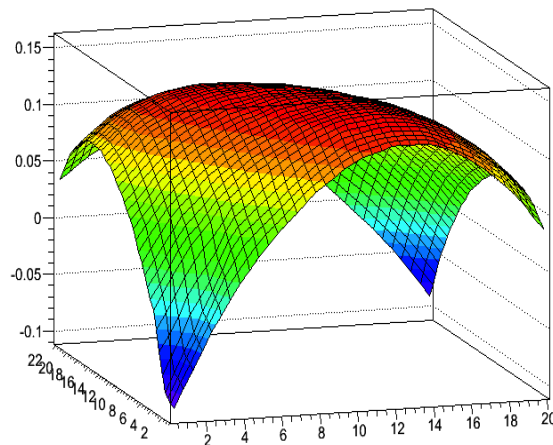
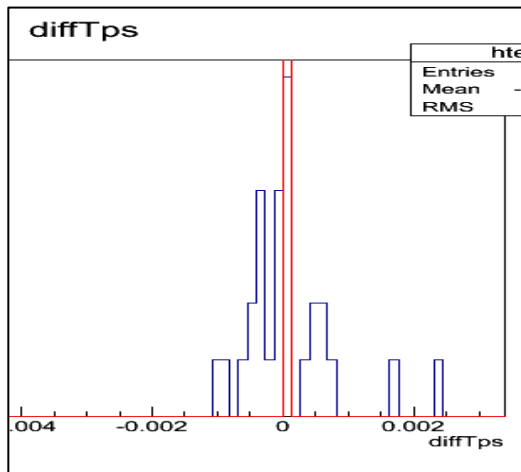


## WBS 1.6 Software

1. An internal review on PXL geometry was conducted on 3/9/2012. Valuable feedback was received and several action items were defined.
  - Work on modeling the SSD is moving ahead.
  - More timing tests were performed. They showed no noticeable difference between the full model and simplified cylinders.
2. Survey work has begun on the new CMM machine with single, thinned chip measurements (see figs below).
  - One can see the tendency of the chip to deform at the edges (right panel). The scale in both panels is in mm. One observes curving of free (unglued) chips of  $\pm 100$  microns or 0.1mm.
  - The fitting code achieves accuracies in representing the measured form of a couple microns. This is shown in the left panel that plots the distribution of residuals, ie difference between measured and predicted points. This accuracy was achieved with  $\sim 35$  measured points per chip. It takes about 5 seconds to complete a single point measurement.
  - Work has started to a) program the CMM equipment to automatically take the measurements of chips on ladders and b) analyze the data of 3 thinned sensors glued on a prototype ladder to see chip in-situ deviations from planarity.



3. Some initial work was done in estimating/defining possible physics goals (and beam requests [BUR]) during the engineering run-13. Full simulations are currently progressing so that detailed capabilities can be determined.

