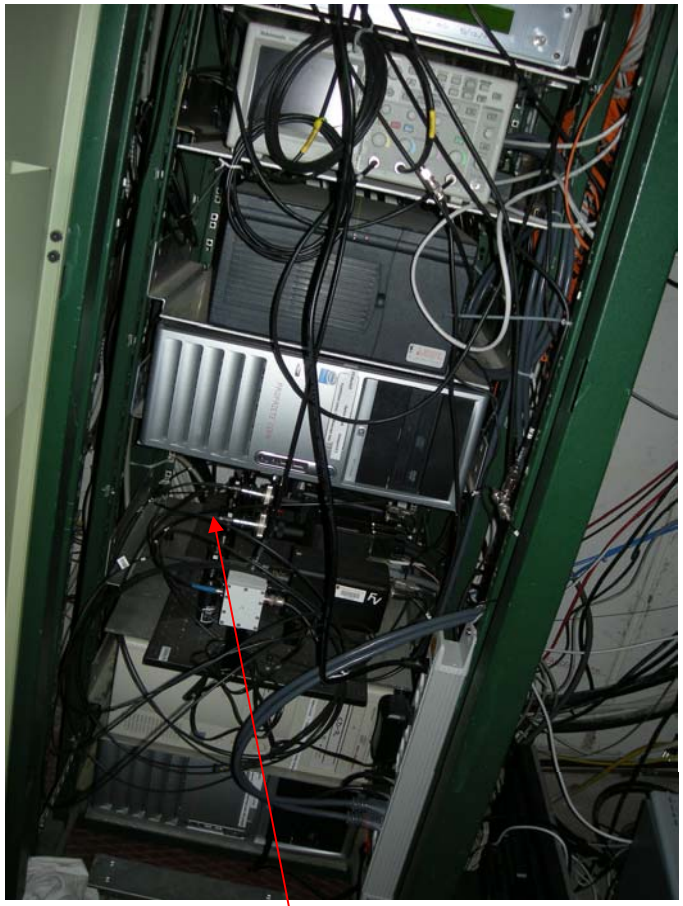
Converts PIXCI Board Differential Strobe Output to TTL

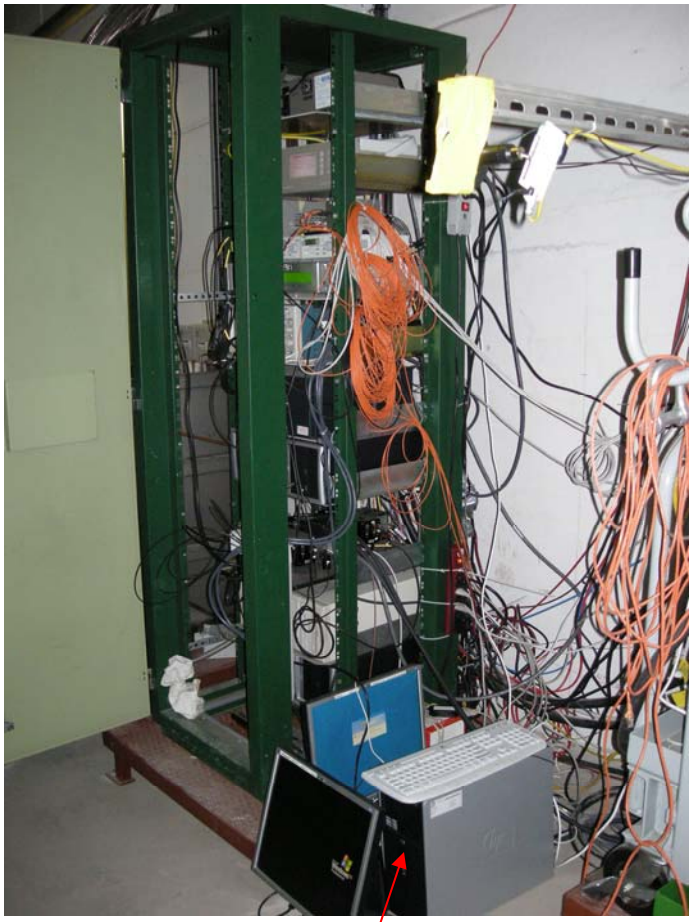


We don’t need this TTL module.

So I disconnected the RS-39 cable.

Camera is triggering using BNC input through “SYNC” as we did at MIT.



