



temp. meas. version2 v2_LV2010GF.vi

C:\Documents and Settings\lab user\Box Sync\The Bochinski_Clarke Science Party\Labview Files\GFirest chamber room\temp. meas. version2 v2_LV2010GF.vi

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GABRIELS VARIANT OF Temperature Fluorescence Measurement

Monochromator Setup
(SPEX 1680B)
Parallel Port Address
378

Lock-In Setup
(EG&G 5209)
GPIO Address Lock-In
12

Oscilloscope Setup
(TEKTRONIX TDS 420)
GPIO Address OSC (GPIO[1]::4)
GPIOB::4

Photon Counter Setup
(SRS 400)
GPIO Address SR400
0:23

This program uses the first GPIO board (GPIOB)
default addresses:
monochromator x378 (parallel port)
lockin GPIOB::12 (hardwired)
osc GPIOB::4 (not used)
counter 0:23

Start Wavelength (nm)
475

File path
C:\users\Data\fluorescence

Gages Variant
temp_stats.txt

Trough Wavelength (nm)
465

Peak Wavelength (nm)
475

Wait Time (s)
5

(m) # measurements per wavelength
1

Mode Control
Temp

extra steps on way TO PEAK
0

Extra Steps taken UP
0

extra steps on way TO TROUGH
0

Extra Steps taken DOWN
0

Current Wavelength (nm)
475

Perylene**: wavelength pairs: literature 464/476 nm
measured*: 460/475 nm
ckc measured (Mar 2014): 464/476 nm

** A. J. Bur, M. G. Vangel, and S. Roth "Temperature Dependence of Fluorescent Probes for Applications to Polymer Materials Processing," *Appl. Spec.* **56**, 174 (2002).

LAST DATA POINT
peak wavelength
475.0
trough wavelength
465.0
peak counter A
2.9934E+5
trough counter A
2.1230E+5
peak counter B
6.2790E+3
trough counter B
6.3190E+3
peak lockin
1.1814E-5
trough lockin
1.1802E-5

LAST TEMP. MEASUREMENT
Time
3.055E+4
std
3.834E+0
Laser Amp. (lockin)
1.181E-5
std (lockin)
0.00
Ratio (counter)
7.029E-1
std (counter)
0.000E+0
Gages std (counter)
0.000E+0
peak loop counter
0
trough loop counter
0

Temp. Meas. (n)
10000

meas. loop counter (0 to n-1)
1862

SR400 Photon Counter:
1. Run photon counter vi or manually control desired Settings.
2. Set Wait Time to Tpreset
3. Run this program.

EG&G 5209 Lockin Amplifier:
1. Manually set appropriate front panel settings (Sensitivity, Filters, and Phase).
2. Set Time Constant to be appropriate for the given REF FREQ and Wait Time (used above).

Wavelength Range Warning
[Green bar]

PAUSE next ratio
[Pause button]

Paused
[Pause button]

PAUSE next quasi watttime
[Pause button]

Input Mode
Voltage Input (A or A-B)

Line reject
2F

Filter Type
Flat

Filter Frequency (Hz)
1670

Auto freq tuning
[On]

Auto Sensitivity
[On]

Auto Measure
[On]

Auto Phase
[On]

slope
12dB/octave

time constant
3 s

display type
Output calibrated

Range
30 uV

manually added info
532 power W
0
X raster V
0
X raster Hz
0
Y raster V
0
Y raster Hz
0.000271
Temp on top of sample
0
Temp of copper block C
0

NOTES
sample 7-3a-2 (soln7, 3layeronair, samp 2, bubble) try3, .05wt1%pery, nonraster heatups

Read temp from RPI?
[On]
IP Address
10.138.238.133
Port
8888
Read volt from RPI?
[On]
RPI top temp
023.45
RPI Block temp
023.82
RPI volt
0.8144
bytes written
4
bytes written 2
4
bytes written 3
4

Time Vs Quasi-waittime*->
3
Trough-to-Peak Ratio
0.69
0.70
0.71
0.72
0.73
Time (s)
0 10000 20000 30000 40000

RATIO
Gages Ratio
[Ratio icon]

Laser Amp. Graph
Laser amp, peak
Laser amp trough
1.32E-5
1.30E-5
1.28E-5
1.26E-5
1.24E-5
1.22E-5
1.20E-5
1.18E-5
1.16E-5
Time (s)
0 5000 10000 15000 20000 25000 30000 35000

cA trough avg.
212304
cA trough std
0
cB trough avg.
6319
cB trough std
0
lockin trough avg.
1.18018E-5
lockin trough std
0

Time v. Ratio Graph
Trough-to-Peak Ratio
0.69
0.70
0.71
0.72
0.73
Time (s)
0 5000 10000 15000 20000 25000 30000 35000

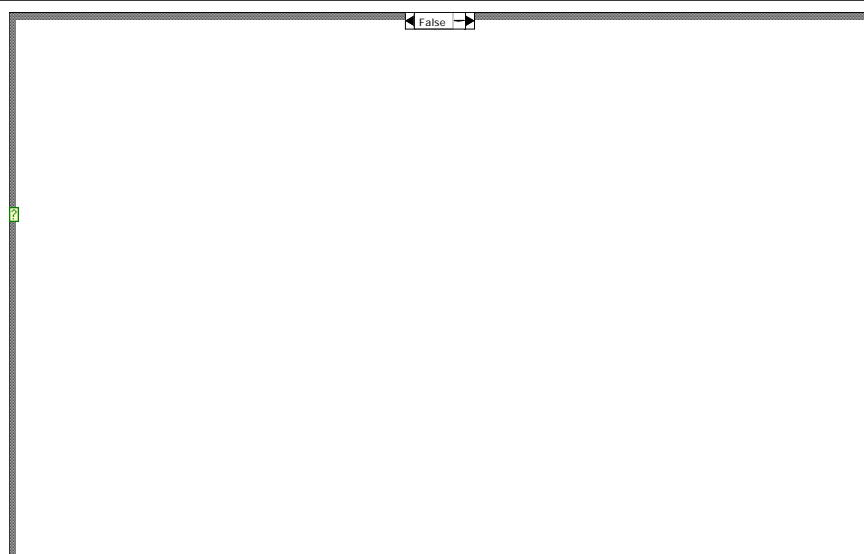
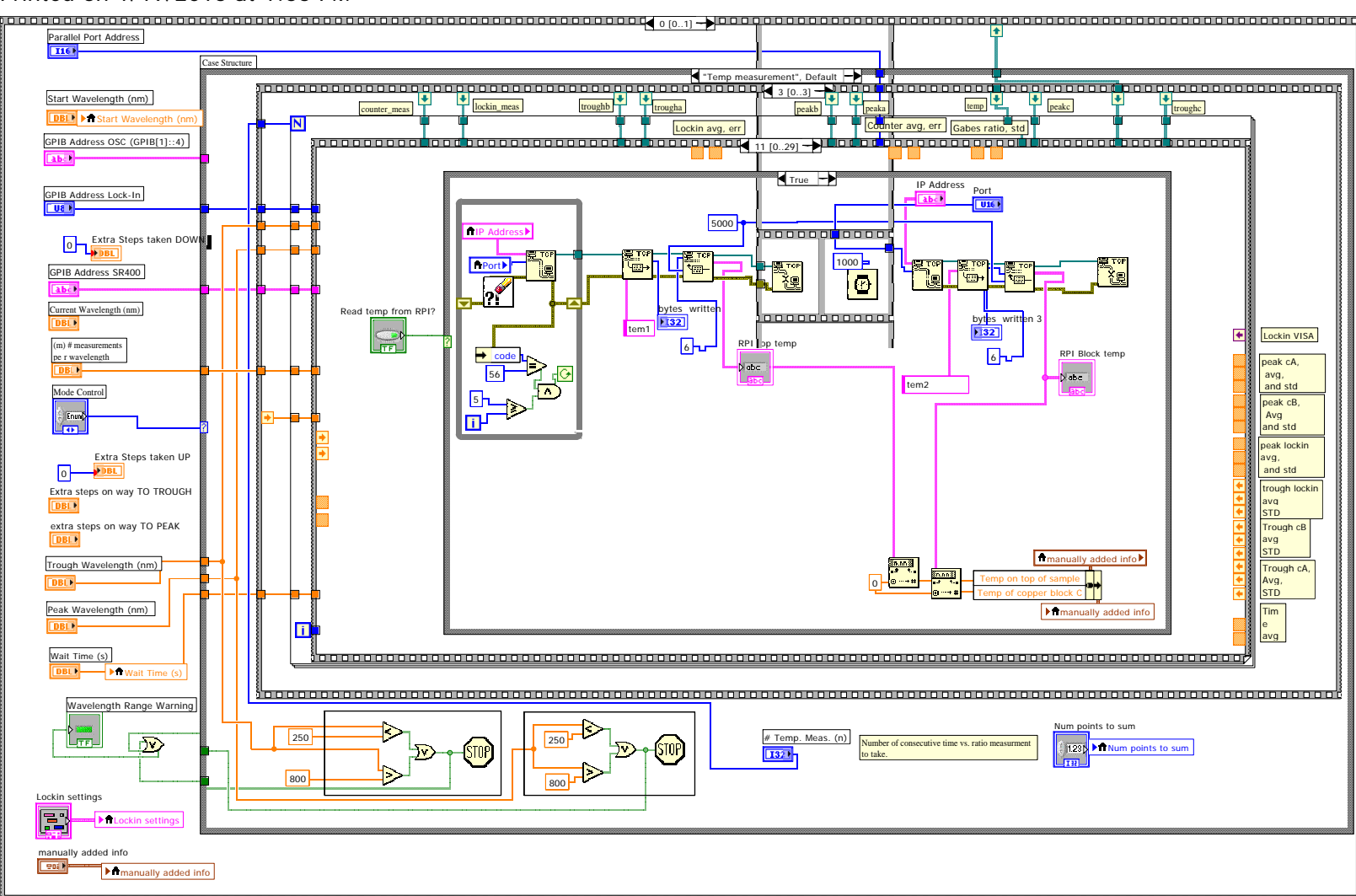
RATIO
Gages Ratio
[Ratio icon]

cA peak avg.
299343
cA peak std
0
cB peak avg.
6279
cB peak std
0
lockin peak avg.
1.18138E-5
lockin peak std
0

Time v. counts/Las. Amp Graph
count to Laser Amp Ratio
1.70E+10
1.80E+10
1.90E+10
2.00E+10
2.10E+10
2.20E+10
2.30E+10
2.40E+10
2.50E+10
2.60E+10
Time (s)
0 5000 10000 15000 20000 25000 30000 35000

Trough
Peak
[Trough/Peak icon]

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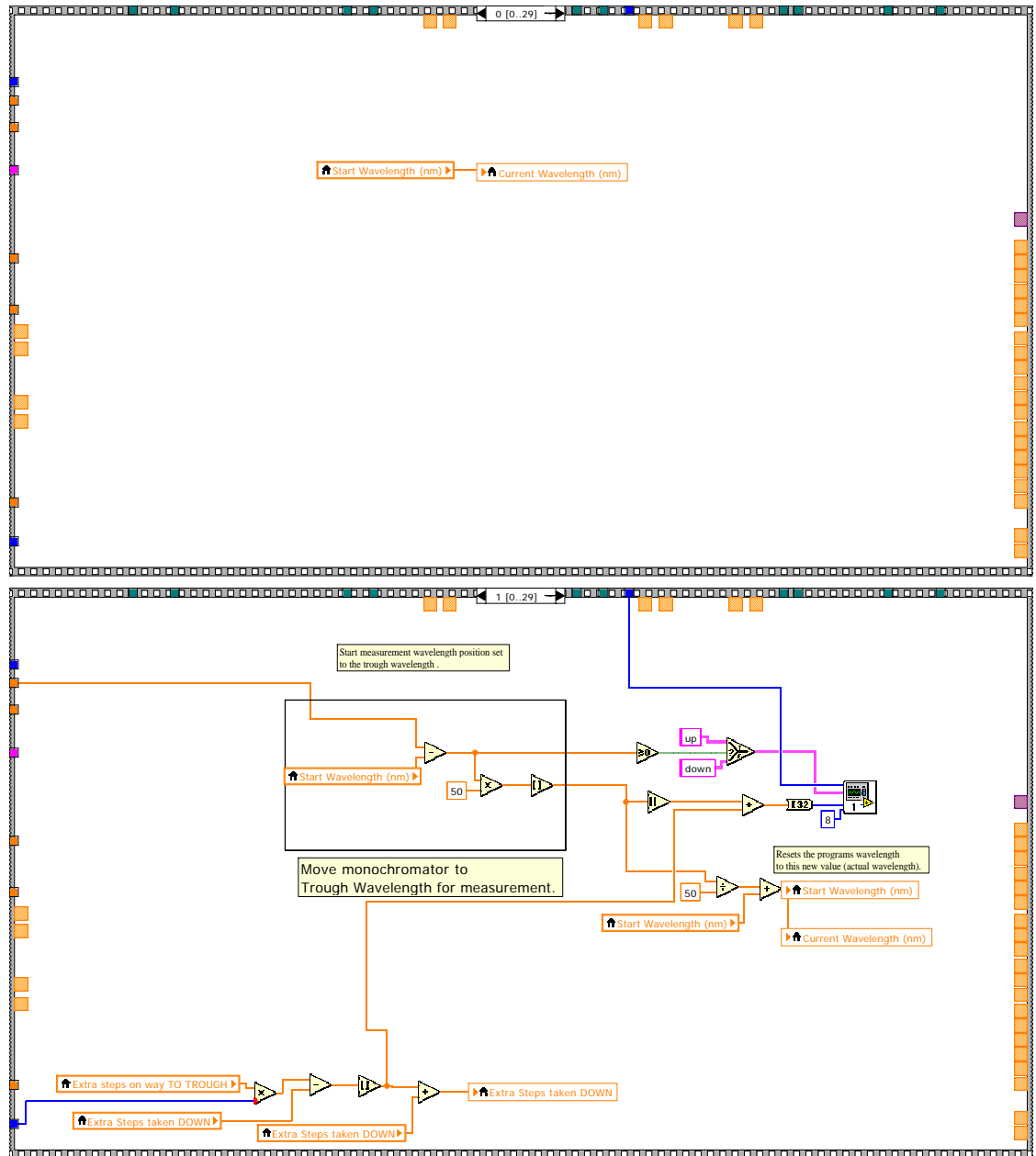


