




Test Monitoring Center

@ Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

<http://astmtmc.cmu.edu>
412-365-1000

MEMORANDUM: 13-023
DATE: May 1, 2013
TO: Chris Prengaman, Chairman, L-37 Surveillance Panel
FROM: Scott Parke 
SUBJECT: L-37 Rater Calibration from October 1, 2012 through March 31, 2013

Please find attached a summary of L-37 rater calibration activity this period.

SDP/sdp/mem13-023.sdp.doc

cc: Frank Farber

Jeff Clark

L-37 Surveillance Panel

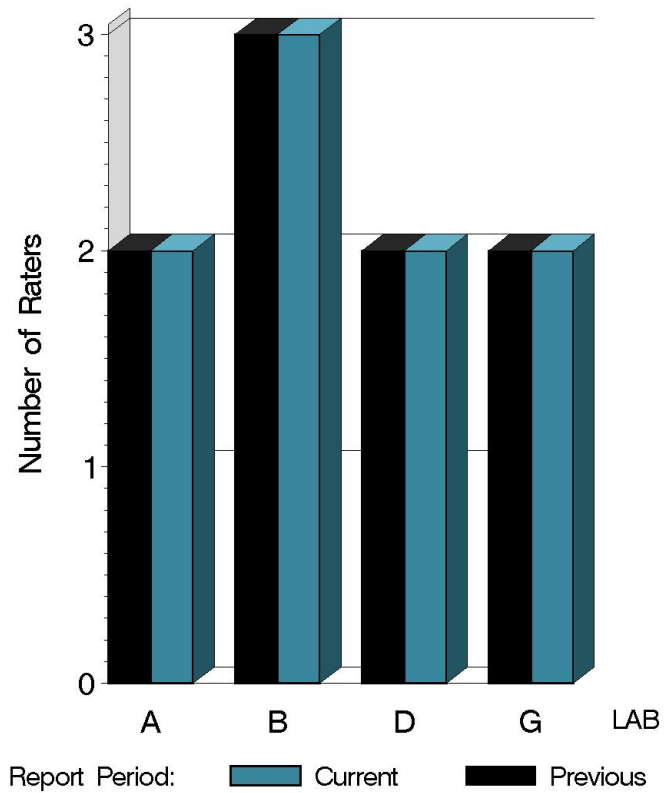
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l37rc/semiannualreports/l37rc-04-2013.pdf>

Distribution: email

L-37 Rater Calibration

	Reporting Data	Calibrated on 3-31-13
Number of Labs	4	4
Number of Raters	9	9

BY-LAB RATER
DISTRIBUTION



13:49:25 30APR2013

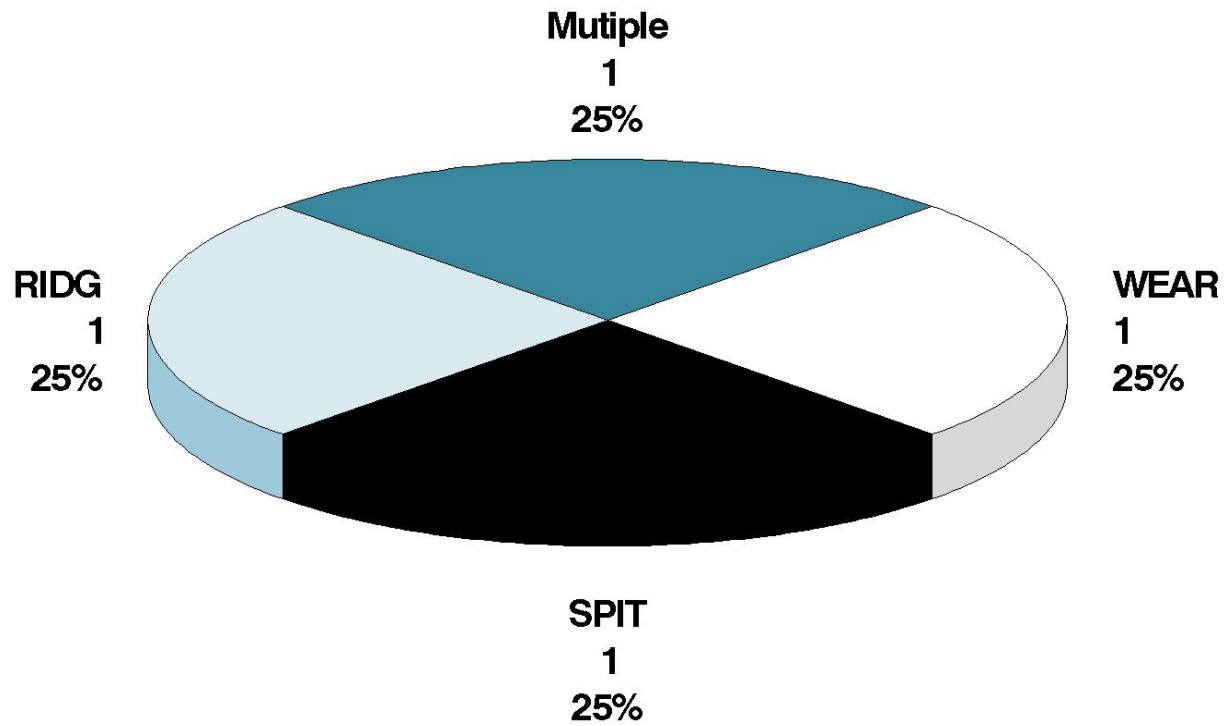
L-37 Rater Calibration

Test Distribution by Validity

		Totals	
		Last Period	This Period
Accepted for calibration	AC	11	11
Rejected (Mild)	OC	2	1
Rejected (Severe)	OC	2	2
Rejected (Multiple)	OC	0	0
Rejected (Precision)	OC	3	1
Workshop data	AG	12	27
<hr/>			
Total		30	42

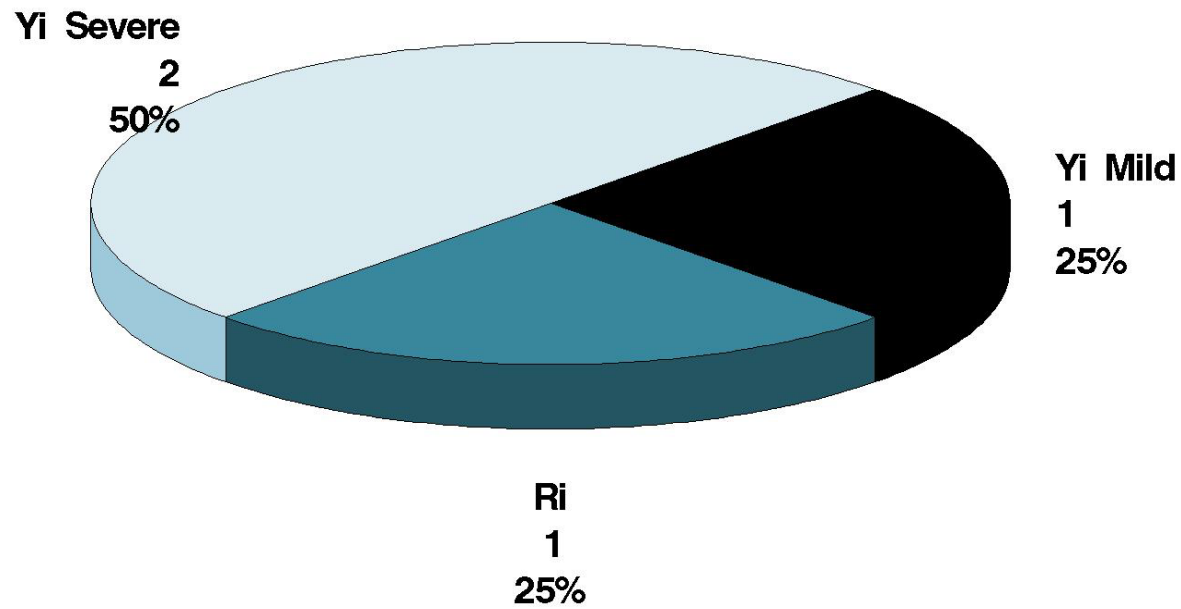
L-37 Rater Calibration

FAILED TESTS (by Parameter)



L-37 Rater Calibration

FAILED TESTS (by Alarm Type)