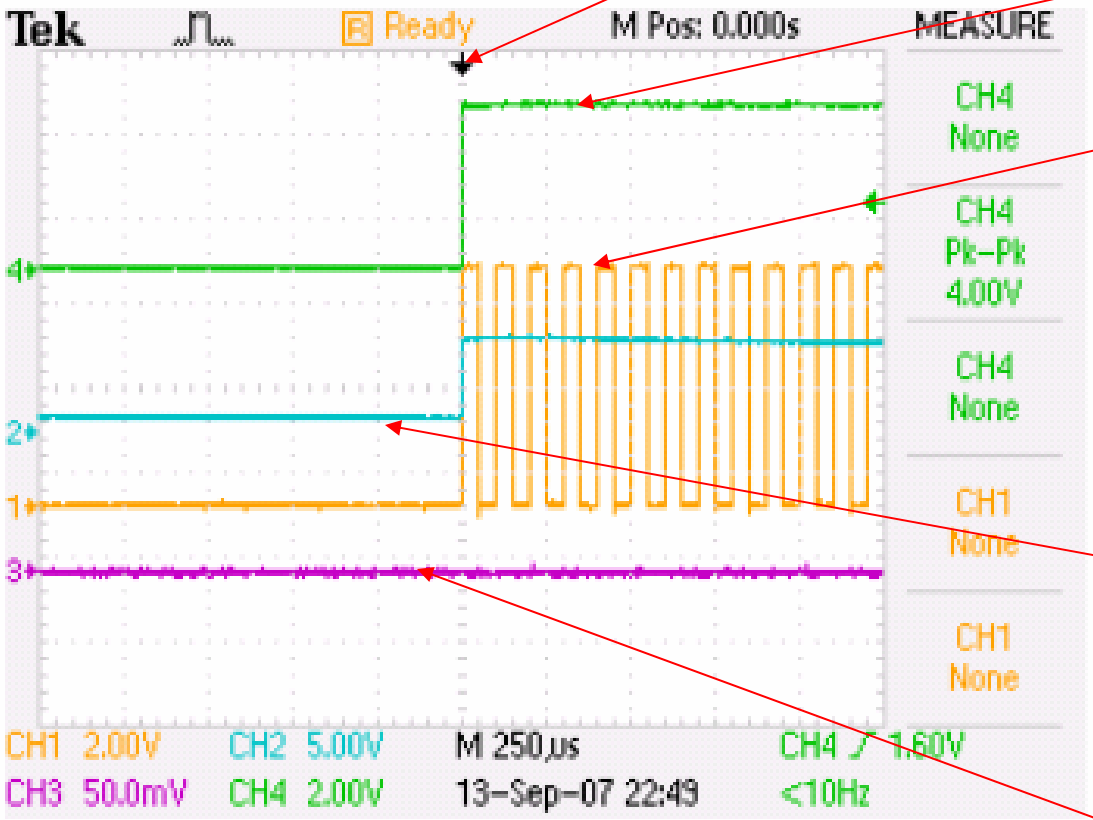


Lens mount alignment : The gap between camera and objective lens was very small.
The focusing adjuster roatated stiff.
Camera holding bar and XY stage holding bar Were rotated.
NOT WELL MOUNTED NOW. IT WAS ASSEMBLED AT BNL. NEVER DISASSEMBLED AFTER IT LEFT BNL.

"pcmerit08" is installed.

- outlet : 3009/15
  (3 outlet left in tunnel)
-IP address : 137.138.184.21
- connected to iboot4

Current Scope Trace



Triggered Time

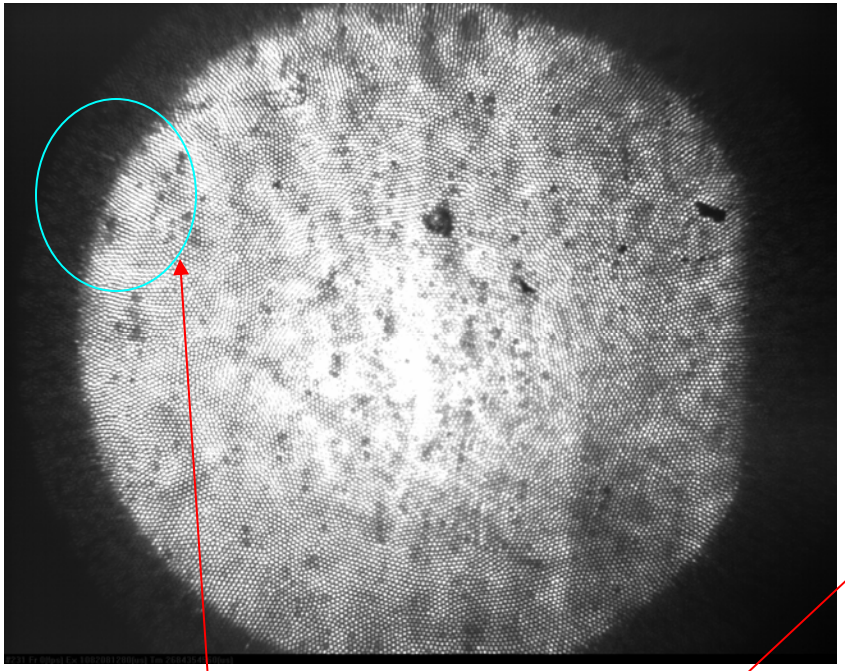
T (Master Triggering) = To
To from DG535

T (Master Triggering) = To
Synchronized Laser Pulse
Triggering Signal from
GaGe Board Output
17 pulse, 0.1 ms period
Delay from To was about
0.005 ms.

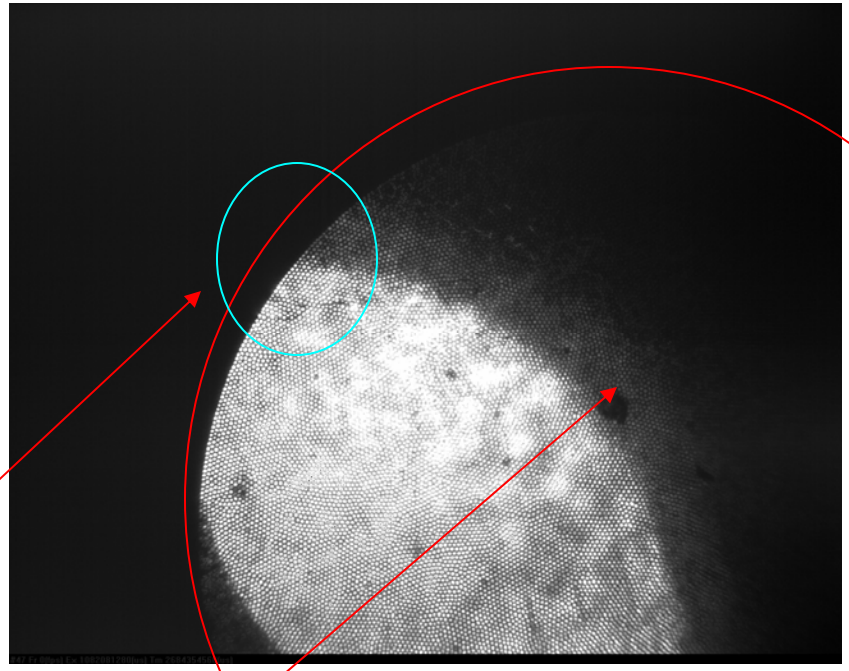
SMD Camera Triggering
Signal. A from DG535
A = To + 0.000000000 s