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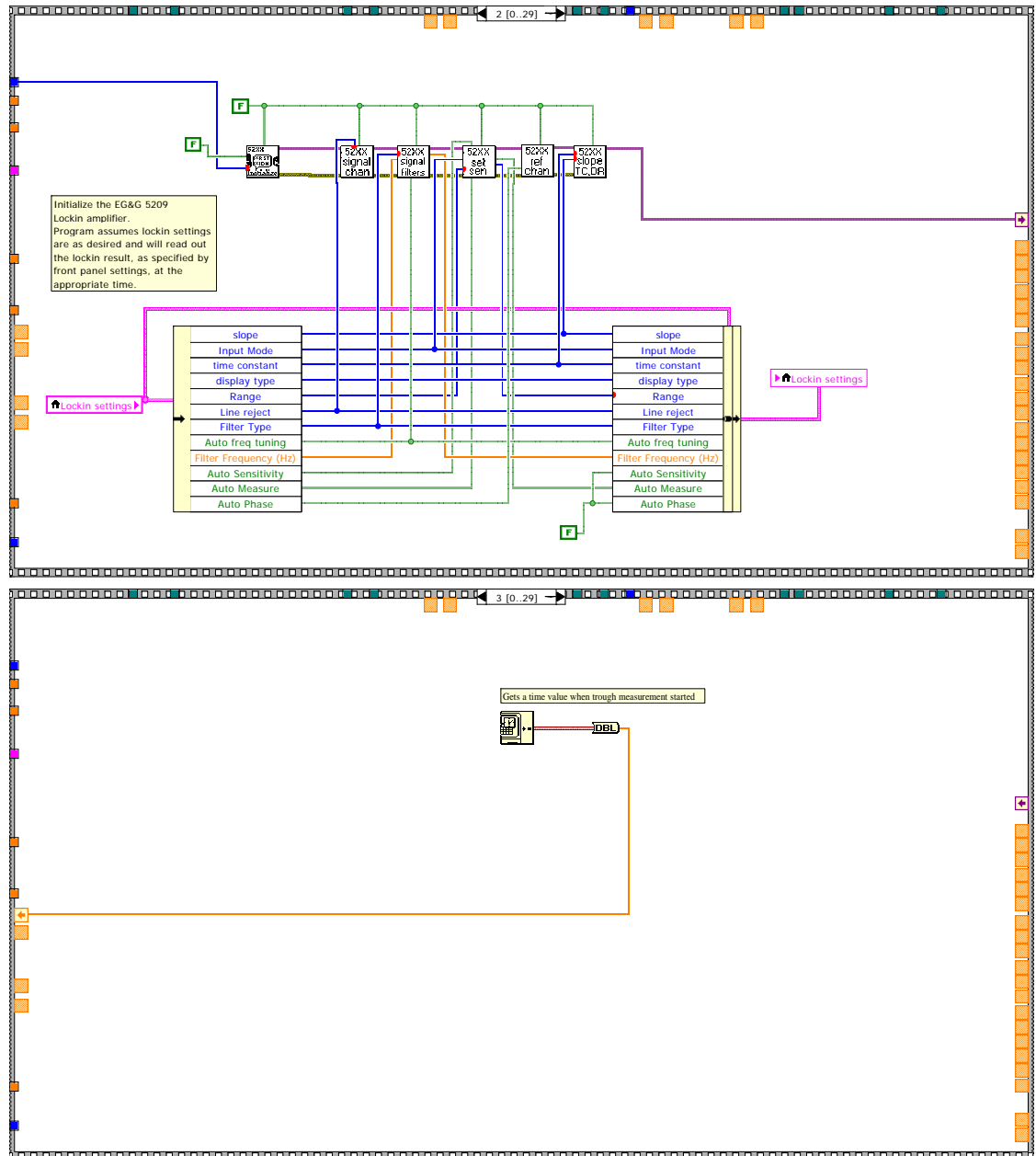


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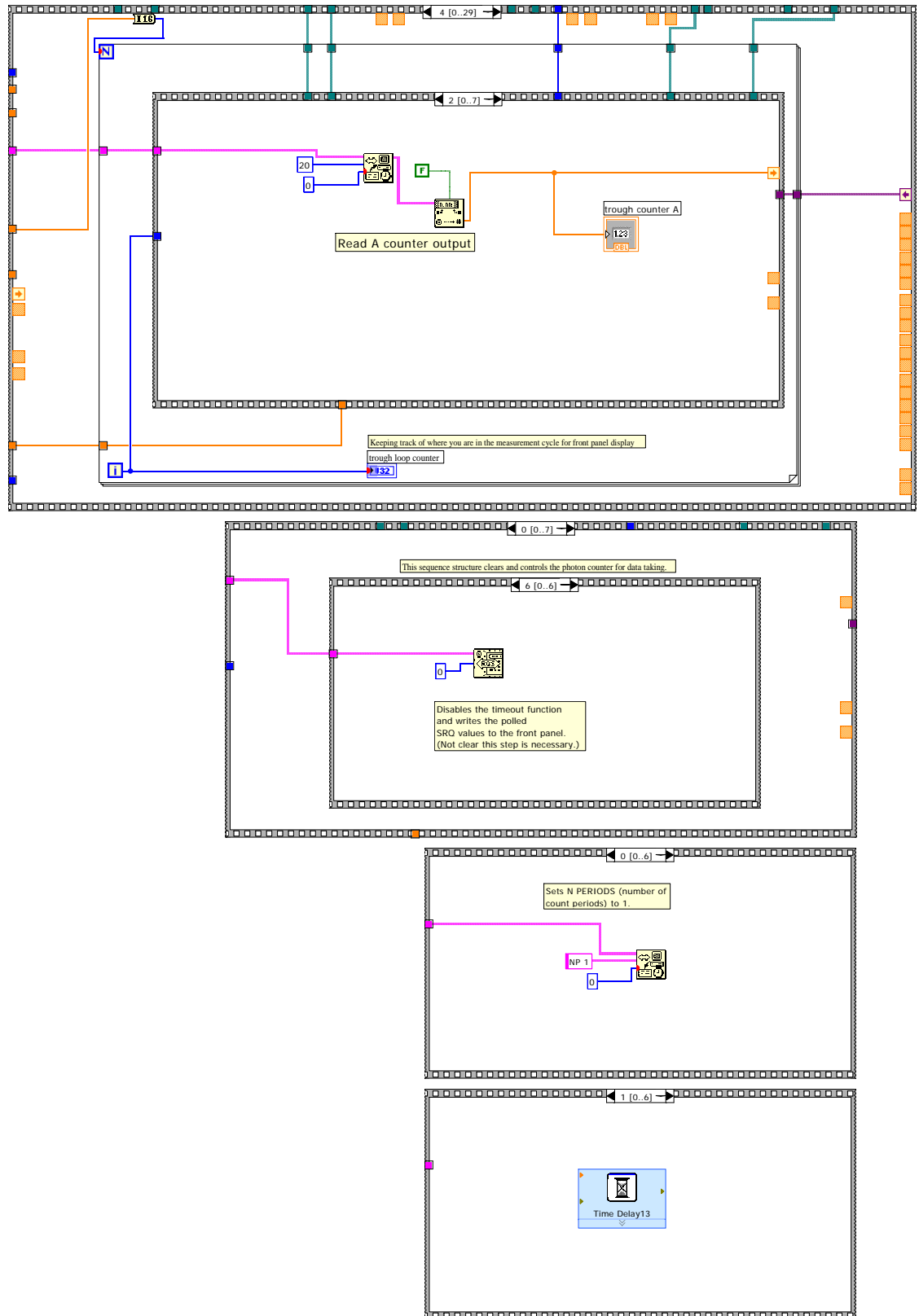


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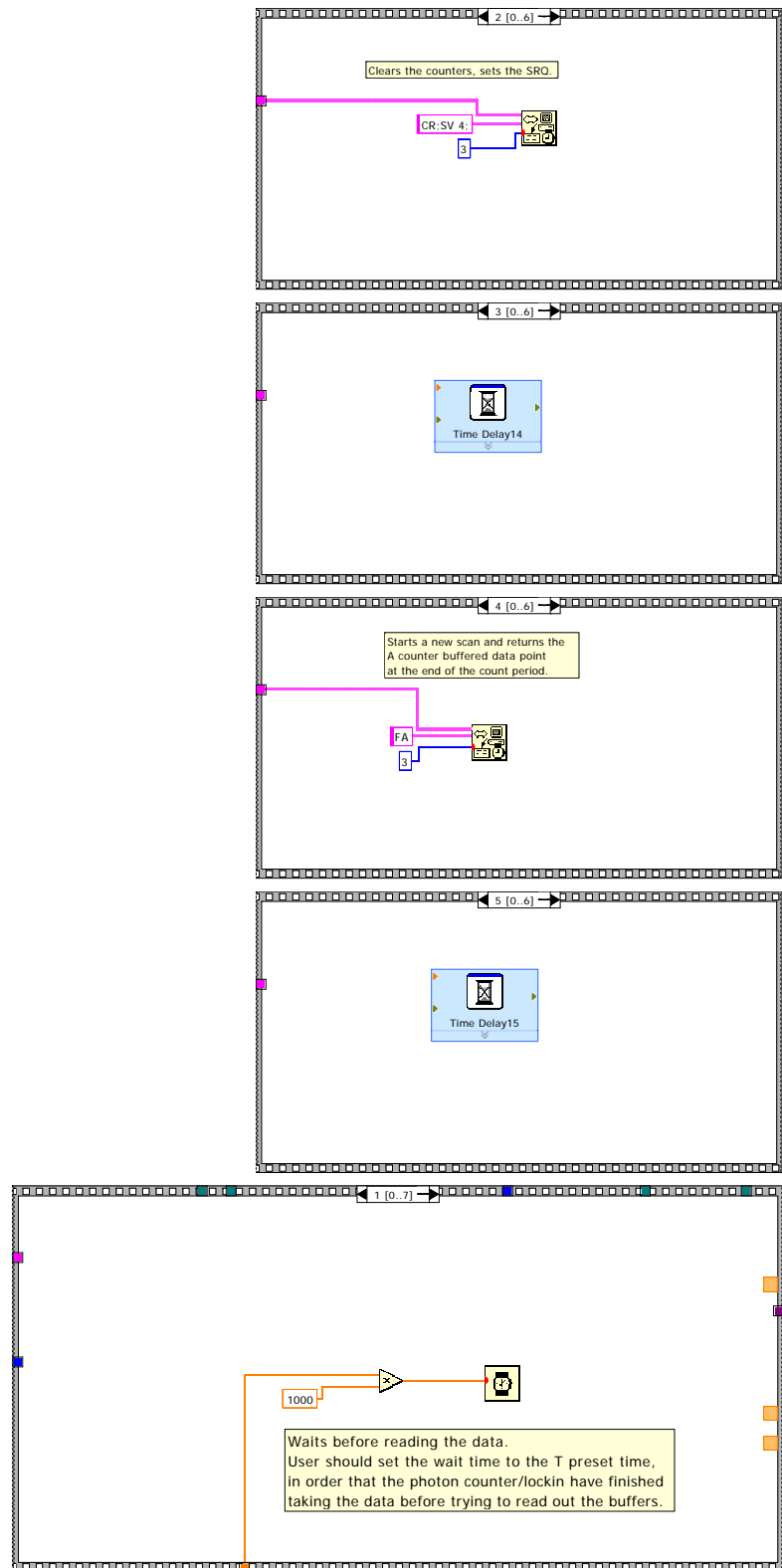