L-37 Rater Calibration

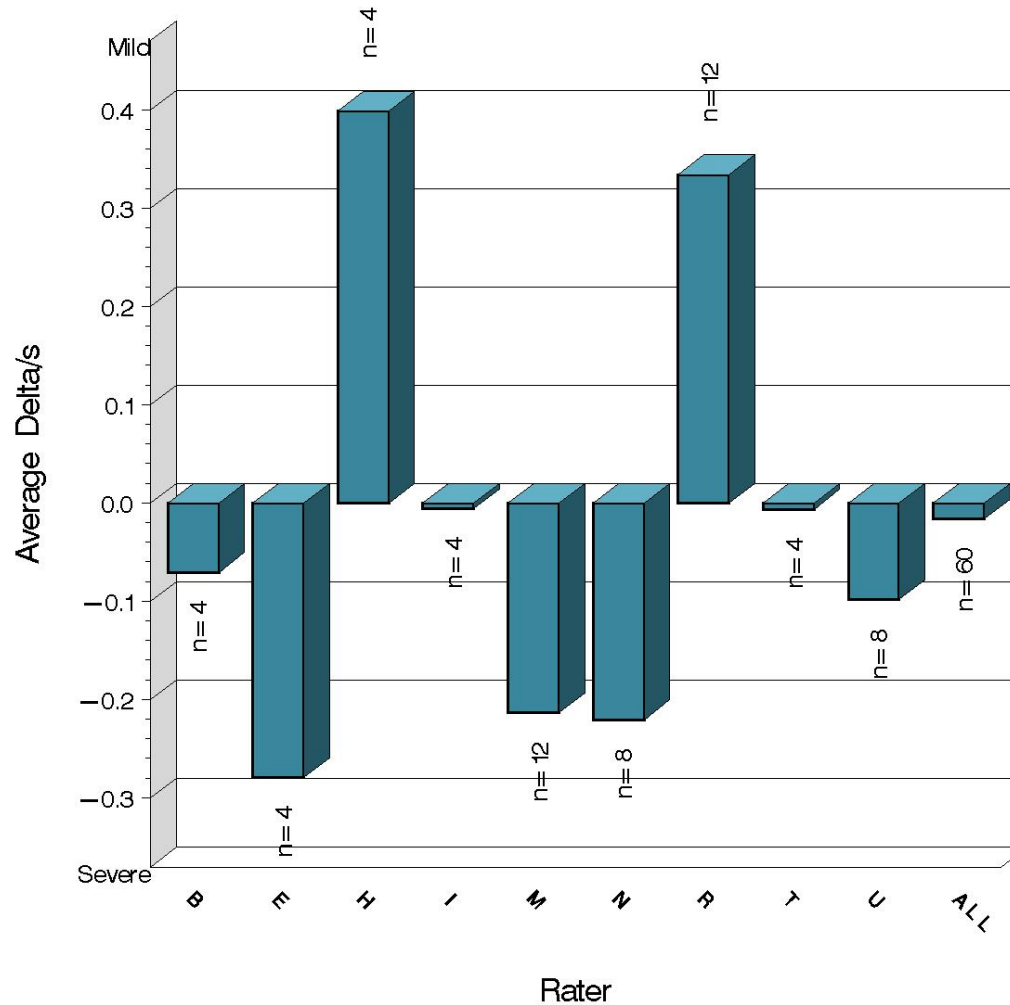
Rater	N	RIDG		RIPP		SPIT		WEAR	
		Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*
B	4	-0.071	0.365	-0.014	0.635	0.213	0.246	0.205	0.625
E	4	-0.279	0.938	0.575	1.064	0.111	0.406	-0.067	0.914
H	4	0.399	1.128	-0.081	1.344	0.018	0.370	-0.065	0.682
I	4	-0.006	0.445	0.738	0.632	0.071	0.642	0.340	0.673
M	12	-0.214	0.732	0.245	0.936	-0.676	2.983	-0.244	0.782
N	8	-0.221	1.238	-0.209	0.712	0.002	0.313	0.268	0.647
R	12	0.334	0.922	0.381	1.175	-0.211	0.372	0.122	1.617
T	4	-0.006	0.978	-0.241	0.878	0.034	0.521	0.232	0.677
U	8	-0.099	0.993	0.047	1.377	0.014	0.542	-0.111	0.799
ALL	60	-0.016	0.888	0.169	1.009	-0.145	1.367	0.039	0.948

* Due to the small number of ratings per pinion, the standard deviation of the Yi values is given in place of a pooled standard deviation.

