



Test Monitoring Center

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

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

MEMORANDUM: 21-012
DATE: April 20, 2021
TO: Rob Slocum, Chairman, L-37 Surveillance Panel
FROM: Dylan Beck *Dylan Beck*
SUBJECT: L-37 Rater Calibration from October 1, 2020 through March 31, 2021

Attached is a summary of L-37 rater calibration activity this period.

DJB/djb/mem21-021.djb.doc

cc: Frank Farber
Jeff Clark

L-37 Surveillance Panel

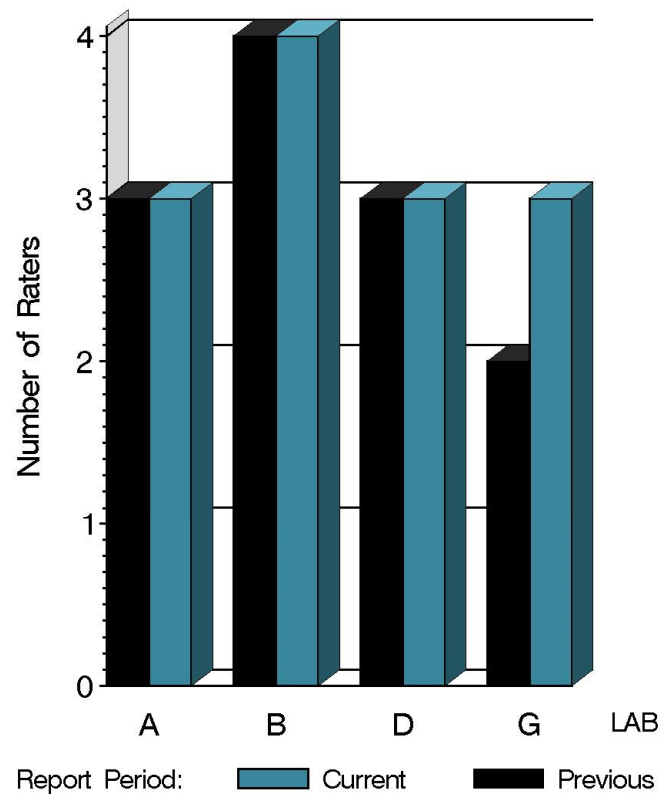
<http://www.astmtmc.cmu.edu/ftp/docs/gear/l37rc/semiannualreports/l37rc-04-2021.pdf>

Distribution: email

L-37 Rater Calibration

	Reporting Data	Calibrated on 3-31-21
Number of Labs	4	4
Number of Raters	13	13

BY-LAB RATER
DISTRIBUTION



14:52:10 15APR2021

L-37 Rater Calibration

Test Distribution by Validity

		Totals	
		Last Period	This Period
Accepted for calibration	AC	14	23
Rejected (Mild)	OC	1	4
Rejected (Severe)	OC	3	4
Rejected (Multiple)	OC	0	0
Rejected (Precision)	OC	0	0
Workshop data	AG	0	0
Total		18	31