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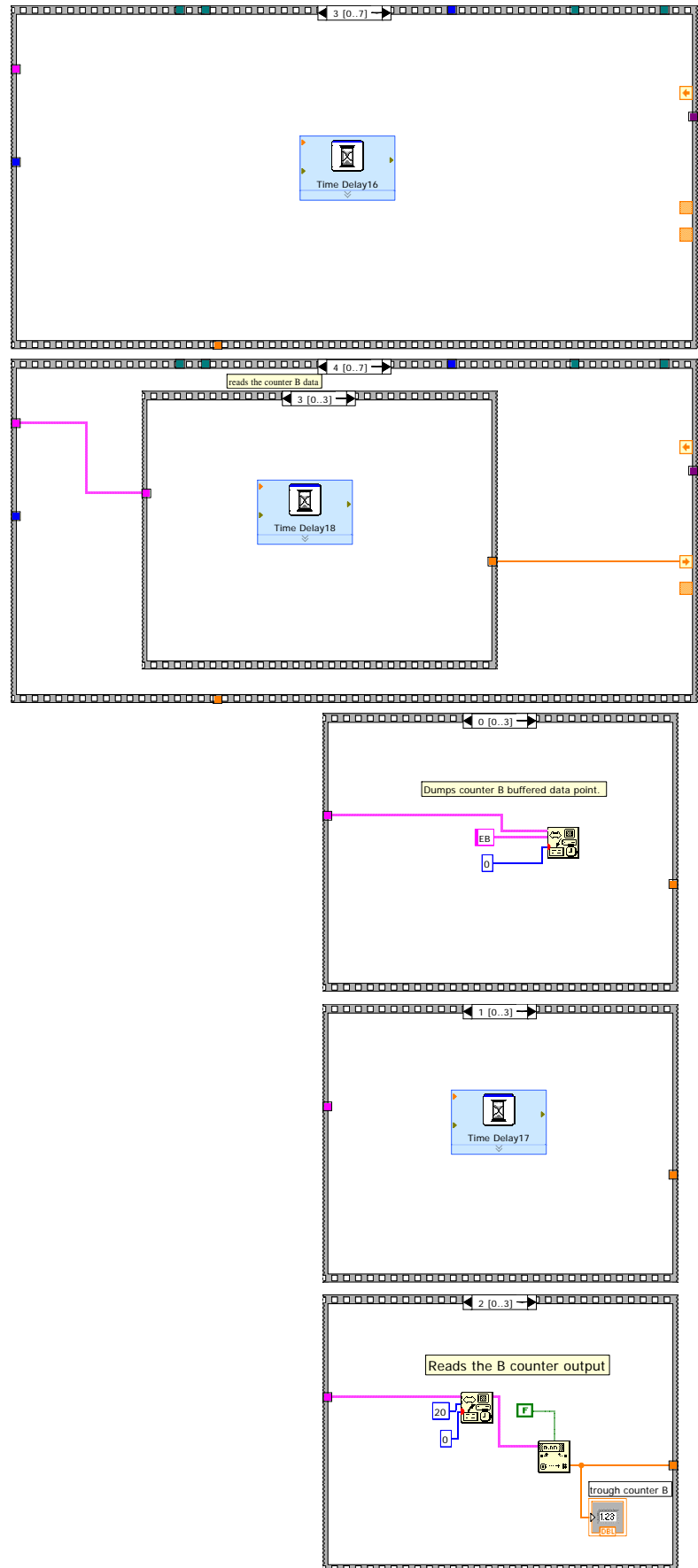


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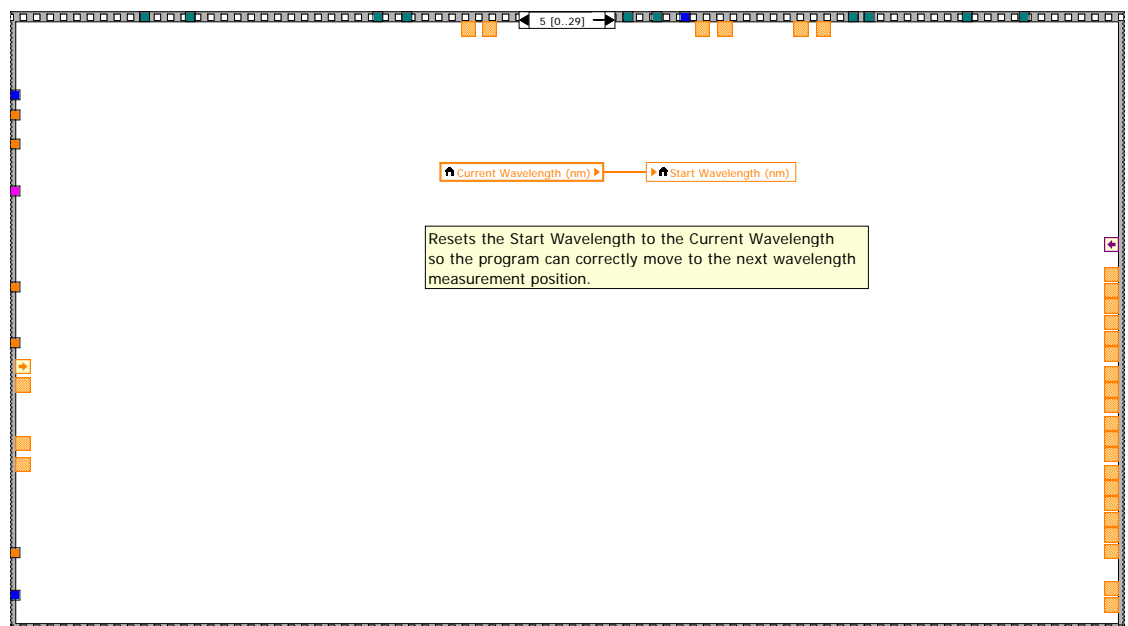
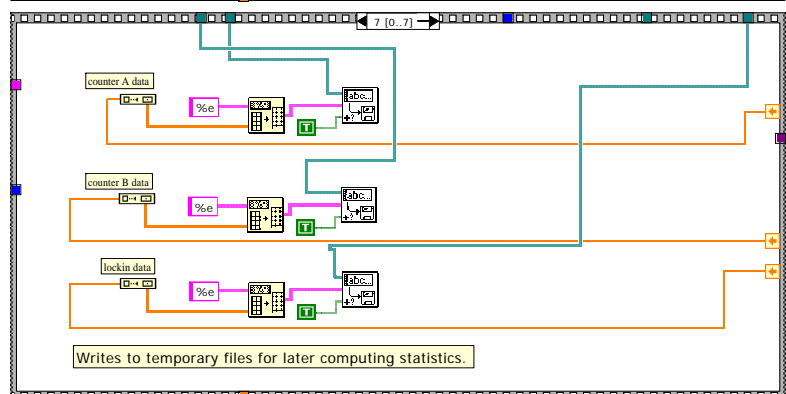
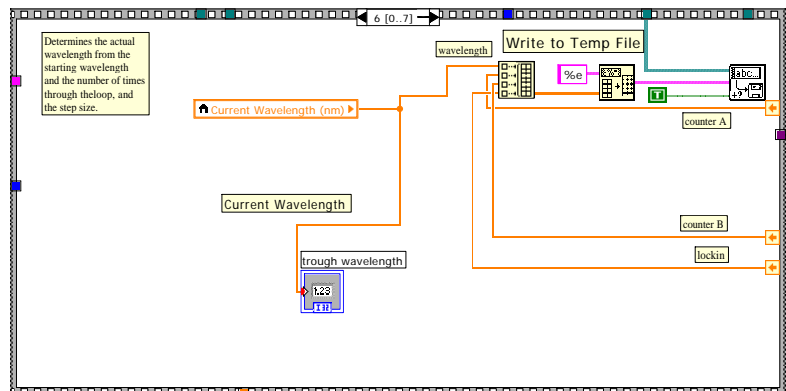
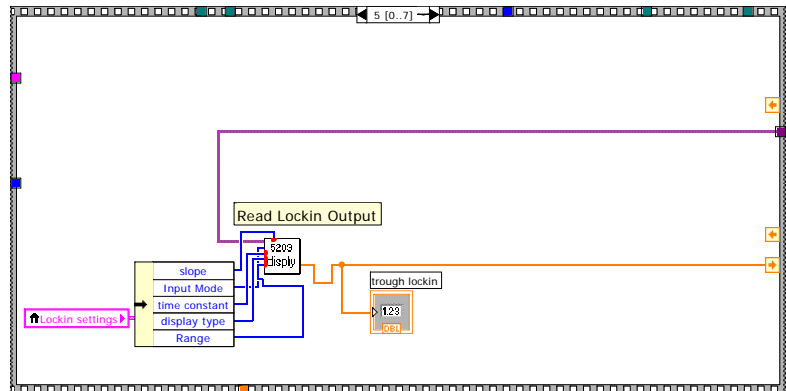


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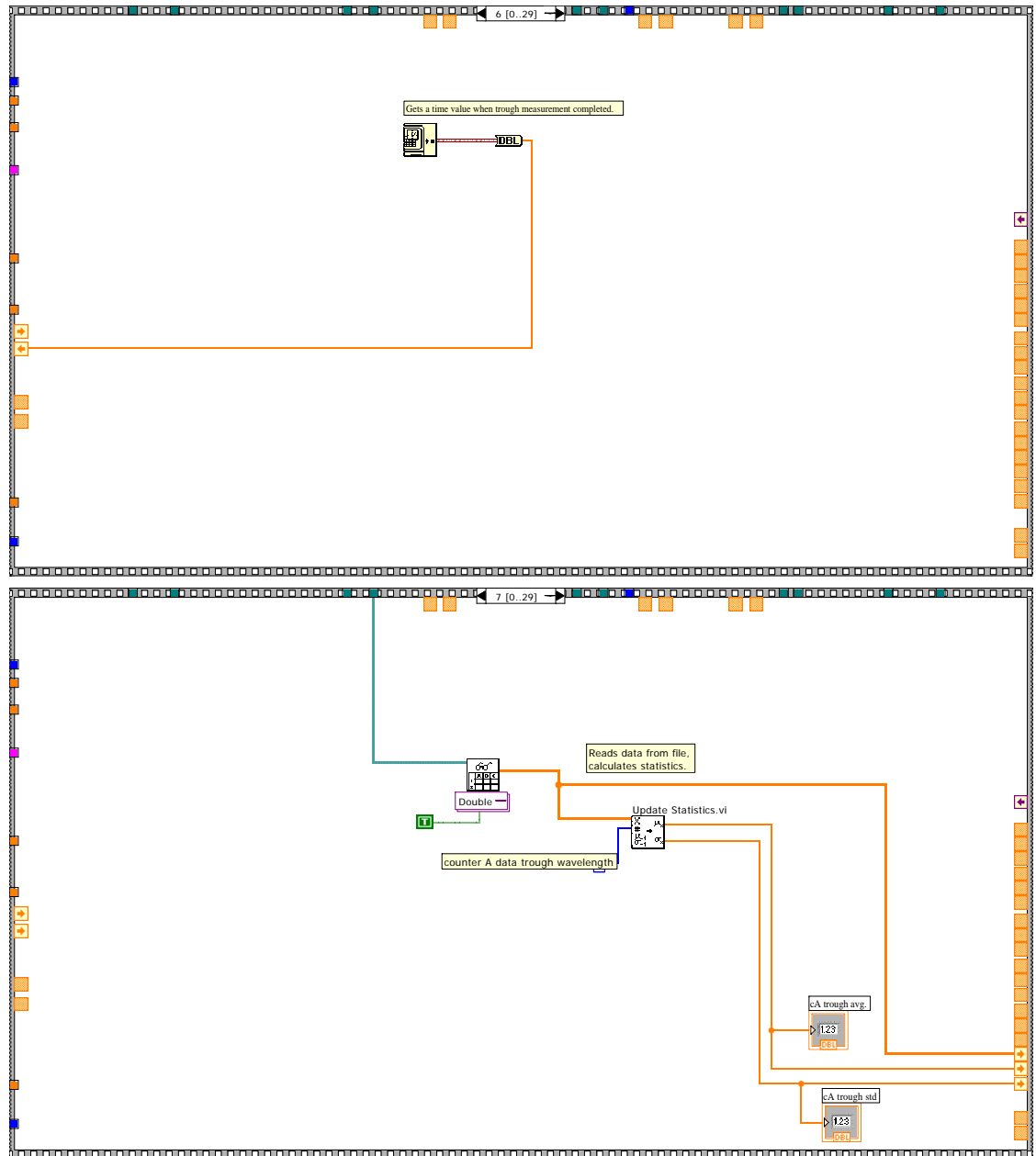