L-37 Rater Calibration

RIDGING

Severity as Measured by Delta/s

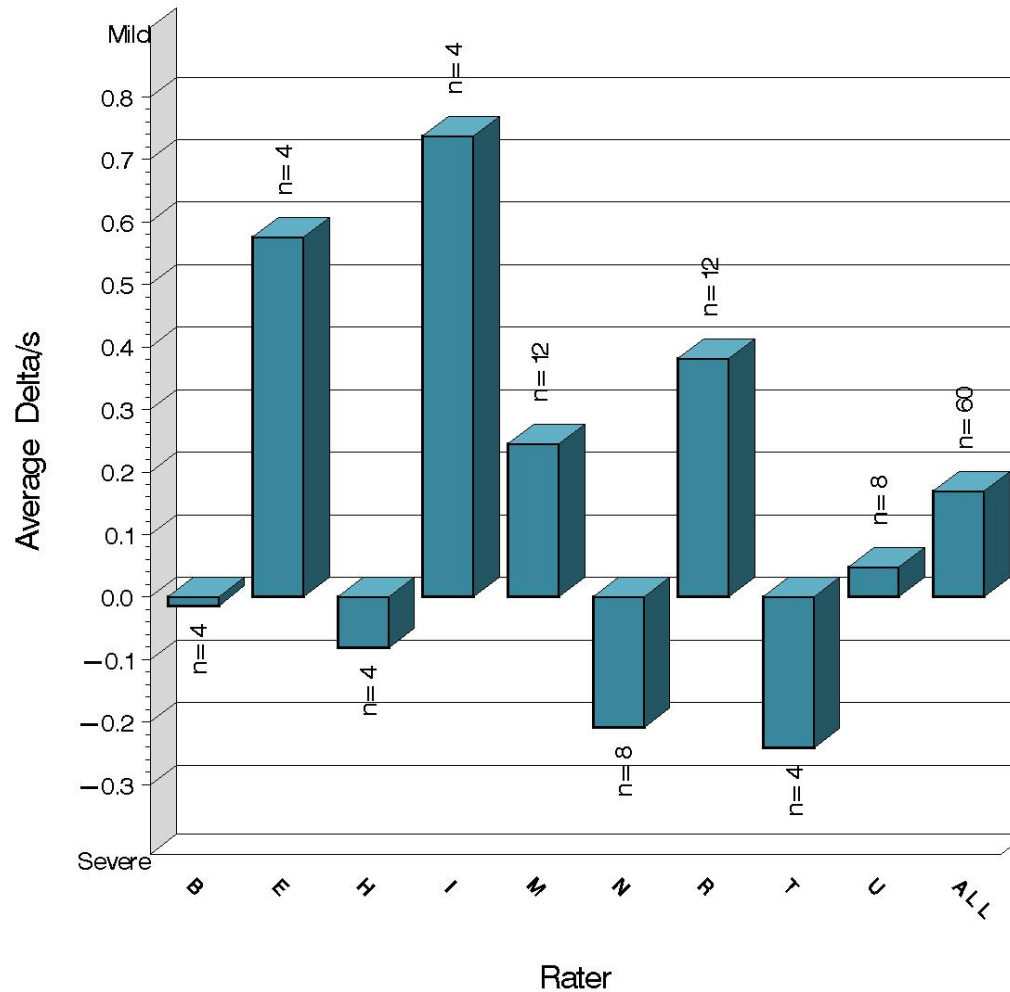


14:13:51 30APR2013

L-37 Rater Calibration

RIPPLING

Severity as Measured by Delta/s

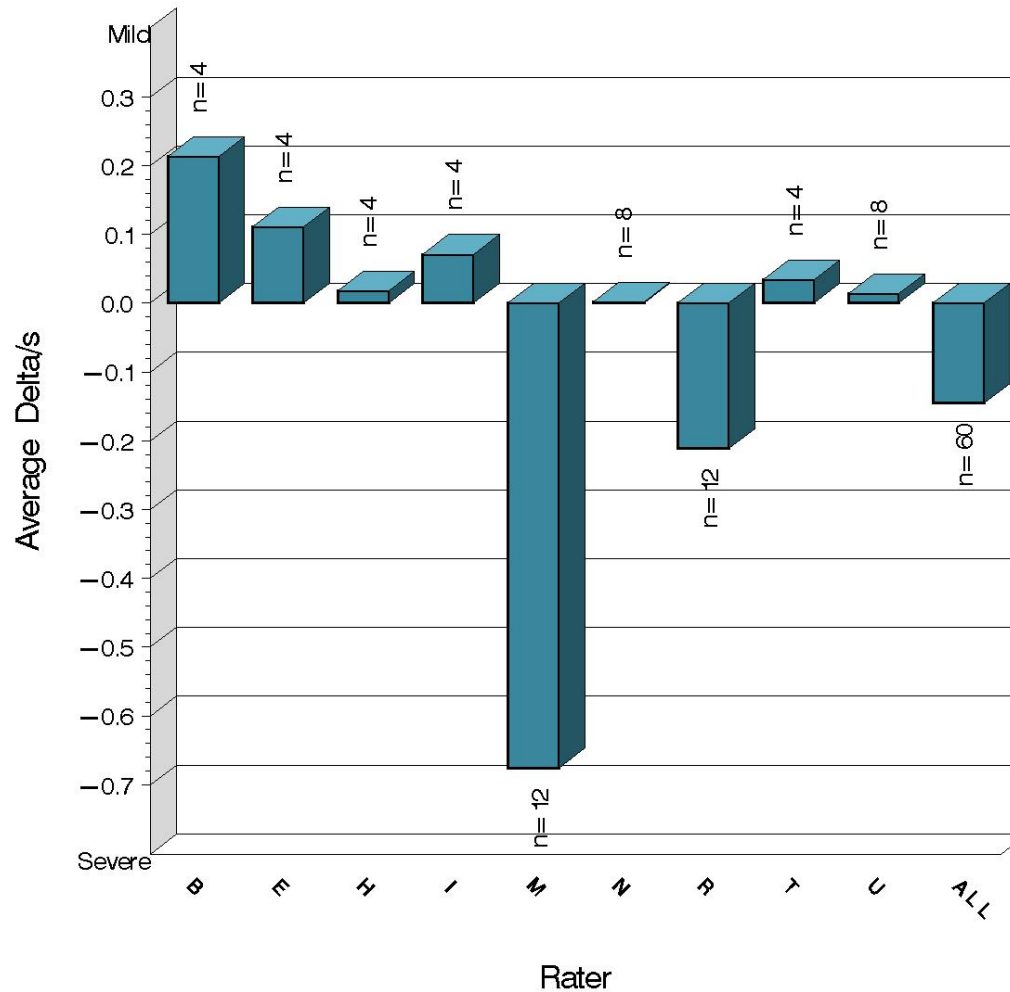


14:13:51 30APR2013

L-37 Rater Calibration

SPITTING

Severity as Measured by Delta/s

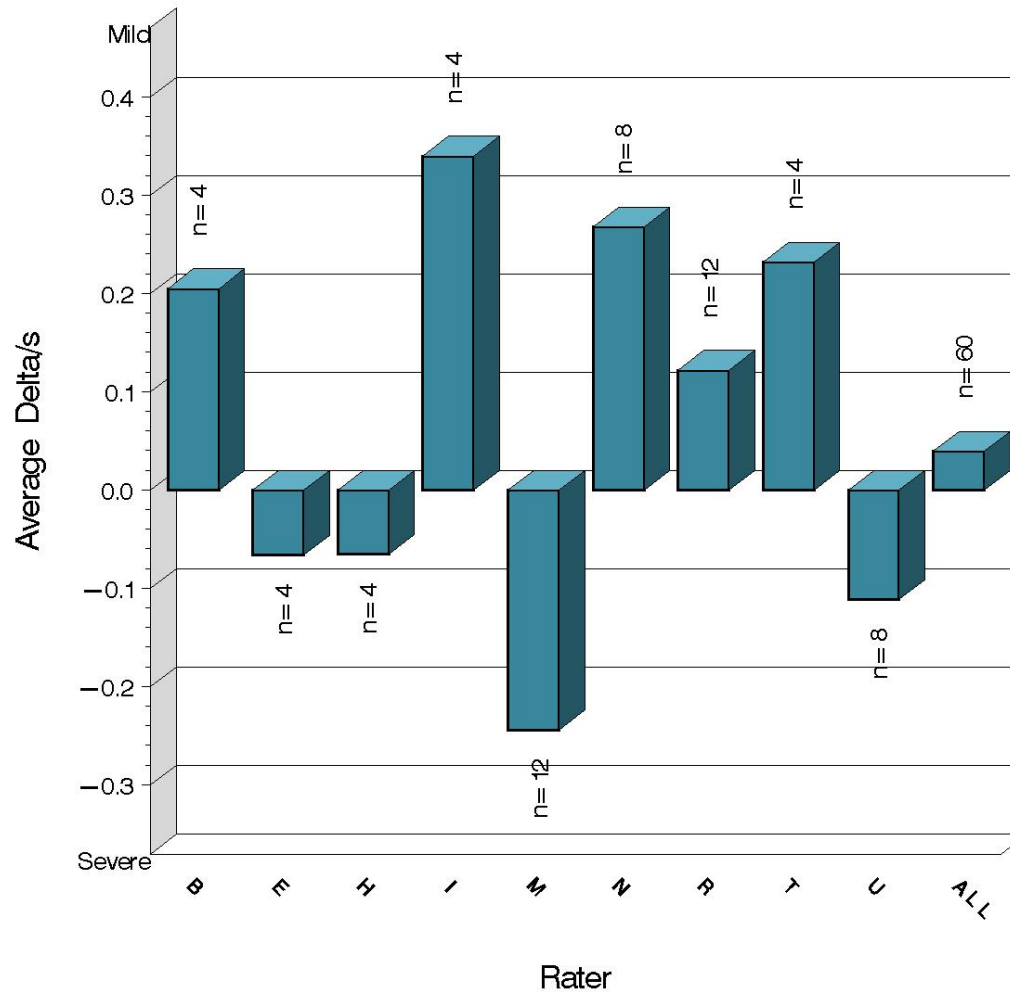


14:13:51 30APR2013

L-37 Rater Calibration

WEAR

Severity as Measured by Delta/s

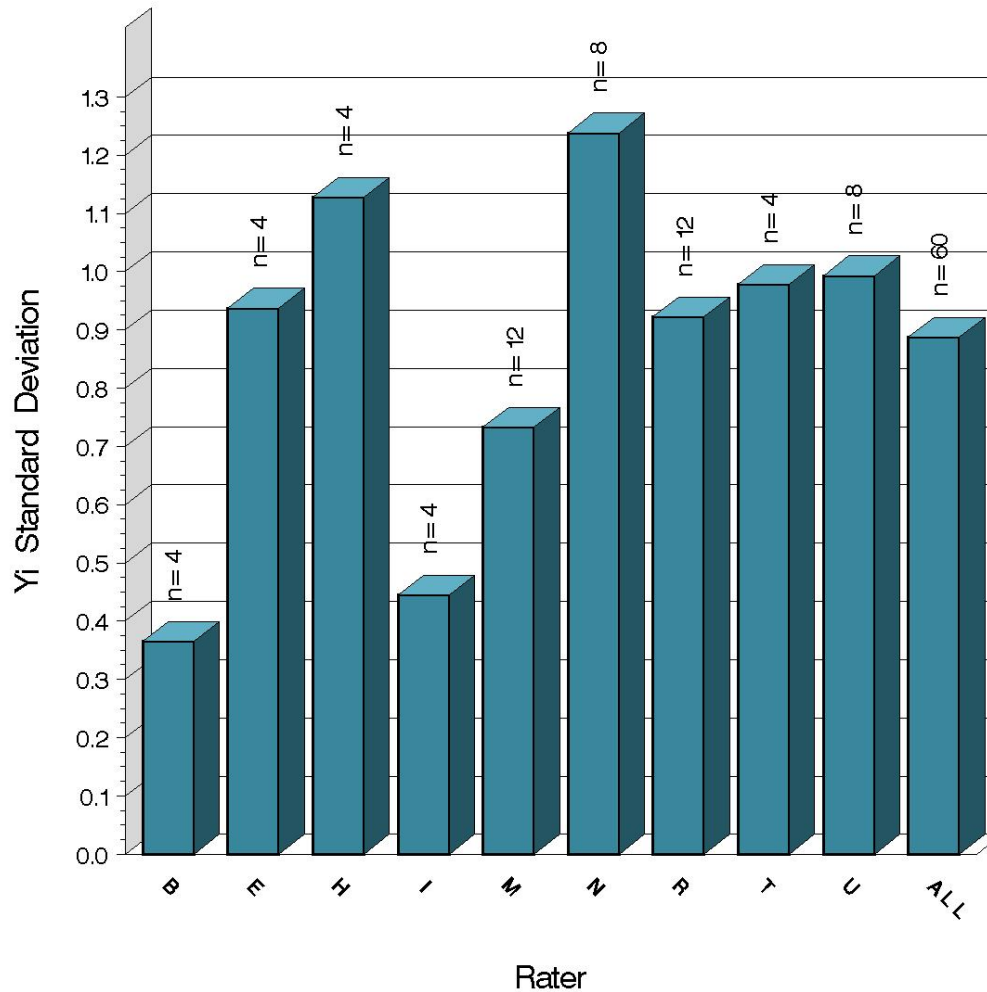


14:13:51 30APR2013

L-37 Rater Calibration

RIDGING

Precision as Measured by Yi STD

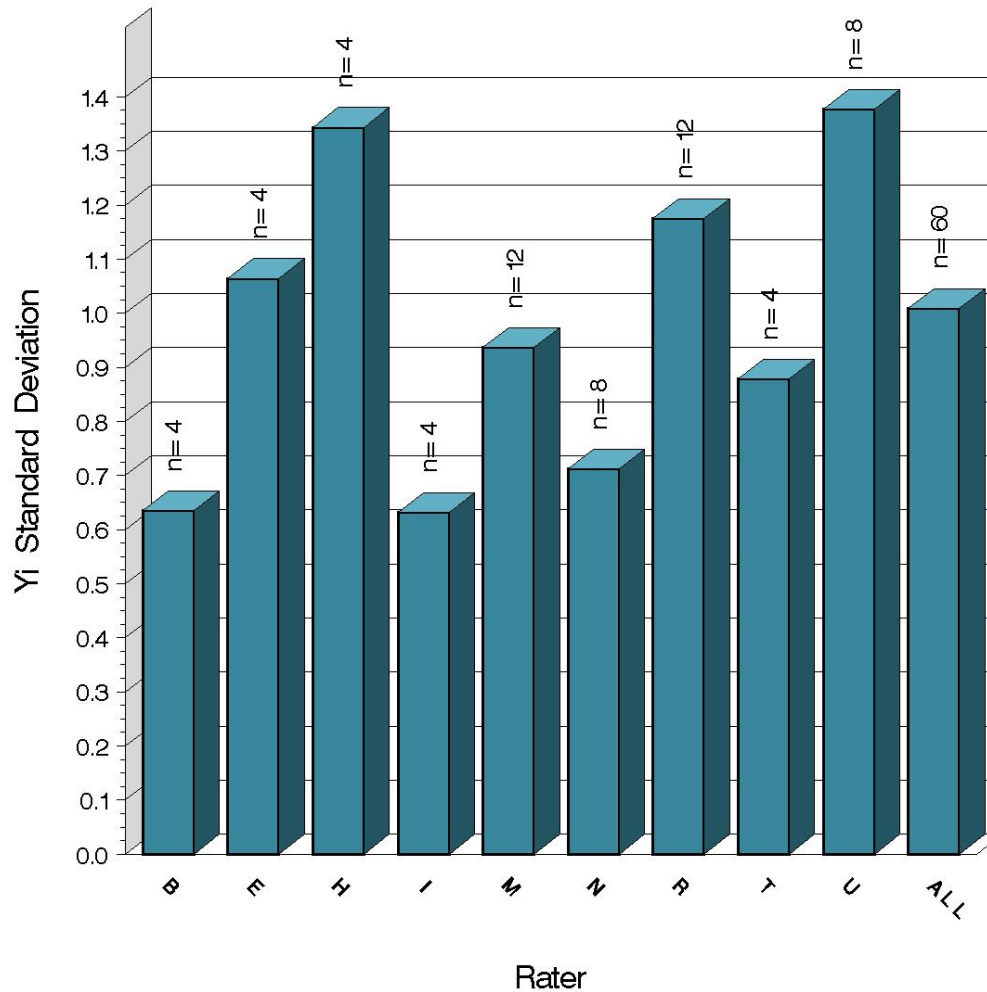


14:13:51 30APR2013

L-37 Rater Calibration

RIPPLING

Precision as Measured by Y_i STD

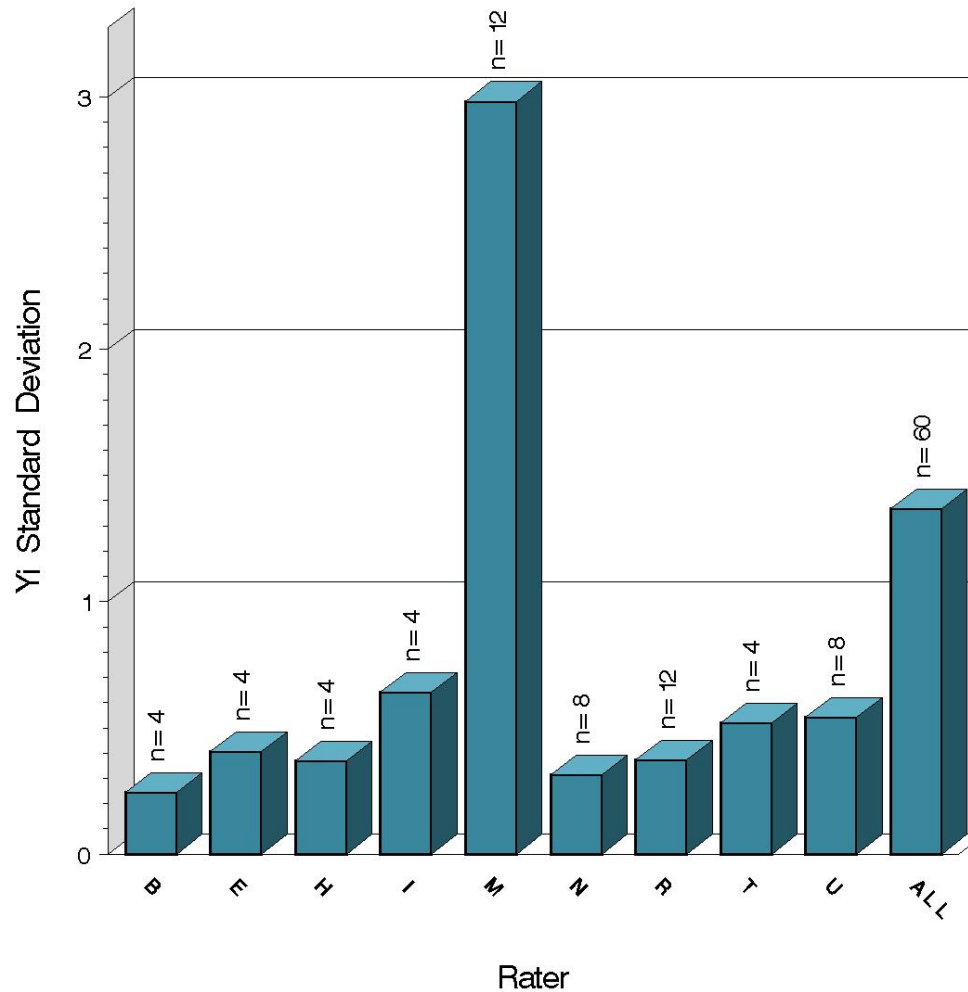


