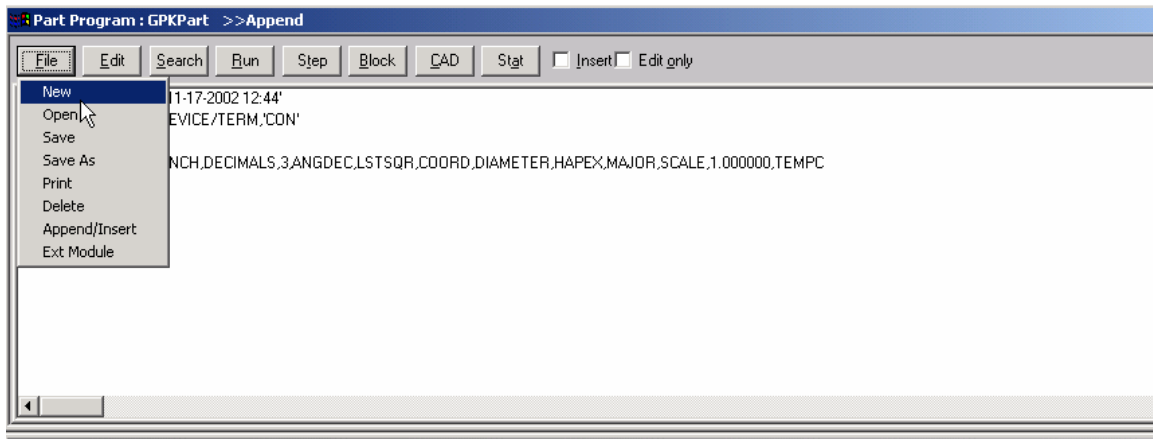


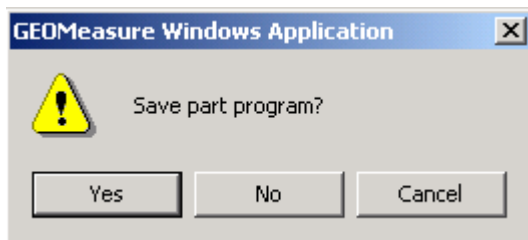
Manual Probe Calibration

The purpose of calibration is to tell the CMM the size of the stylus you are using and the location of the center of the stylus in the different rotation angles you may use. The software subtracts the radius of the stylus from the measurements in a process called probe compensation. The following exercise is a macro routine that will prompt you through the process. You will be generating a program as you complete these steps. In the future, to calibrate, you will just need to run this program

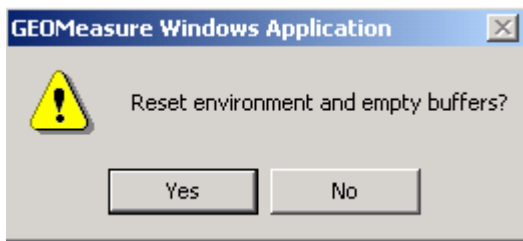
Step 1: From the **Part program** window select **File** and then select **New**.