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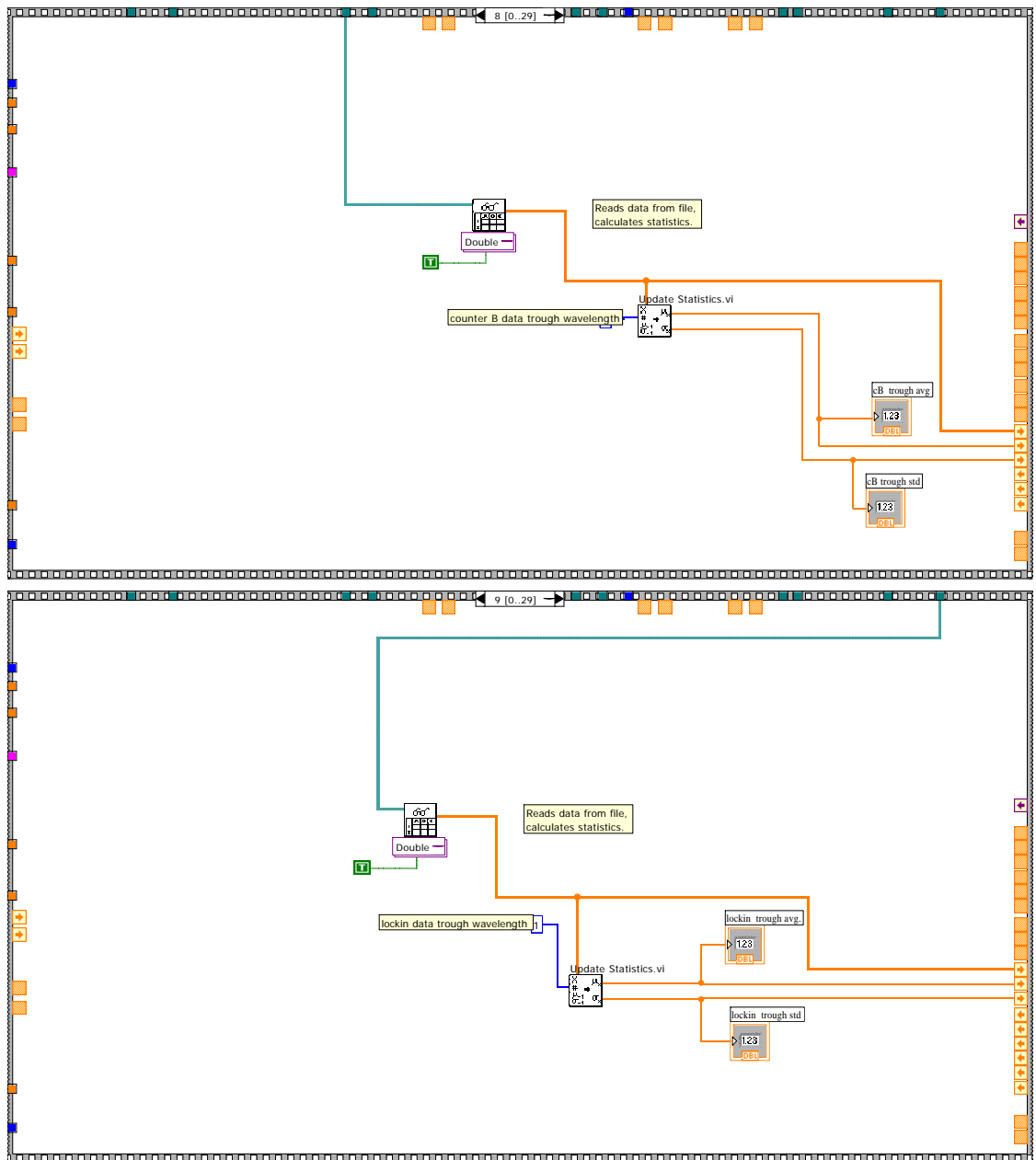
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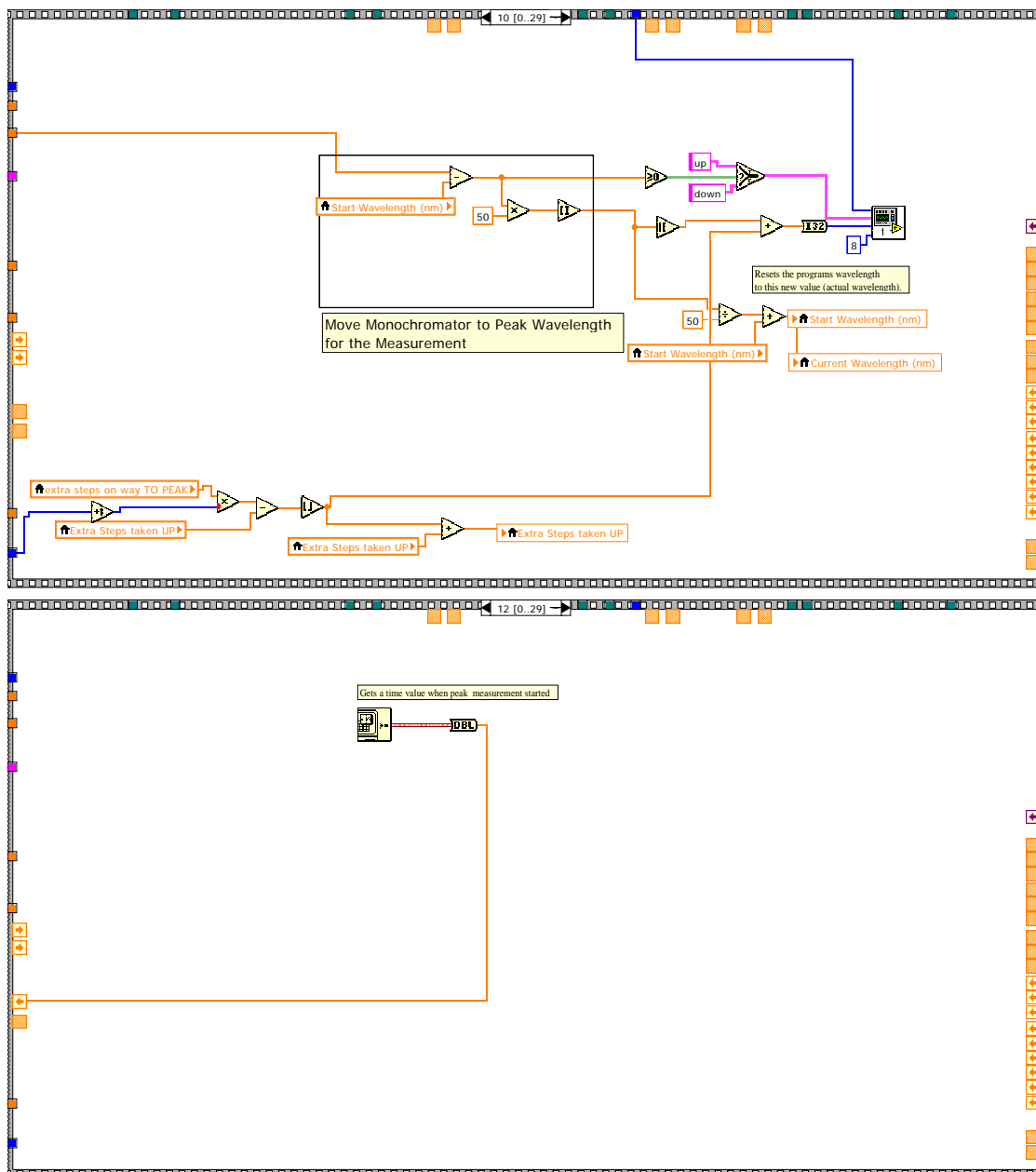
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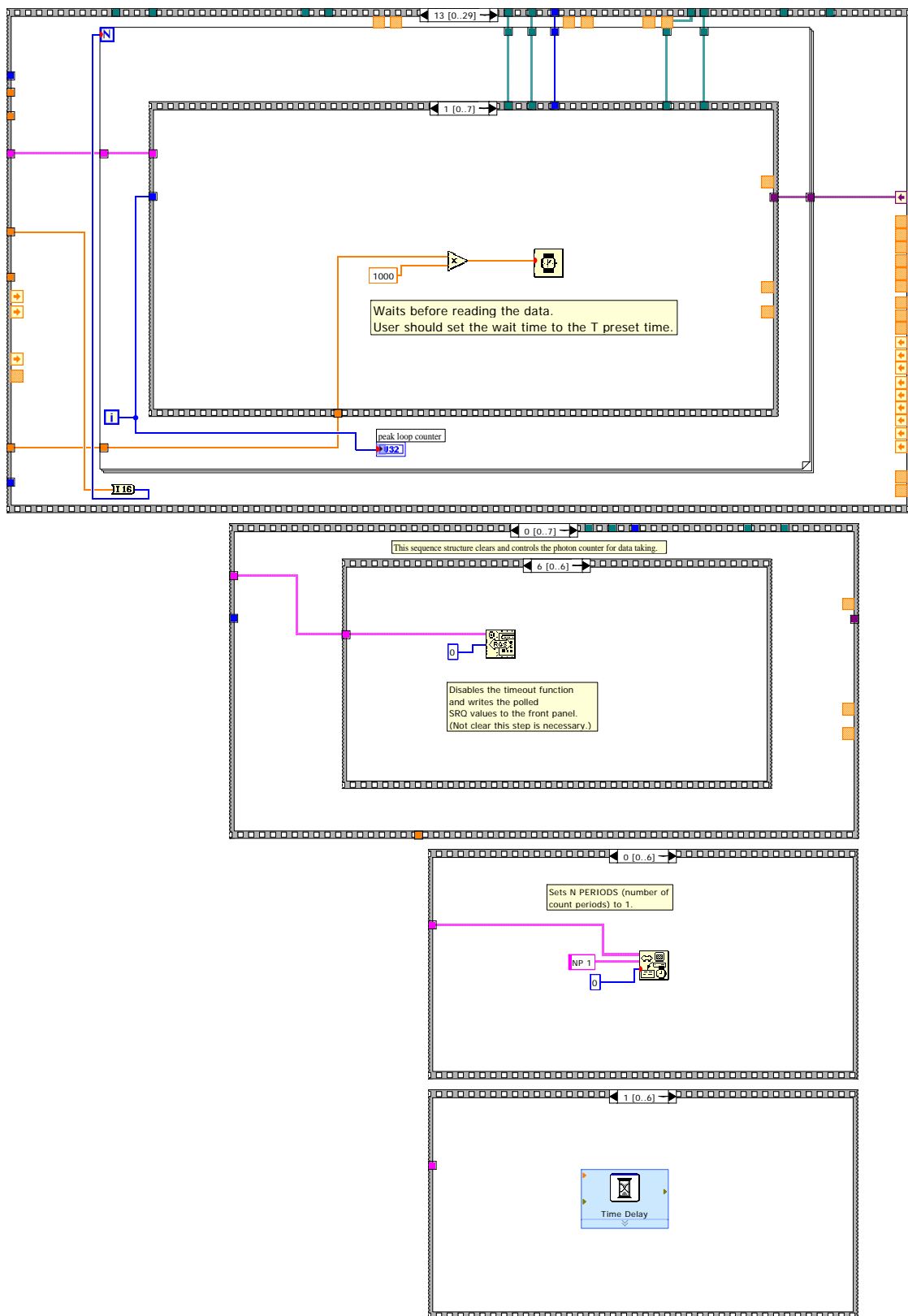
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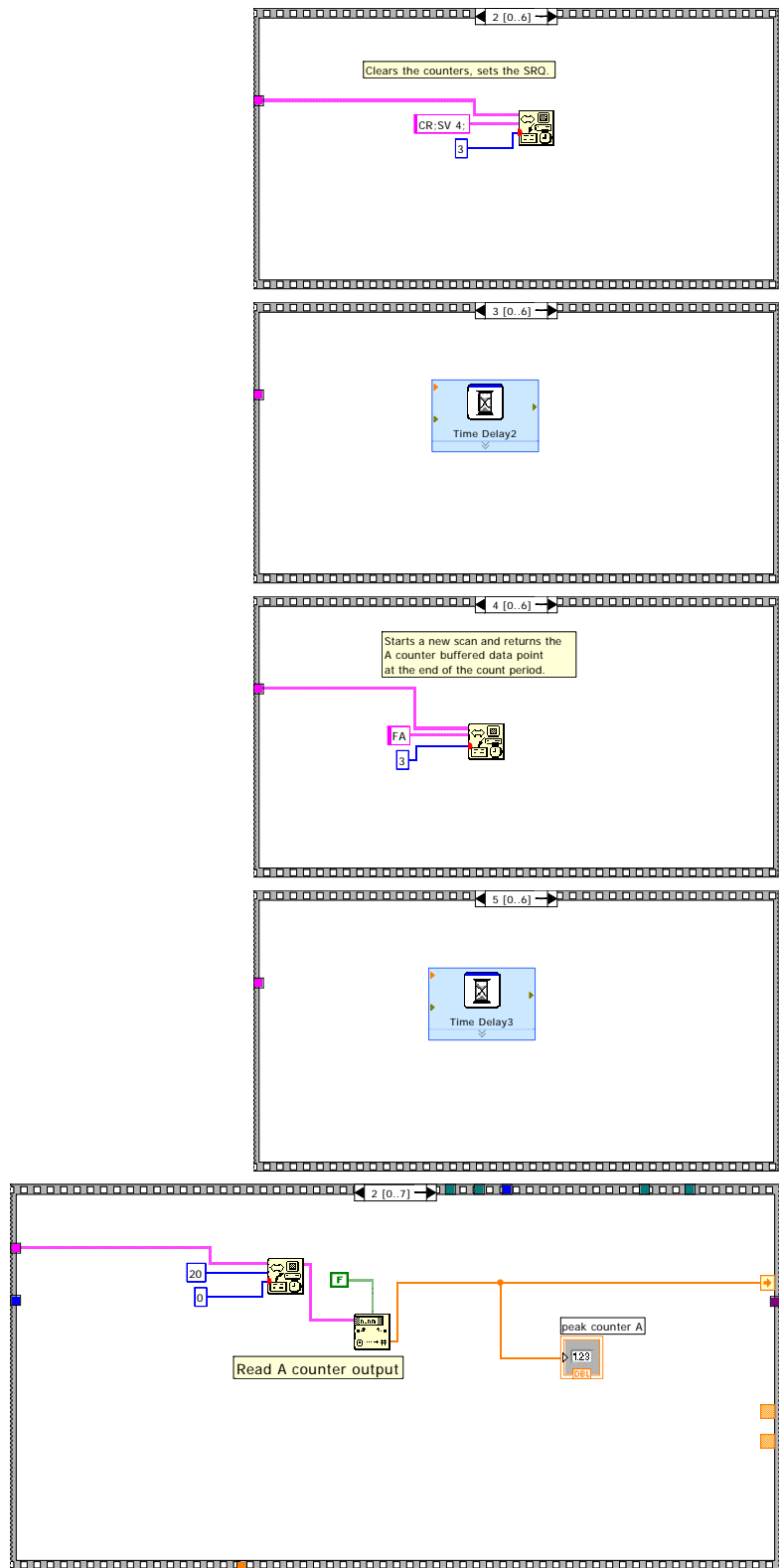
