




Test Monitoring Center

@ Carnegie Mellon University
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<http://astmtmc.cmu.edu>
412-365-1000

MEMORANDUM: 15-024
DATE: June 8, 2015
TO: Chris Prengaman, Chairman, L-37 Surveillance Panel
FROM: Scott Parke 
SUBJECT: L-37 Rater Calibration from October 1, 2014 through March 31, 2015

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

SDP/sdp/mem15-024.sdp.doc

cc: Frank Farber

Jeff Clark

L-37 Surveillance Panel

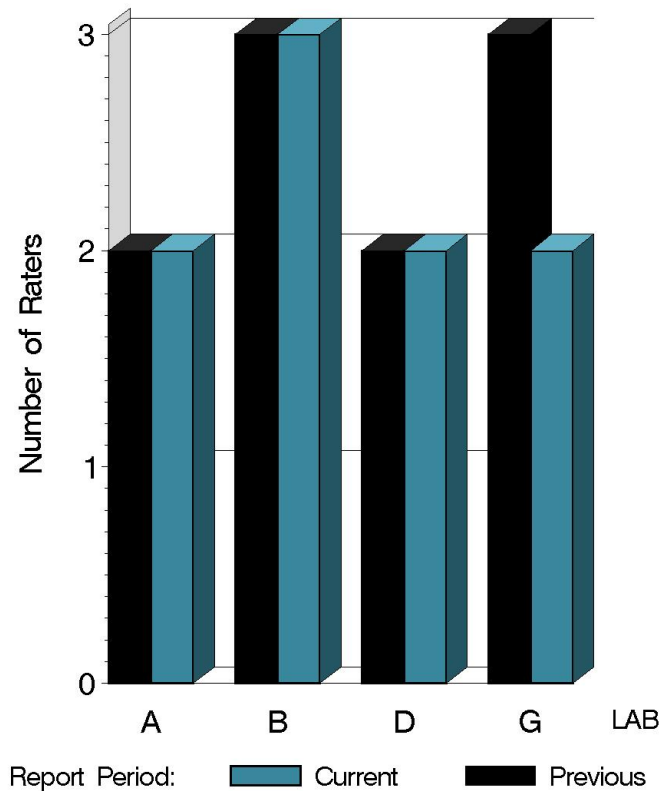
<ftp://ftp.astmtmc.cmu.edu/docs/gear/l37rc/semiannualreports/l37rc-04-2015.pdf>

Distribution: email

L-37 Rater Calibration

	Reporting Data	Calibrated on 3-31-15
Number of Labs	4	4
Number of Raters	9	9

BY-LAB RATER DISTRIBUTION



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L-37 Rater Calibration

Test Distribution by Validity

		Totals	
		Last Period	This Period
Accepted for calibration	AC	13	11
Rejected (Mild)	OC	2	1
Rejected (Severe)	OC	0	3
Rejected (Multiple)	OC	1	0
Rejected (Precision)	OC	0	0
Workshop data	AG	15	0
<hr/>			
Total		31	15

L-37 Rater Calibration

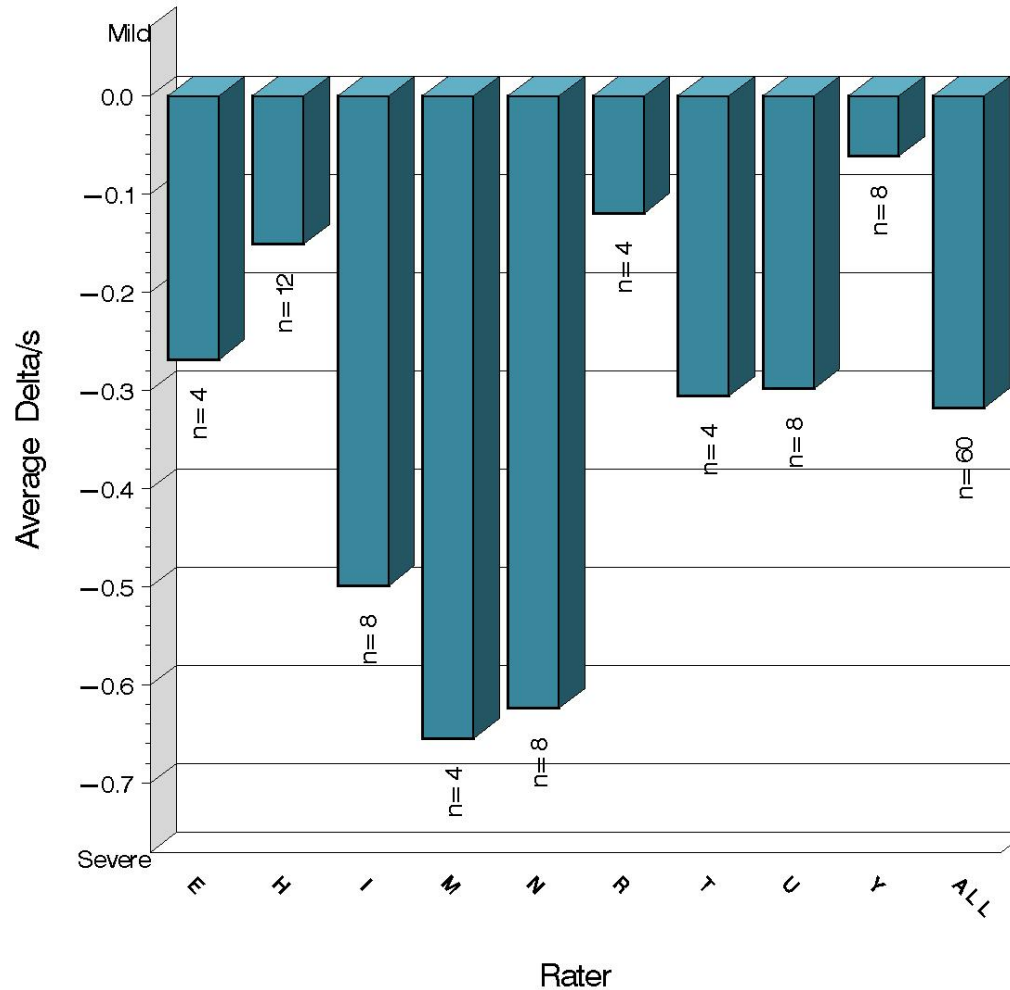
Rater	N	RIDG		RIPP		SPIT		WEAR	
		Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*
E	4	-0.269	0.796	0.372	1.089	0.100	0.469	0.020	0.835
H	12	-0.151	1.032	0.409	0.652	0.170	0.493	-0.049	1.012
I	8	-0.499	1.040	0.662	0.989	0.156	0.329	-0.063	0.674
M	4	-0.655	0.780	-0.323	0.272	-0.026	0.052	-0.520	0.613
N	8	-0.624	1.233	-0.224	0.423	-0.035	0.426	-0.026	0.827
R	4	-0.120	0.478	0.725	1.217	0.406	0.316	-0.381	0.759
T	4	-0.306	0.670	-0.232	0.454	-0.076	0.378	-0.185	1.727
U	8	-0.298	0.841	0.008	0.641	0.146	0.326	0.353	0.575
Y	8	-0.061	1.277	-0.028	0.930	-0.151	0.751	0.208	0.598
ALL	60	-0.318	0.962	0.174	0.802	0.076	0.453	-0.018	0.835