Photodiode signal
from scintillating fiber

Viewport 1, Sep. 5, 2007



Viewport 1, Sep. 13, 2007

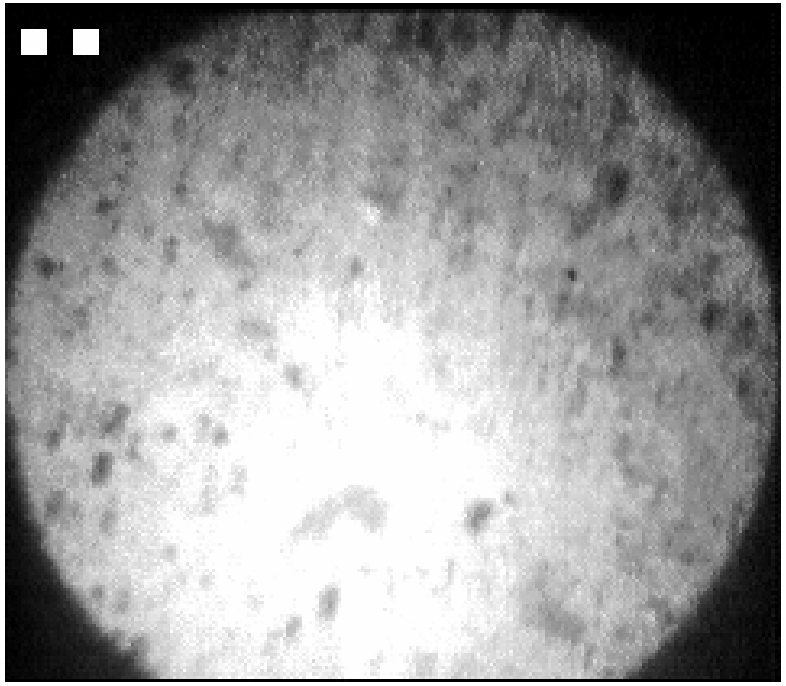


Brightness changes suddenly.
Possibly optics problem.

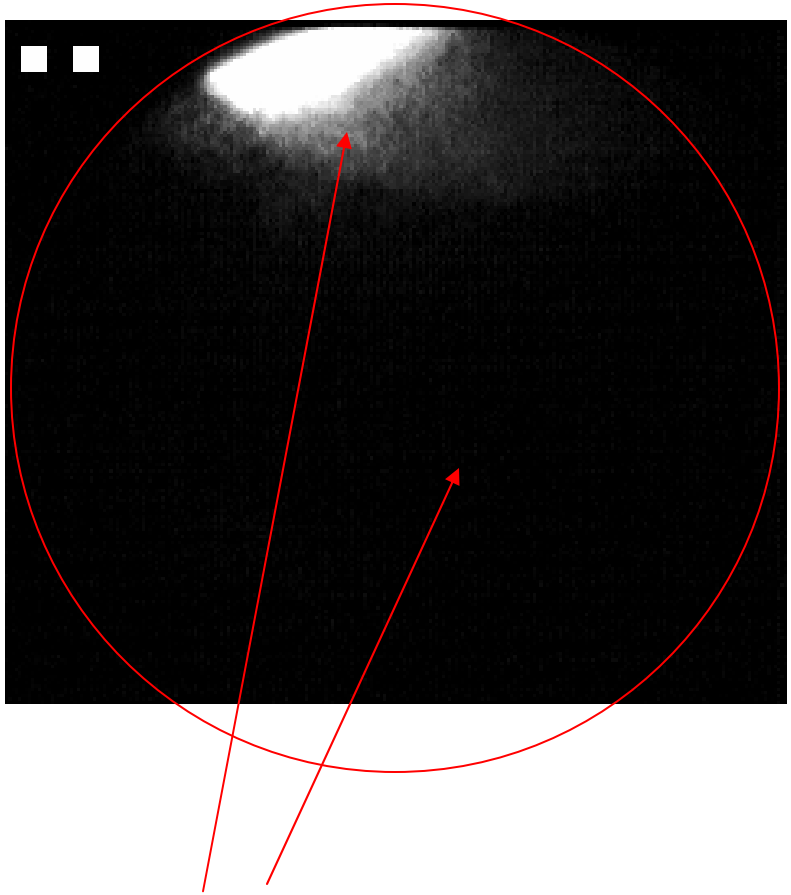
The edge is very sharp.
Possiblely optics may got damaged.

Circle is shifted. Alignment is broken.
Window is not clear.