L-37 Rater Calibration

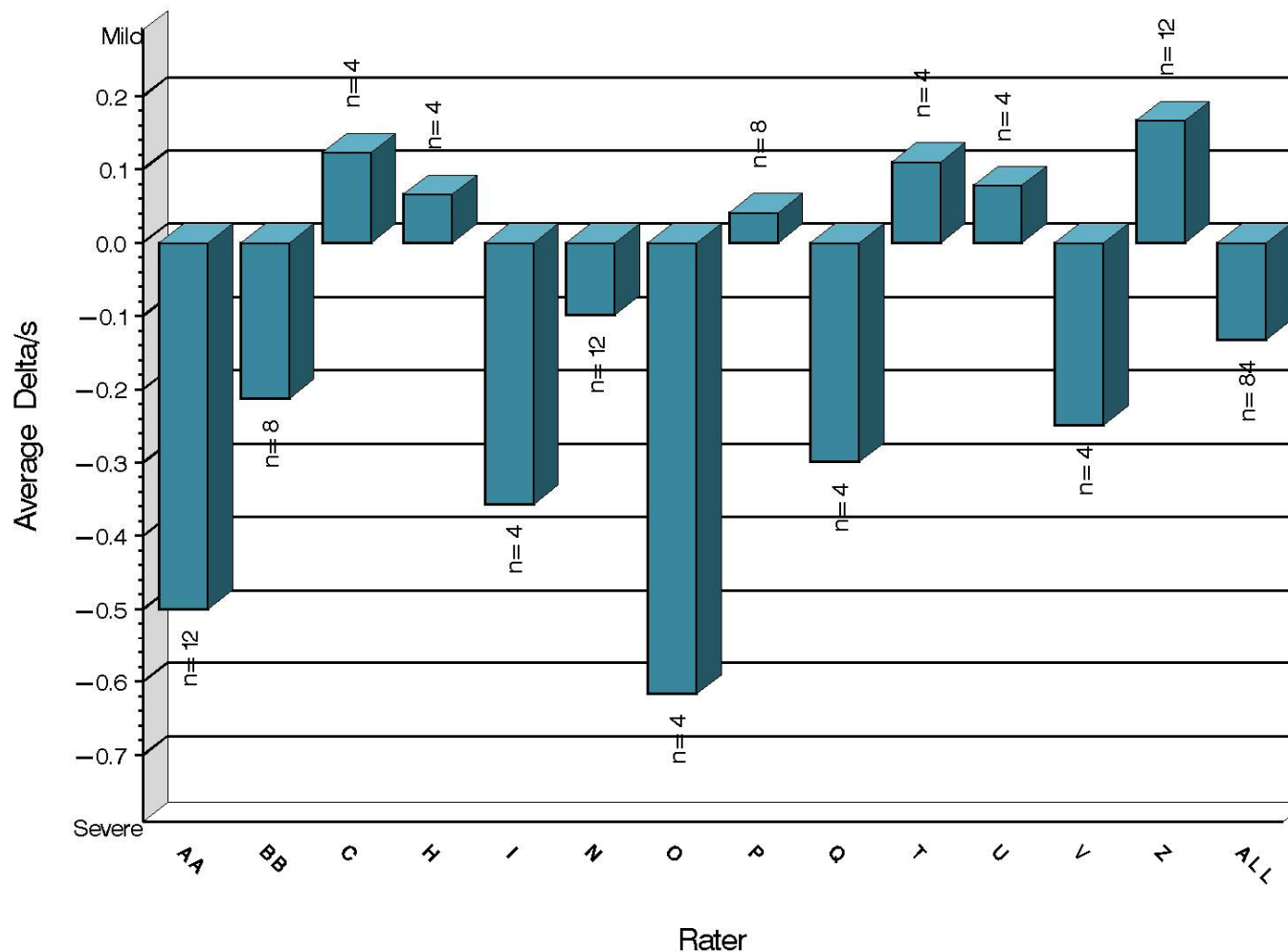
Rater		N	RIDG		RIPP		SPIT		WEAR	
			Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*	Avg Yi	STD*
AA		12	-0.49963	0.91638	0.44538	1.56414	0.01498	0.30474	0.14857	1.44732
BB		8	-0.21221	0.74140	-0.27967	0.72677	0.00210	0.41331	-0.49744	0.62168
C		4	-0.12350	0.59647	-0.71254	0.76960	-0.12688	0.14651	0.29072	0.97273
H		4	0.06601	0.83240	-0.29073	0.39979	-0.02257	0.21218	-0.16572	0.41090
I		4	-0.35649	0.95923	-0.31085	0.57355	-0.09050	0.31567	-0.06933	0.70182
N		12	-0.09821	0.54952	0.28518	1.49901	-0.13480	0.23979	-0.02151	0.59959
O		4	-0.61636	0.59295	0.71299	0.32529	-0.66784	1.50918	-0.51695	0.36155
P		8	0.04136	0.60607	0.16065	0.74546	-0.15679	0.64795	0.63907	1.38847
Q		4	-0.29873	0.48797	-0.03380	0.86048	-0.07812	0.15625	-0.21209	0.29065
T		4	0.11047	0.63345	0.00671	0.42936	-0.01988	0.36756	0.22470	0.70267
U		4	0.07795	0.93896	-0.16137	0.87468	0.10810	0.53159	0.09358	1.03808
V		4	-0.24869	0.56583	-0.12187	0.50708	0.16266	0.52361	-0.00492	0.92947
Z		12	0.16715	0.78295	-0.38054	1.02607	0.33840	0.23304	0.74432	1.20739
ALL		84	-0.13220	0.72263	-0.08466	1.03118	-0.01851	0.48707	0.12083	1.01138