* 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

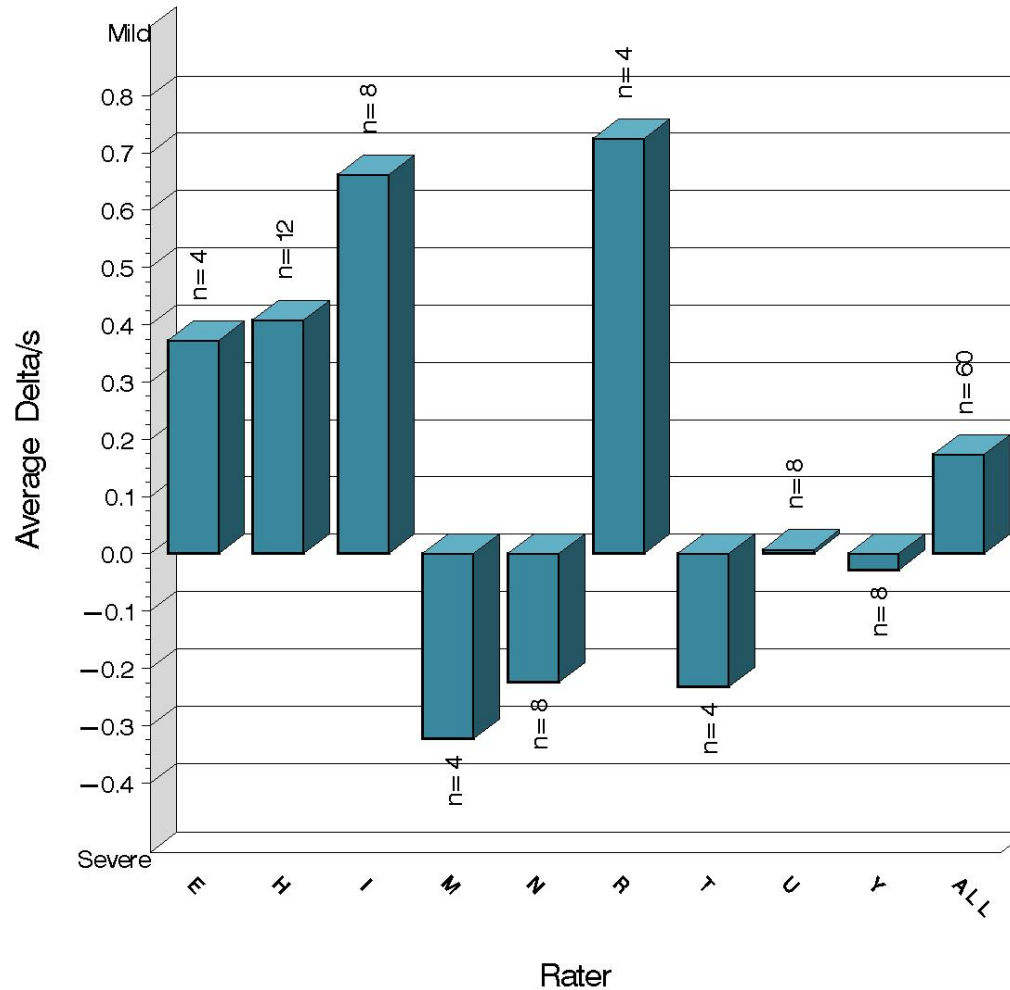


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L-37 Rater Calibration

RIPPLING

Severity as Measured by Delta/s

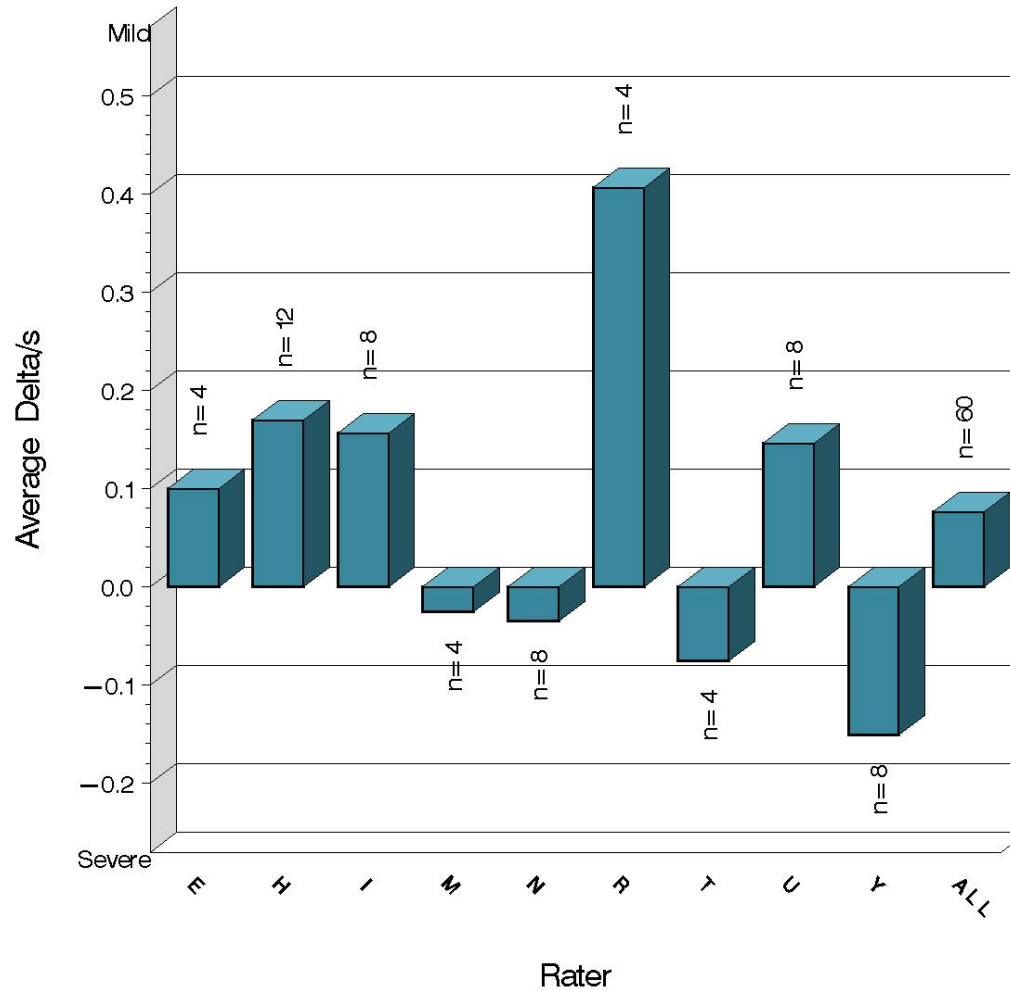


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L-37 Rater Calibration

SPITTING

Severity as Measured by Delta/s

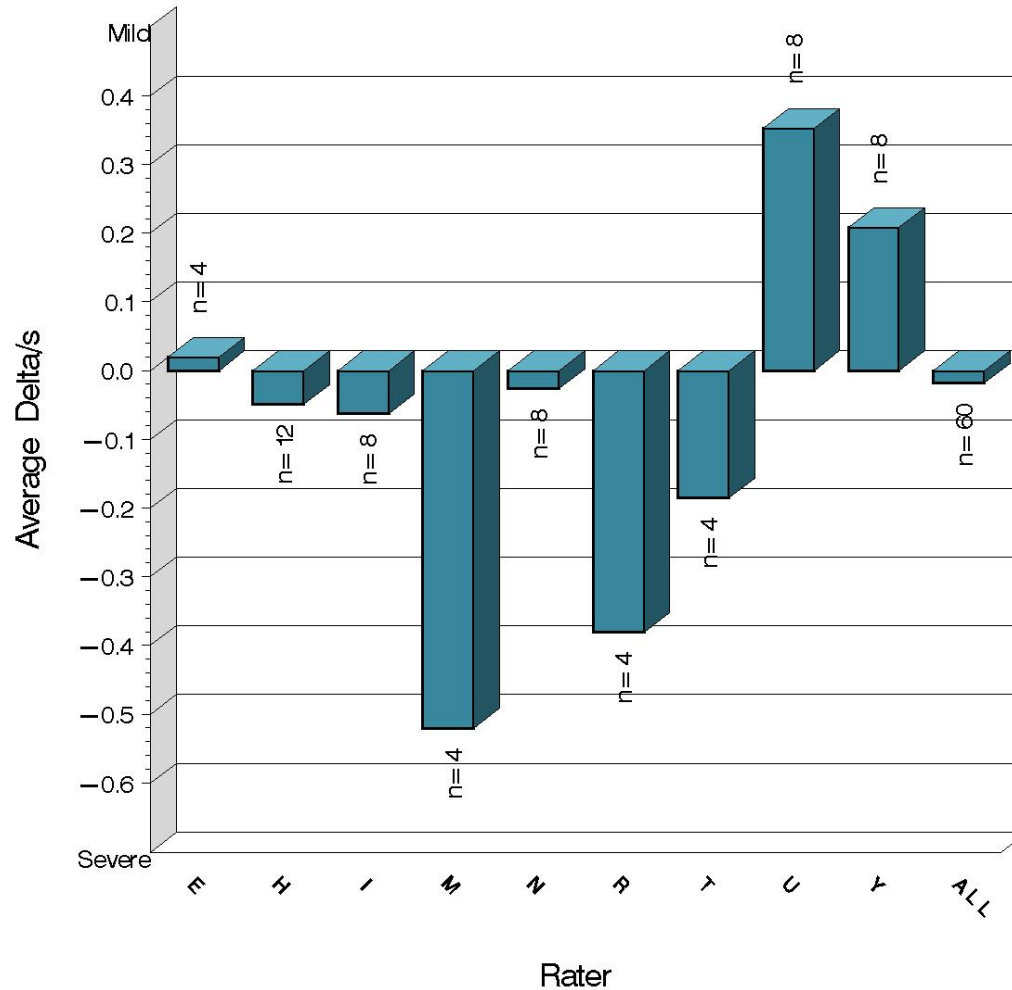


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L-37 Rater Calibration

WEAR

Severity as Measured by Delta/s

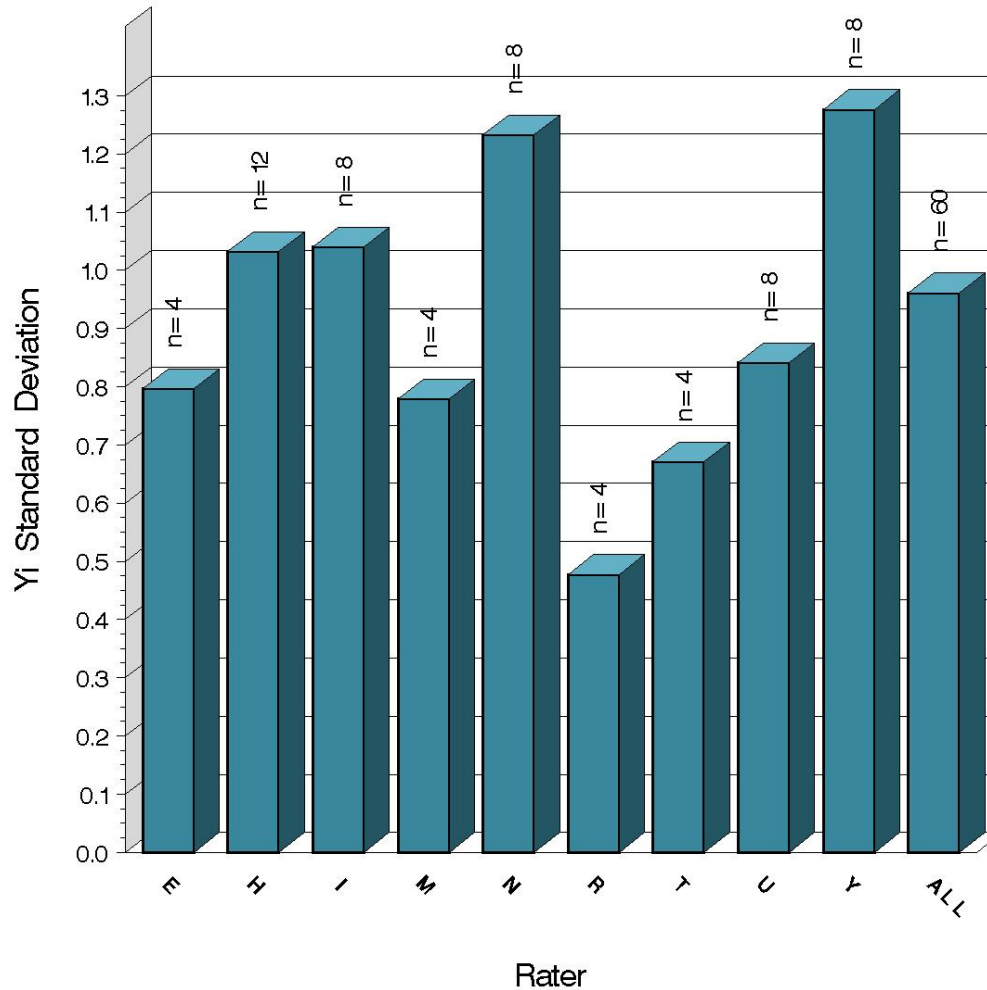