14:13:51 30APR2013

L-37 Rater Calibration

SPITTING

Precision as Measured by Yi STD

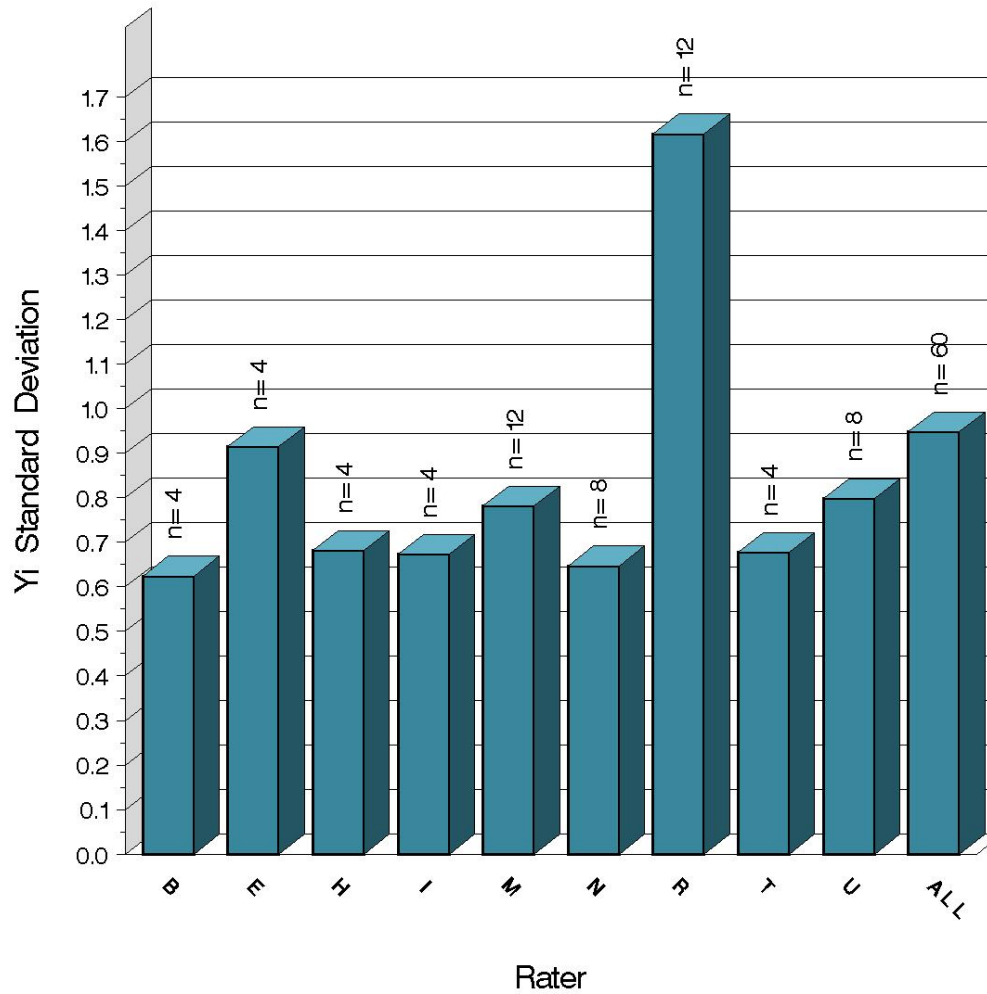


14:13:51 30APR2013

L-37 Rater Calibration

WEAR

Precision as Measured by Y_i STD



14:13:51 30APR2013

L-37 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

After a several-periods long severe trend, RIDG is showing on-target results this period; RIPP, SPIT, and WEAR were generally on target. The March 2011 target update reduced target standard deviations for the most part and thus accounts for the increase in variability shown in testing seen since then.

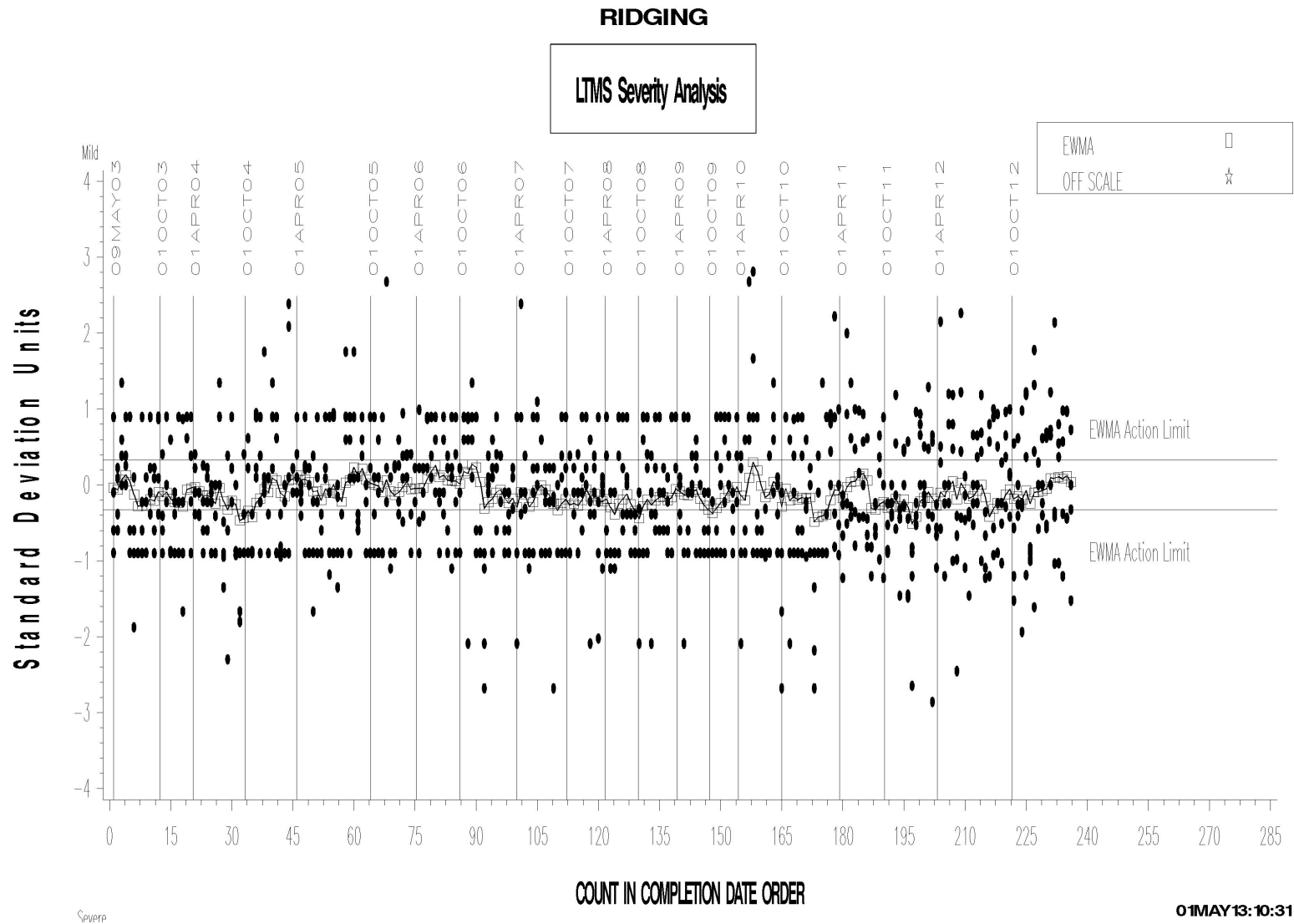
Precision

All parameters continue to show within-limits precision performance.

Industry control charts follow.