Viewport 2, Sep. 5, 2007



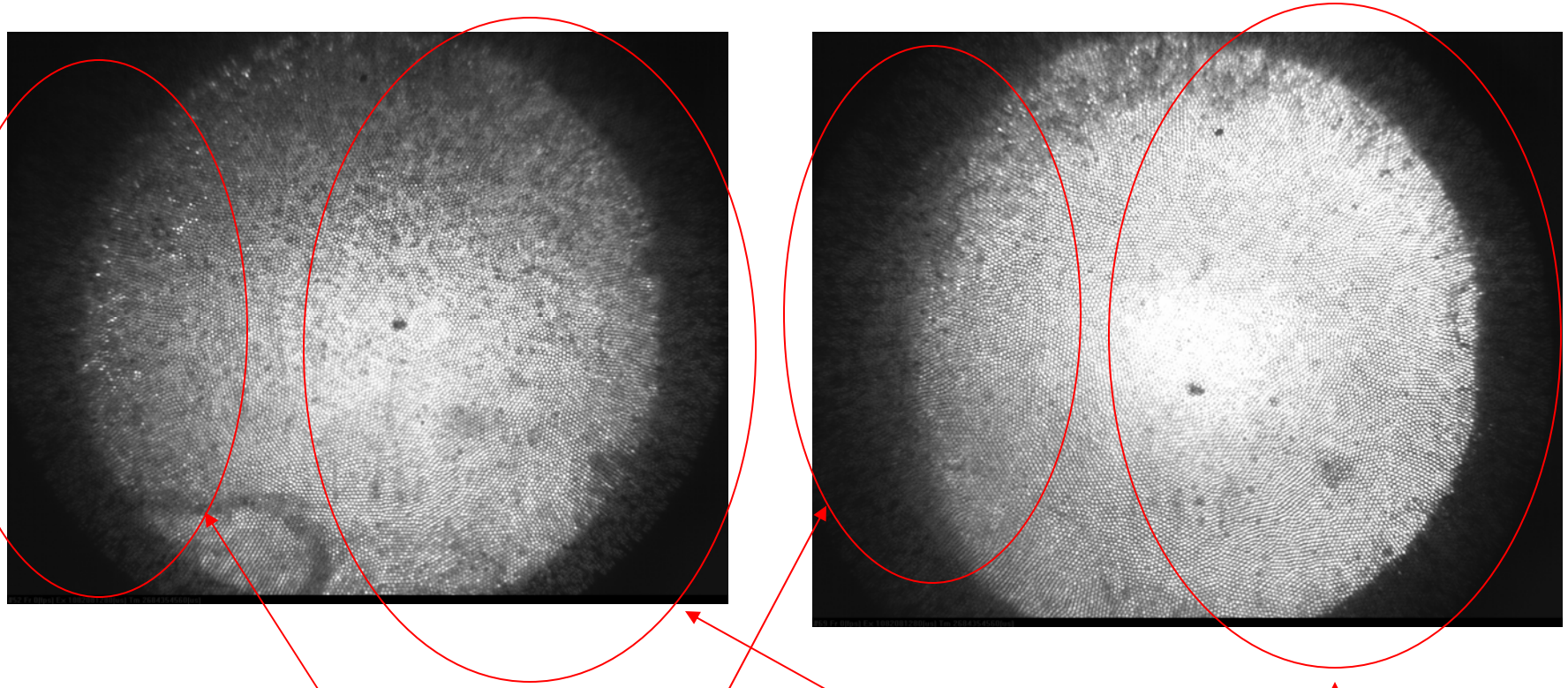
Viewport 2, Sep. 13, 2007



Window is not clear.
Brightness changes suddenly.
No field of view is visible.

