



Gantry Report



***University of California
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UCSB Gantry Team:

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Russell Taylor (unfortunately he has gone back to London)

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Overview



- 1. Review module re-measure data on our 5 TOB assembly plates.***
- 2. Update on recently commissioned R5 & R6 assembly plates.***
- 3. Other miscellaneous items.***



TOB Module Re-Measurement



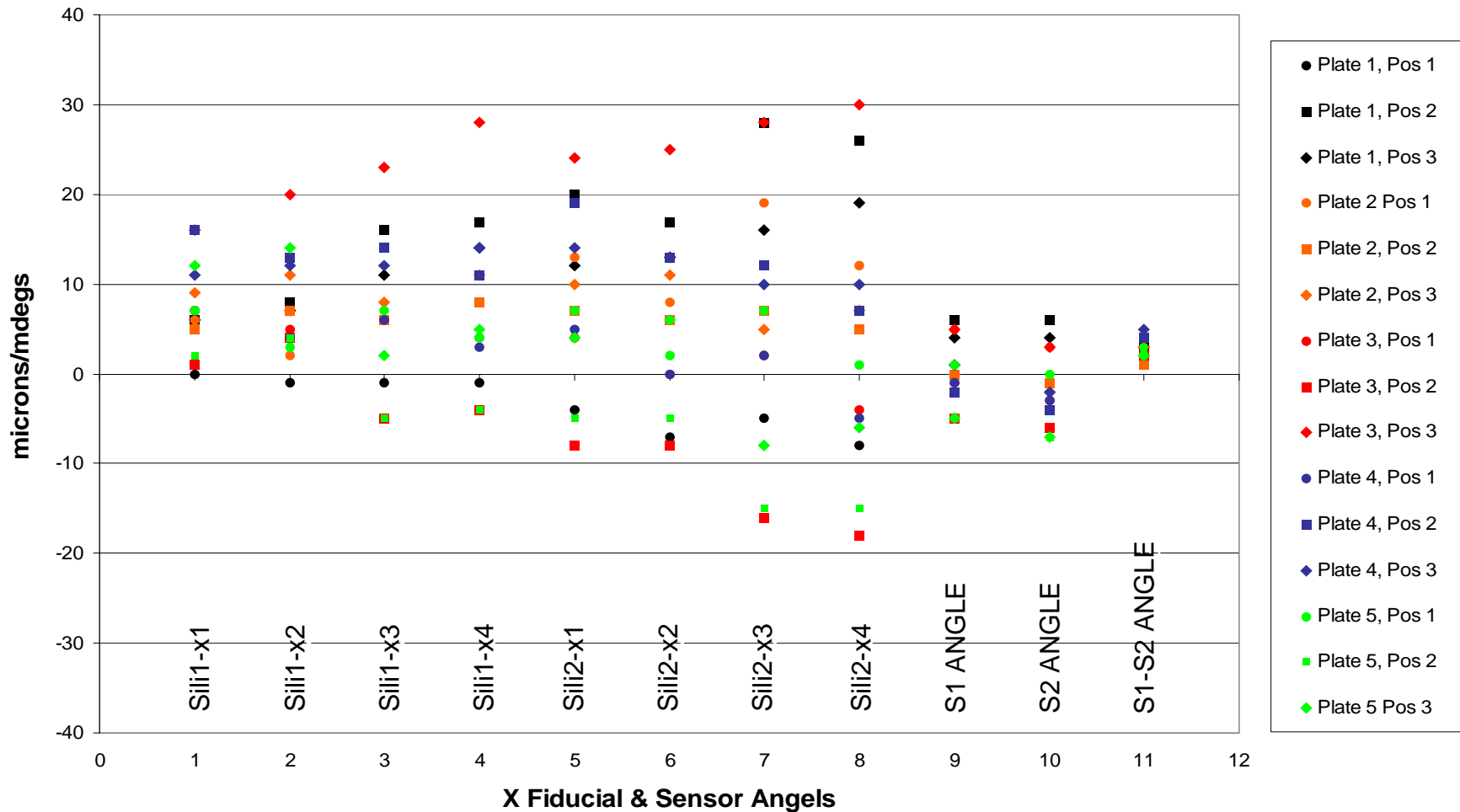
- ***As reported at the last Tracker meeting, we discovered a problem with the consistency of module measurements on in a couple positions on our 5 TOB assembly plates.***
- ***After replacing several damaged mounting pins and recessing them all as far as practical, we did a re-measure of 3 modules on all positions on the 5 TOB assembly plates.***
- ***The following charts show all the x axis values and the sensor angles (S1, S2, & delta S1/S2).***
- ***The original after-cure surveys for each of the 3 modules used showed the x values all within +/-6 um.***