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L-37 Rater Calibration

RIDGING

Precision as Measured by Y_i STD

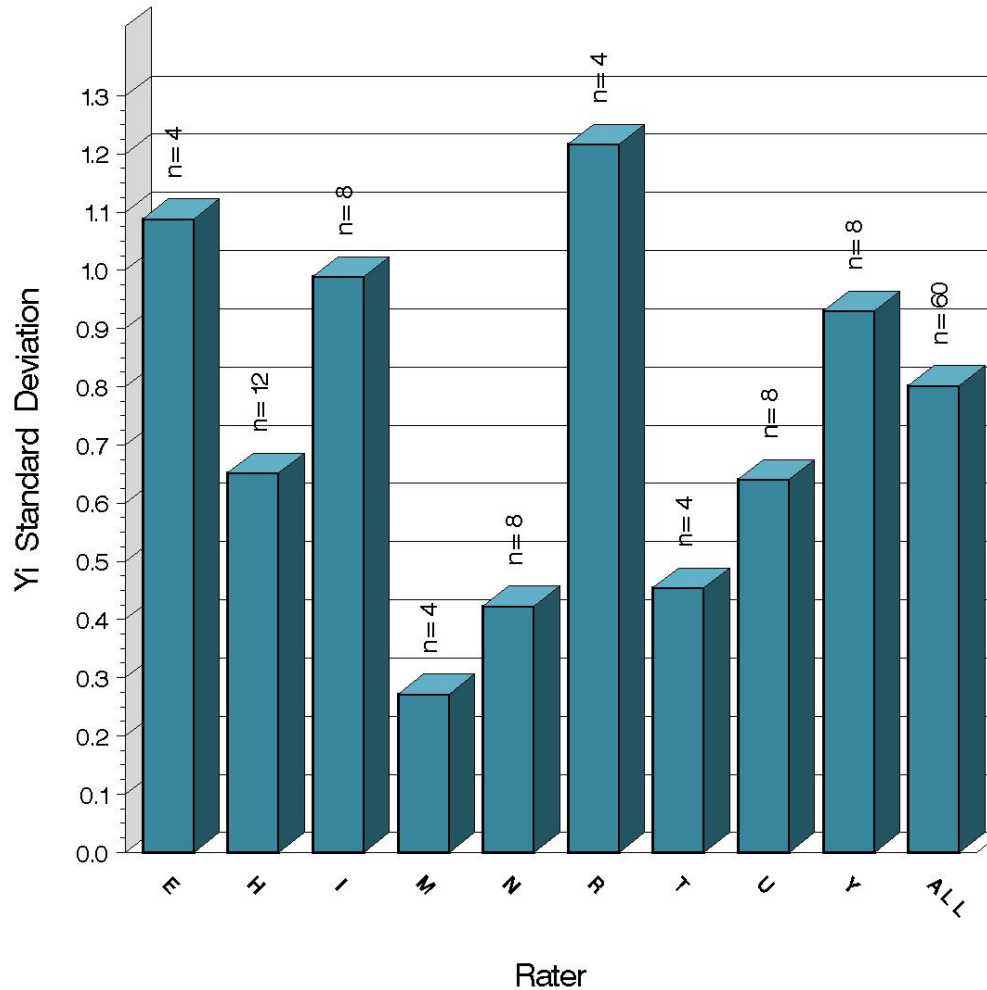


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L-37 Rater Calibration

RIPPLING

Precision as Measured by Yi STD

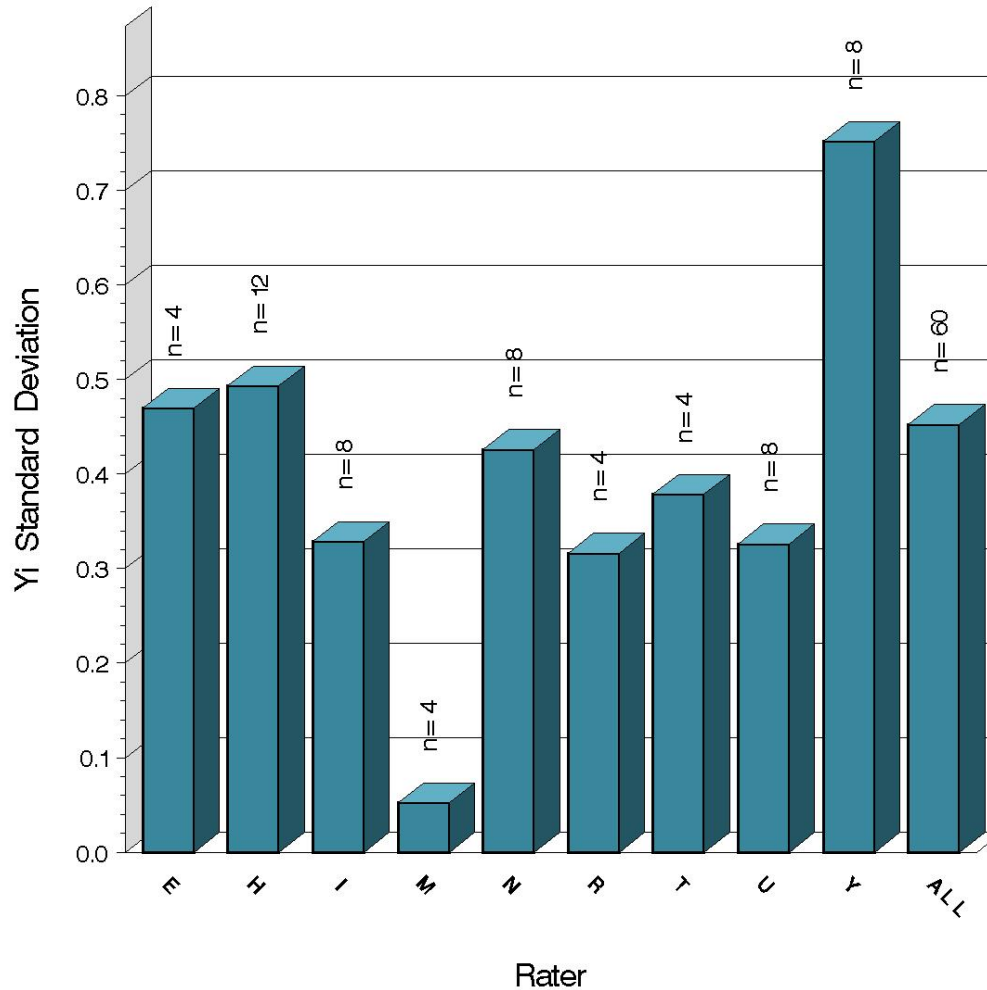


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L-37 Rater Calibration

SPITTING

Precision as Measured by Yi STD

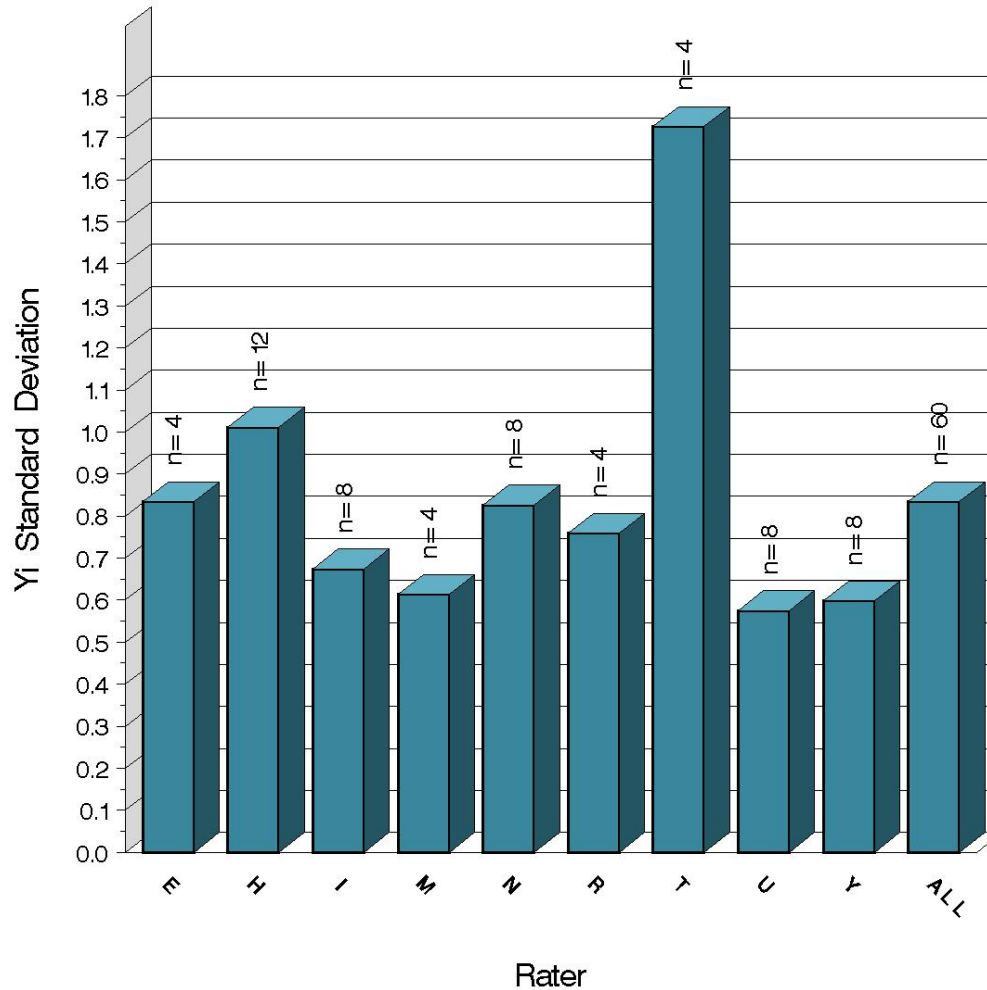


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L-37 Rater Calibration

WEAR

Precision as Measured by Y1 STD