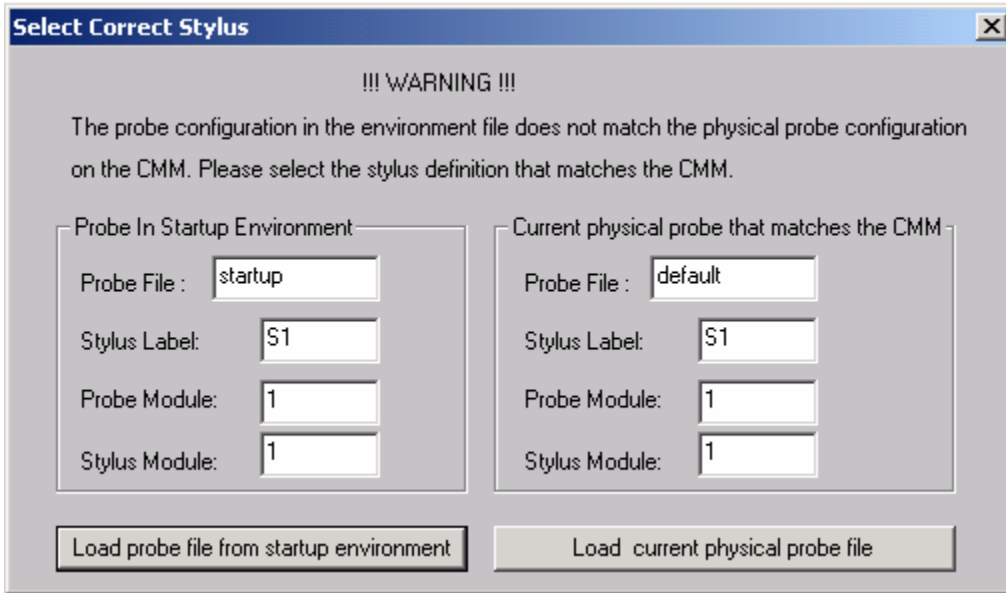
Step 2: When prompted to save the part program, select **No**.



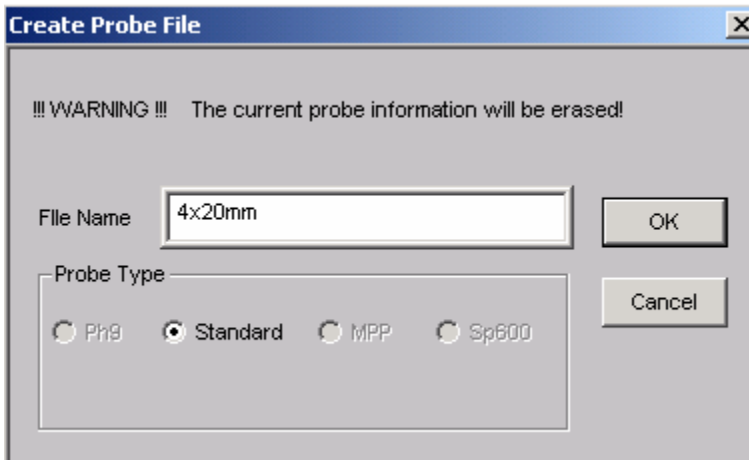
Step 3: When prompted to Reset environment and empty buffers select **Yes**. This is very important because the computer will load the Startup environment file and clear the output window for your new results.



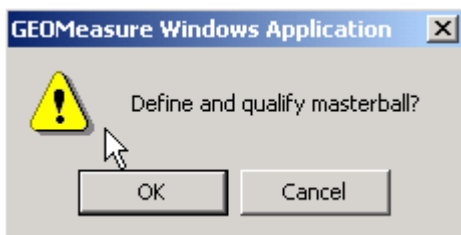
Step 4: If the **Select Correct Stylus** screen appears, simply click on the **X** in the top right hand corner of this box.



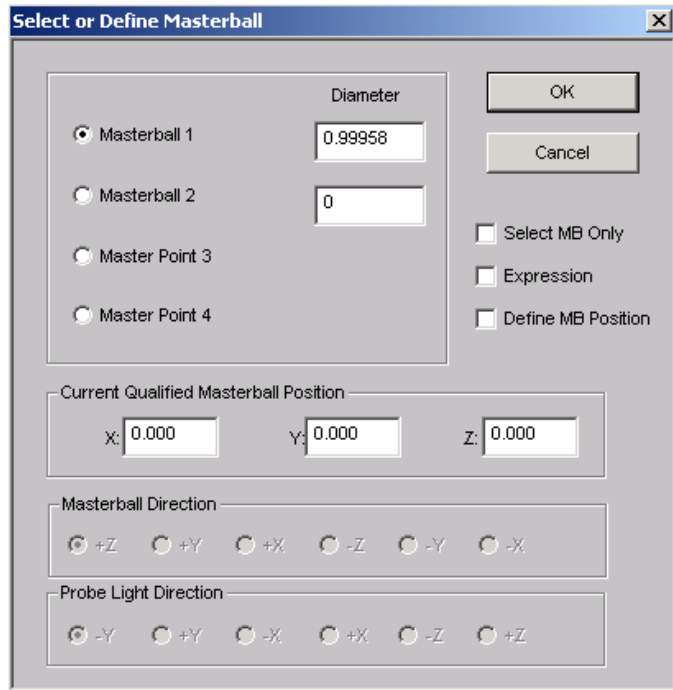
Step 5: From the **Prb** pull down select **Create Probe File**. You need to give a name to the probe file you are creating, I recommend describing the stylus by the diameter and length as shown here.