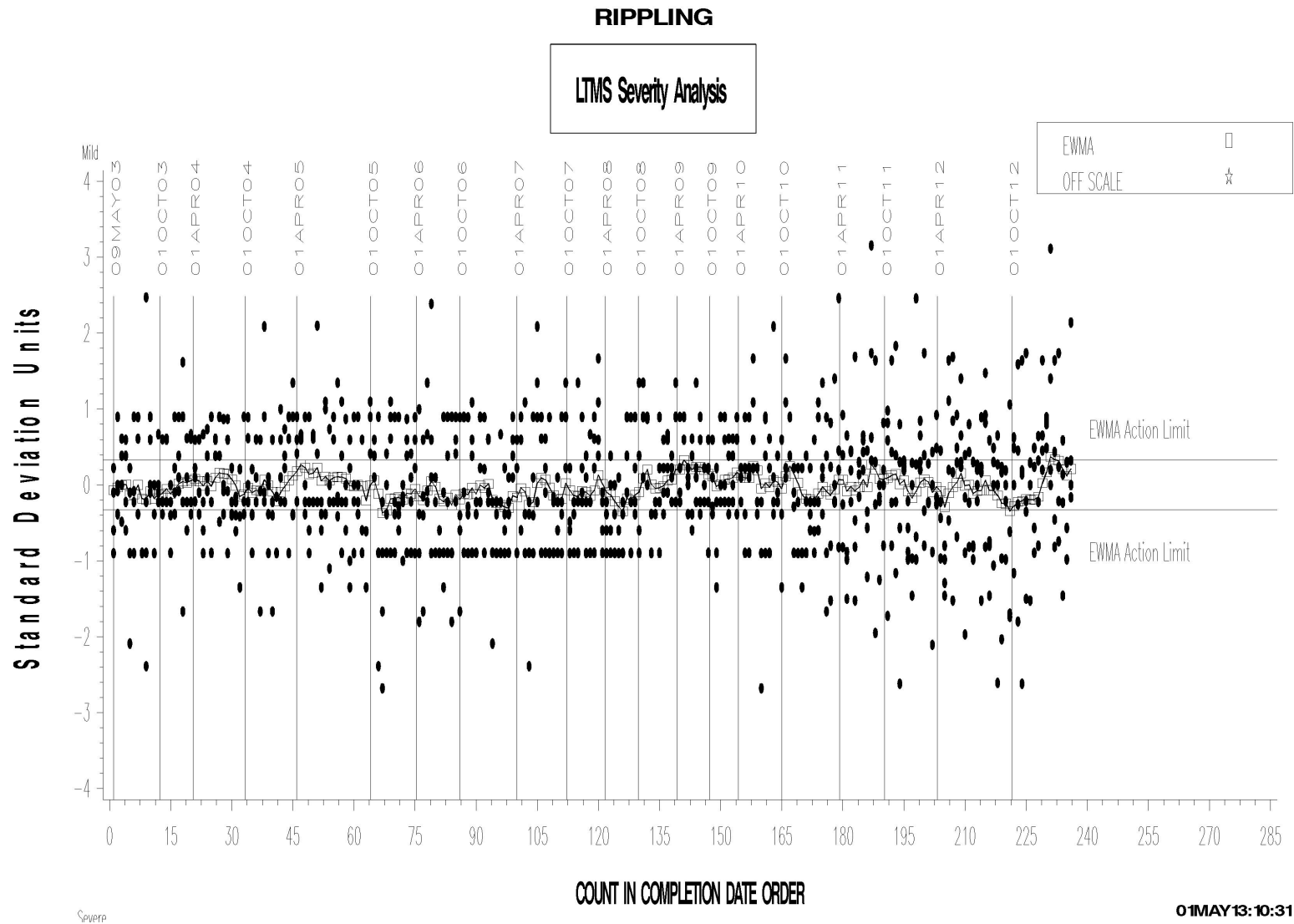
L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA



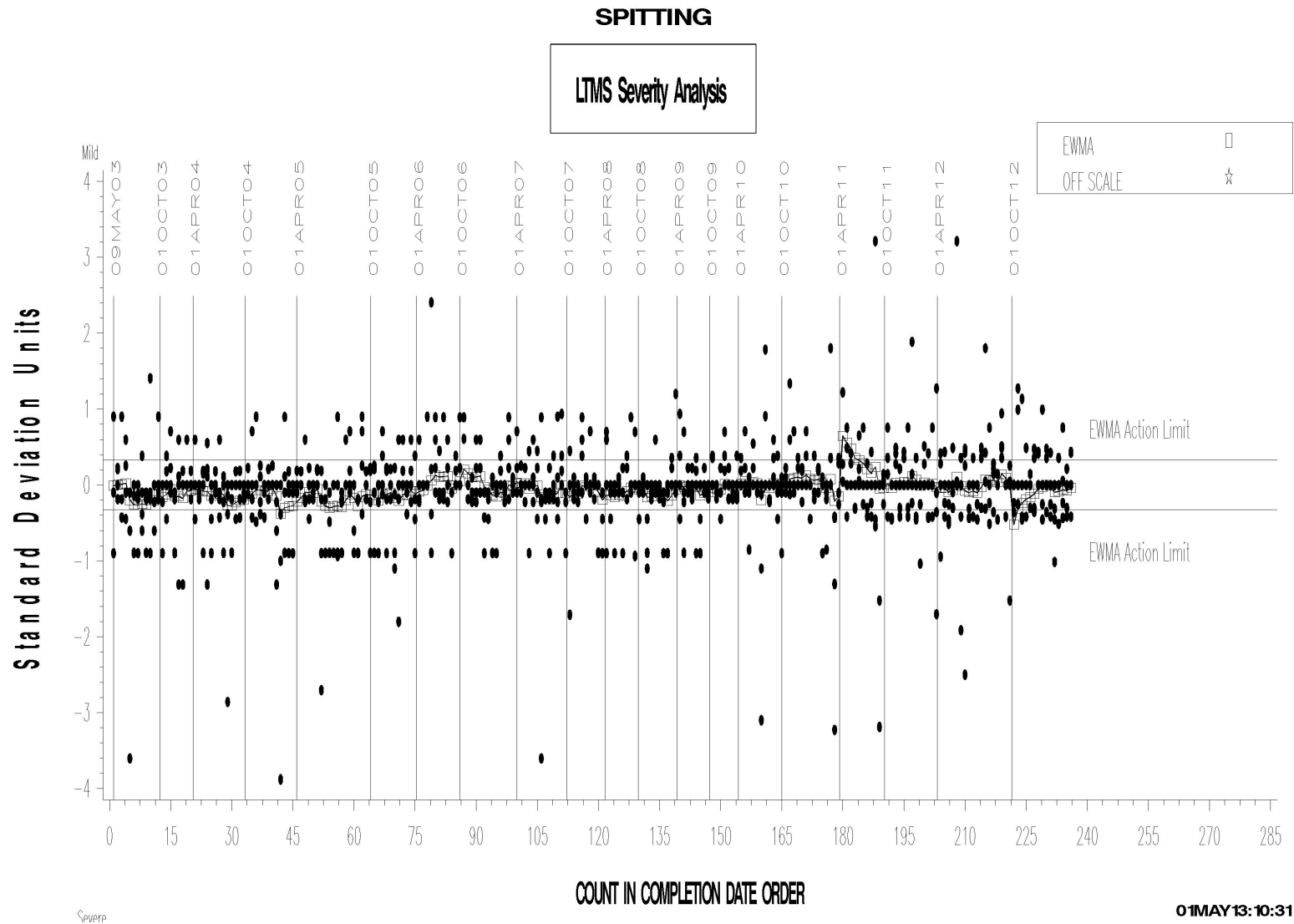
L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA



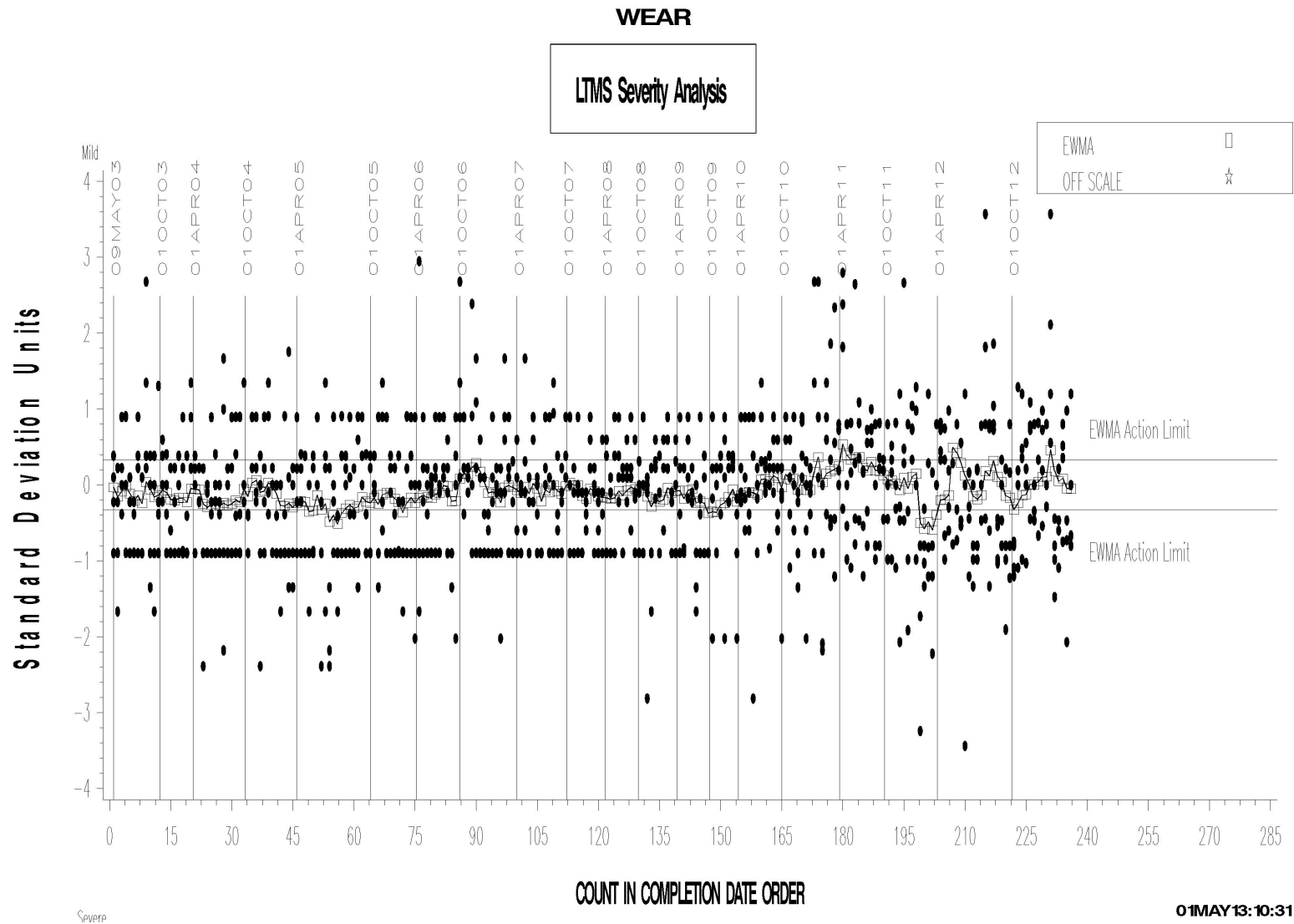
L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA



