**TRANSPOSED\_VERTREAD\_CSV\_import\_control\_lasers\_and\_SMs\_and\_ICC4C\_CAM\_Trigger.vi**

Currently, the main program I’m using runs the mirrors on an imported CSV file. During each iteration, has two stages:  
First, it changes the mirrors to the next setting, then takes a picture of the new setting.   
It accepts vertical columns of voltage values.  
It triggers ANDOR with a 5V “Start exposure” pulse. Andor should be on “external” triggering mode to make this work.

**ITERATION EXPOSURE!**  
I want to make a version of this which takes one picture per K iterations. This would work as follows:  
Let the number of mirror steps traversed so far be N.   
  
IF MODULO(K,N)=0,   
ANDOR\_V = 0 (LOW)  
Else  
ANDOR\_V=5V (HIGH) \*\*DELAY FOR 1 FRAME’s WORTH\*\*  
  
Thus ANDOR will continue to expose so long as we are not on some integer I multiple of N\*K, I\*N\*K. We should thus end up with I exposures at any given time.

**N-channel imaging**.   
Let N be the number of channels in use, K is number of cycles.   
If MODULO(K,N)=0  
color1=on  
color2=off  
IF modulo(K,N)=1  
color1=off  
Color2=on

**ETL TESTER:   
Note I split this off the the importCSV lineage!  
Iterate through some given range of ETL values over N steps. Moves linearly through -250mA->250mA from 0->10V, so 50mA/V.  
What’s odd here is this was easy, except for whatever reason the stop condition actually works!! How bizzare! (normally, stop condition is totally ignored.)**

**VertRead\_import\_SM1\_full\_control\_Nstep\_camtrigger**

**The idea behind this version of code is to allow N voltage settings to proceed before the camera gets set to low. The Camera is set to high the rest of the time. If put in “external trigger exposure” mode, the ANDOR should take a single pic per N voltage steps. Probably needs some kind of additional delay on the Nth step to allow the image to save and the Andor to prepare for the next step.  
KNOWN BUG: This program does not expose the camera during the Nth step!**

**I should update all ICC-4C control programs to use “full control” nomenclature**