Viewport 3, Sep. 5, 2007

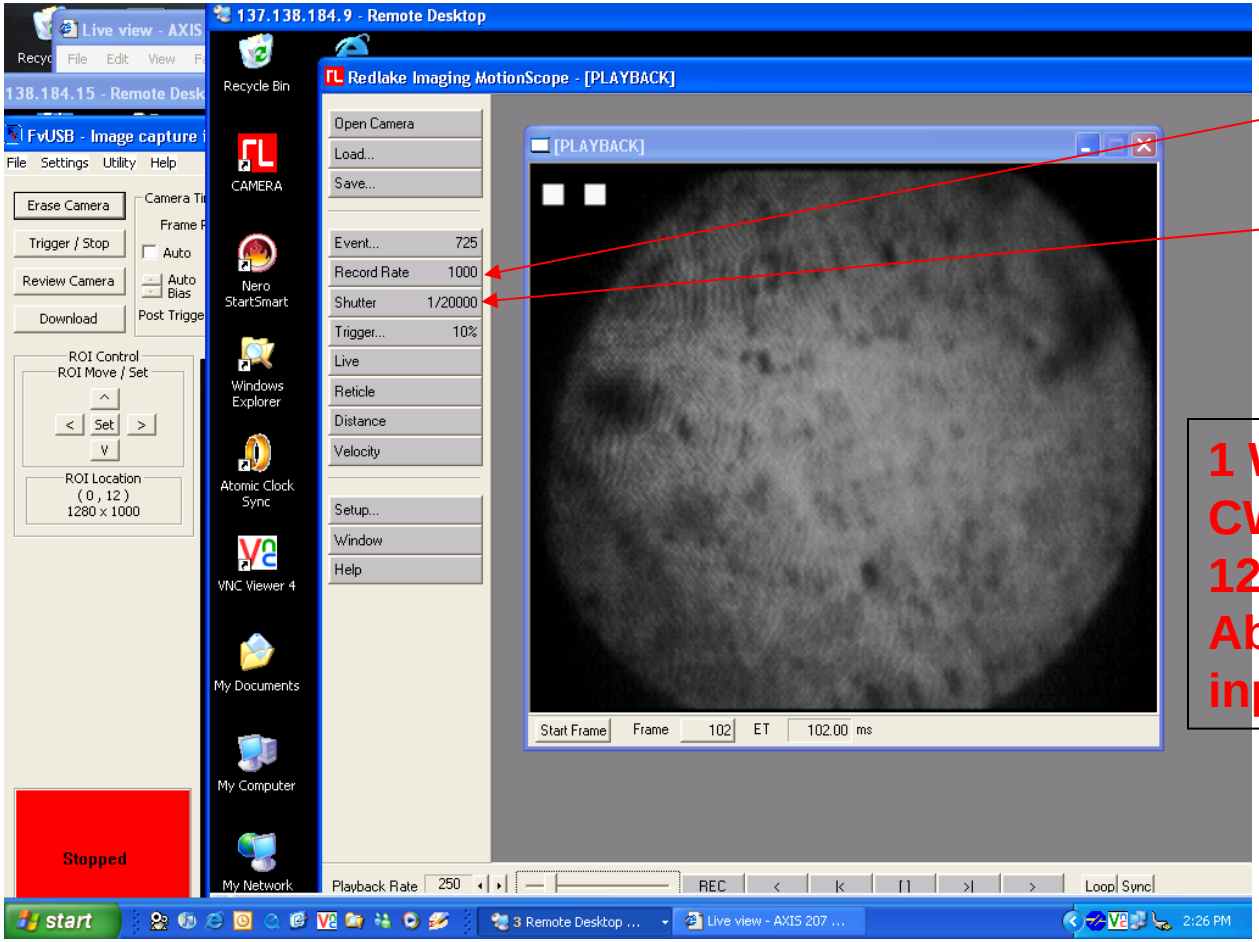
Viewport 3, Sep. 13, 2007



Focusing of left side was changed.
Alignment changed slightly.