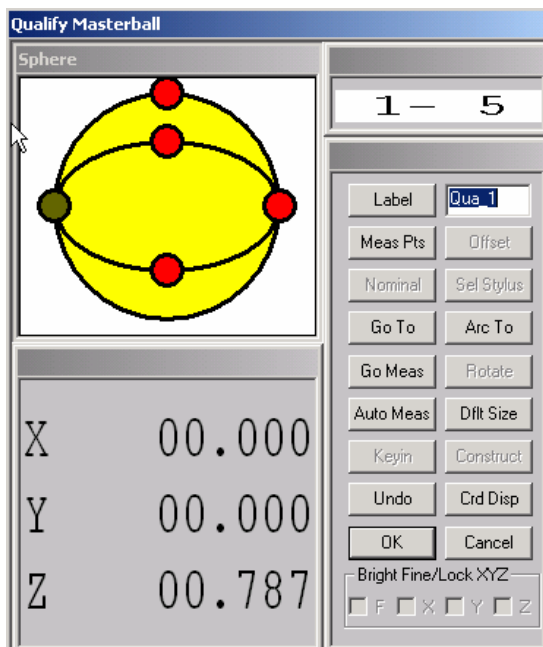
Step 6: When prompted to **Define and Qualify Masterball** select **Ok**.



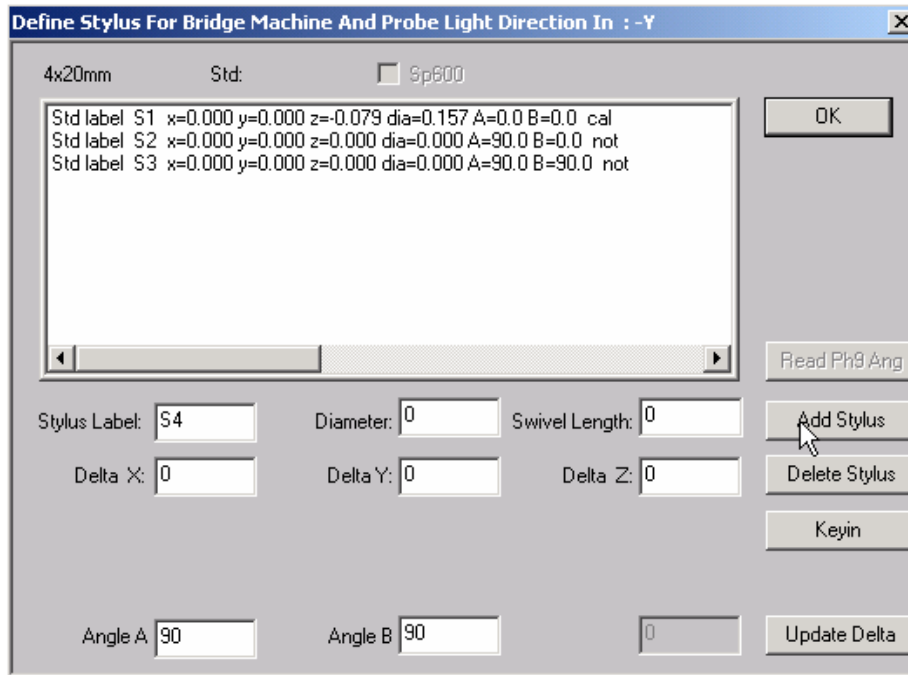
Step 7: Enter the size of the master ball as shown here. The size of the master ball is scribed in the side of the master ball shaft. If you have an older master ball, which would be black with a silver ball, you need to enter 1 inch.