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L-37 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

RIDG results were severe across all raters this period. The other parameters all remained within limits.

Precision

Industry precision for all parameters remained within limits throughout the period.

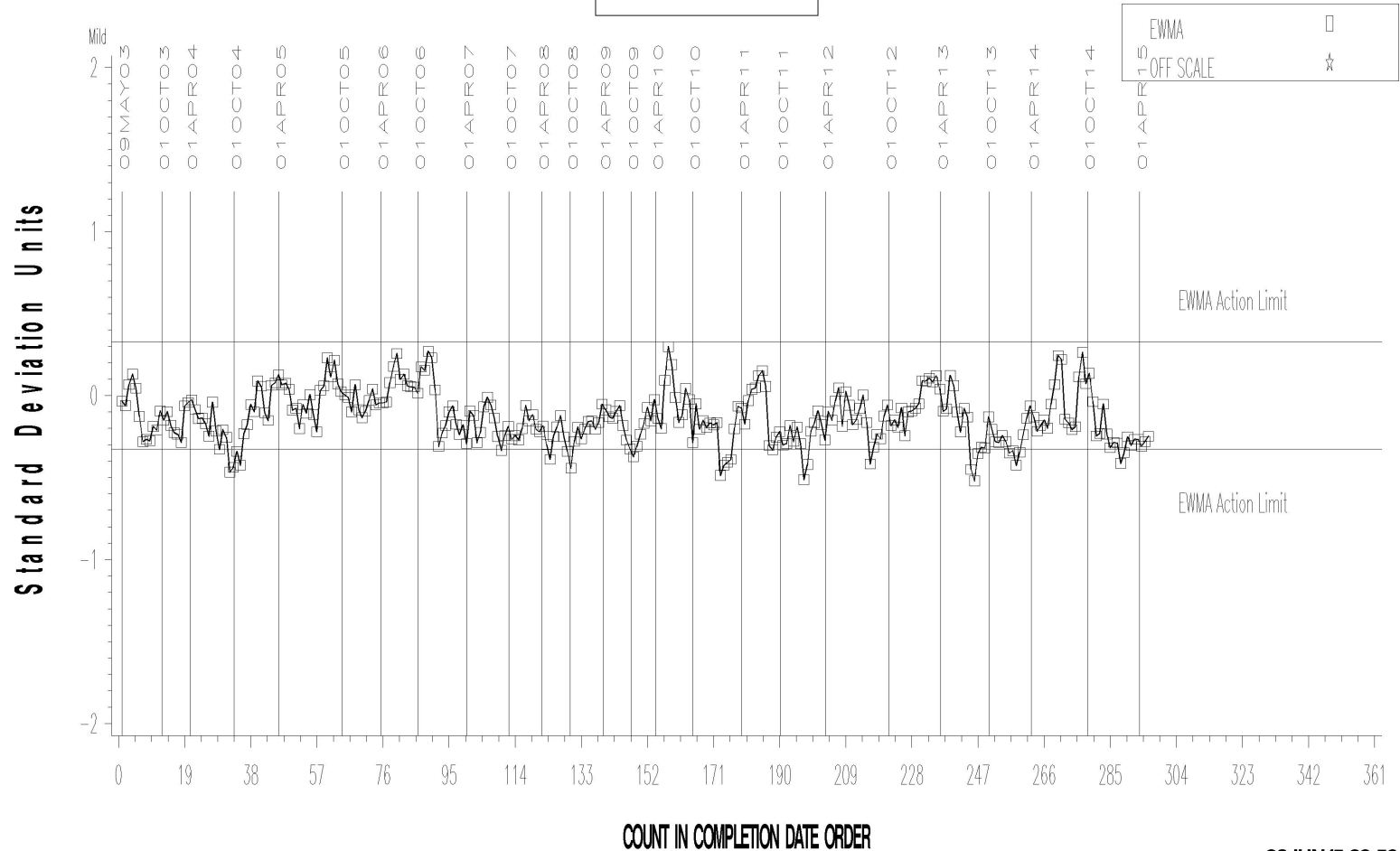
Industry control charts follow.

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

LTMS Severity Analysis



Severe

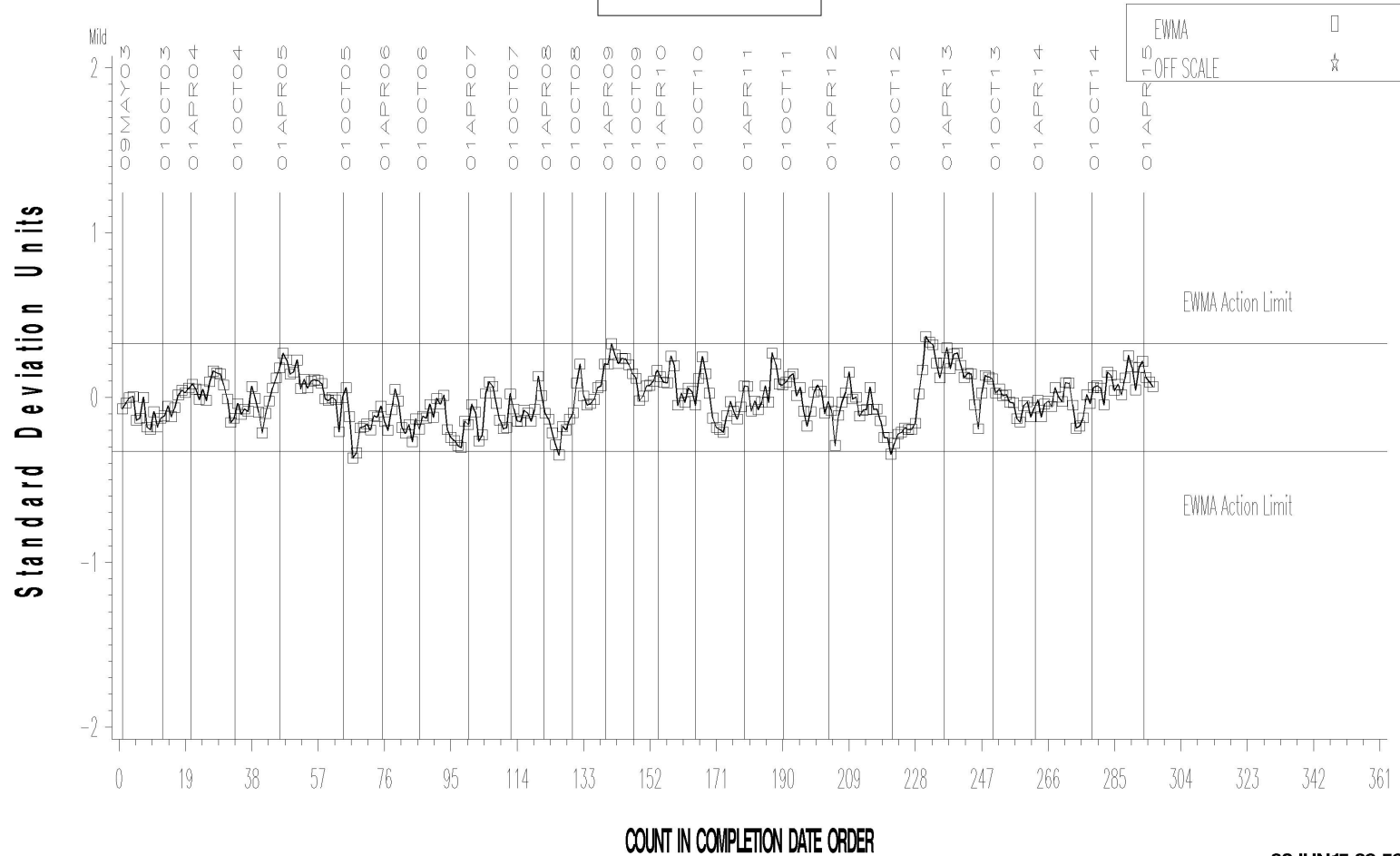
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