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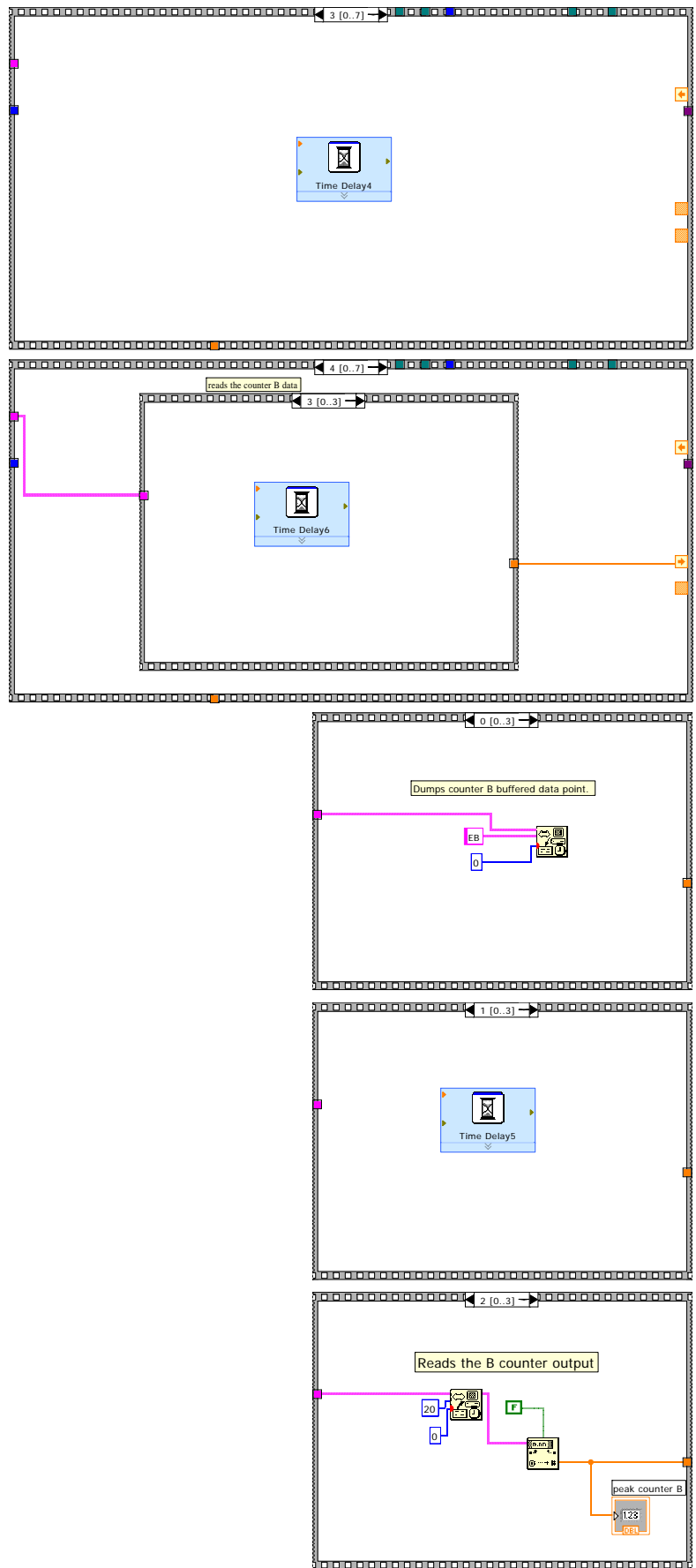
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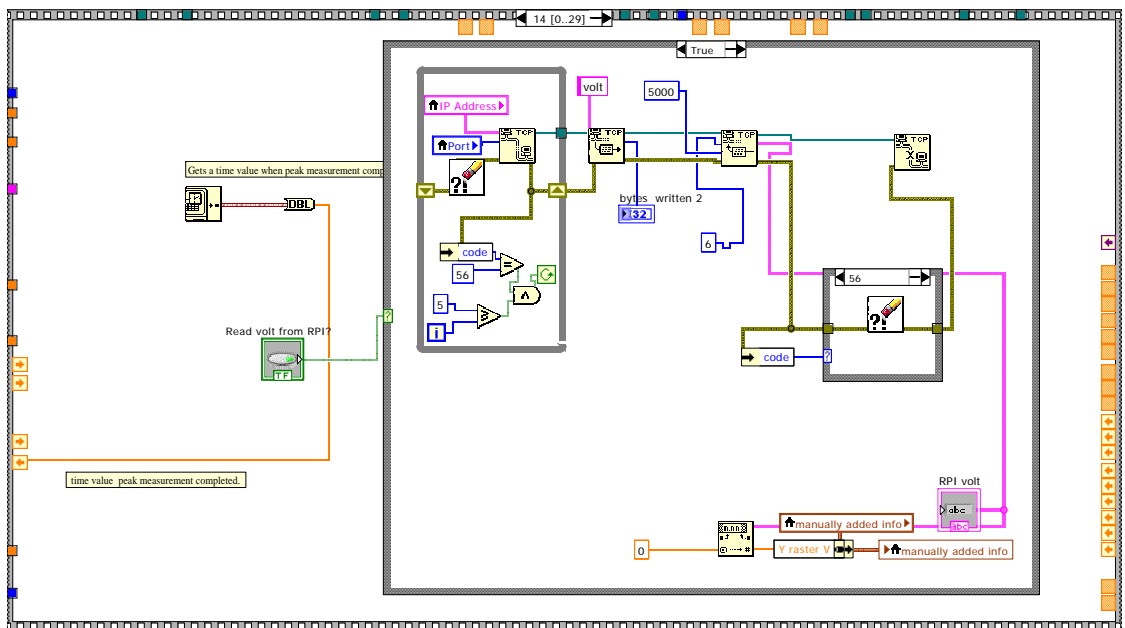
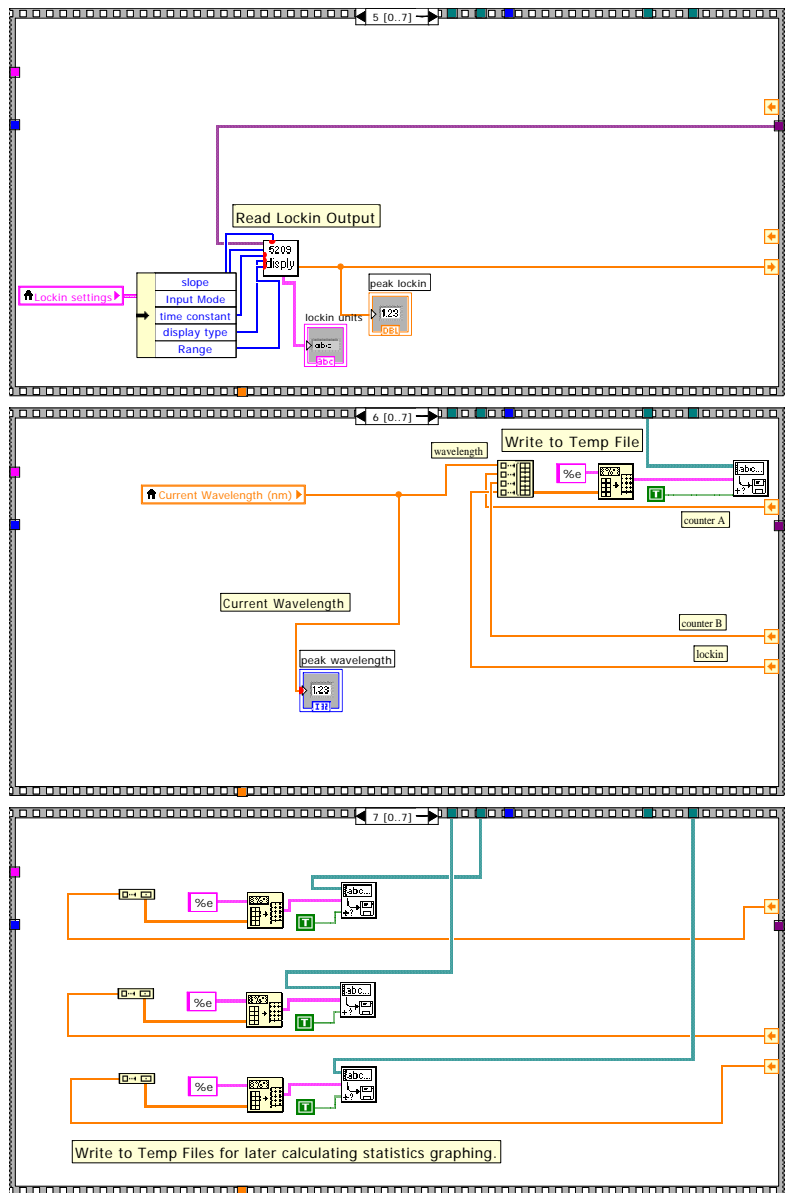
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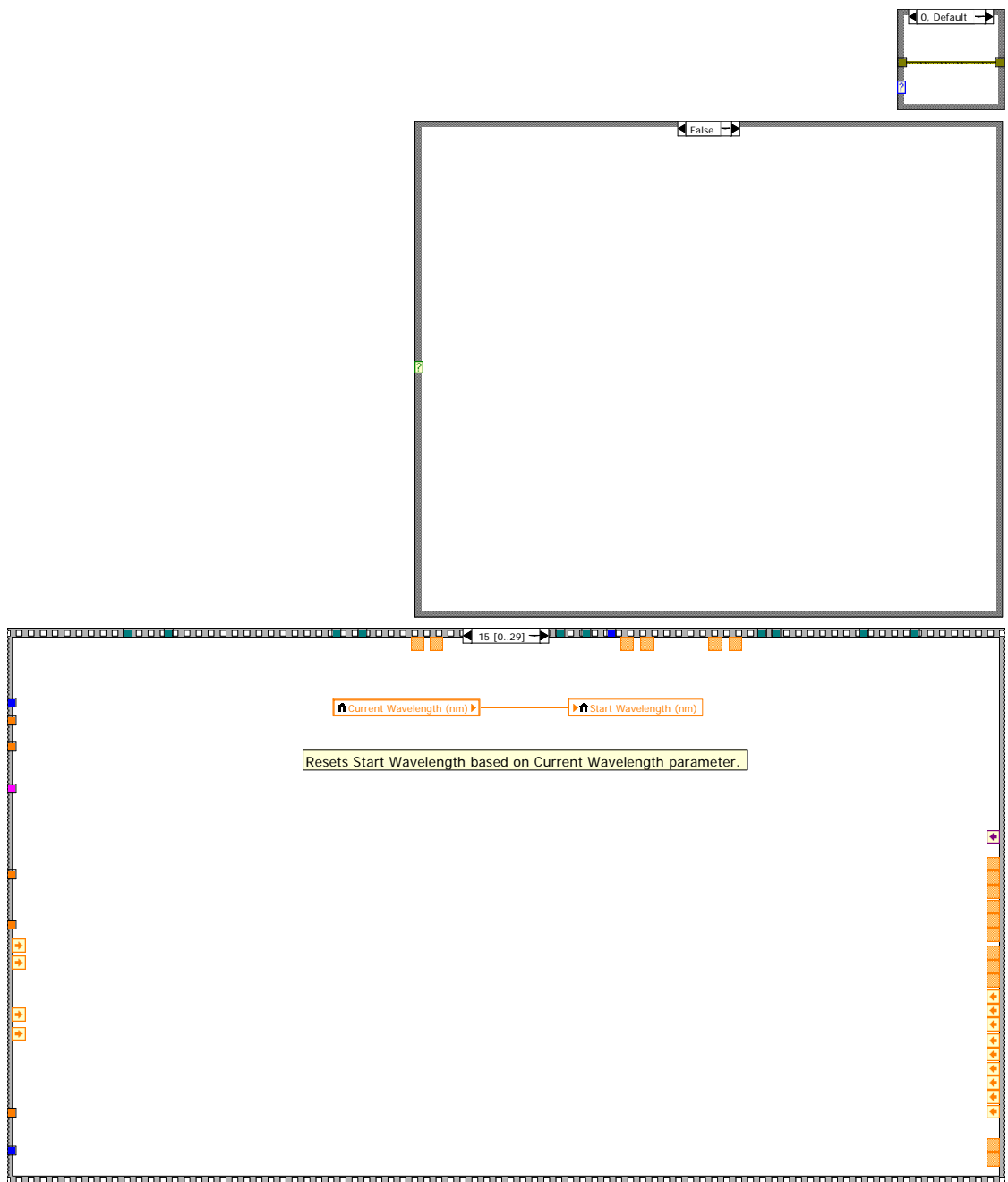