ALMOST SAME

Viewport 4, Sep. 5, 2007

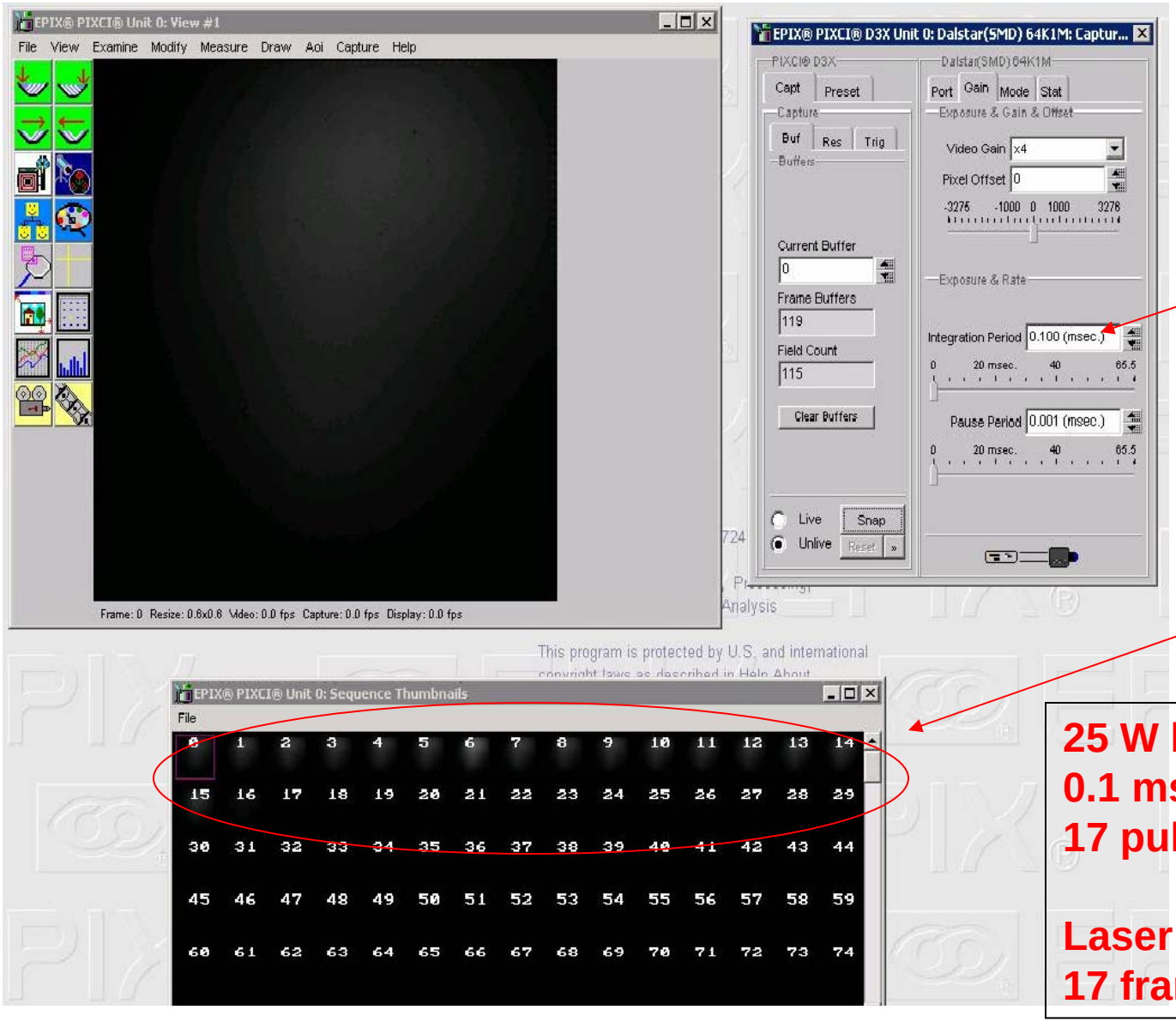


1 ms fps

0.05 ms shutter

1 W laser used.
CW pulse for 0.5 s
12db+12db attenuator used
Able to use same control input signal with FV camera.

Viewport 4, Sep. 13, 2007



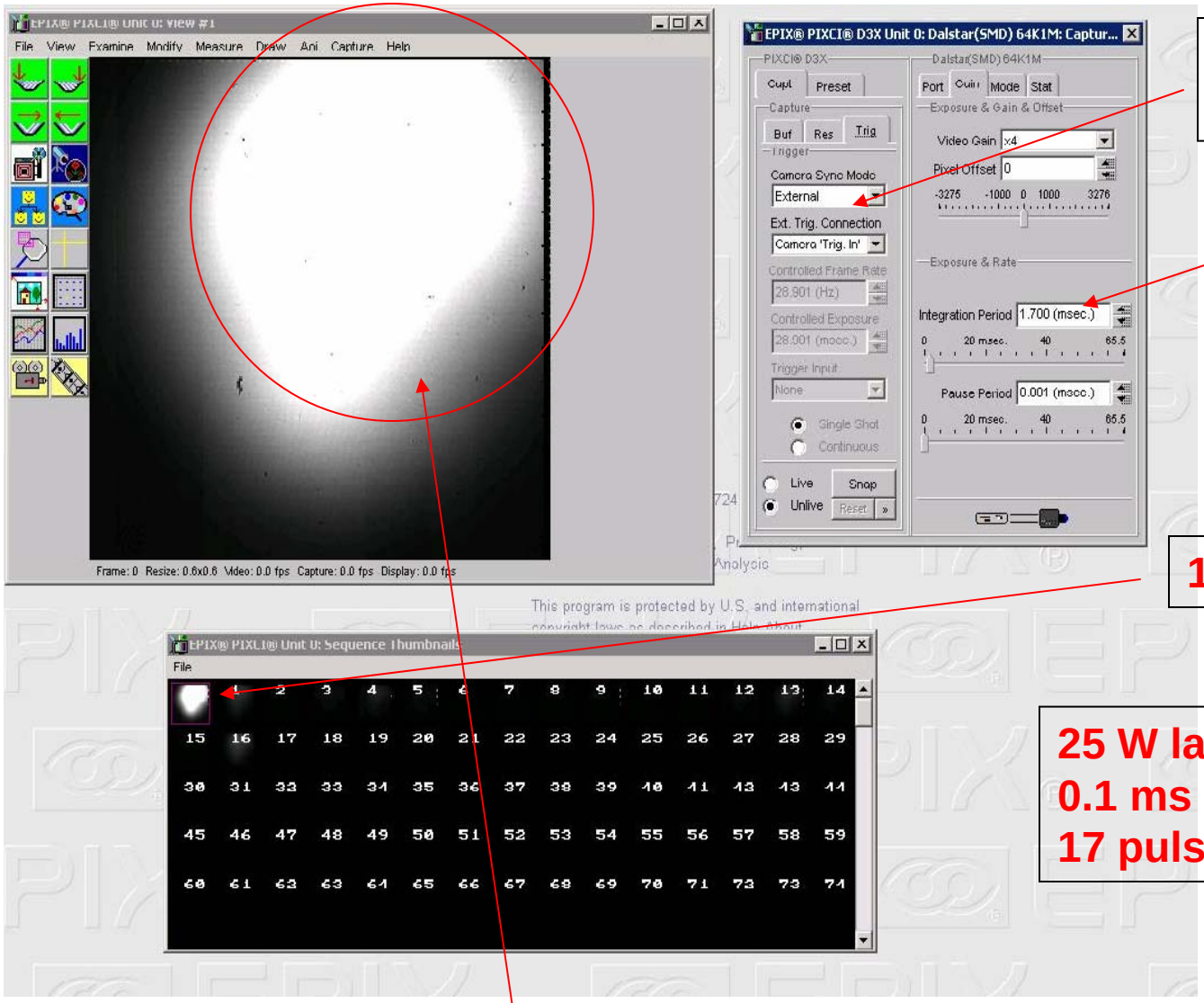
0.1 ms fps

17 frames Read Out

25 W laser used.
0.1 ms period laser pulse
17 pulses, total 1.7 ms light

Laser Insensity is LOW
17 frames Read Out

Viewport 4, Sep. 13, 2007



External Triggeirng
Camera “Trigger IN”