* 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

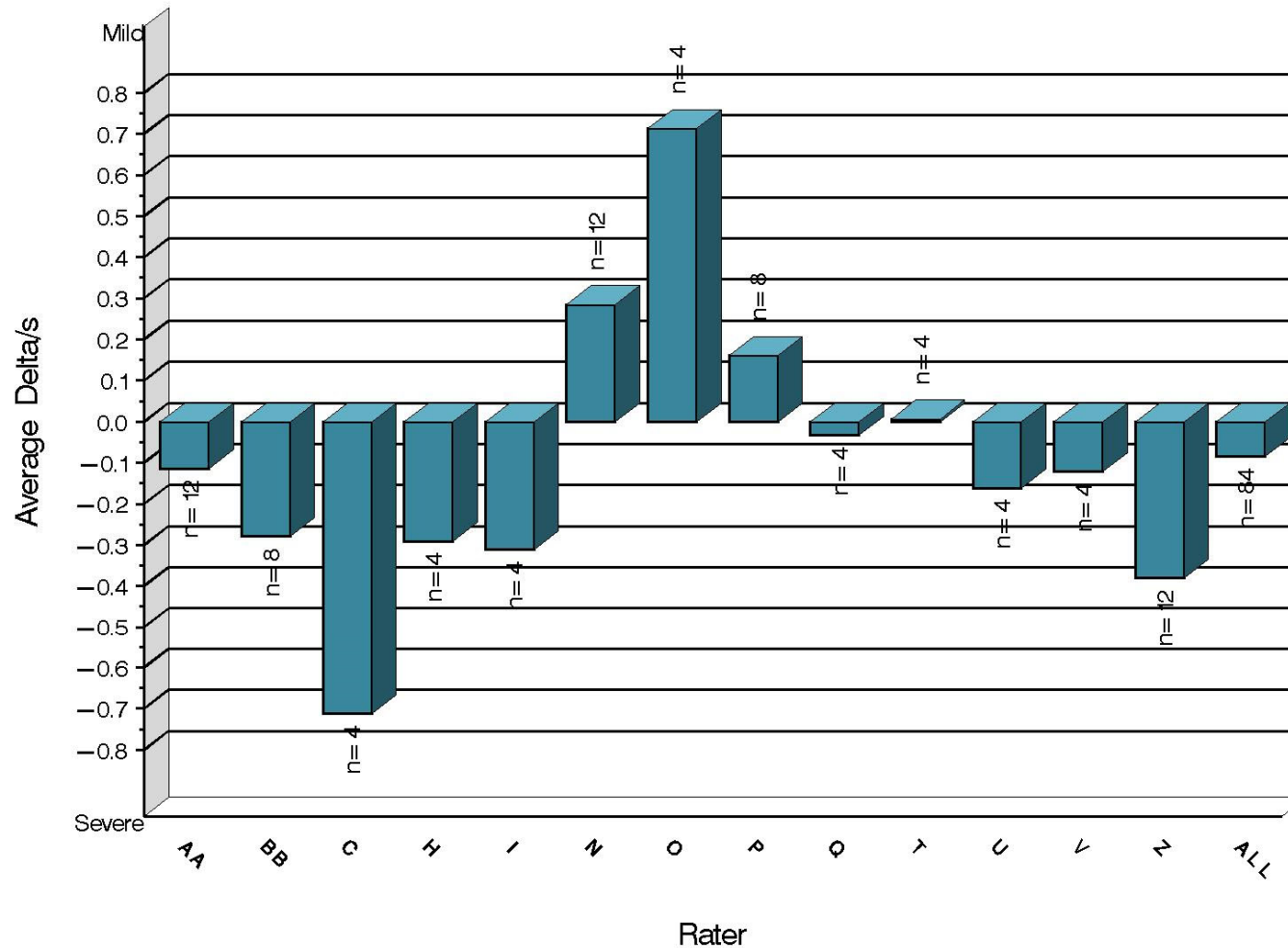


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L-37 Rater Calibration

RIPPLING

Severity as Measured by Delta/s

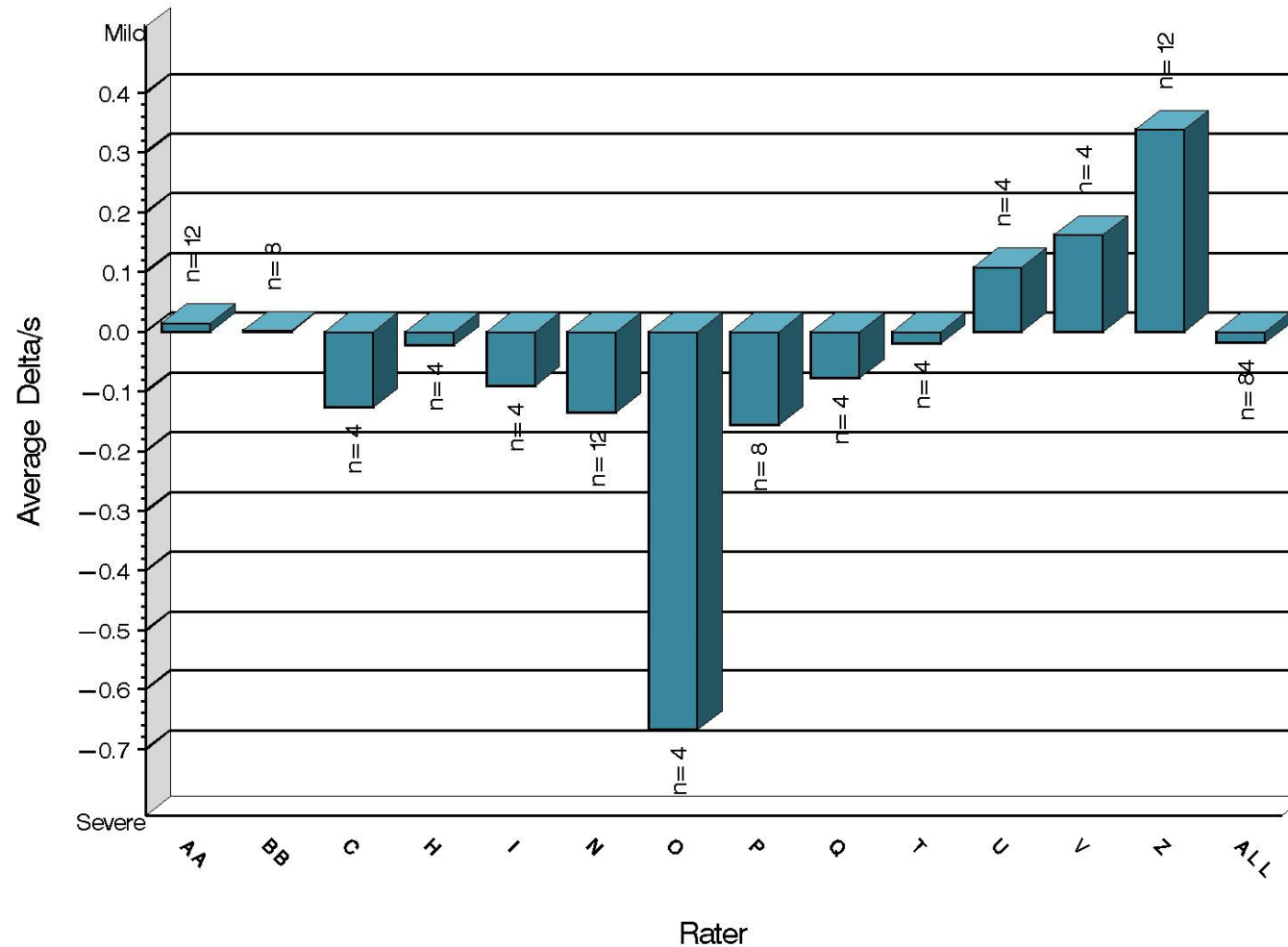