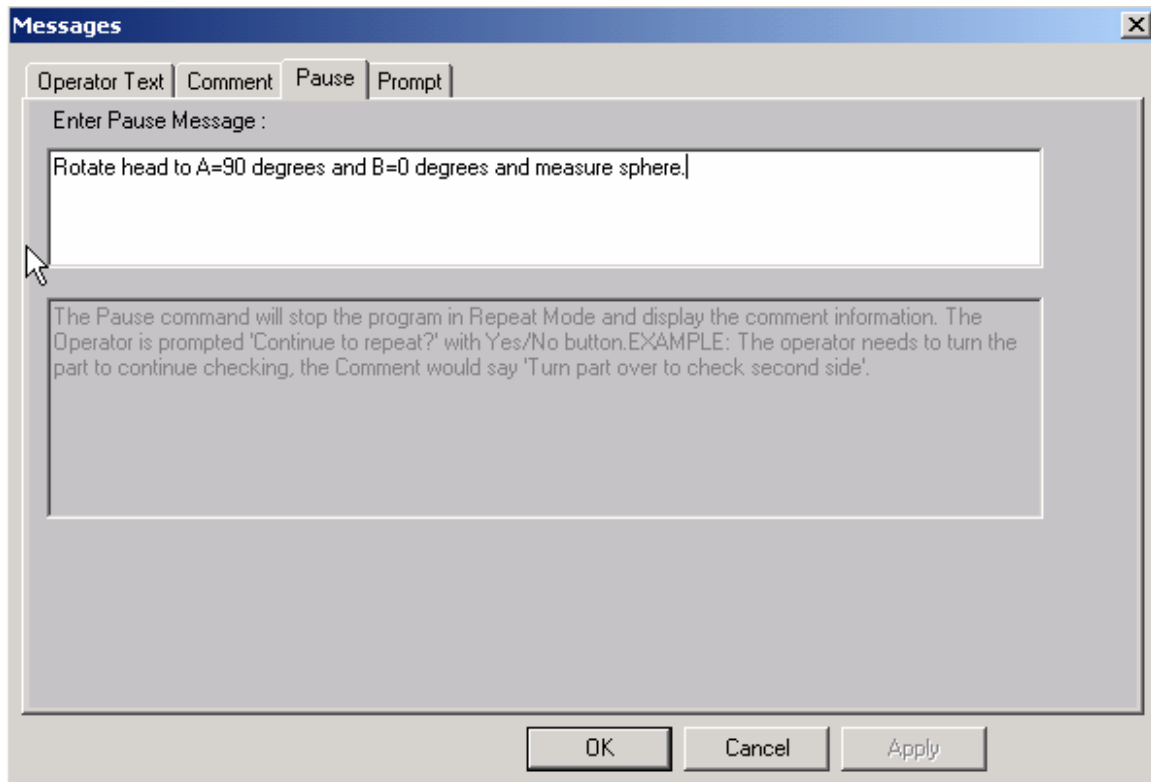
Step 8: Measure the sphere.



