




Lab 6 – Video Analysis Tutorial


1. Open Video:

- Click “insert” on the tool bar select “movie...” and find the desired file


2. Prepare for video analysis:

- Click  This will **open the video analysis task bar**.
- Press  to **set the scale**: Click and drag the length of the scale/known length. Once you release, a dialog box will open, enter the measurement value and units. Click OK.
- Click on  Click where you'd like to **place the origin** of your axis
 - If misplaced, just drag and drop at the desired location
 - If you need to change the orientation/angle of the axis, click and drag the yellow circle on the x-axis
 - Use this button whenever you'd like to reposition your axis

3. Collect data points for the 1st ball:

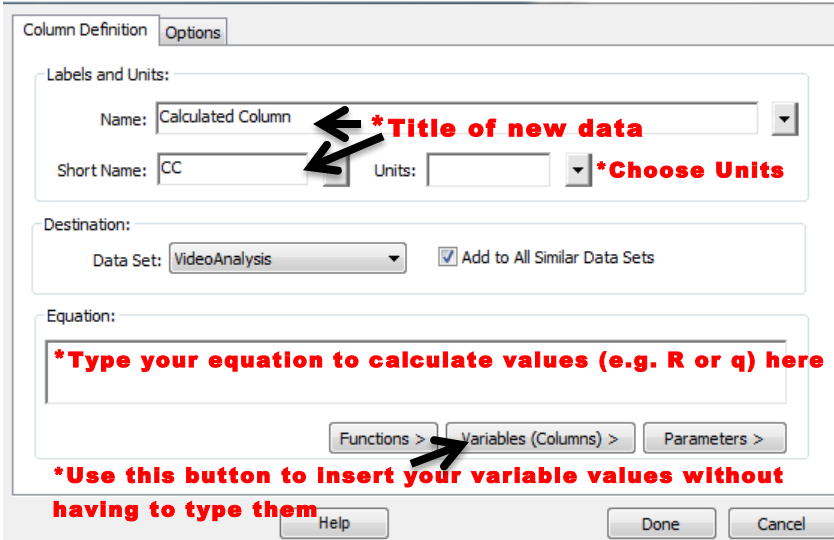
- Advance 1 frame (so that the “introductory data” is not obscuring your view)
- Click  to **collect data points**
- Click on the center of the ball (exact same location)
- With each click the video will advance one frame, click the point’s new position each time until the video is finished or a large enough data set is collected

4. Collect data points for the 2nd ball:

- Click  on the video analysis task bar
- Click “Add Point Series” to **create a new video analysis data set**
- Repeat data collection procedure outlined above (3) but for the 2nd ball (click its center each time)

5. To add a new column (i.e. for charge):

- Click on “data” on the tool bar
- Click “New Calculated Column, A dialog box will appear:



The screenshot shows the "Column Definition" dialog box with the "Options" tab selected. The "Labels and Units" section has "Name: Calculated Column" and "Short Name: CC". The "Units" field is empty. The "Destination" section has "Data Set: VideoAnalysis" and a checked "Add to All Similar Data Sets" box. The "Equation" section is empty. Red annotations with arrows point to the "Name" field (*Title of new data), the "Units" field (*Choose Units), and the "Variables (Columns)" button (*Use this button to insert your variable values without having to type them).

Column Definition Options

Labels and Units:

Name: Calculated Column ***Title of new data**

Short Name: CC Units: ***Choose Units**

Destination:

Data Set: VideoAnalysis Add to All Similar Data Sets

Equation:

***Type your equation to calculate values (e.g. R or q) here**

Functions > Variables (Columns) > Parameters >

***Use this button to insert your variable values without having to type them**

Help Done Cancel

- c. Click "Done" to calculate the desired values and make new column for them on the data table

6. **To add a new graph:**

- a. Click Insert -> Graph
- b. A graph will appear
- c. **To change axis data:** left click on the desired axis and select the desired data set to be shown, from the drop down menu
- d. **To change axis number value range:** left click on the number value at the end of the axis which you would like to change (e.g. "0" on the x-axis if you want to change the start of the graph to another value) the number will change into a text box, type in you desired start or start number.