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L-37 Rater Calibration

SPITTING

Severity as Measured by Delta/s

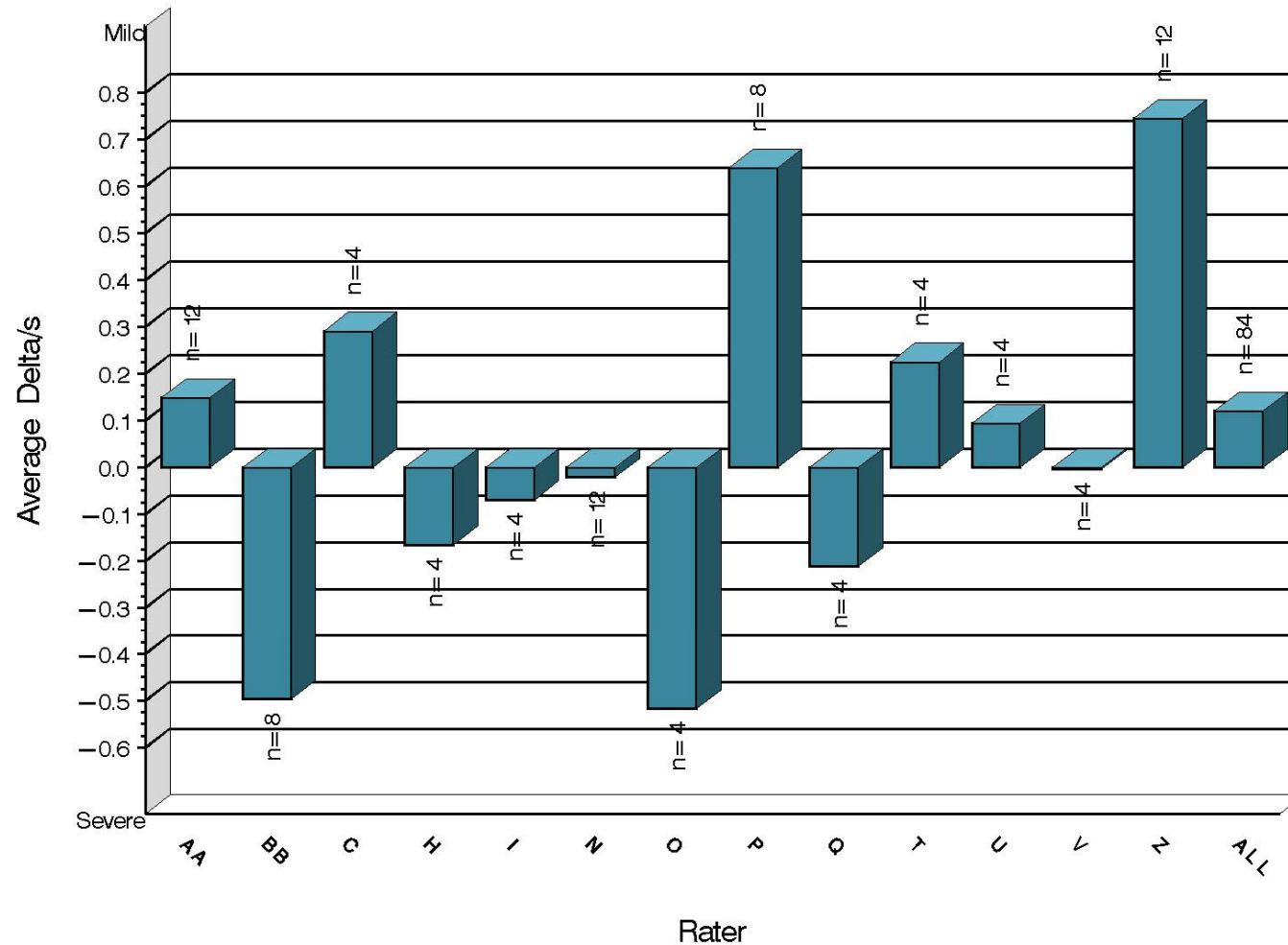


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L-37 Rater Calibration

WEAR

Severity as Measured by Delta/s

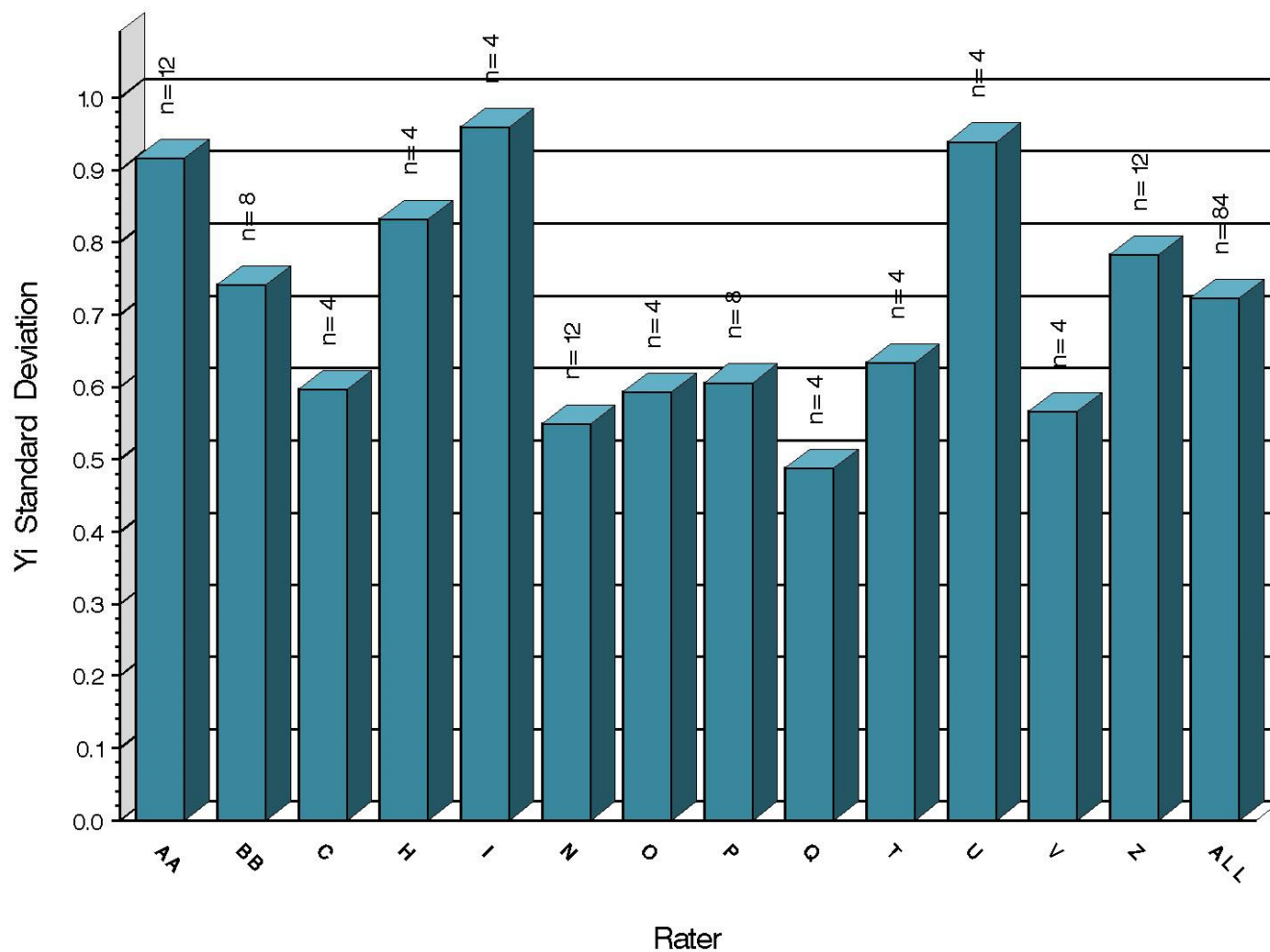