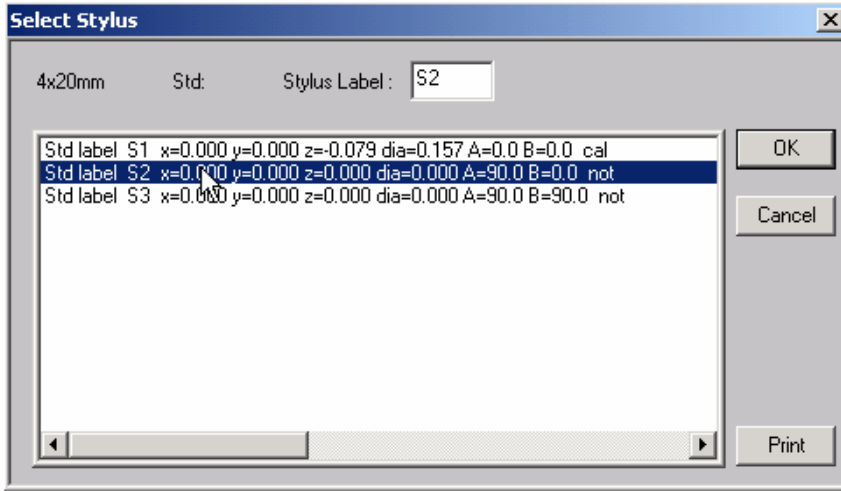
Step 9: From the **Prb** pull down select **Define Stylus**. You need to define any additional probe rotations. I have defined three rotations as shown here.



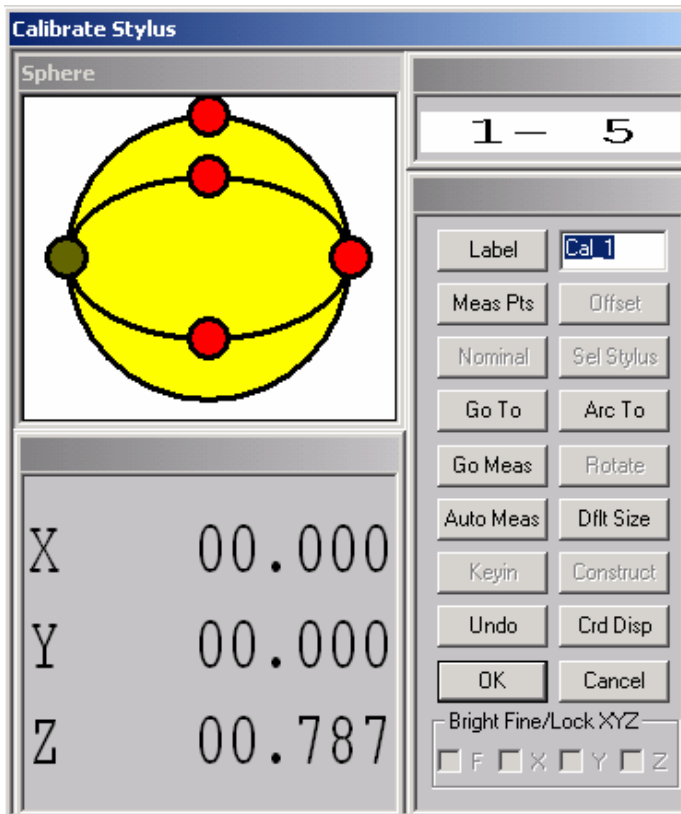
Step 10: From the pull down **Flow** select **Messages** and then select **Pause**. Notice I gave the operator a message telling them exactly what to do. It is important that you use notes.