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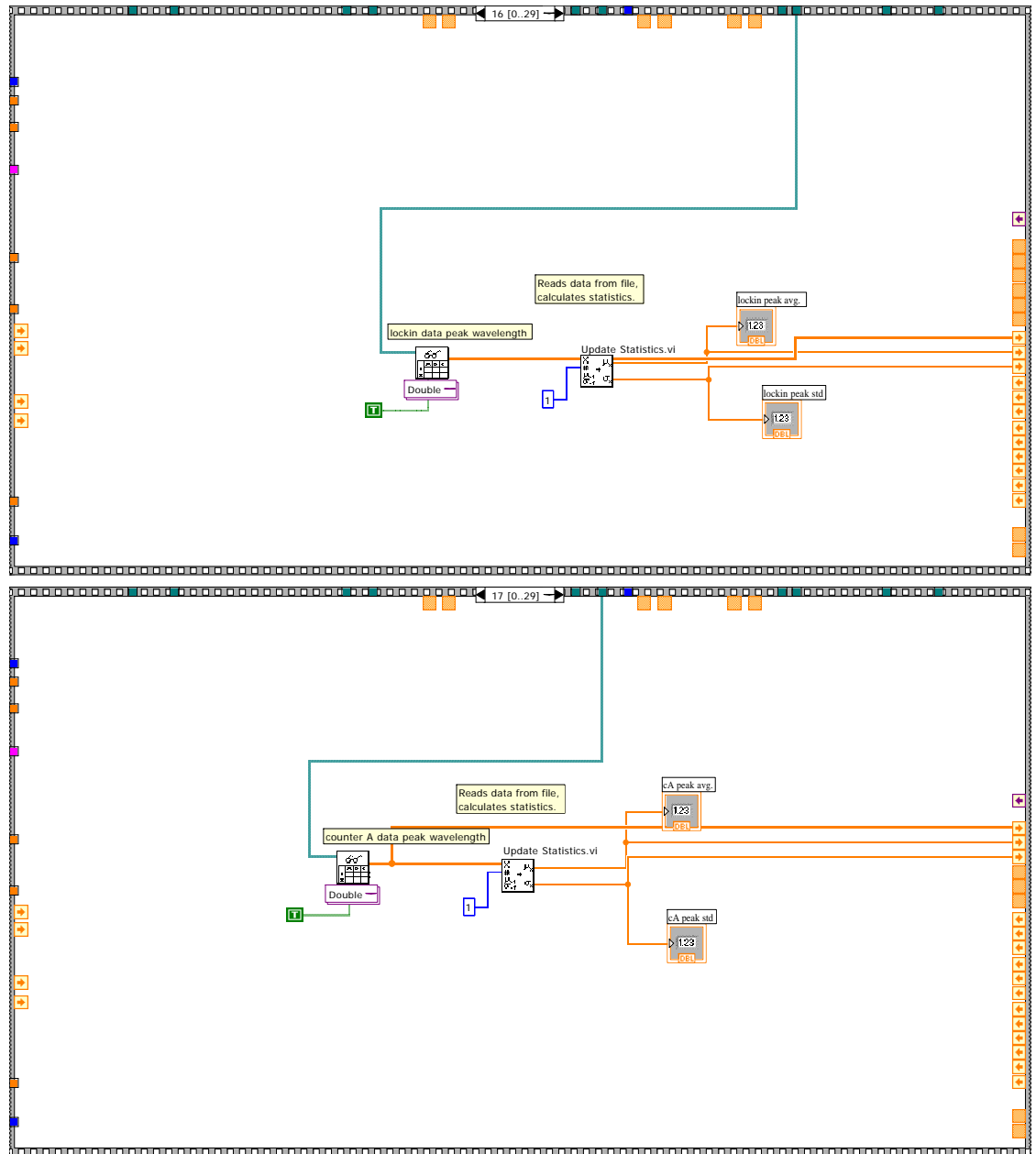
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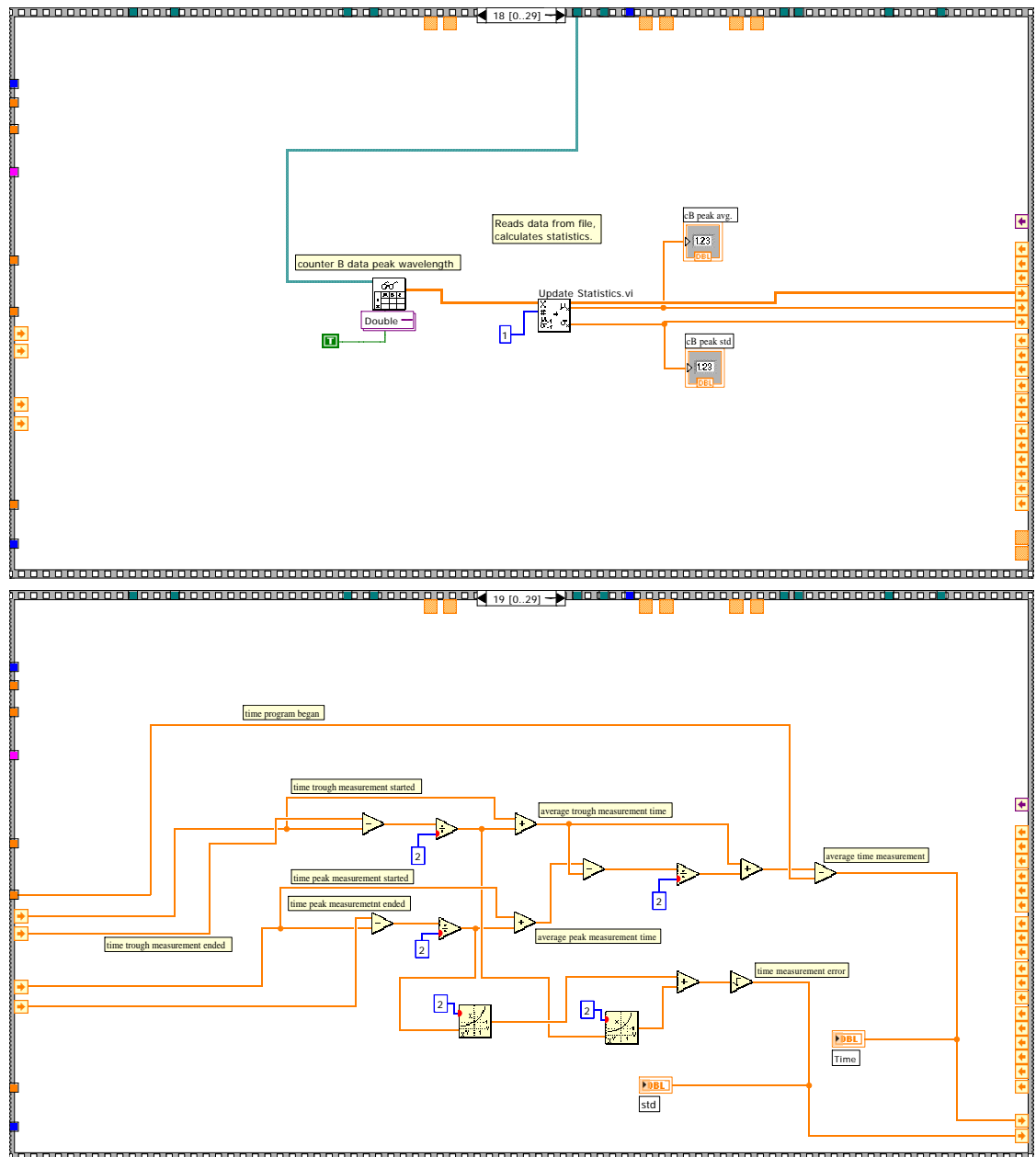
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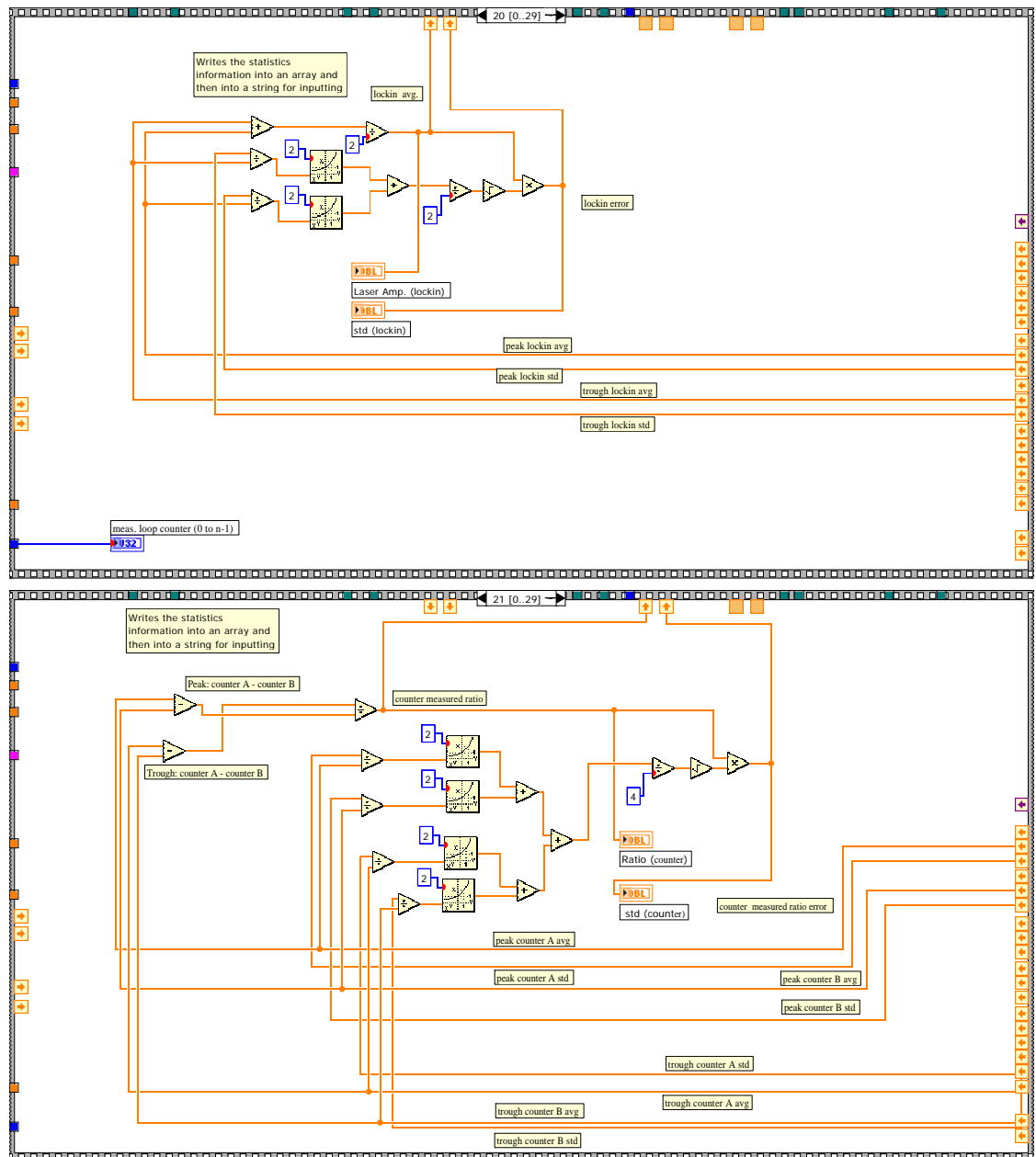
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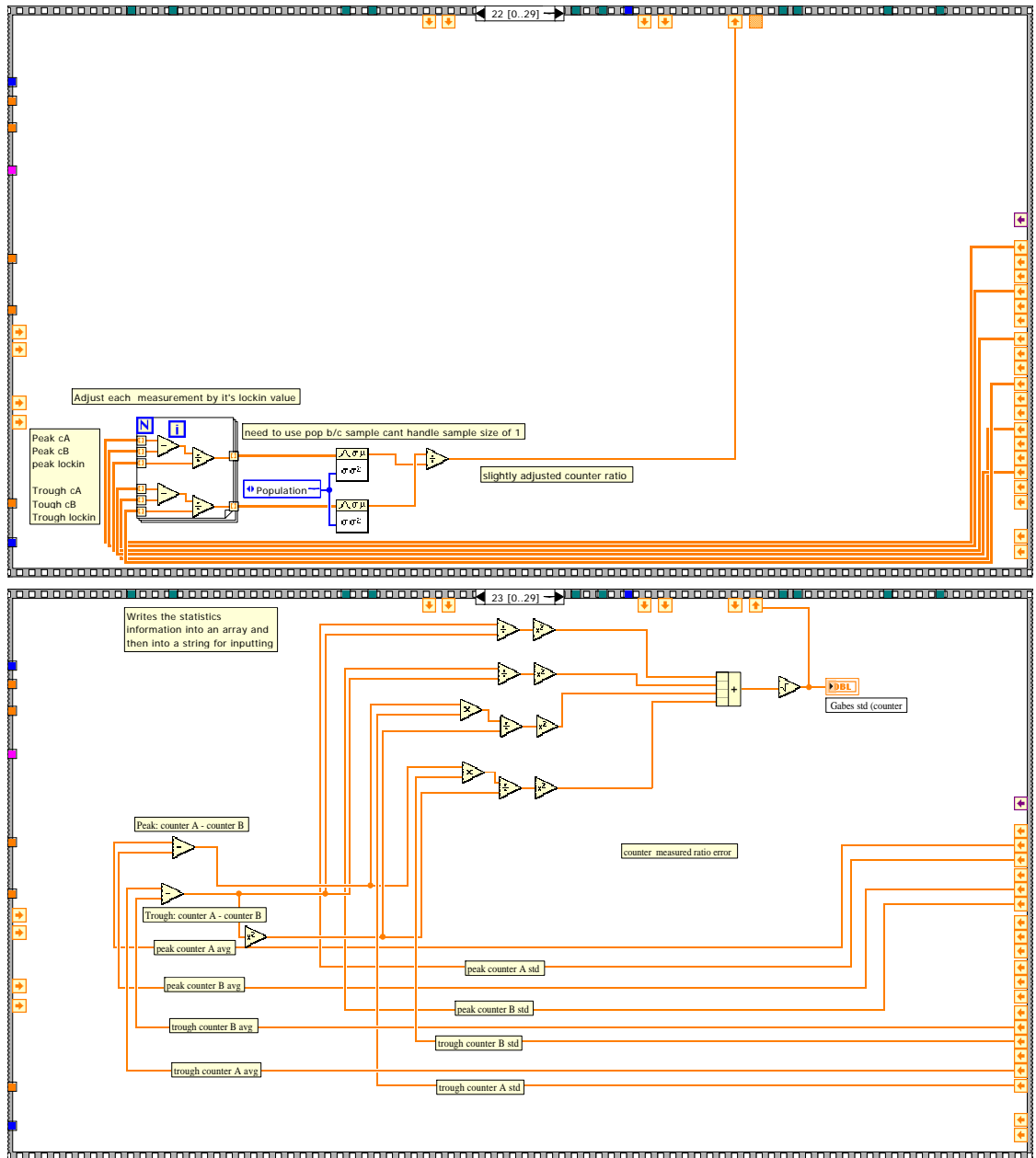
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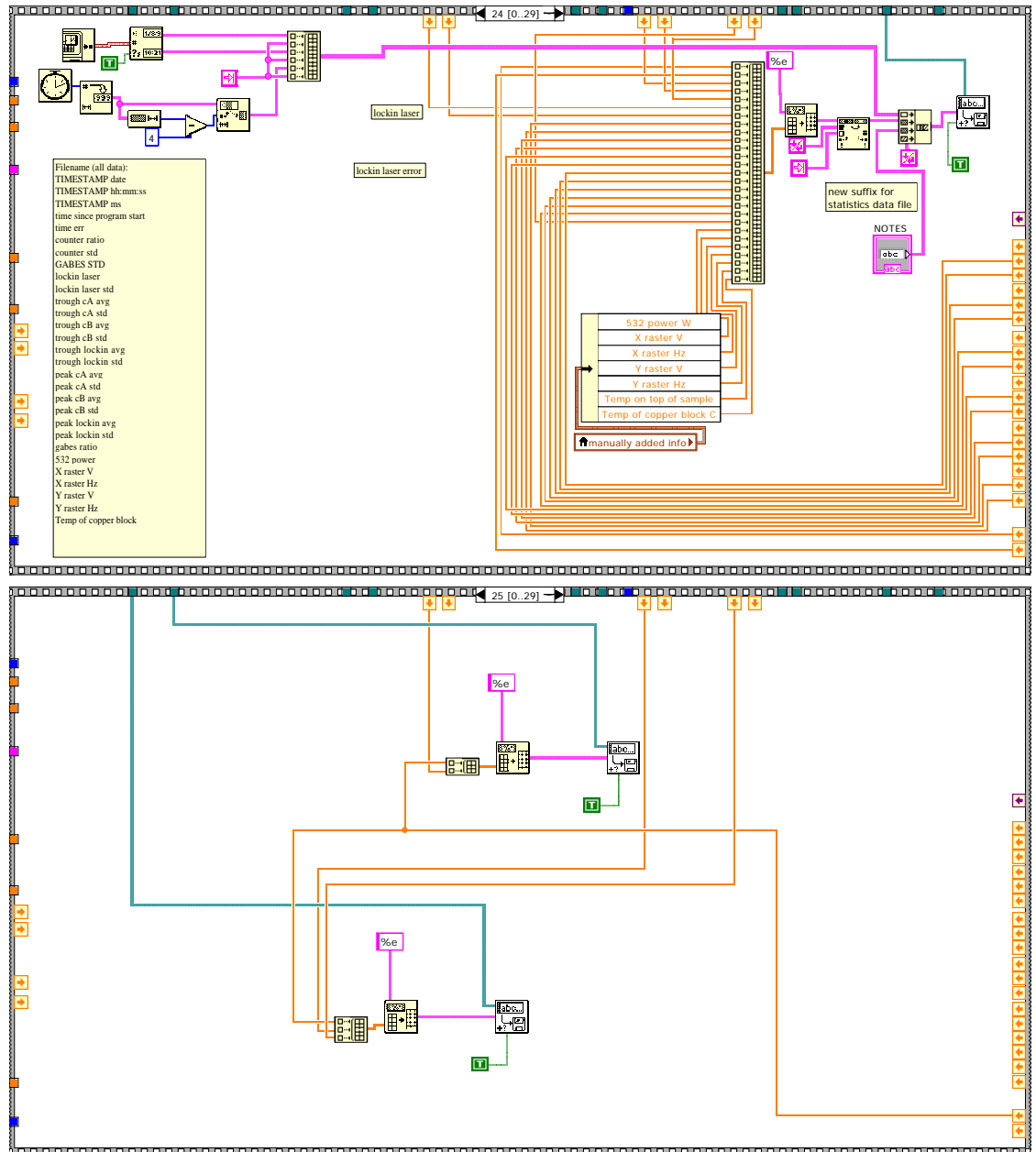
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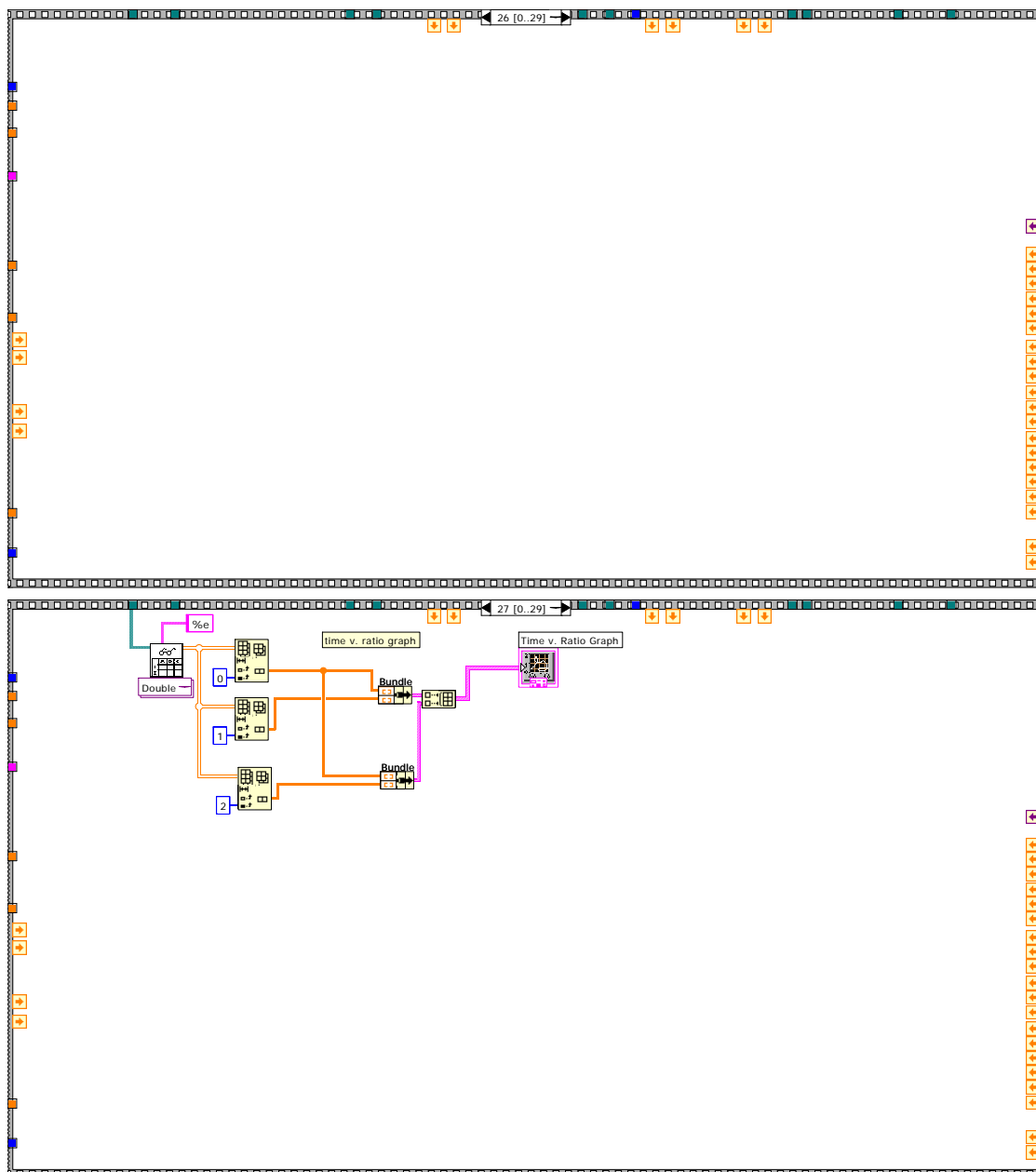
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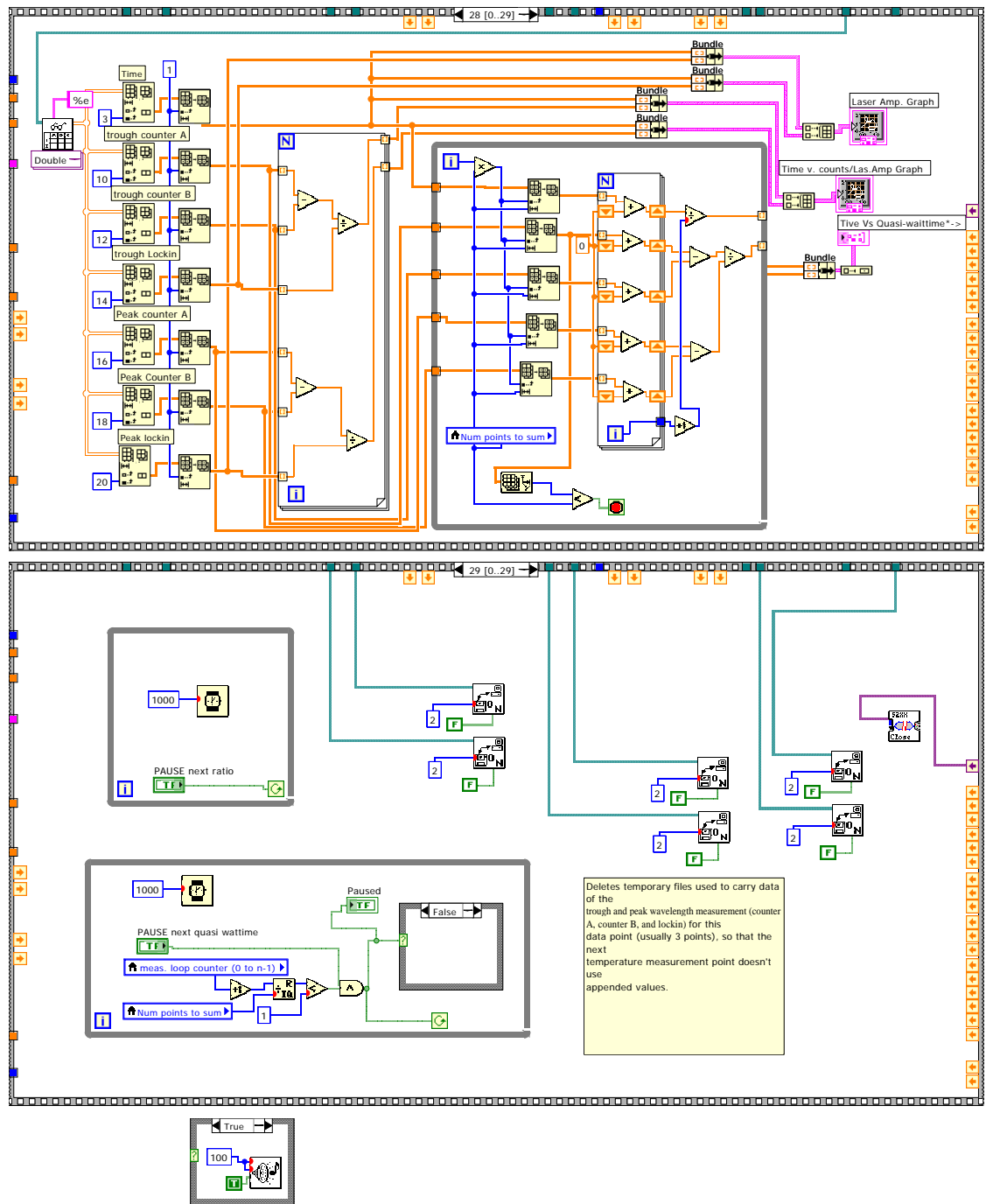