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L-37 Rater Calibration

RIDGING

Precision as Measured by Yi STD

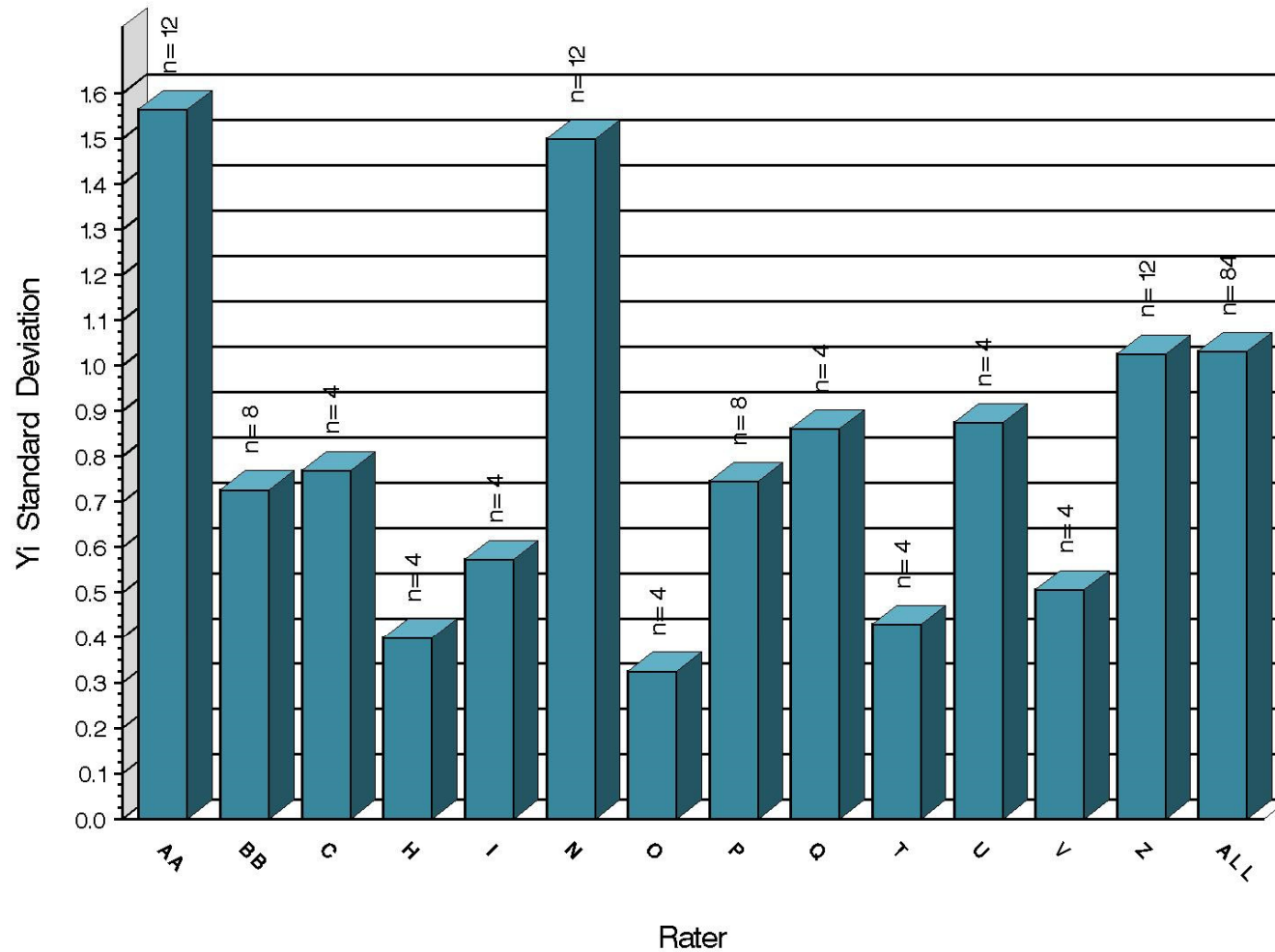


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L-37 Rater Calibration

RIPPLING

Precision as Measured by Y1 STD