LTMS Severity Analysis



Severe

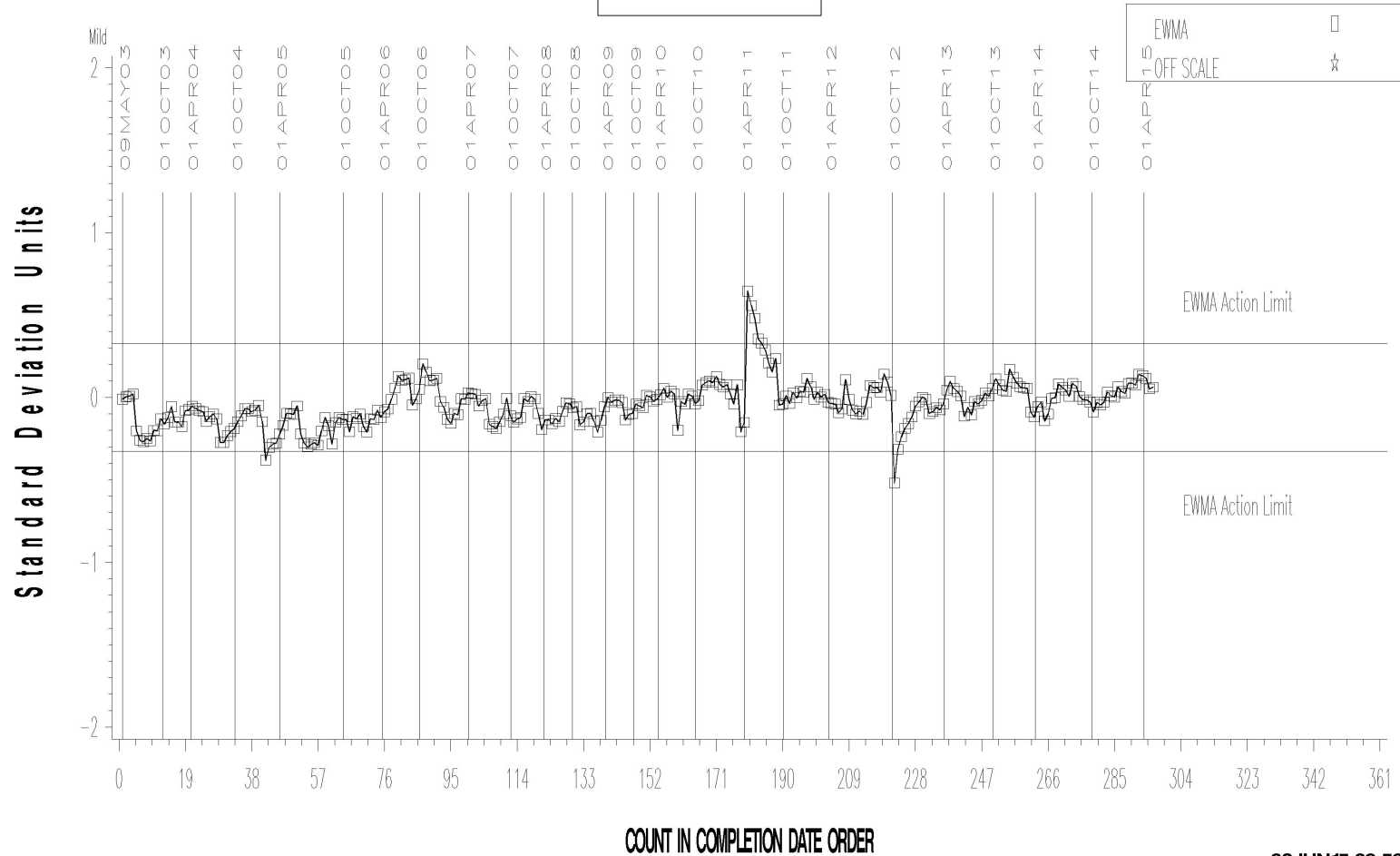
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

LTMS Severity Analysis



Severe

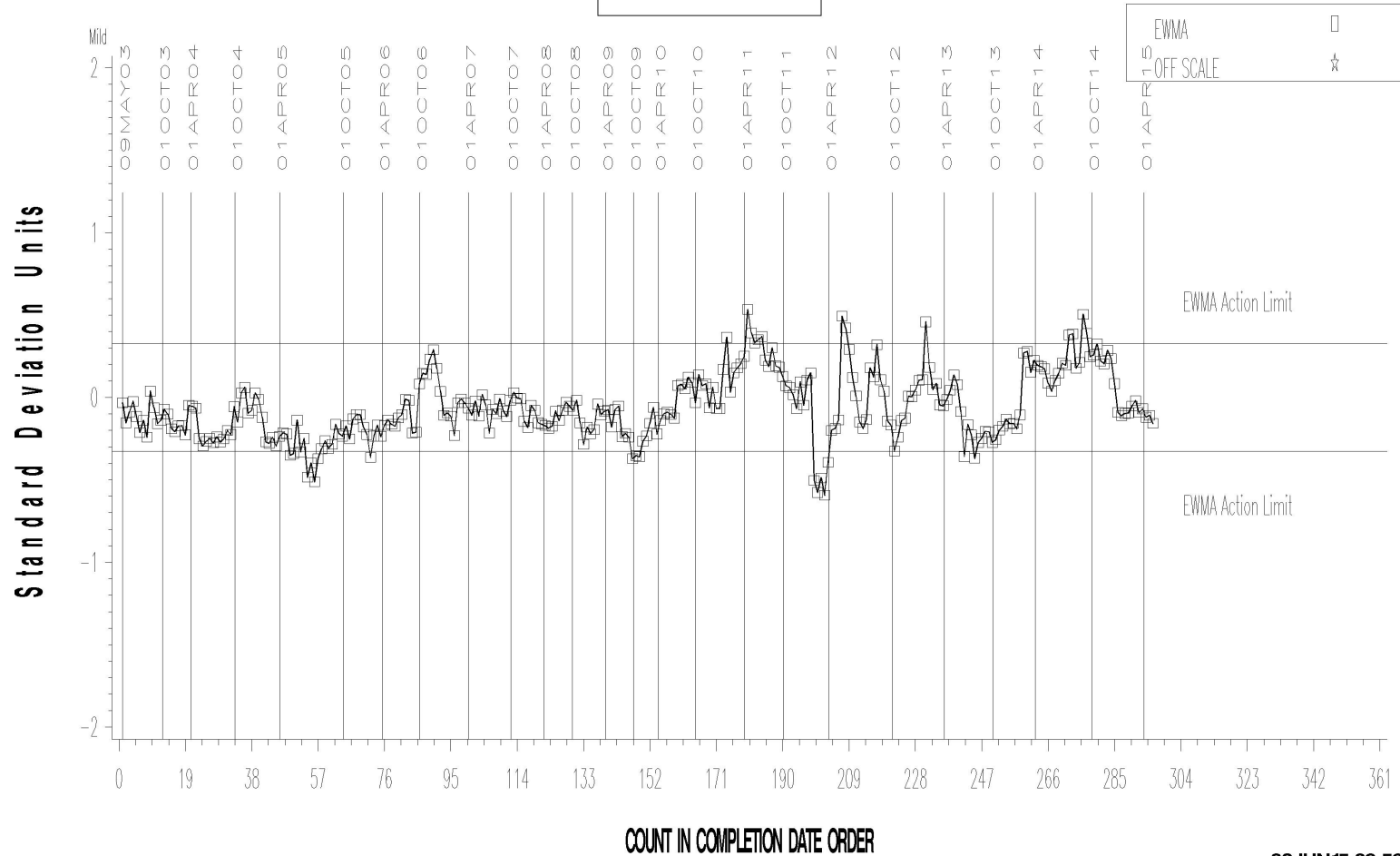
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

LTMS Severity Analysis



Severe

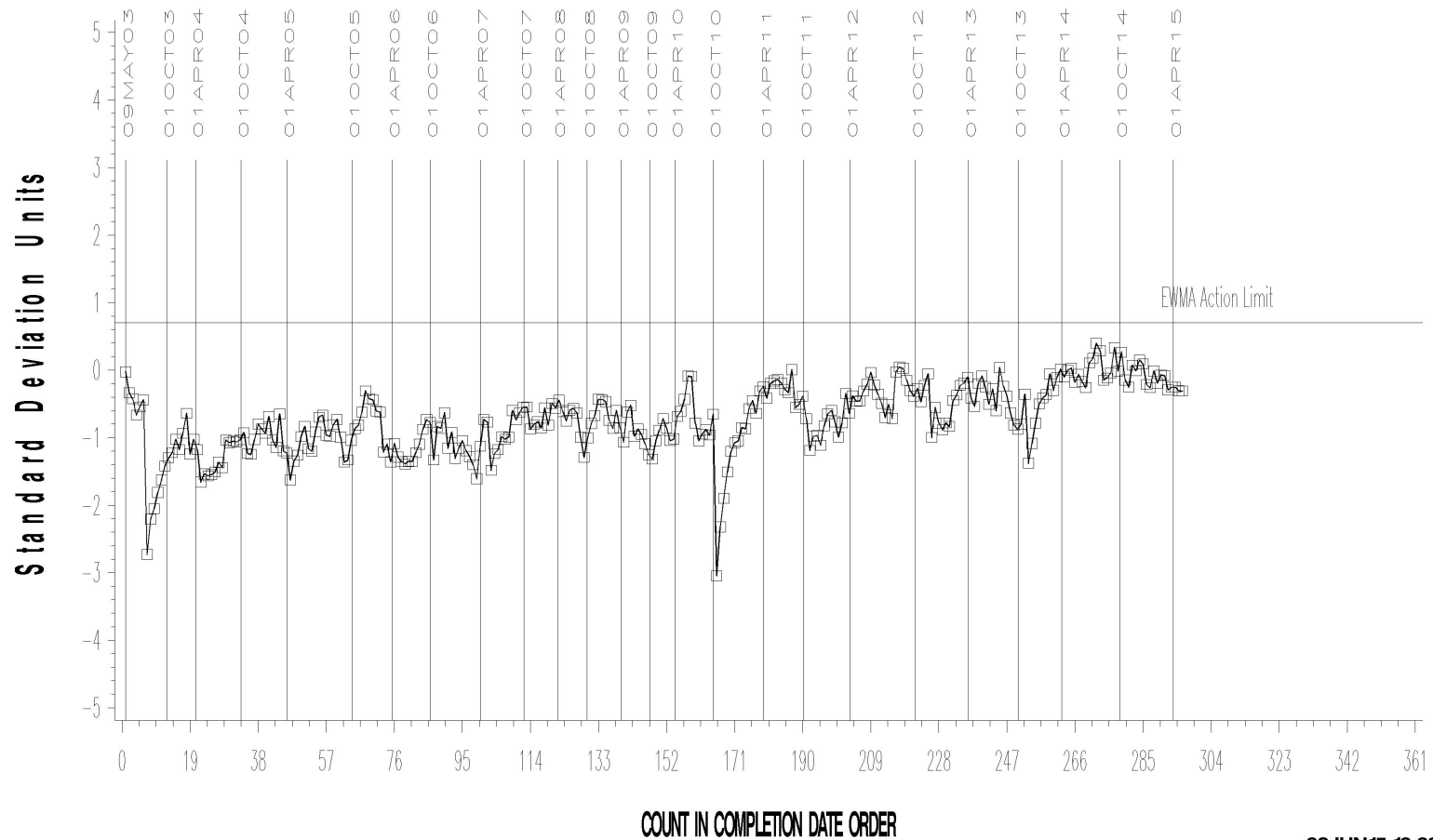
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