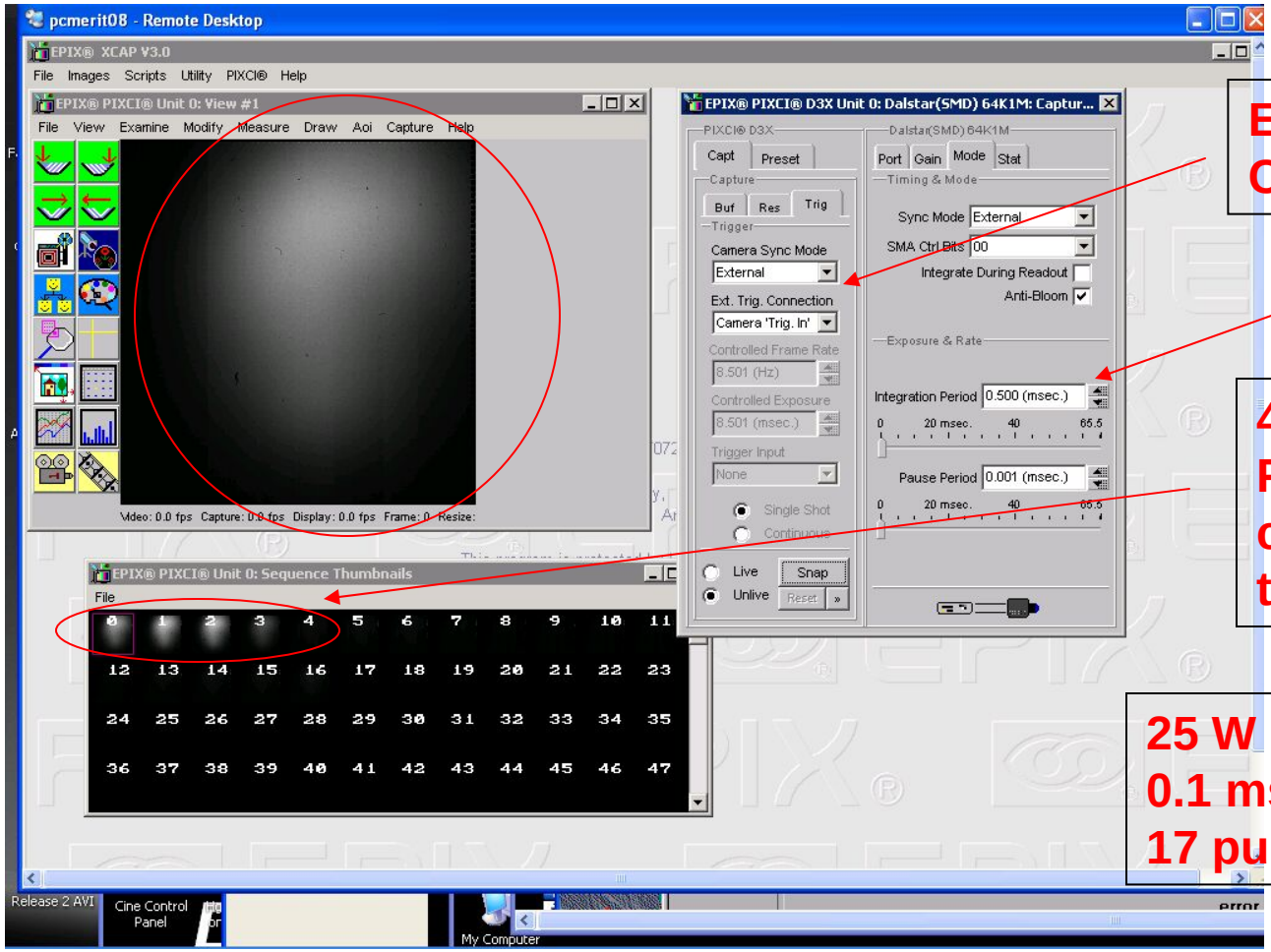
1.7 ms fps

1 frames Read Out

25 W laser used.
0.1 ms period laser pulse
17 pulses, total 1.7 ms light

Field of View is visible clearly
OBJECTIVE LENS IS NOT WELL MOUNTED

Viewport 4, Sep. 13, 2007



External Triggeirng Camera "Trigger IN"