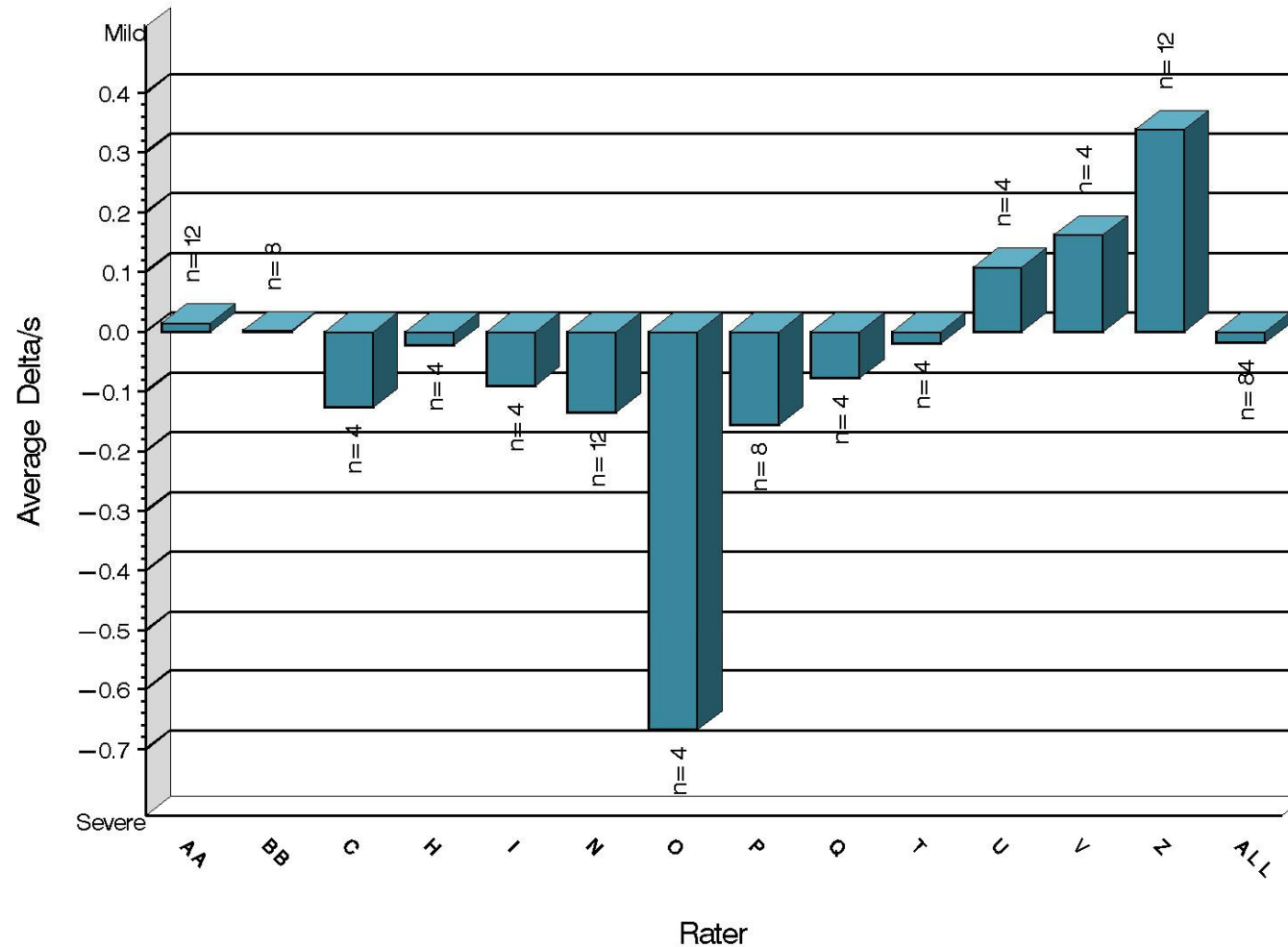


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L-37 Rater Calibration

SPITTING

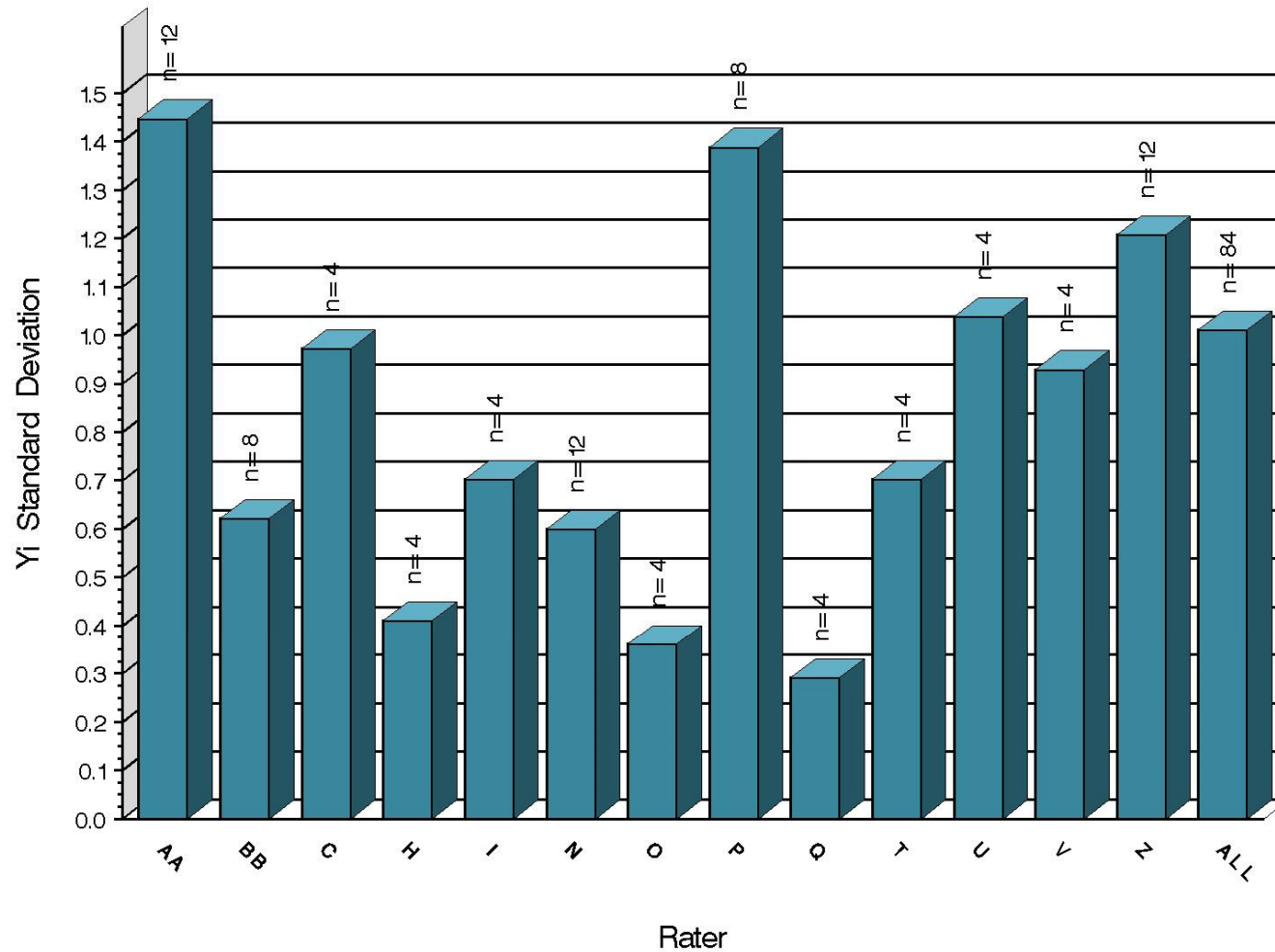
Severity as Measured by Delta/s



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L-37 Rater Calibration