LTMS Precision Analysis



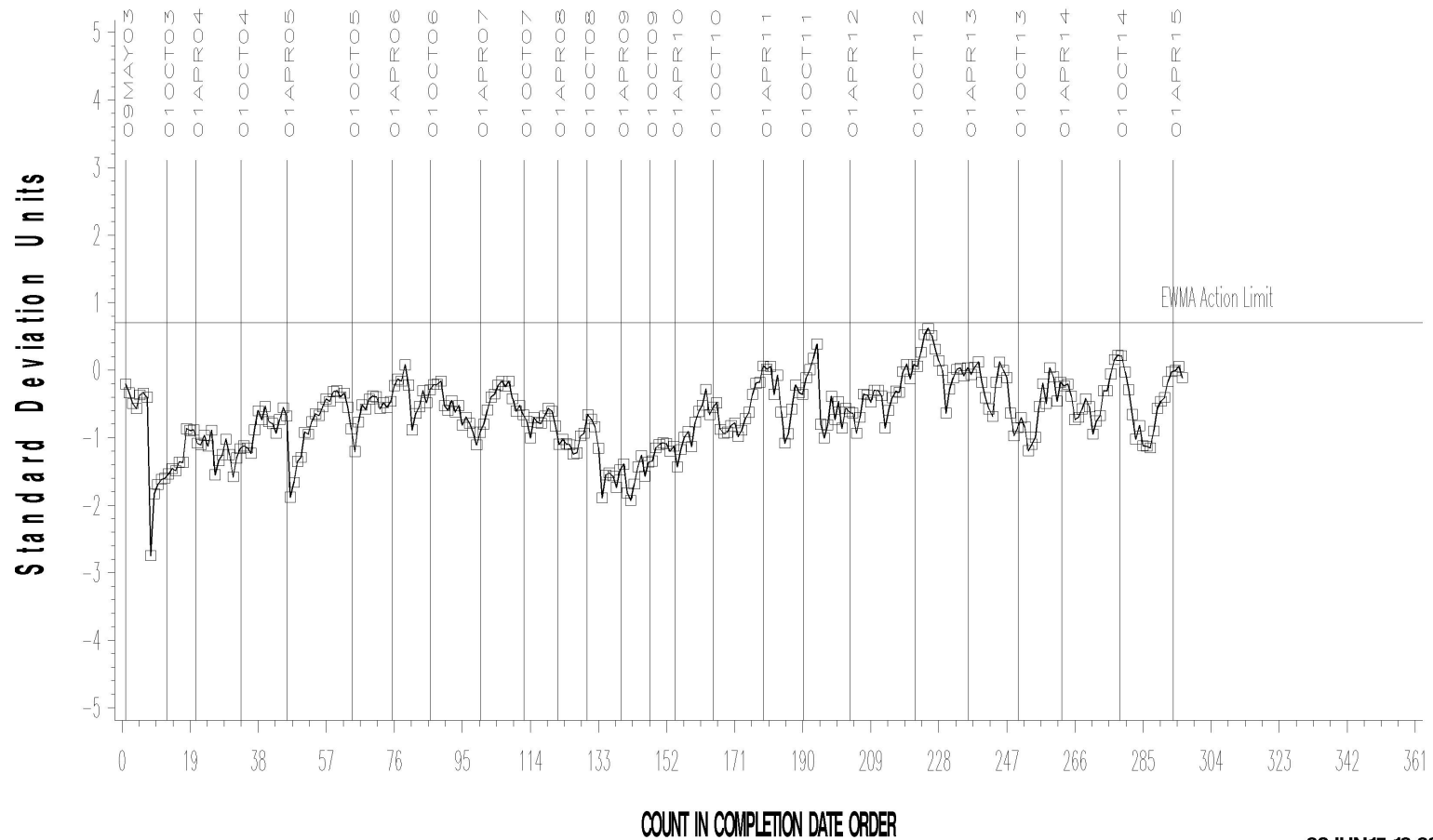
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

LTMS Precision Analysis



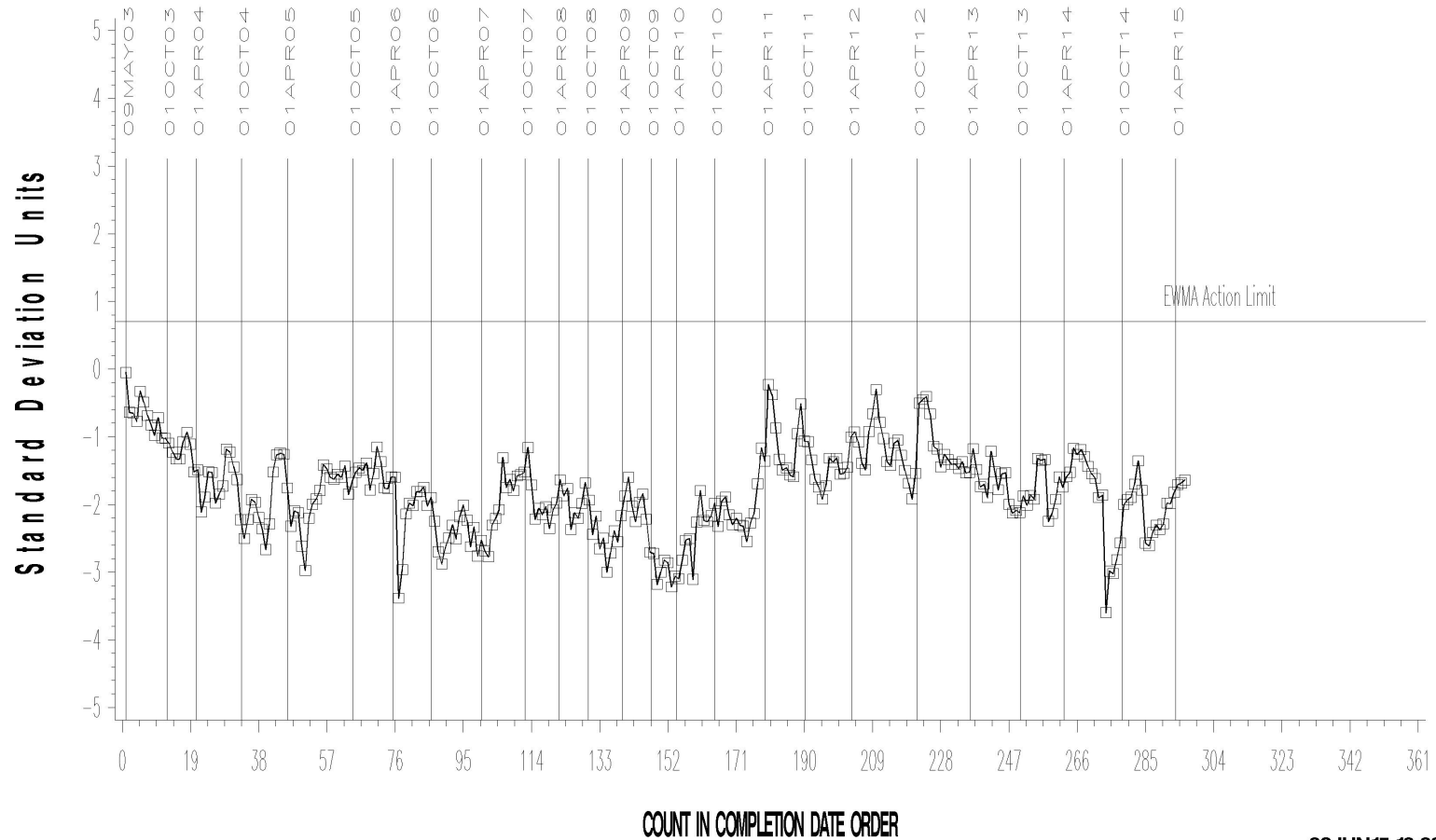
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