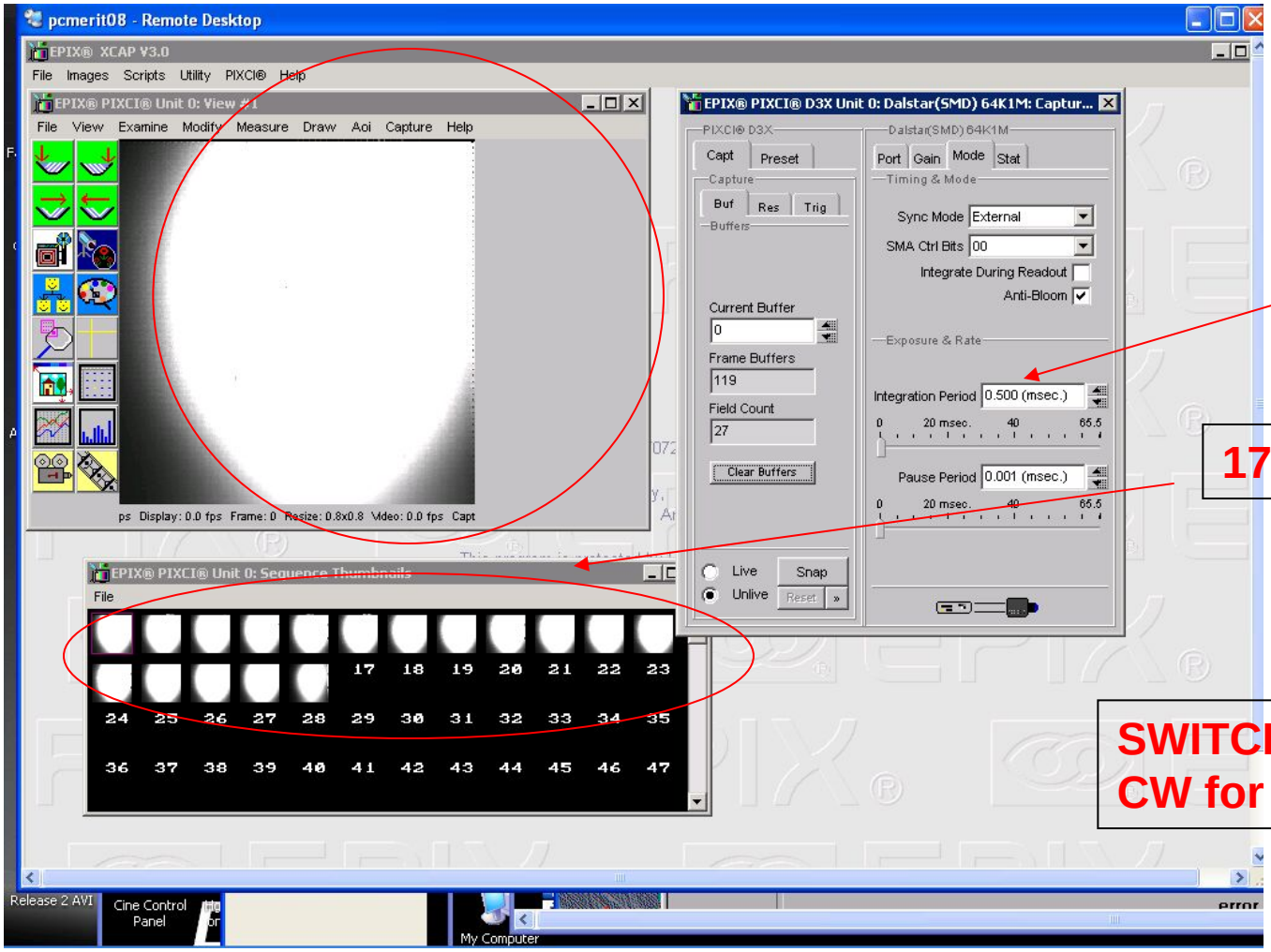
0.5 ms fps

4 frames Read Out Frame does read out correctly corresponding to the laser time.

25 W laser used.
0.1 ms period laser pulse
17 pulses, total 1.7 ms light

Viewport 4, Sep. 13, 2007

1W laser, 0.5s CW pulse, 0.5 ms fps

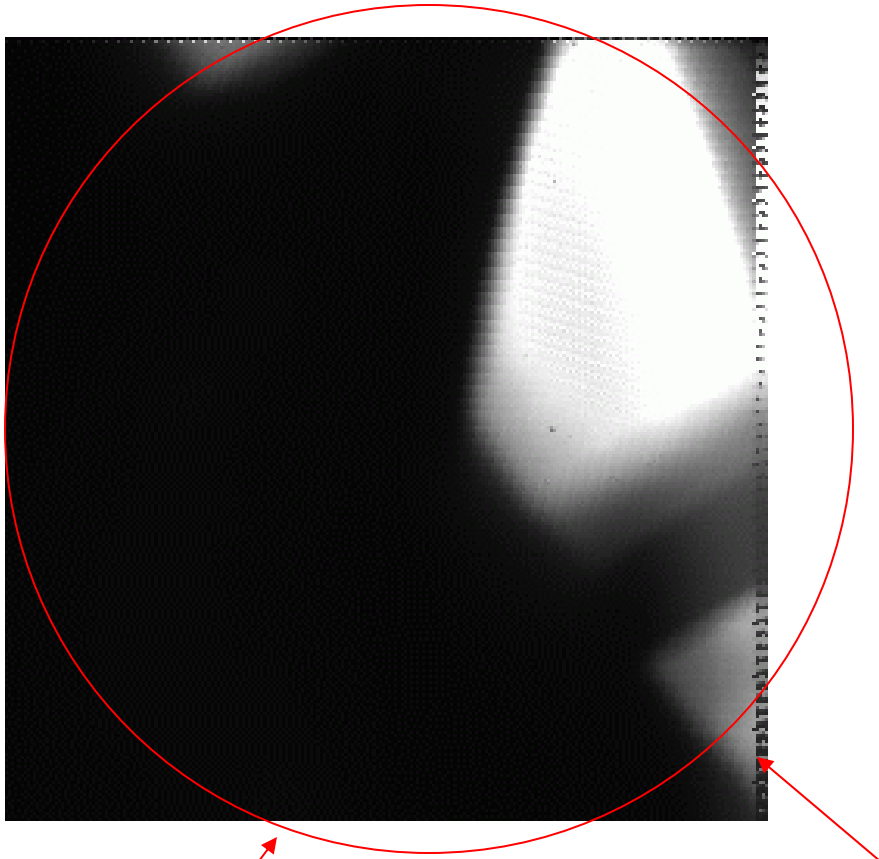


0.5 ms fps

17 frames Read Out

SWITCHED to 1 W Laser CW for 0.5 s

Moving Fan image



Manual triggering
0.1 ms fps.
17 frames.
8, 12(default), 16 bit file save support.
jpg, tif, …etc support.
Possible to save files
Independently.
Possible to save files in
one file. But the file size
Increases up to 10 Mbyte
because it saves all of the buffer
Images (180EA).

No 14 degree rotation
Different with previous software

Software shows like this.
Not real

CONFIRMATION

- ALL COMPUTERS / EQUIPMENT ARE ABLE TO DO POWER RECYCLE AND CONTROL REMOTELY AND ALL 4 IBOOT IS WORKING
- SMD CAMERA IS WORKING CORRECTLY AND RESPOND CORRECTLY TO THE EXTERNAL TRIGGERING INPUT
- ALL 4 CAMERAS WORK SIMULTANEOUSLY

THINGS TO BE RESOLVED

- SHOULD OPEN THE SNOUT AGAIN AND INSPECT OPTICS STATUS AND THEN REPAIR/REALIGN OPTICS. BE PREPARED FOR THAT.

→ PREREQUISITE : THOMAS SHOULD COME AND COOPERATE WHEN THERE IS A CHANCE TO OPEN THE SNOUT.
WE HAVE ONE EXTRA OPTICS-FIBER SET. JUST IN CASE, WE CAN REPLACE ONE VIEWPORT.

- SHOULD MOUNT SMD OBJECTIVE LENS AGAIN. THE SPACE WAS VERY TIGHT AND NOT HOLDED TIGHTLY.

- CHECK 25W LASER INTENSITY. HOW? SOFTWARE DIFFERENCE? CONNECTION WAS ALREADY CHECKED AGAIN.
NOW USED MAXIMUM INPUT VOLTAGE, -20V