L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

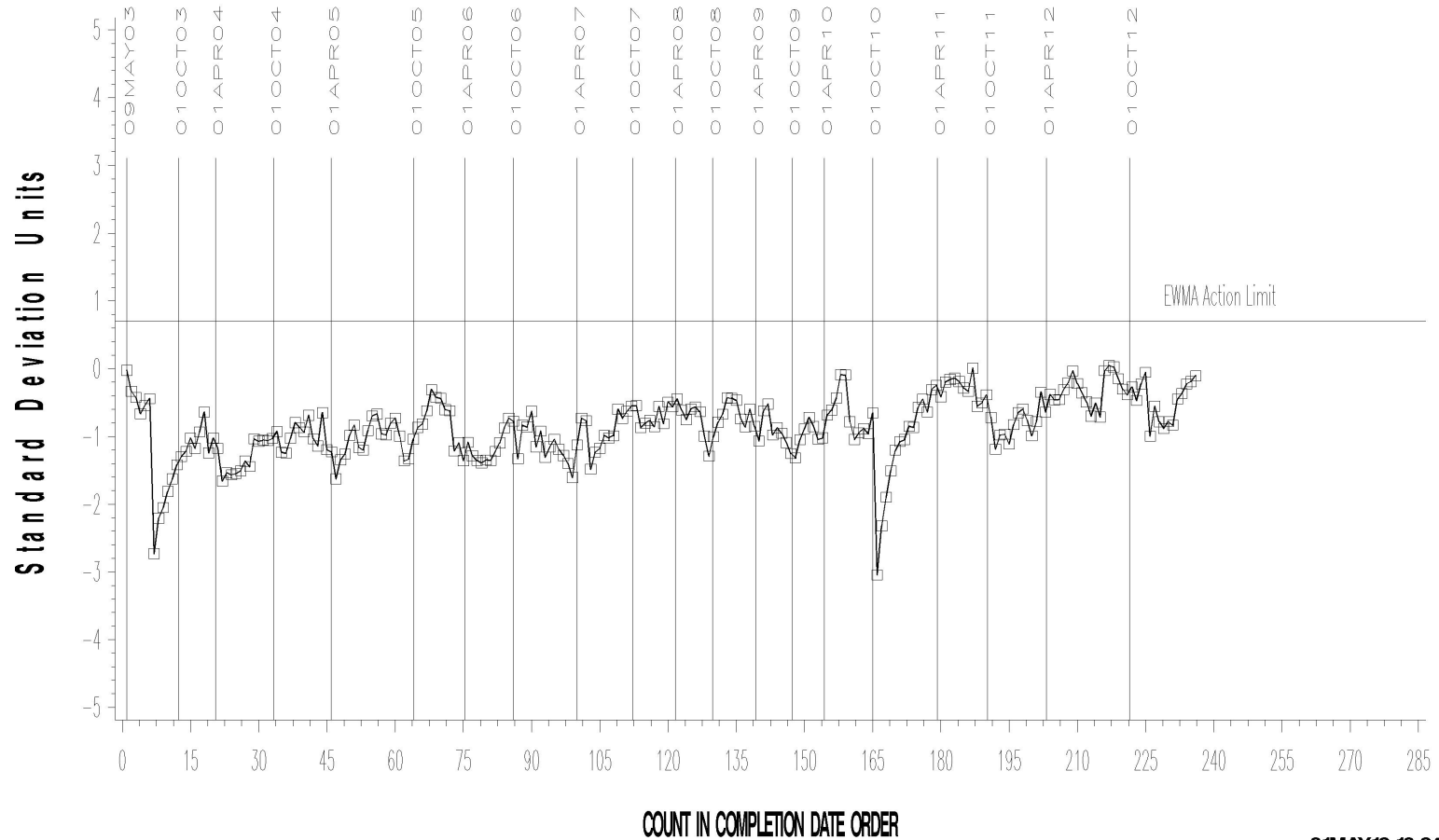


L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

LTMS Precision Analysis



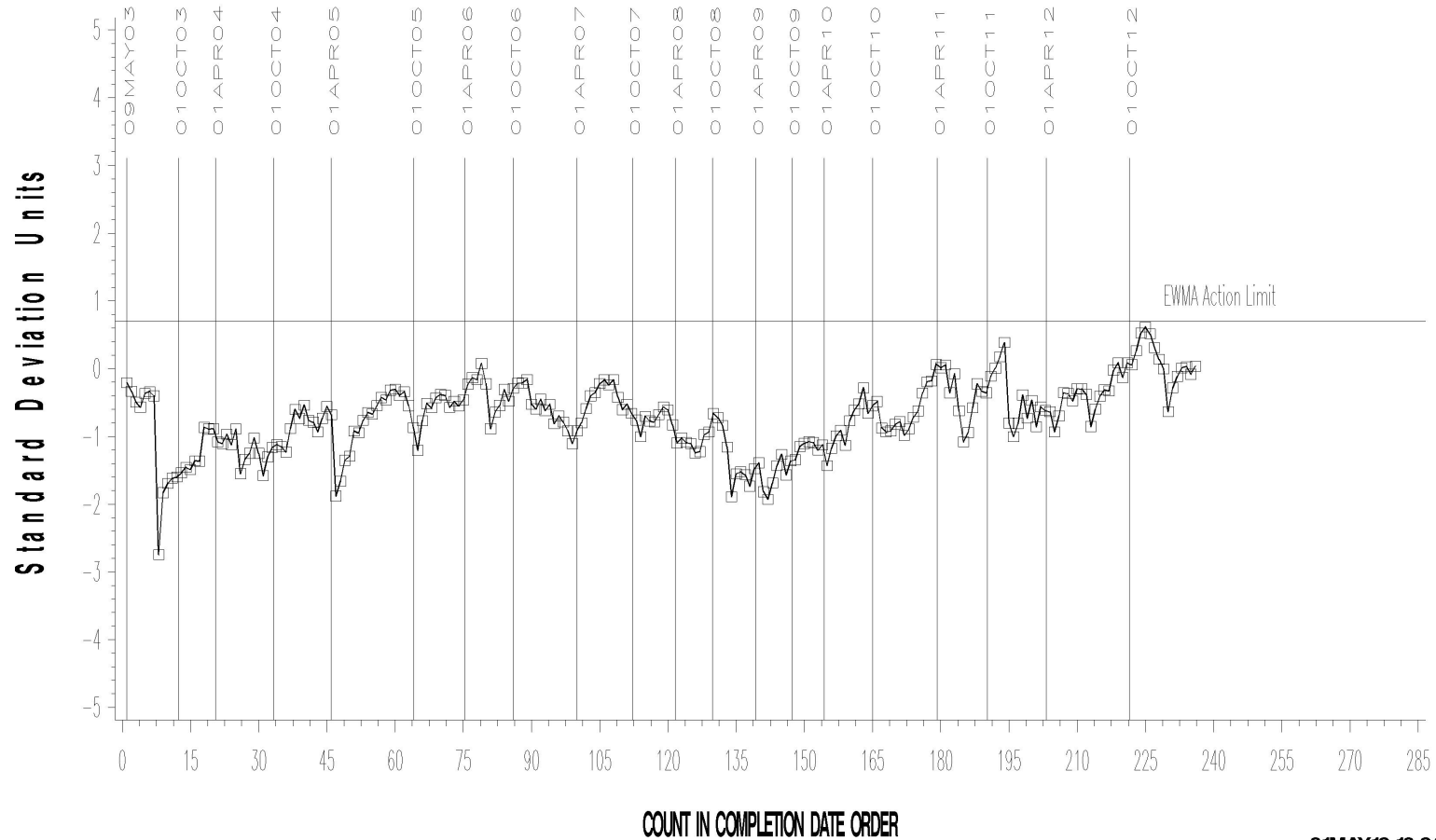
01MAY13:10:34

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

LTMS Precision Analysis



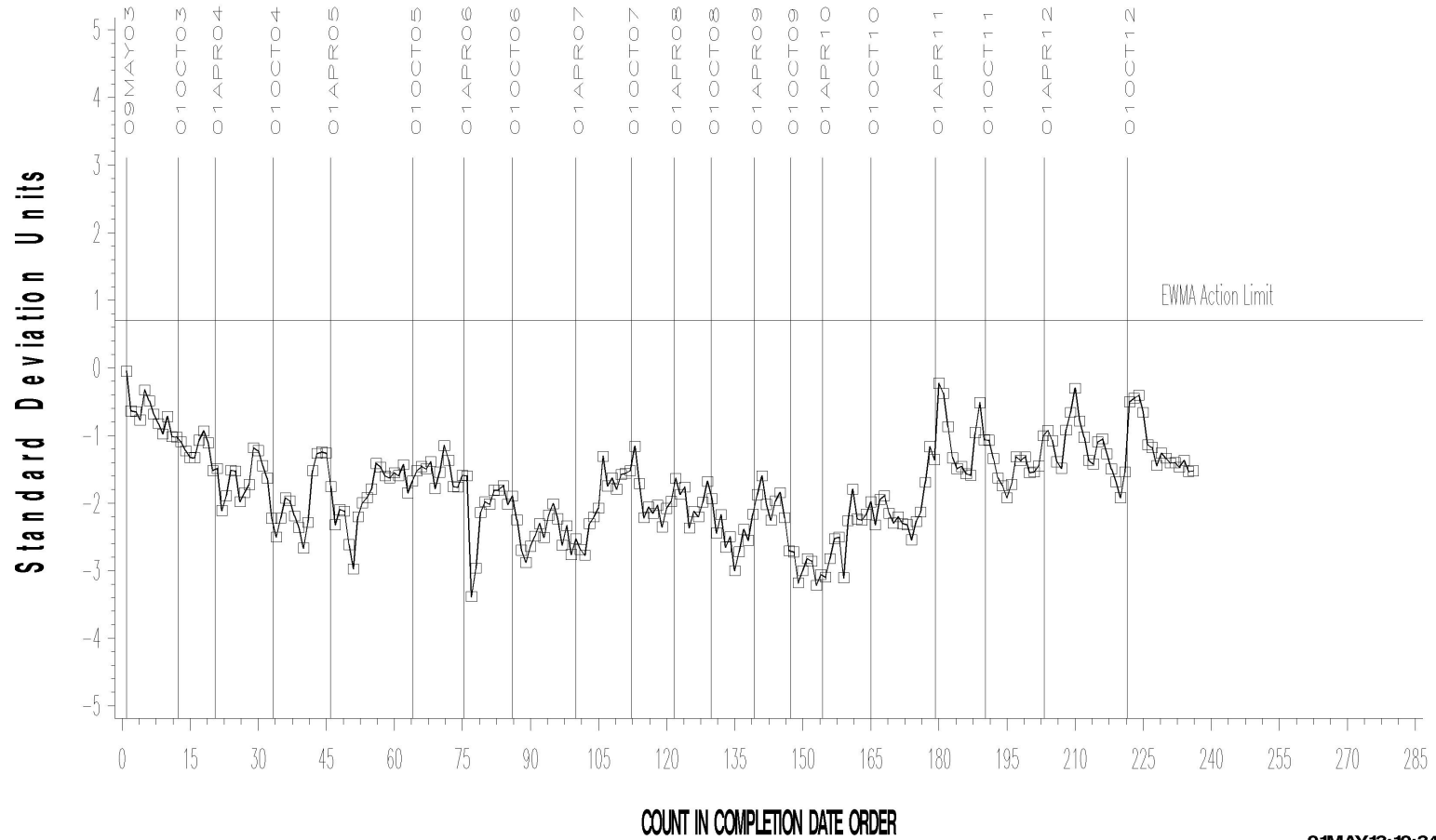
01MAY13:10:34