LTMS Precision Analysis



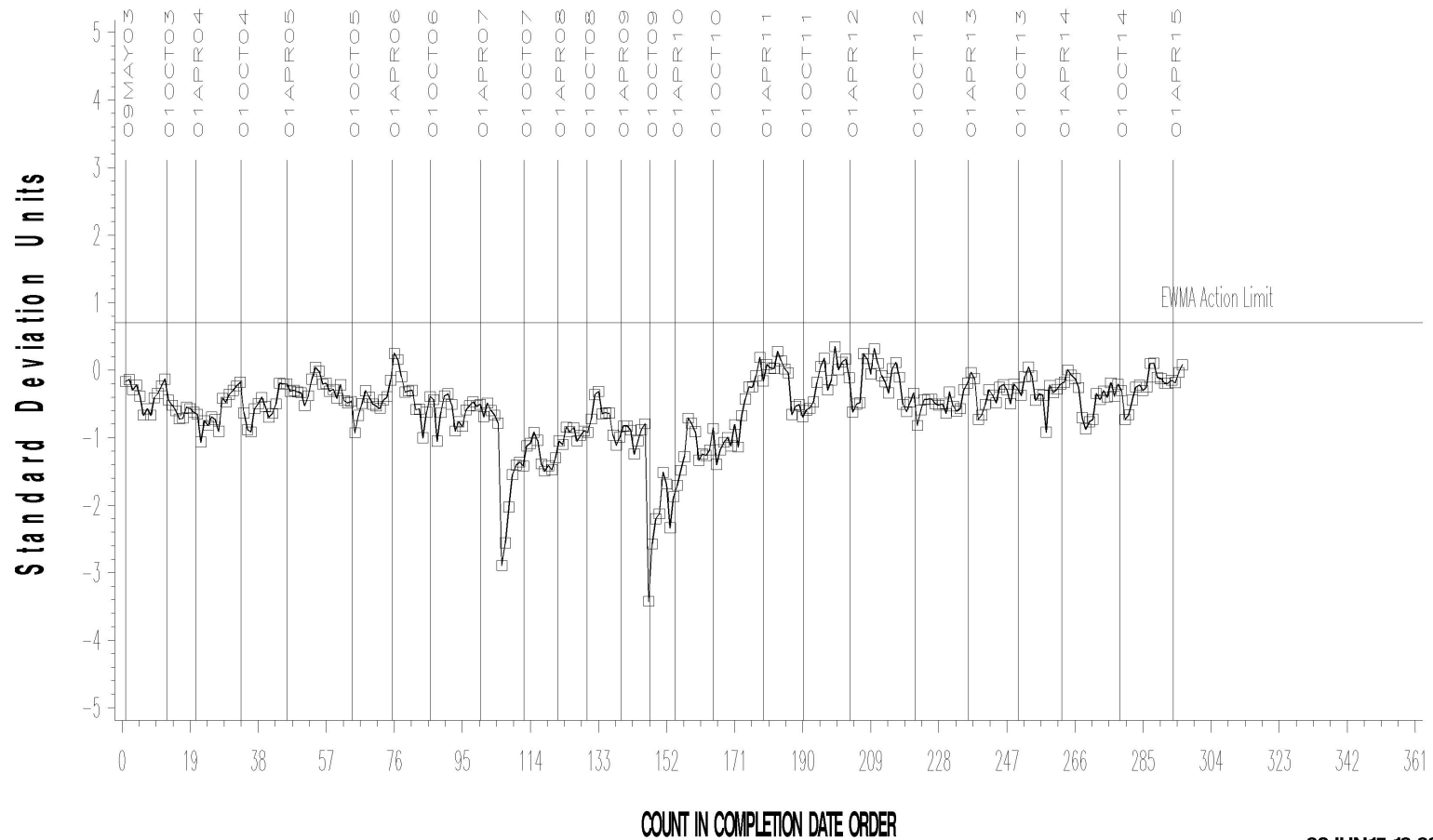
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

LTMS Precision Analysis



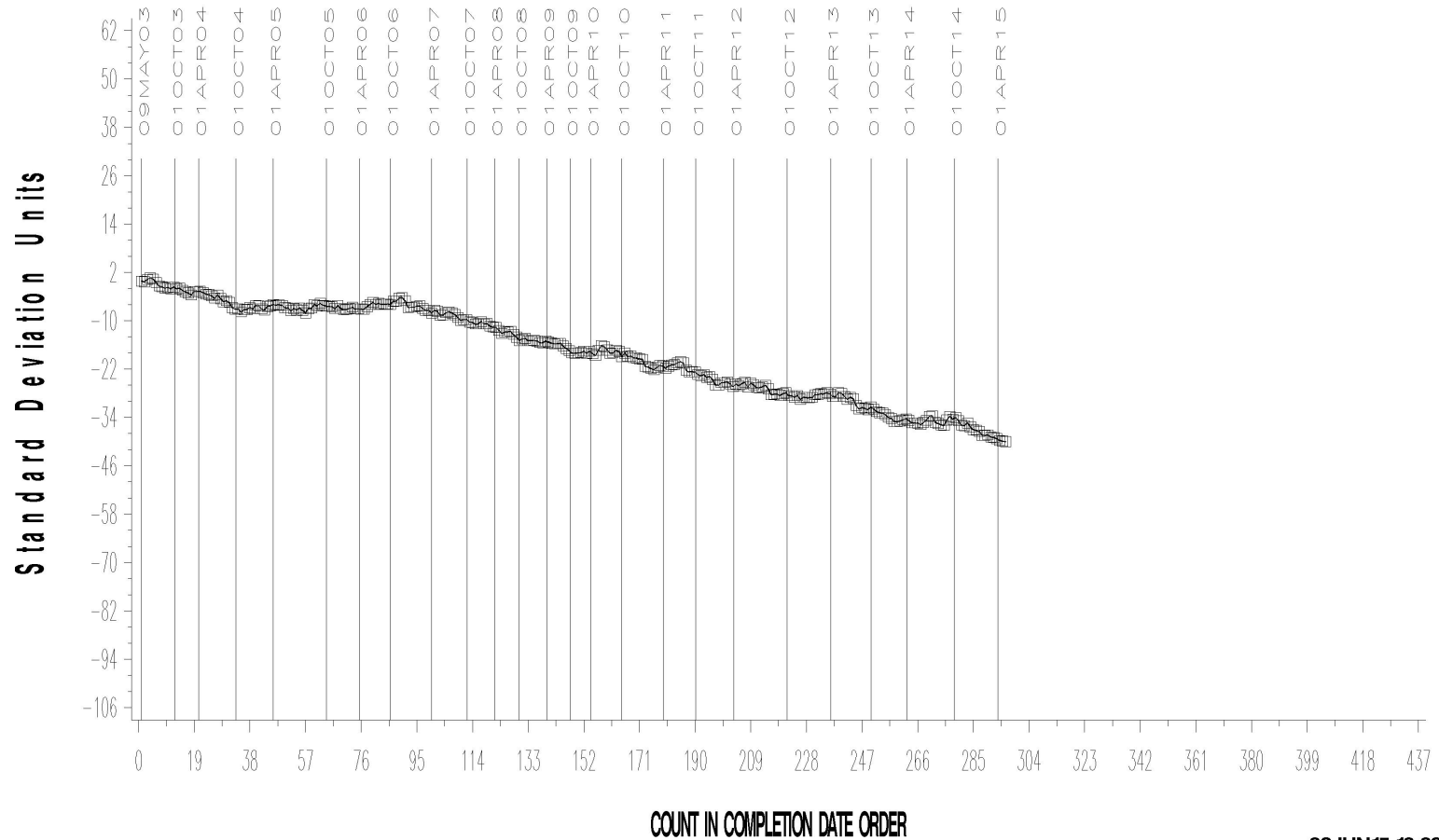
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

CUSUM Severity Analysis



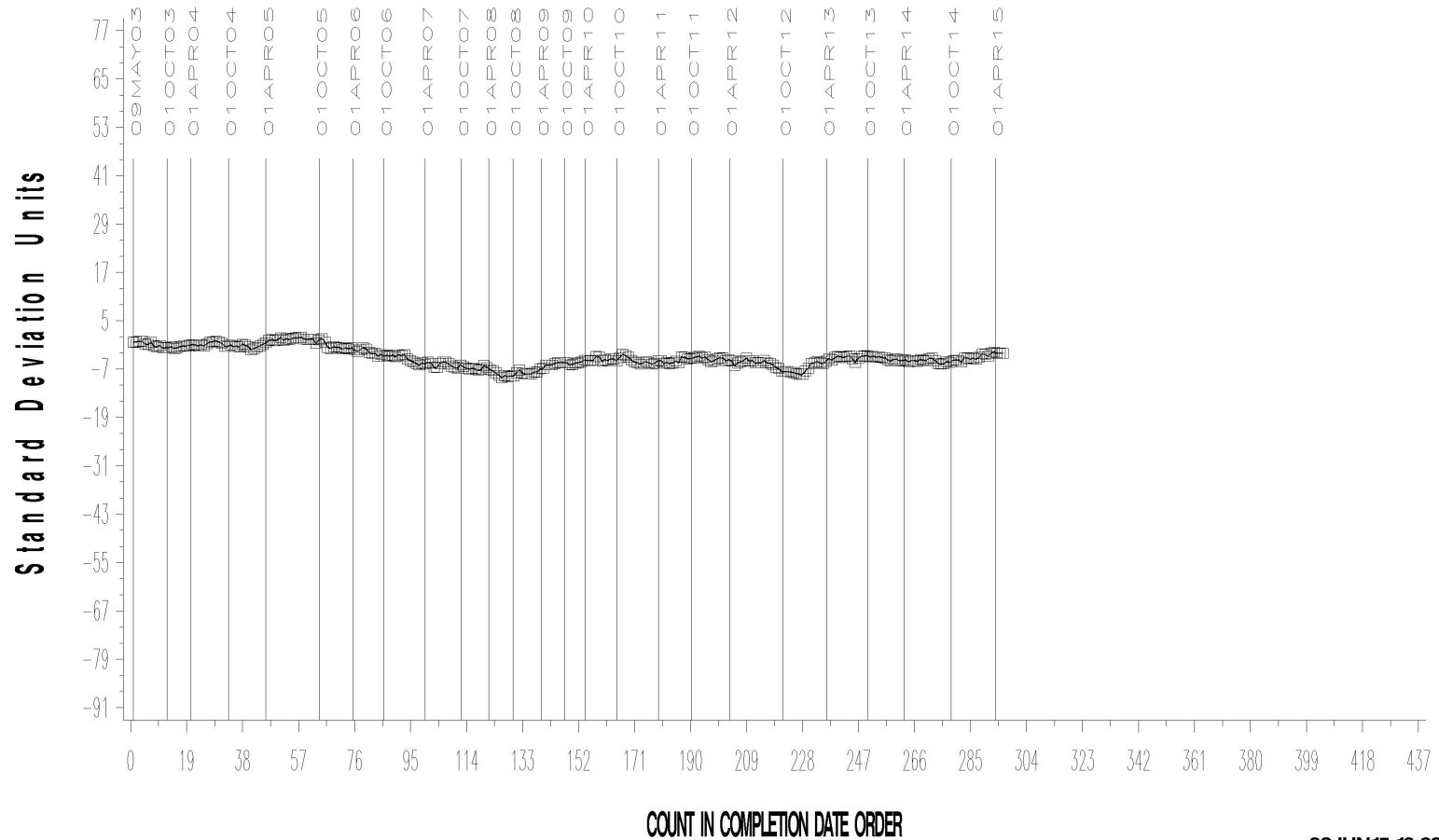
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