Module 5160 Re-Measurement



Module 5160

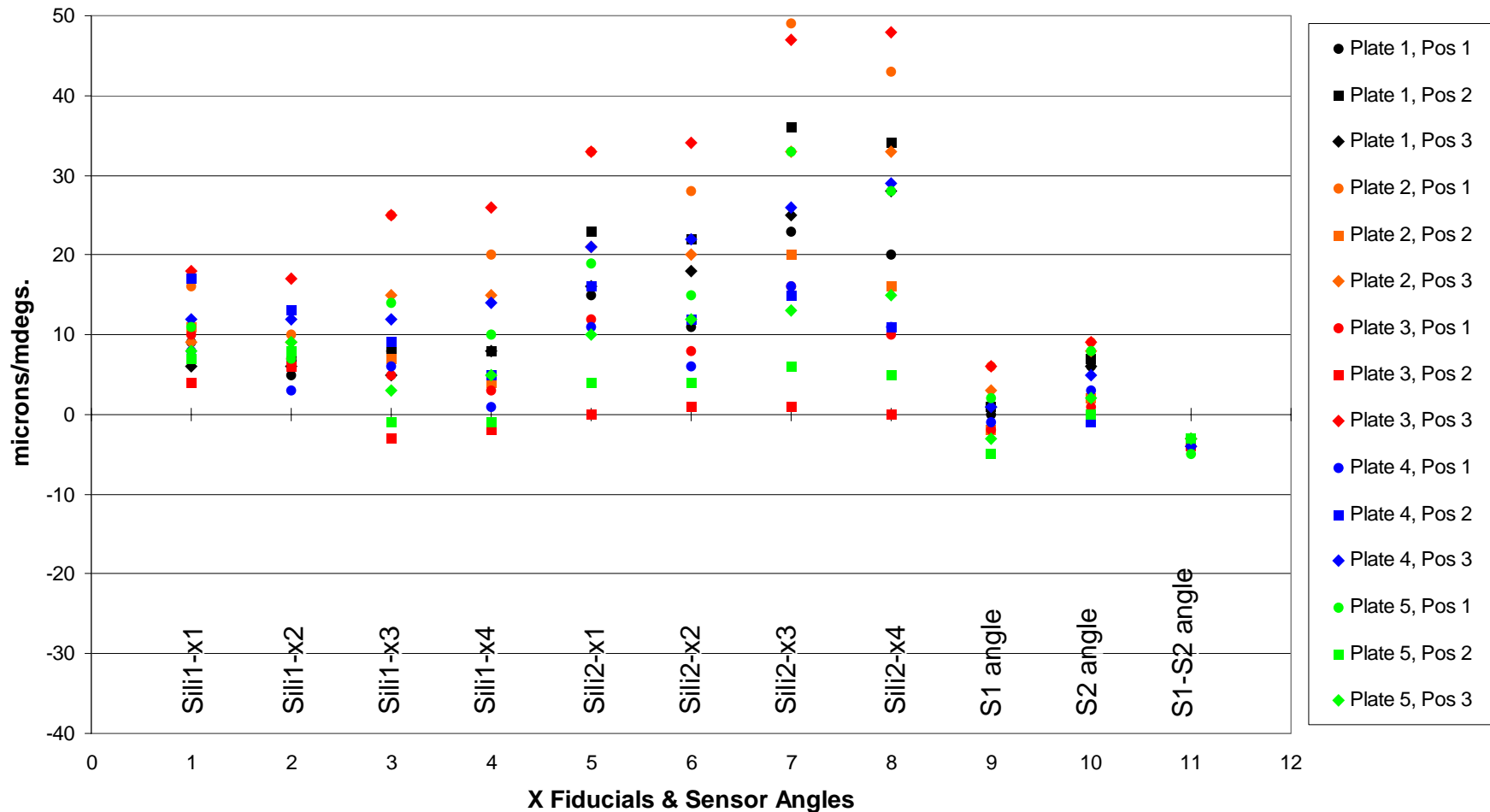




Module 5115 Re-Measurement



Module 5115

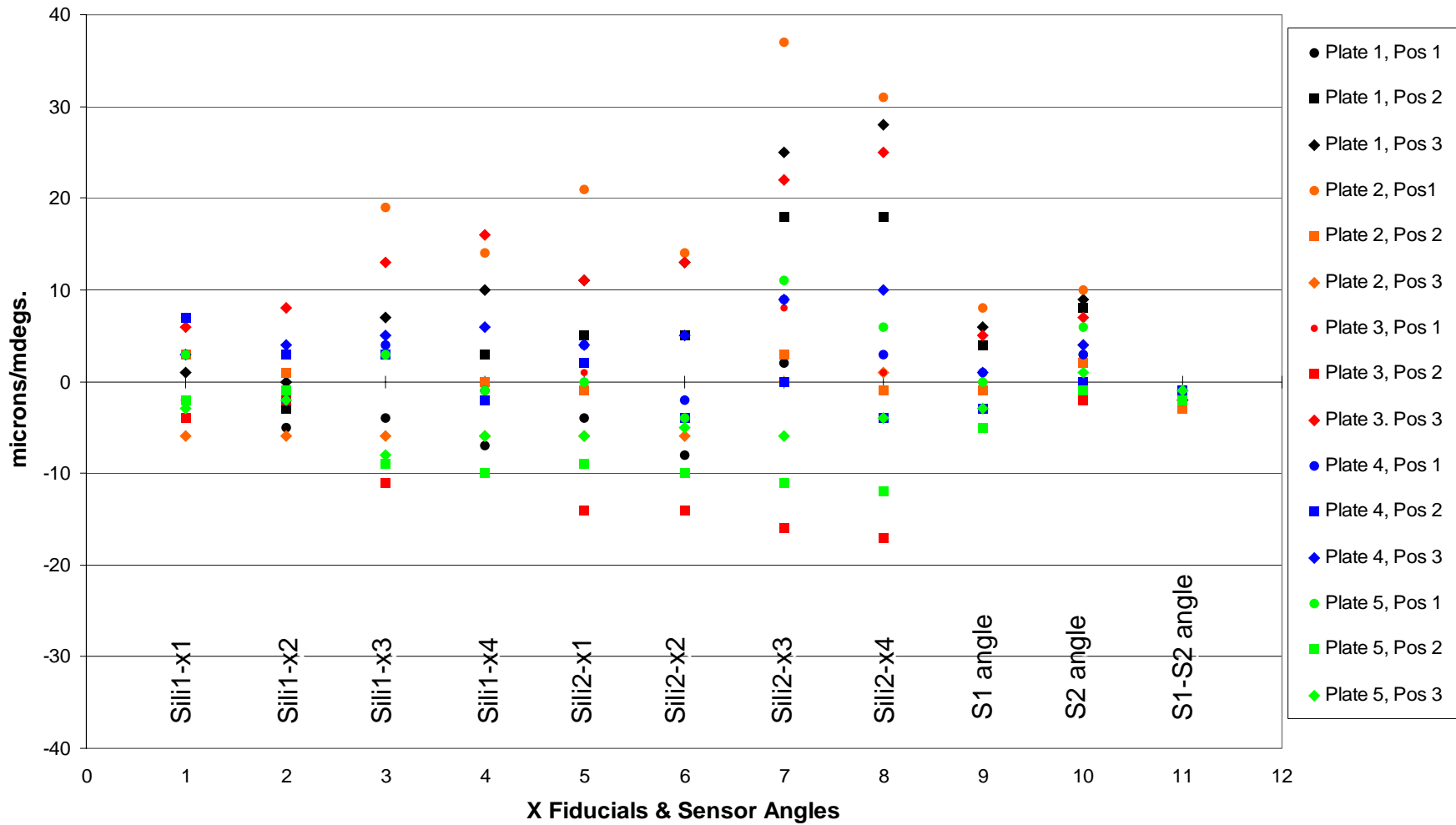




Module 5141 Re-Measurement



Module 5141





Module Re-Measurement Conclusions



- ***The Y axis values for the 3 modules all re-measured under 20 microns with the majority of the measurements being under 10 – looked fine.***