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

LTMS Precision Analysis



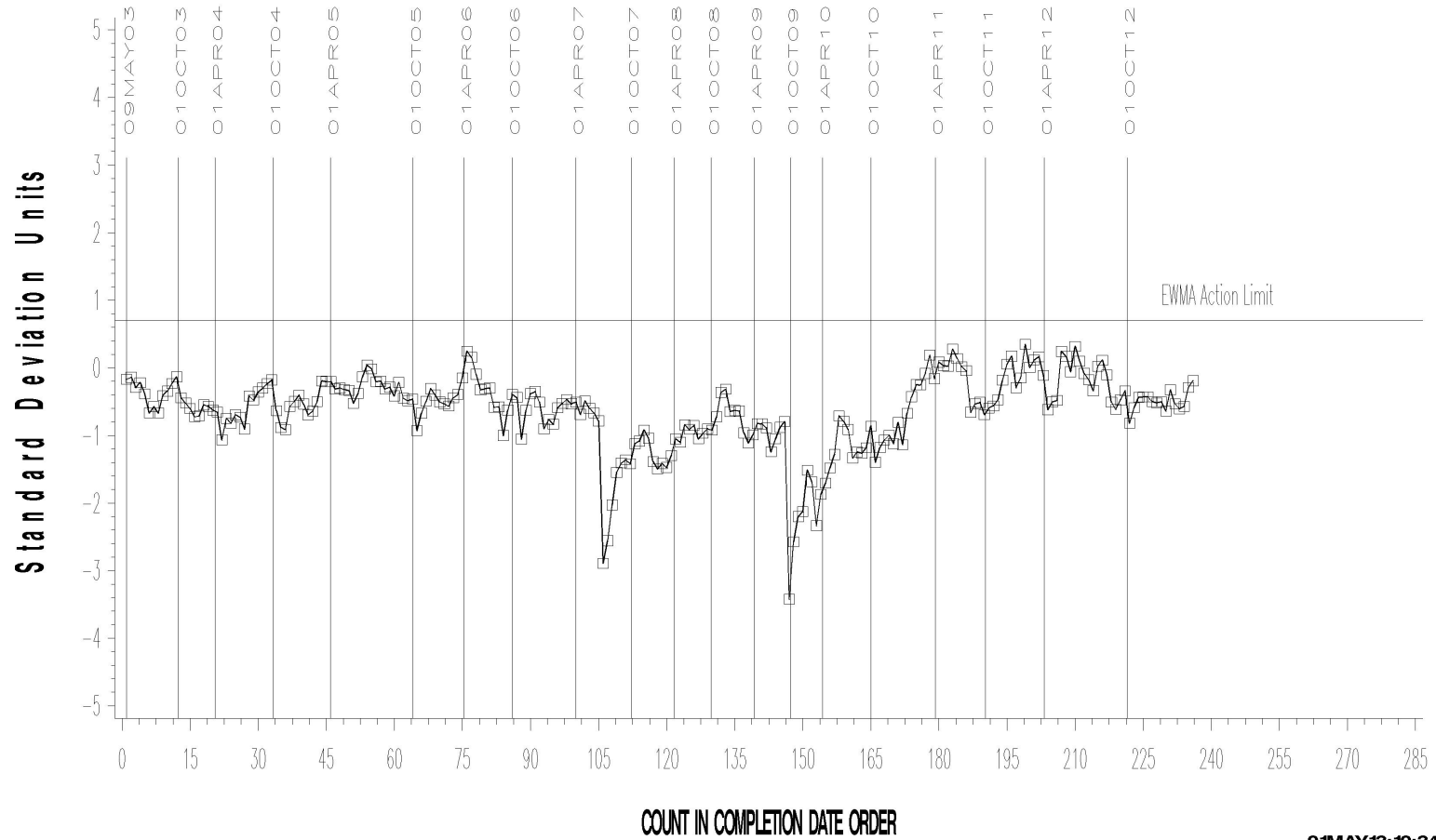
01MAY13:10:34

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

LTMS Precision Analysis



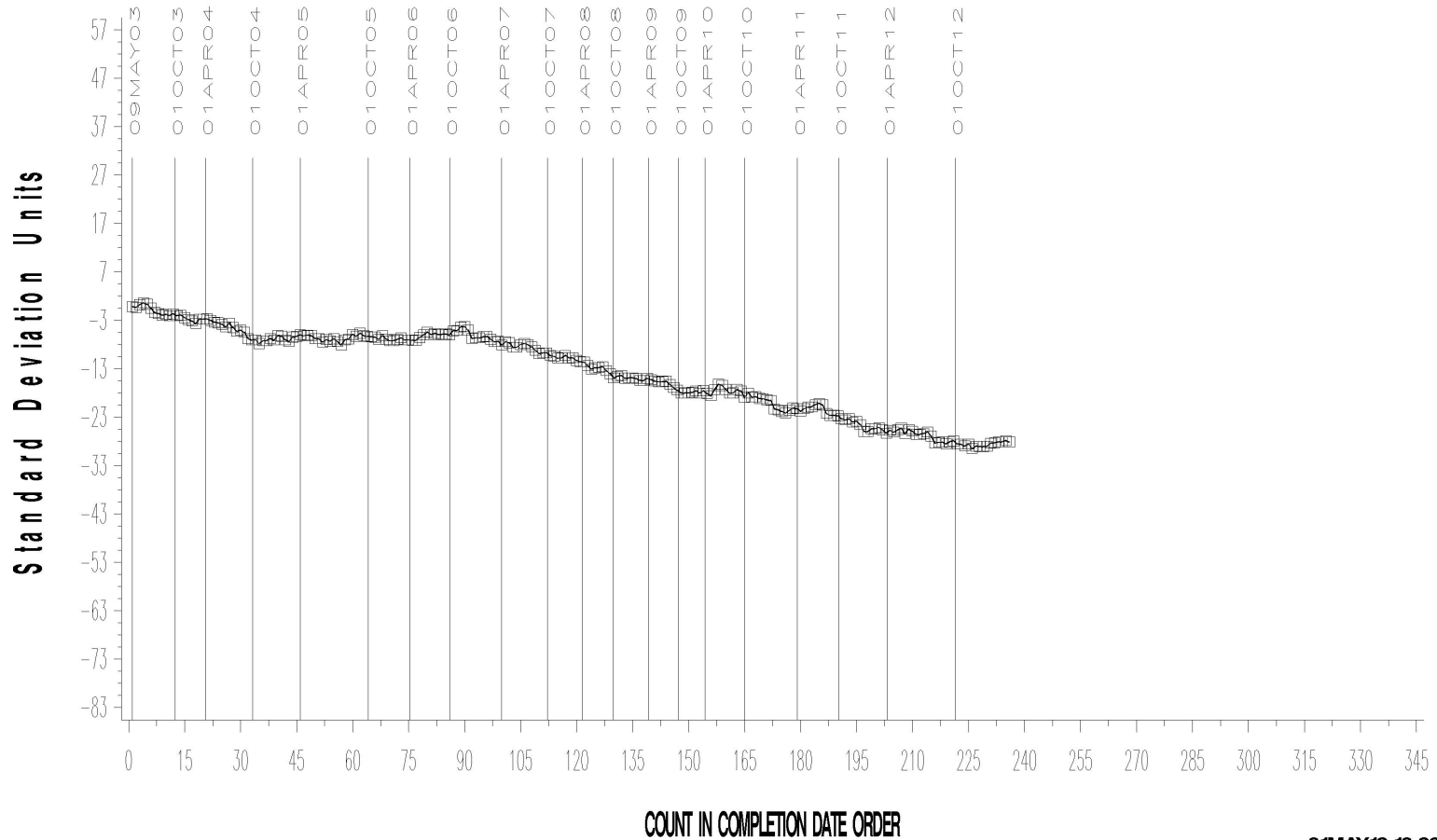
01MAY13:10:34

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

CUSUM Severity Analysis



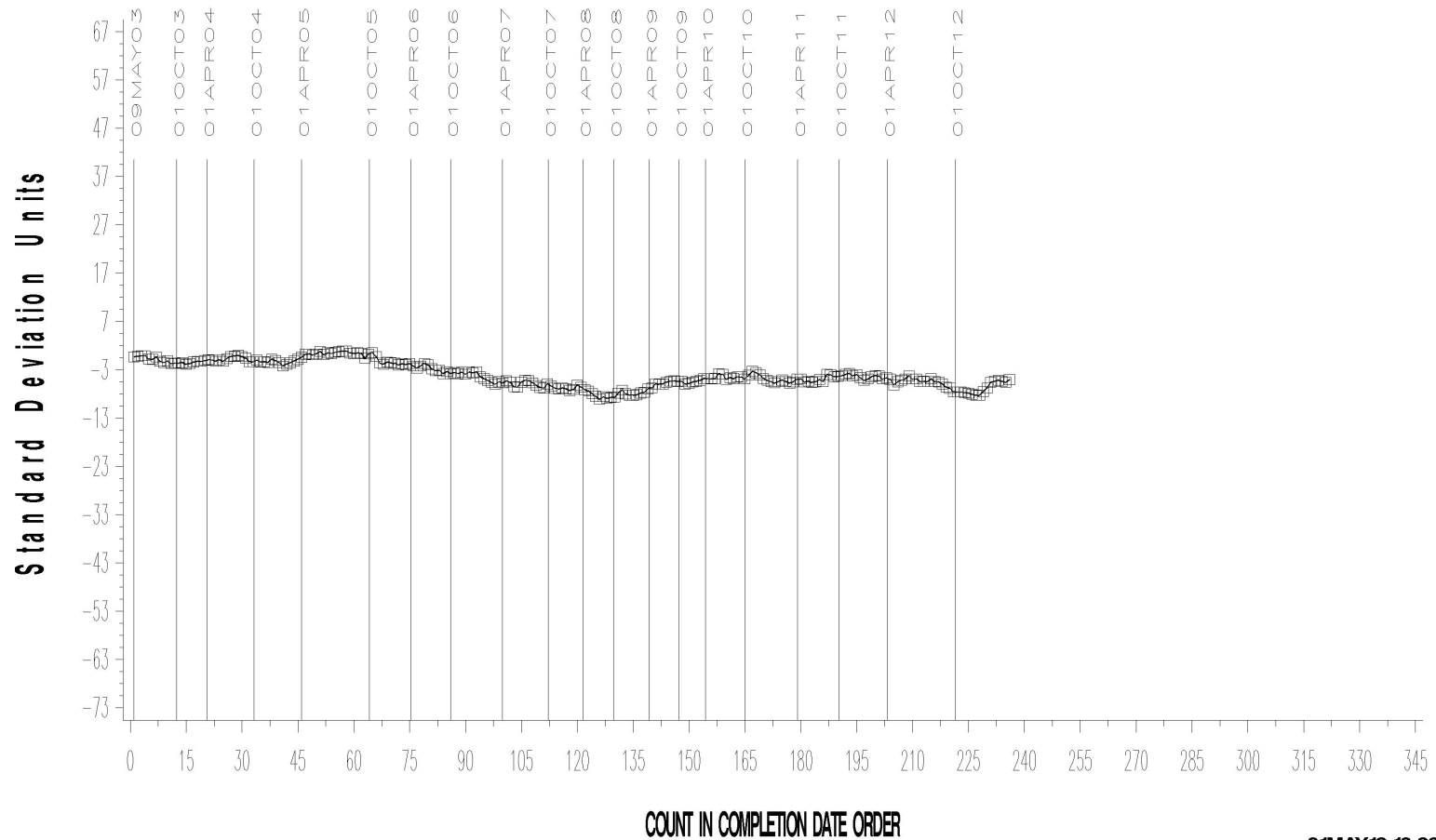