CUSUM Severity Analysis



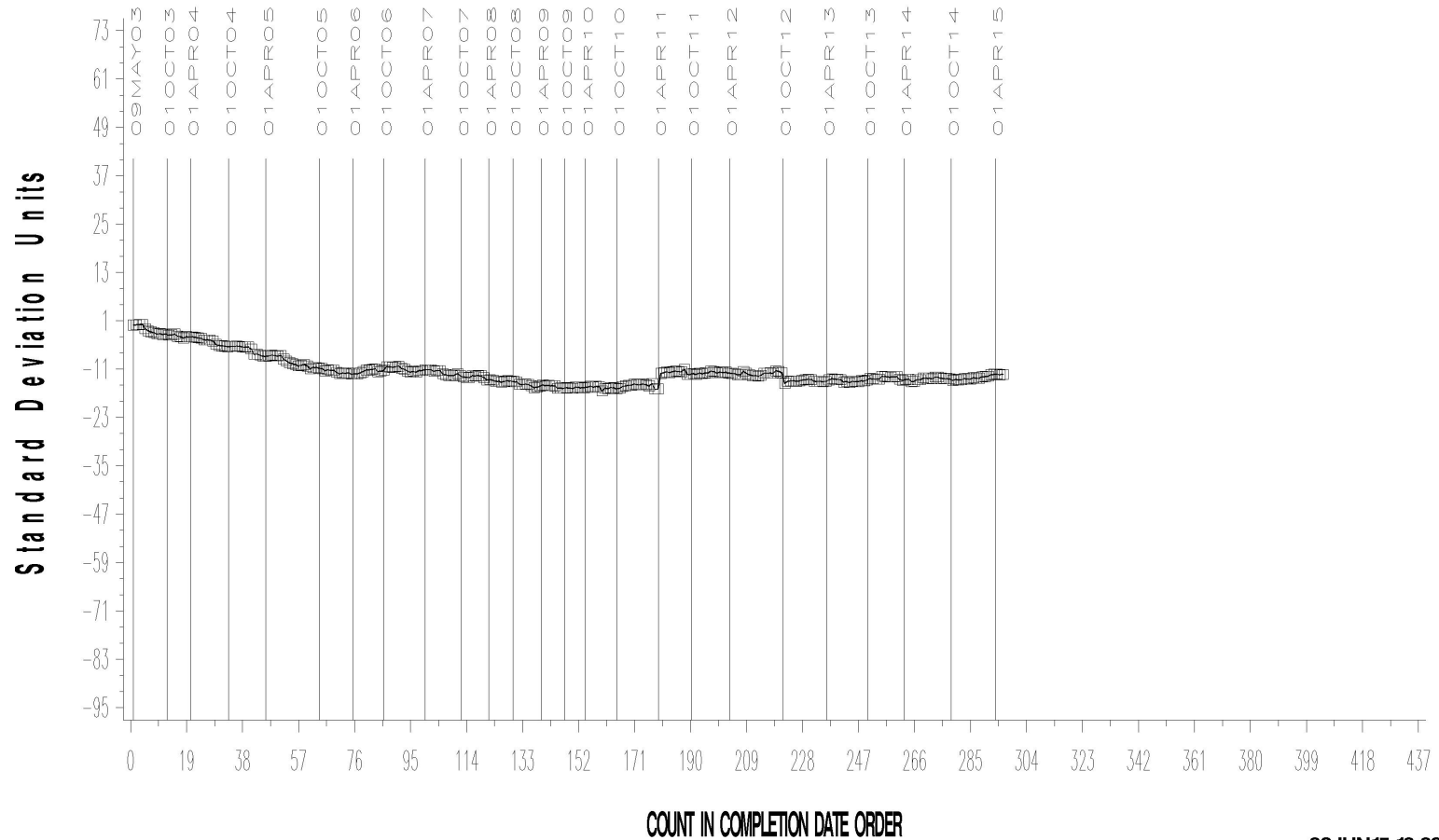
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

CUSUM Severity Analysis



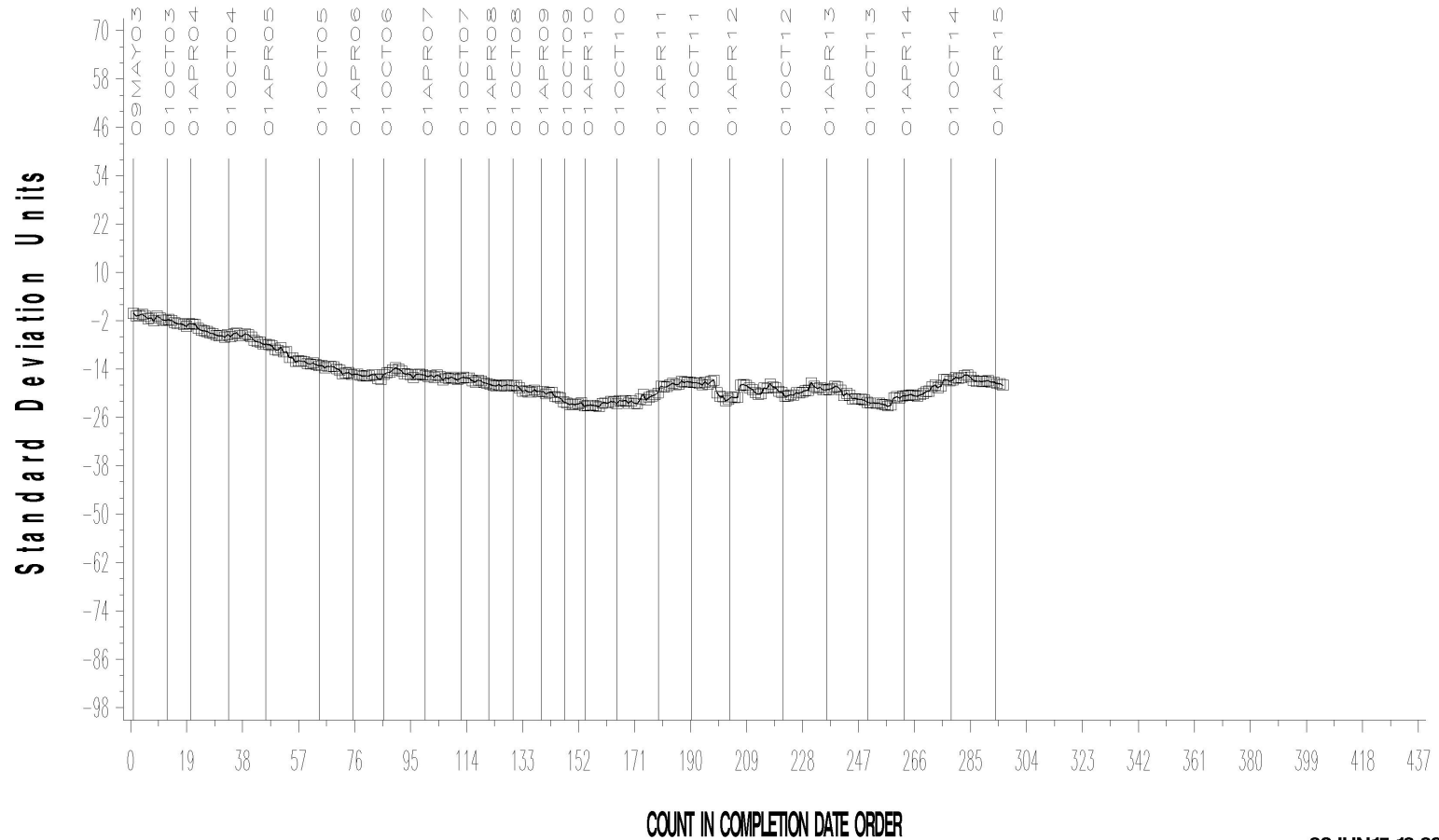
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

CUSUM Severity Analysis



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