CMM Measurement Plan at LBL

Introduction

These are some notes on the goals and tasks associated with the Survey of the Pixel detector and related support hardware like the prototype fixture.

Goals

The goals are:
1. Test-drive and machine and measure actual resolutions
2. Become familiar with the output. Prepare code to manipulate it and transform it to a 'standard' format (common to all subsystems)
3. Survey the *Prototype Fixture* and enter it into the Database
4. Build and Survey a prototype Pixel *Sector*. Depending on result decide on best Db-representation scheme. Decide on data density/volume per sector. Assess possible variations until Shell is installed *in-situ* due to transportation/handling.

Measurements

In order to achieve the above goals the following measurements are proposed to be performed at LBL some time soon. Please feel free to comment.
1. Survey a flat Silicon disk (300 or 50 um) with the Camera and with the Touch Probe when available. This relates to goals 1) and 2) above.
2. Survey a couple of spherical and rectangular objects several times. This also relates to goals 1) and 2) above.
3. Survey the *Prototype Fixture.* Then, analyze the data and enter it in the Db.
4. Survey a prototype Pixel *Sector*. If possible, simulate transportation/installation stresses/fatigue and re-survey it. Compare outputs, estimate margins and enter the data in the Db