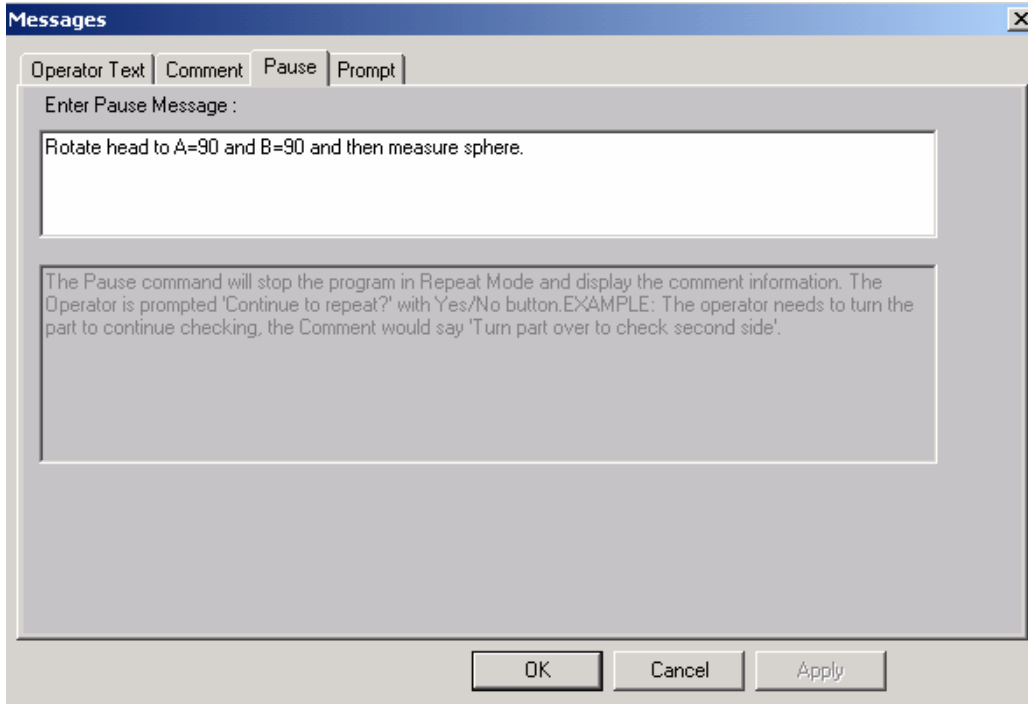
Step 11: From the **Prb** pull down select **Calibrate Stylus**. Select the stylus to calibrate and click ok.



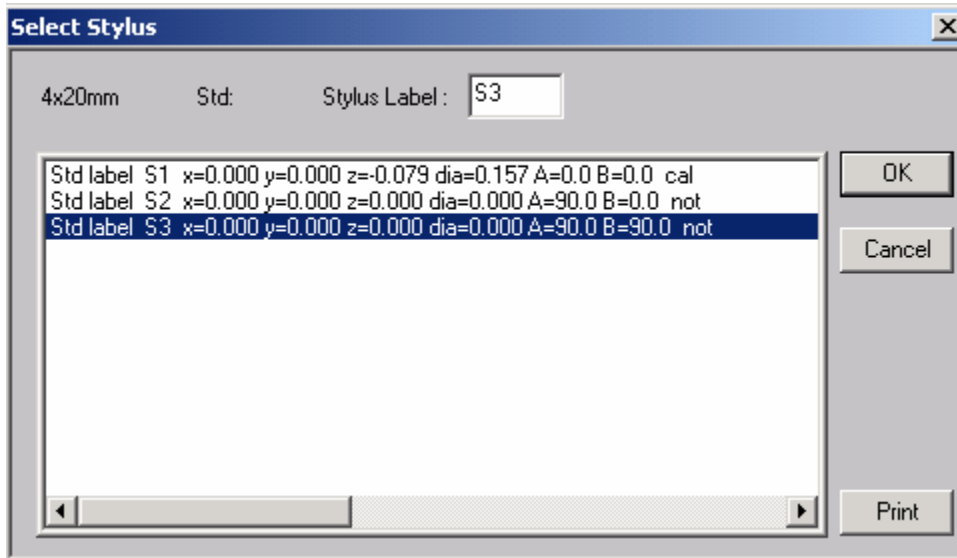
Step 12: Once you have rotated the head, measure the sphere.



