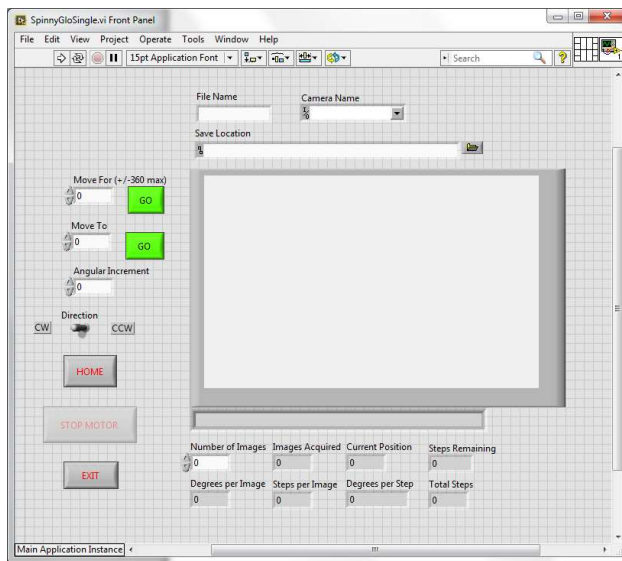## *How To: Rotating Using LabVIEW*

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This manual explains how to use the LabVIEW interface to rotate the heart and acquire images for geometry reconstruction.
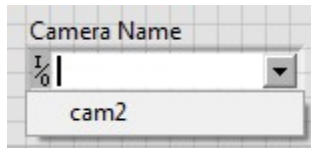
Launching the Interface

Before opening the program, be sure that your camera is plugged in and on.

Open LabVIEW and launch SpinnyGloSingle.vi. You should get this window:

Setting Initial Parameters

Before you run the program, you need to set the camera name. Use the dropdown to select the camera you are using.
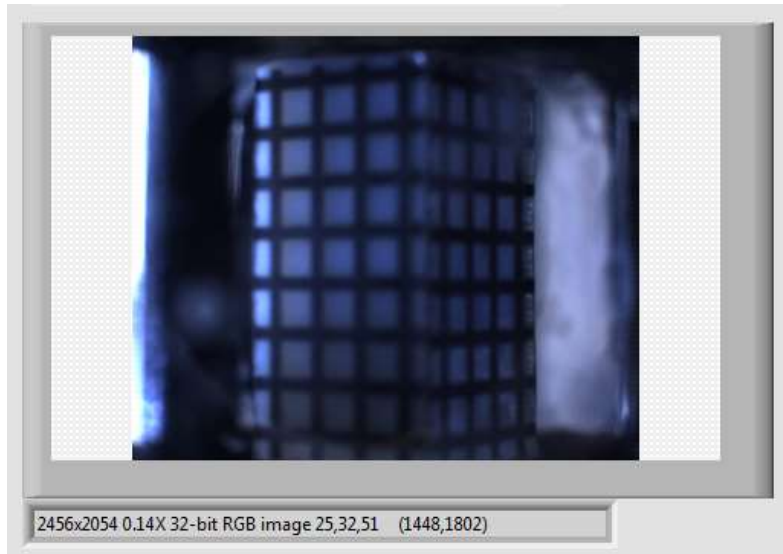

If nothing shows up in the dropdown, be sure that your camera is plugged in and is on. Then re-open the program.

Now run the program by clicking the right arrow at the top.
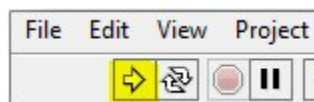
You should be able to see a live feed of your camera.

2456x2054 0.14X 32-bit RGB image 25,32,51   (1448,1802)

Disclaimer: The images might be flipped vertically. You can manually flip the images after collection. Select all the flipped images and right-click. Click 'Rotate Clockwise'. Repeat the process again to do a complete flip.
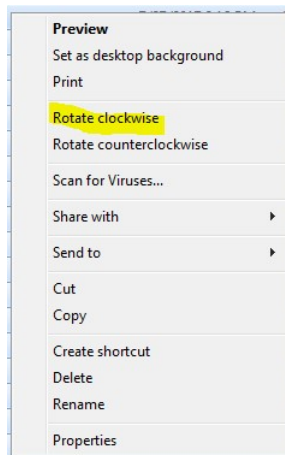
Type in a file tag in the 'File Name' box. The files will be named '*Your_Tag_Name*1.tiff', '*Your_Tag_Name*2.tiff', '*Your_Tag_Name*3.tiff', etc.
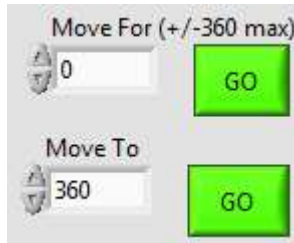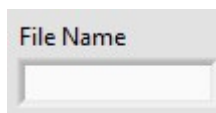

Click the folder icon to select the location where you want the images to be saved.
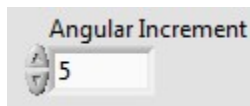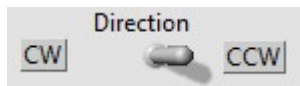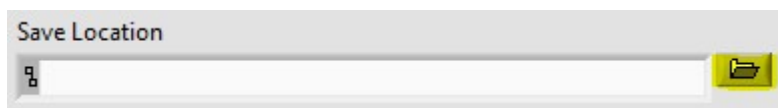
Setting Angles and Number of Images

Set the 'Move For' angle to be your starting position. Usually this value is 0. Set the 'Move To' angle to be your ending position. To rotate 360°, set this value to 360.
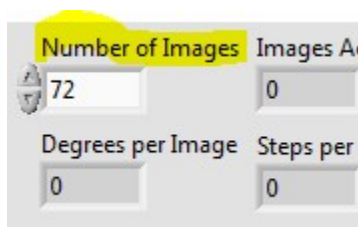
The 'Angular Increment' value determines how often you want images to be taken. For 72 images, we set this value to be $360/72 = 5$.

Choose the direction of rotation to be counter-clockwise. You can change the direction by clicking on the pointer.

Type in the number of images you want to collect in the 'Number of Images' box. Using a 5° step, this value should be 72.

Starting the Rotation

Once you have inputted all the necessary parameters, hit the bottom 'GO' button next to the 'Move To' box.

The bottom boxes will get calculated and stay constant throughout the rotation. The top boxes (except for 'Number of Images') will be updated to reflect the progress of the rotation.

Number of Images	Images Acquired	Current Position	Steps Remaining
72	7	32.51	58296

Degrees per Image	Steps per Image	Degrees per Step	Total Steps
5	890	0.00561798	64080

Be sure to check the images and ensure that the rotation was successful. If not, make sure nothing is slowing the rotation stage down and try again.

If you have any questions, found any issues, or have new ideas, email sgupta2020@gwu.edu.