

<b>Special Test Request Form</b>	<b>STR Number 10r1</b>
<b>Part 1 – Test Definition Section</b>	
<b>Test Requestor:</b> Hiro Tajima	
<b>Test Purpose and Justification:</b> Adjust the timing of data capture with respect to the calibration pulse timing. This adjustment was performed a long time ago with an EGSE without GASU. The timing of the data capture depends on TREQ delay, Trigger Window and Tack delay when GASU is present. After the timing is readjusted, all tower needs to be recalibrated.	
<b>Test Description:</b>  Scan the data capture timing to maximize the gain of the GTFE. (GTFE average gain can be measured using LPT version of the TkrNoiseAndGain) It takes 5 minutes per run. Scan the timing at 10-clock cycle interval to find a rough peak spot and scan around the peak at 1-clock cycle interval. Perform the above test at nominal TREQ delay/trigger window and both values set at 0. After find the optimum timing, all towers need to be recalibrated which involves getting thresholds, tot parameters, taking cosmic rays to charge scale calibration.	
<b>GSE Configuration:</b> GASU based teststand at building 33.	
<b>LAT Configuration:</b> Any tower for adjusting timing. All towers need to be recalibrated.	
<b>Expected Results/Acceptance Criteria:</b> Find optimum data capture timing for TKR charge injection test.	
<b>Expected Duration:</b> 4 hours for timing optimization. 1 hour/tower for threshold/TOT parameter calibration. 4 hours for cosmic ray data taking.	
<b>Expected Analysis Duration:</b> All results are given online as test reports.	
<b>Test Procedure:</b> <ol style="list-style-type: none"> <li>1. run TkrNoiseAndGain.py with varying Tack delay.\</li> <li>2. Determine the best data capture timing.</li> <li>3. Run TkrThresholdCal.py</li> <li>4. Run TkrTotGain.py</li> <li>5. Take cosmic ray data</li> </ol>	
<b>Test Script:</b> TkrNoiseAndGain.py, TkrThresholdCal.py, TkrTotGain.py, DataTaking.py	

<b>Part 2 – Impact Assessment Section</b>			
<b>Procedure development:</b> The procedure is the similar to existing TKR test. Procedure 1 involves changing data capture timing which can be done via a standard GUI panel.			
<b>Script development and checkout:</b> Script needs to read TREQ delay and Trigger window to determine total trigger delay..			
<b>Impact to schedule:</b> The total testing time is 1.5 shift.			
<b>Risk Assessment:</b> Procedure does not have additional risks beyond the TKR tests.			
<b>Required Resources:</b> GASU based teststand and TKR charge injection associated equipment at building 33. Needs Hiro Tajima to be present for parameter changes. Needs presence of an operator for equipment power on/off at start and end of the test.			
<b>Other Affected Parties:</b> Desirable to have TKR expert verify the charge injection setup.			
<b>Part 3: Signature Approval:</b>			
Required Authorizations	Printed Name	Signature	Date
Quality	Joe Cullinan	(Signature on file)	5/26/05
I&T	Elliott Bloom	(Signature on file)	5/25/05
Program Office	Lowell Klaisner or Dick Horn	(Signature on file)	5/26/05
Systems Engineering	Pat Hascall	(Signature on file)	5/26/05
Affected S/S managers	N/A		
Instrument Scientist	Steve Ritz or Eduardo do Couto e Silva	(Signature on file)	5/16/05
Other	N/A		
Other	N/A		
Other	N/A		
Other	N/A		