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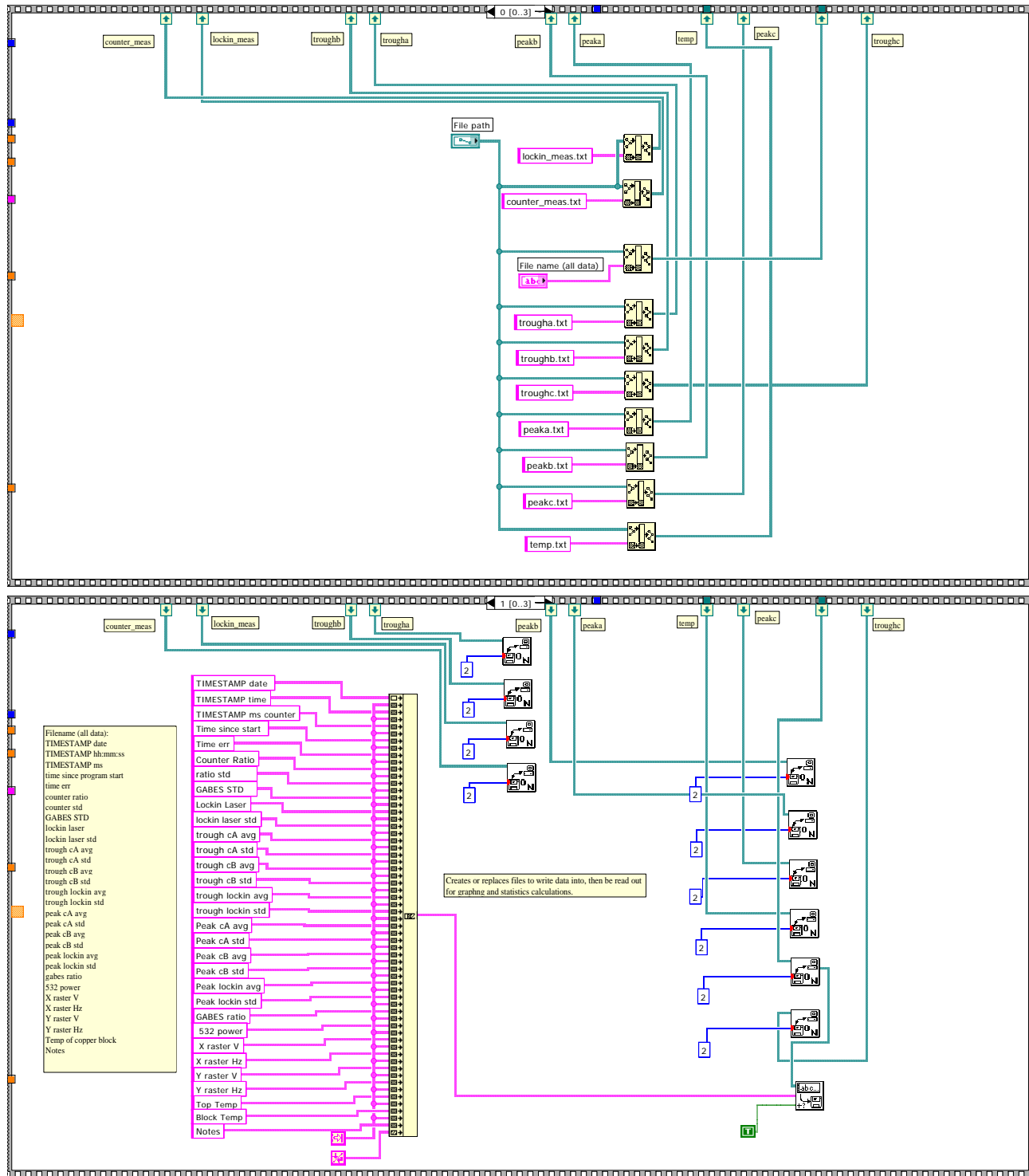
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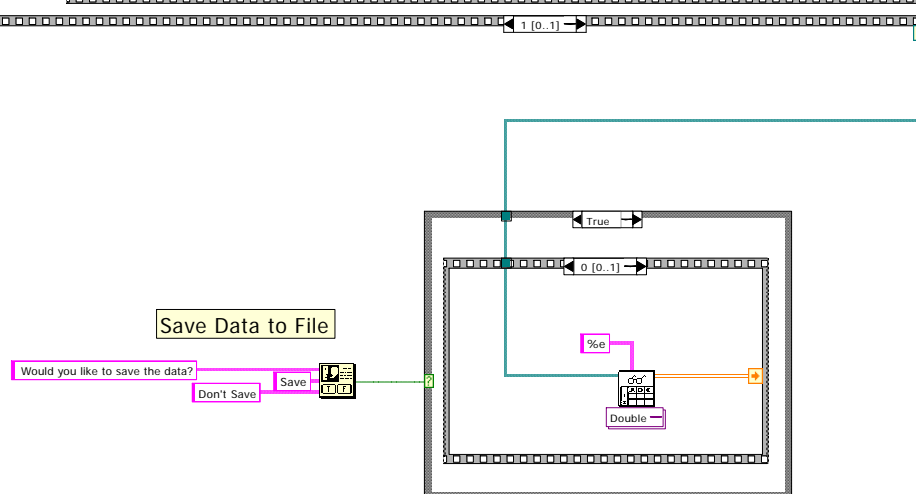
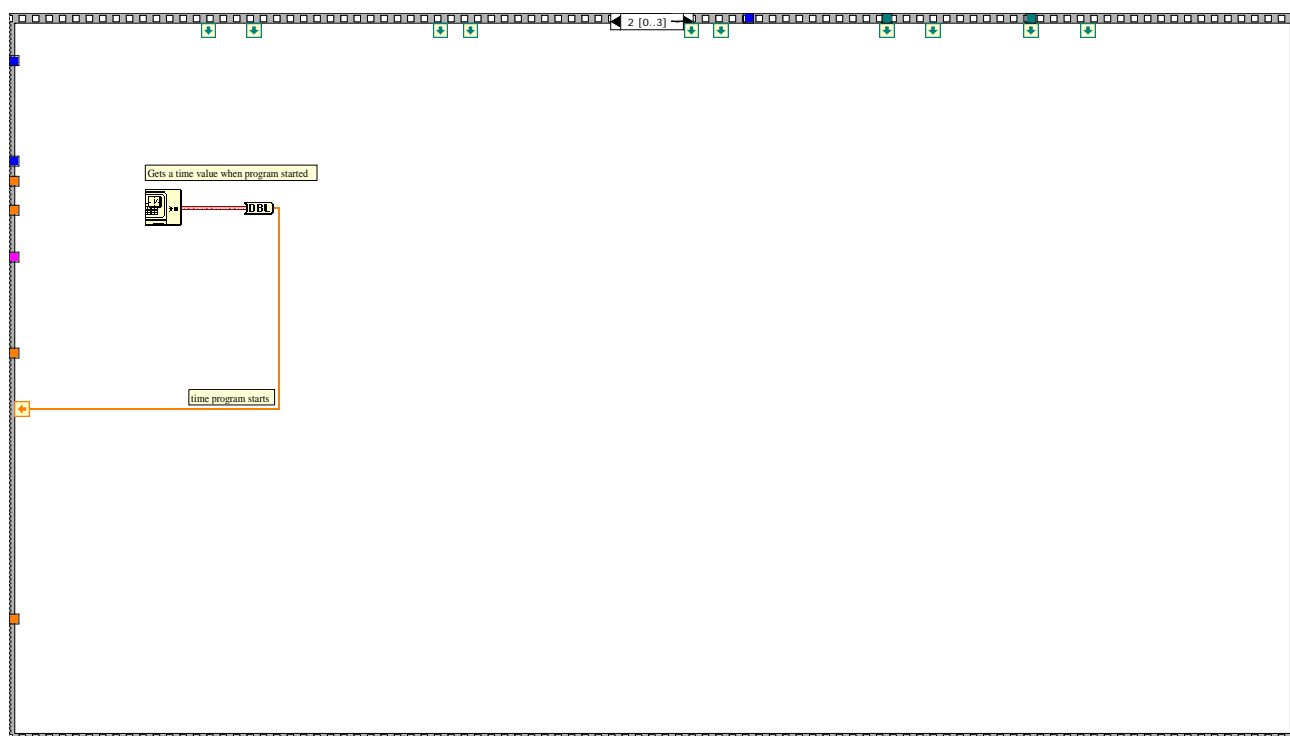
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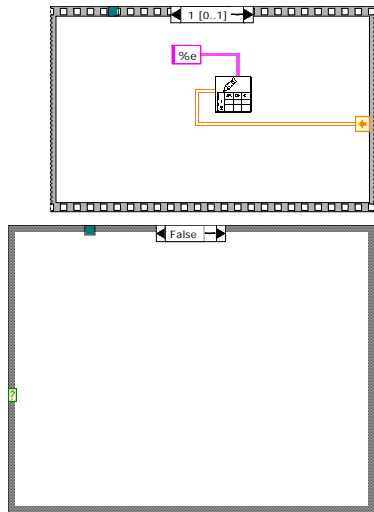


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Time Delay6

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay5

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay4

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



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Time Delay3

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay2

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay18

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay17

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



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Time Delay16

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay15

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay14

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s



Time Delay13

Time Delay

Inserts a time delay in the Express VI.

This Express VI is configured as follows:

Delay Time: 0.05 s