- ***For module 5115, the range of measurements is the same (~ +/- 25 microns) as the other two but they are shifted in the positive direction. This seems to be a characteristic of the module which was built before we reworked and re-measured all the pins on these plates.***
- ***As can be seen by this data the x axis accuracy when mounting the modules in rods at the end away from the pins could be up to +/- 25um larger than the module after-cure survey.***



Assembly Plate Status



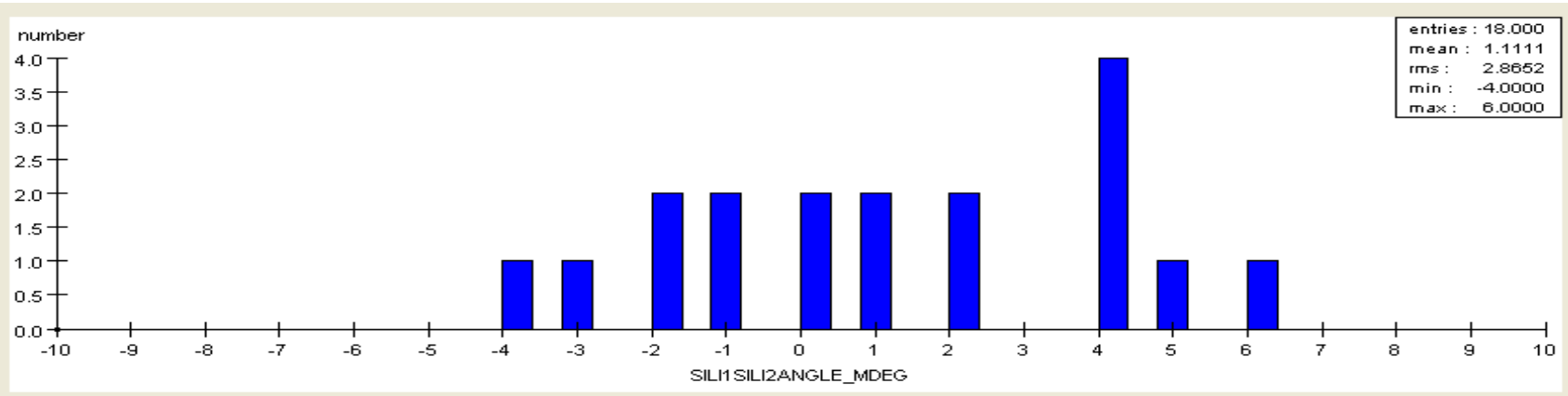
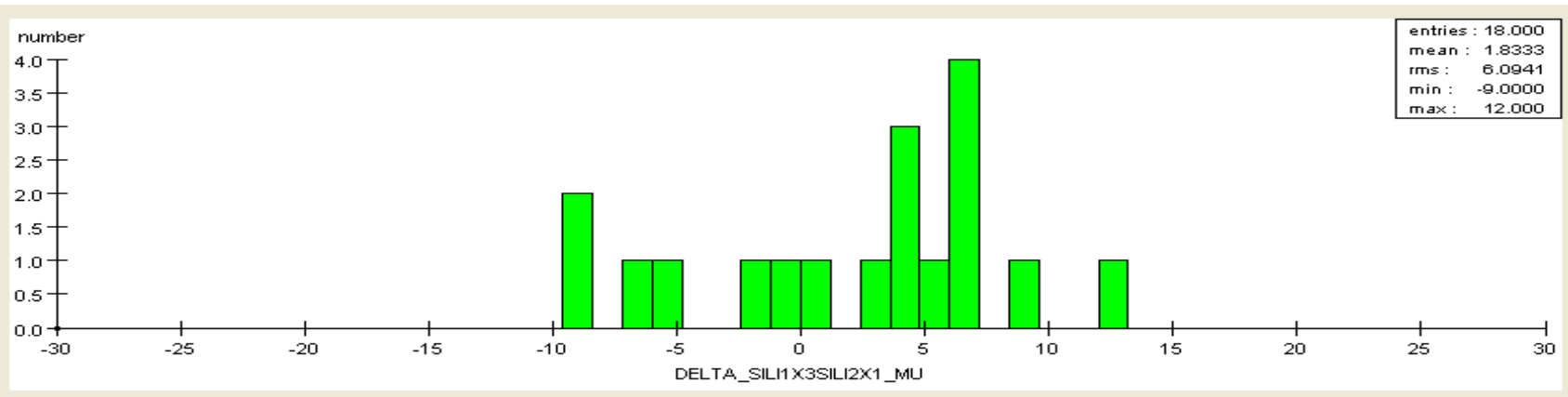
<i>Assy Plate Type</i>	<i># Fabricated</i>	<i># Commissioned</i>	<i># Modules Built On</i>
<i>TOB R-phi</i>	<i>7</i>	<i>5</i>	<i>5</i>
<i>TOB Stereo</i>	<i>3</i>	<i>1</i>	<i>1</i>
<i>TEC R5 R-phi</i>	<i>2</i>	<i>2</i>	<i>2</i>
<i>TEC R5 Stereo</i>	<i>2</i>	<i>2</i>	<i>2</i>
<i>TEC R6</i>	<i>5</i>	<i>5</i>	<i>3</i>
<i>Total</i>	<i>19</i>	<i>15</i>	<i>13</i>