01MAY13:10:36

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

CUSUM Severity Analysis



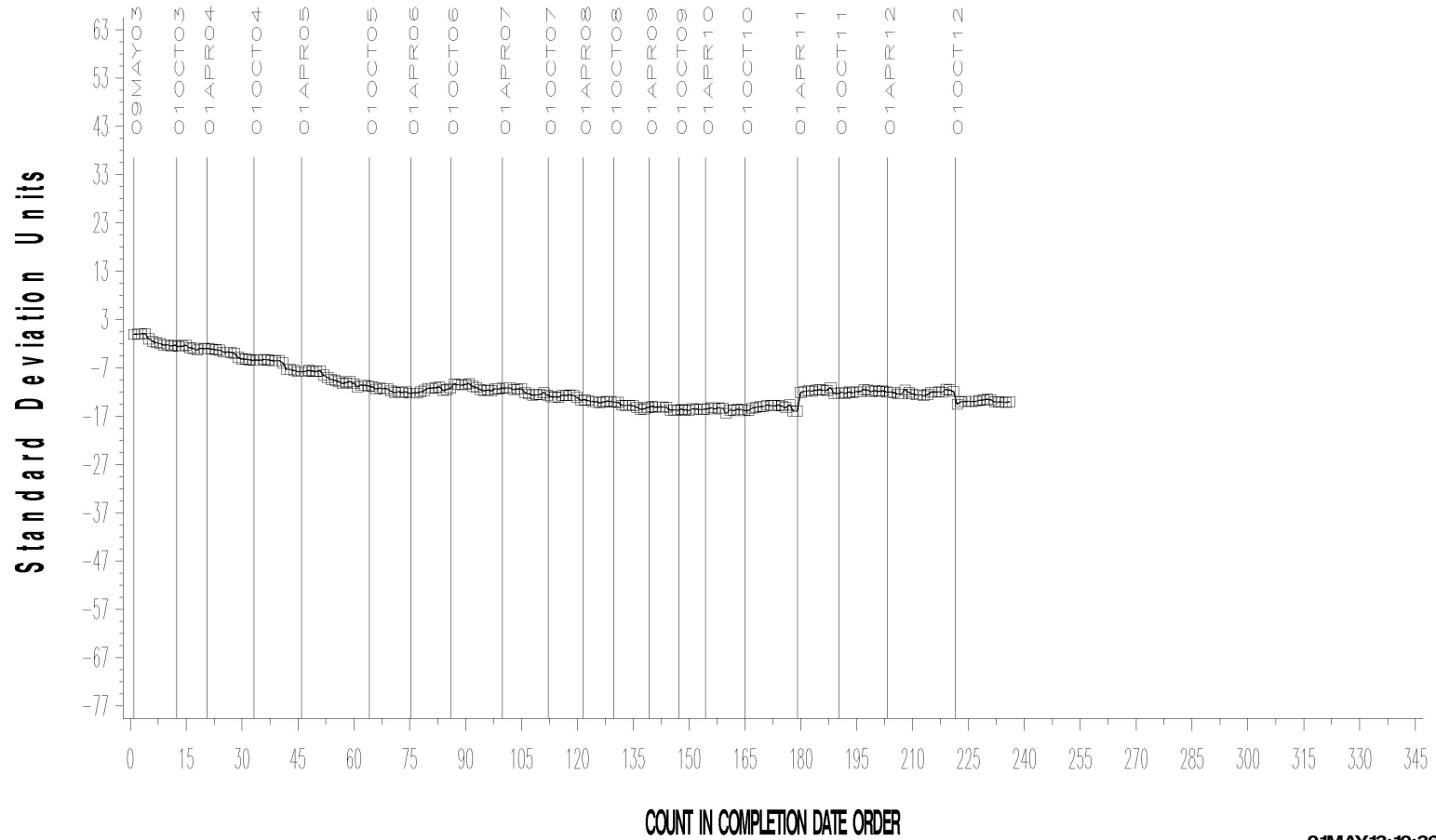
01MAY13:10:36

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

CUSUM Severity Analysis



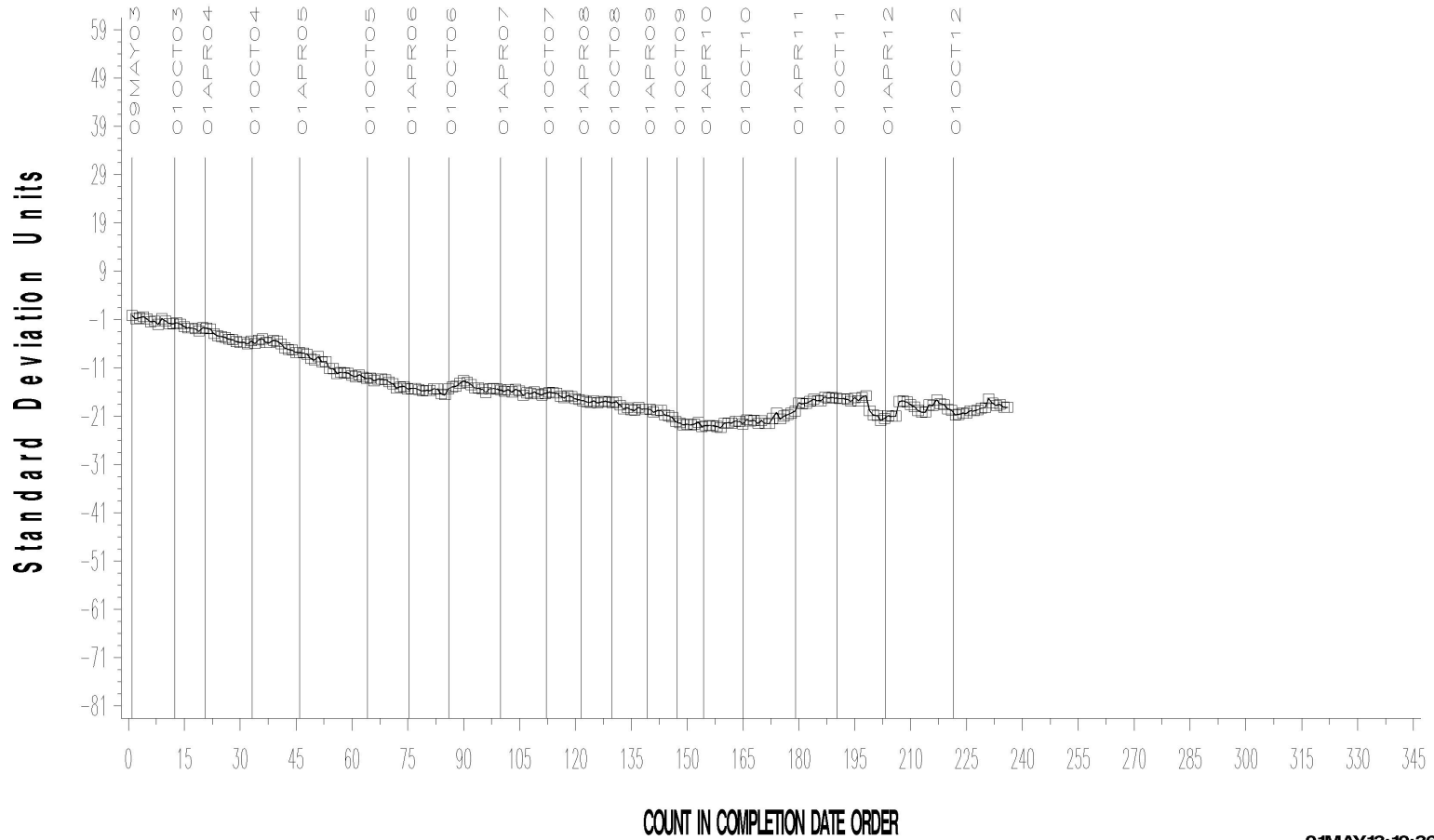
01MAY13:10:36

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

CUSUM Severity Analysis



01MAY13:10:36