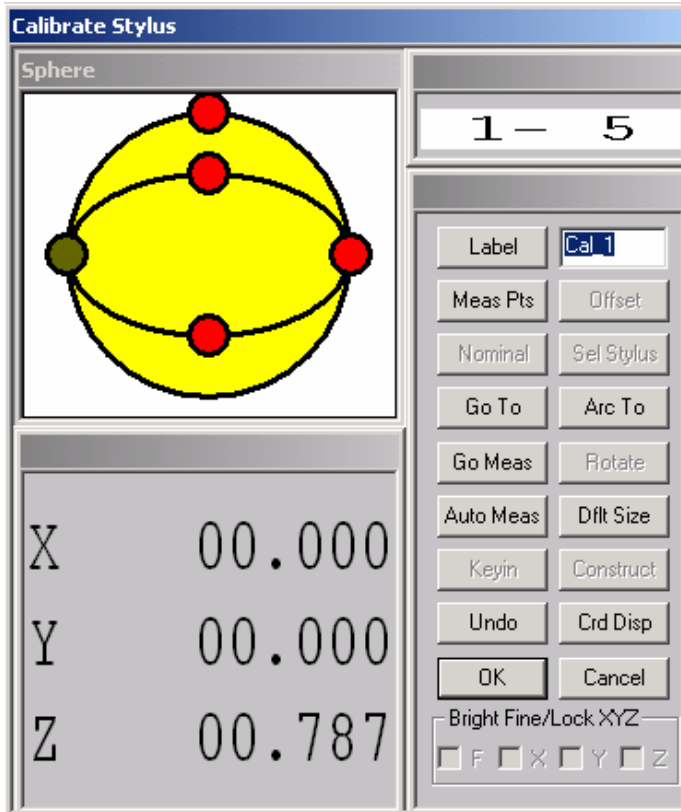
Step 13: From the pull down **Flow** select **Messages** and then select **Pause**.



Step 14: From the **Prb** pull down select **Calibrate Stylus**. Select the next stylus to calibrate and click ok.

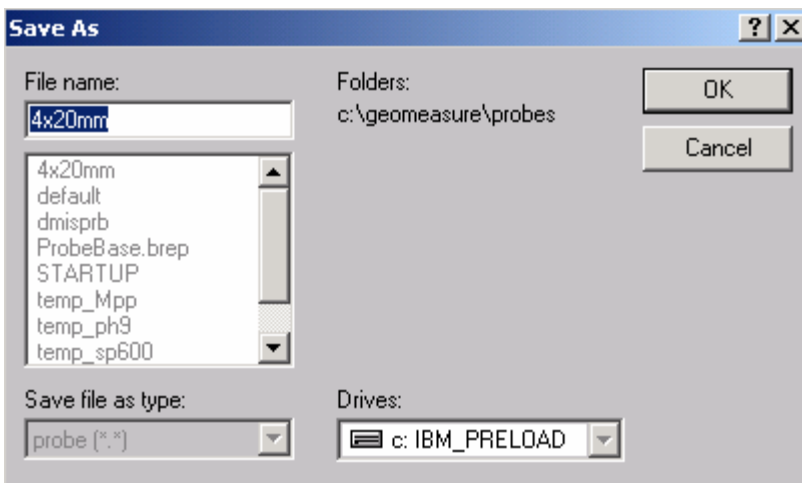


Step 15: Once you have rotated the head, measure the sphere.

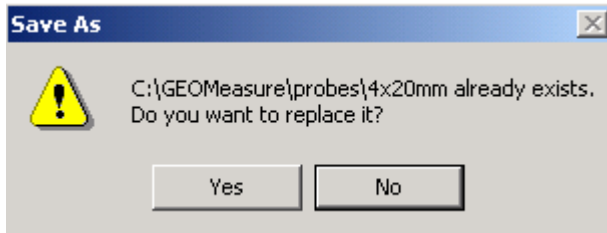


The last three steps in this process are the three most important, if you do not do these, everything you've done so far is useless.

Step 16: From the **Prb** pull down select **Save as** and then select 4x20mm. It will ask to replace the file, select **Ok**.



Step 17: It will ask to replace the file, select **Yes**.



Step 18: From the **Part Program Window** select **File** and **Save as** and call the program the same name as the probe file. The name will be 4x20mm.