Survey Results—6 New Assy Plates

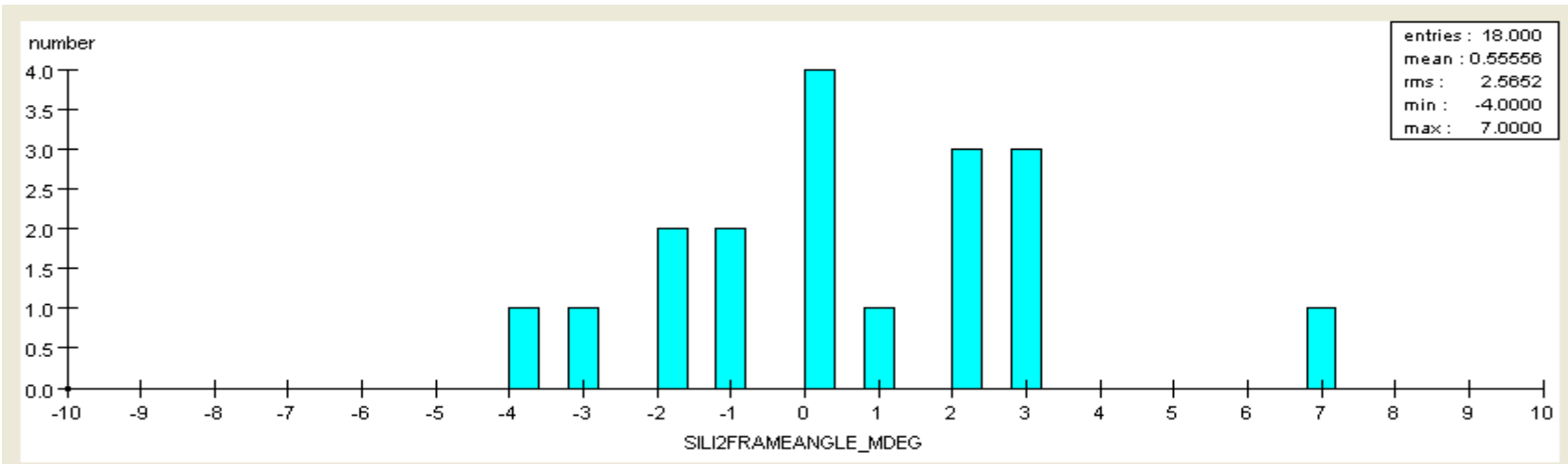
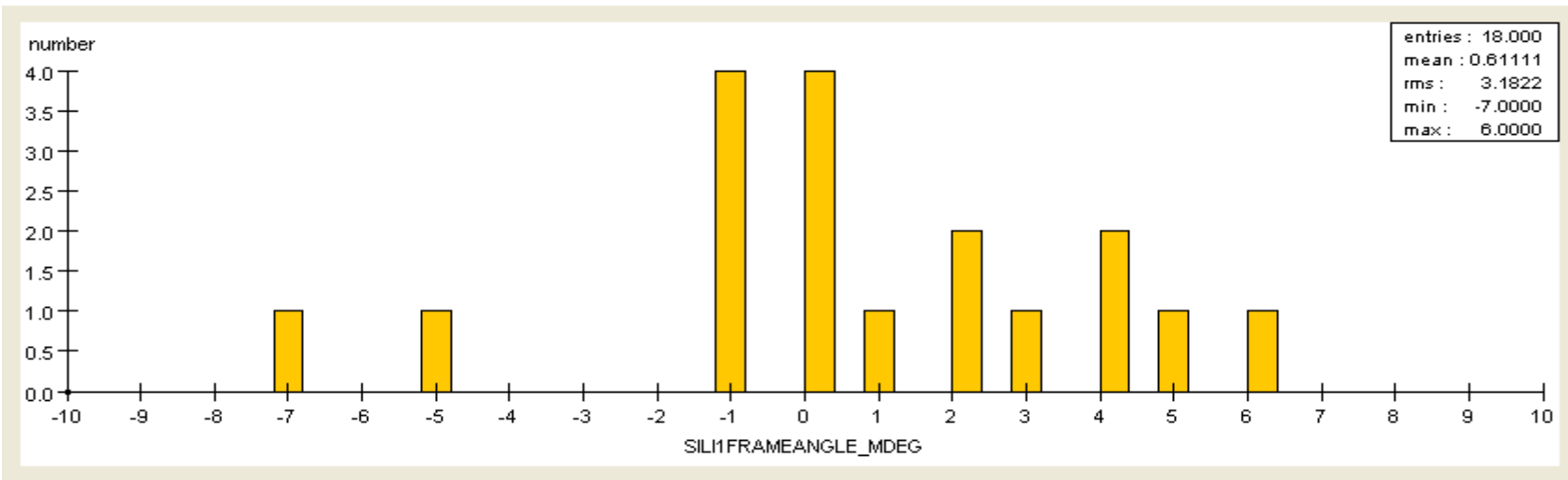


- Over the last month we have built our 1st modules on 2 – R5N, 2 – R5S and 2 – R6 assembly plates.
- Following is some of the final survey data on those 18 modules:



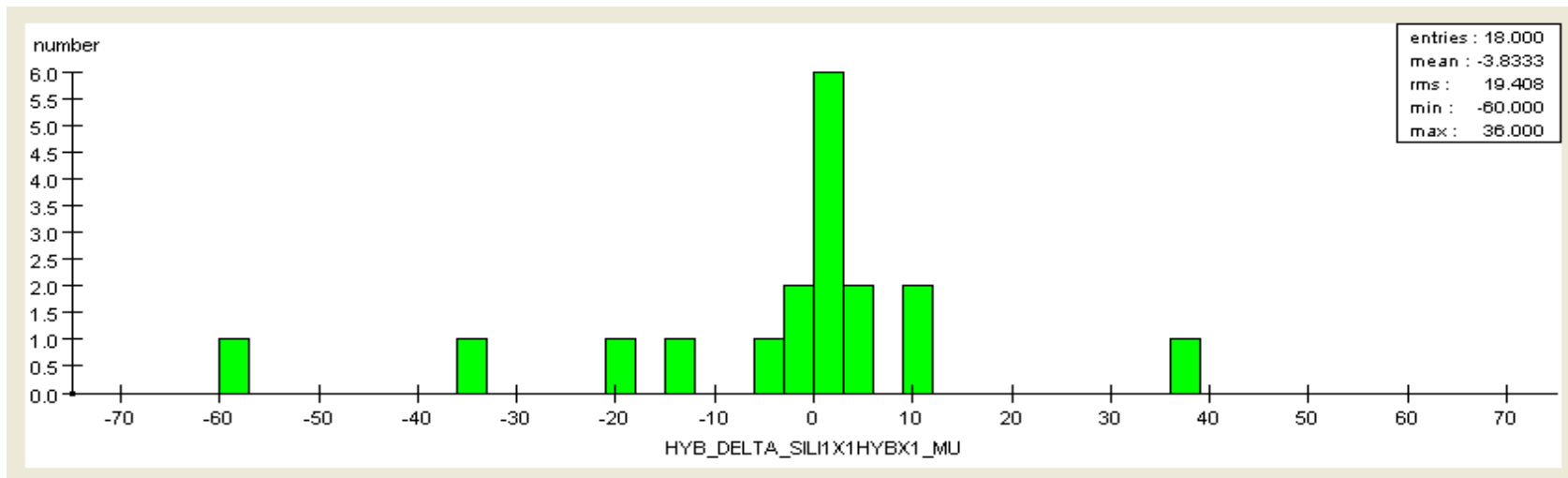
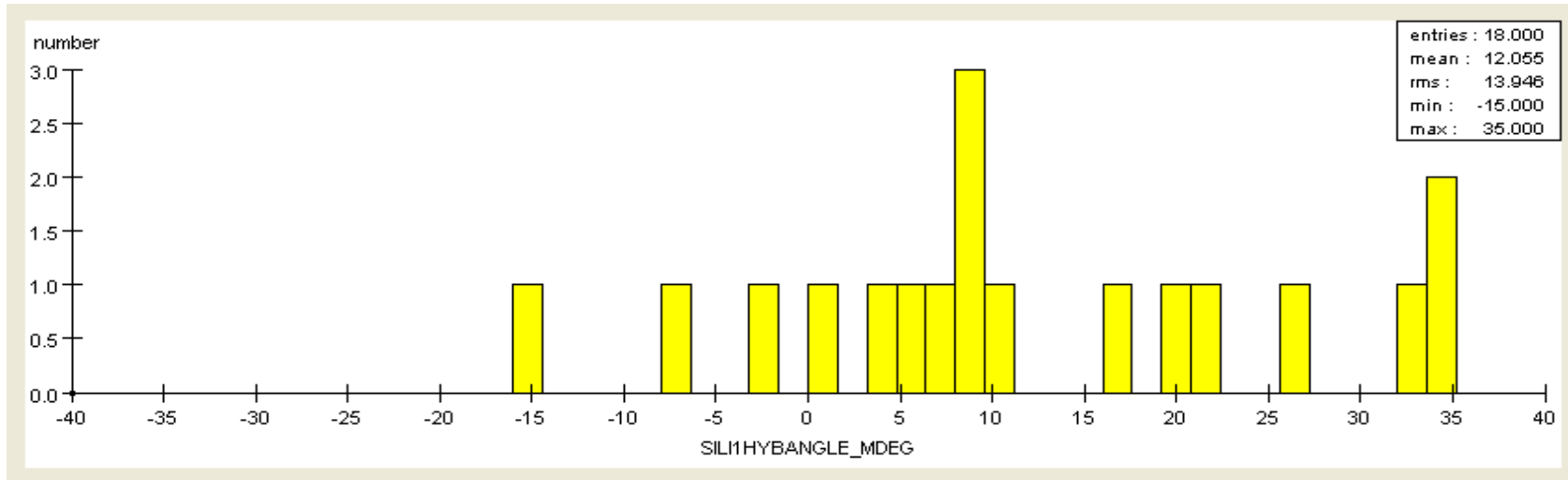


Survey Results Sensor Angles





Survey Results Hybrids





Other Miscellaneous Items



Assembly Plate Commissioning Procedures:

I have made a list of the steps we go thru in commissioning an assembly plate. This is available at: (I will put a link on our gantry webpage when I get back)

http://hep.ucsb.edu/people/dean/assy_plate_commis.doc

Other items that Russell recently posted on the UCSB gantry site: <http://hep.ucsb.edu/cms/gantry.html>

A copy of the UCSB gantry code

A copy of the UCSB OGP code.

Soon to come: A CMS Note on module production at UCSB (Russell is still completing final editing).