WEAR
Precision as Measured by Yi STD



14:52:10 15APR2021

L-37 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

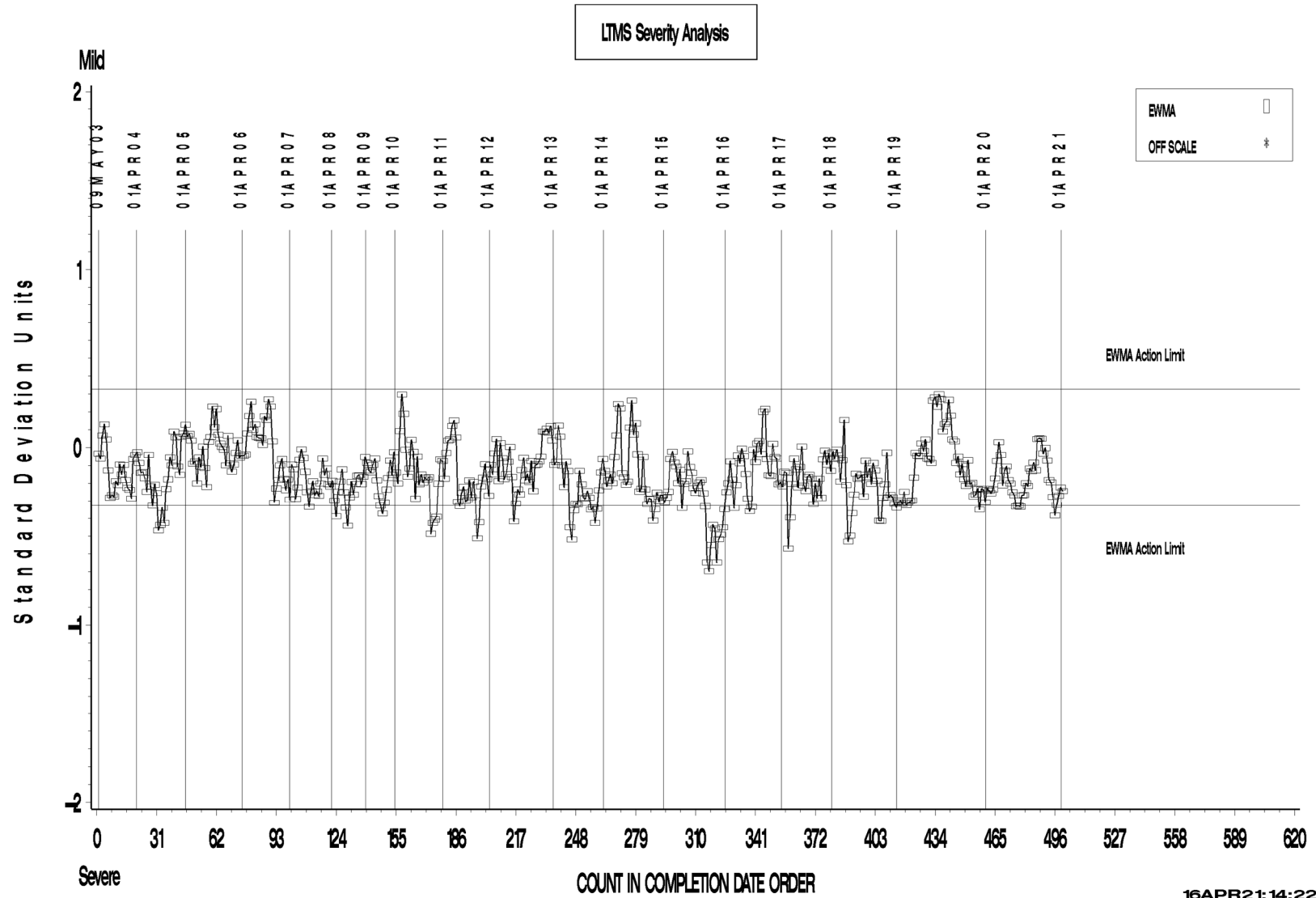
Severity
WEAR, RIPP, and RIDG all briefly exceeded the action limit this period, but have since returned within limits. SPIT remained within limits throughout the period.
Precision
All parameters remained within limits throughout the period.

Industry rater control charts follow.

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING



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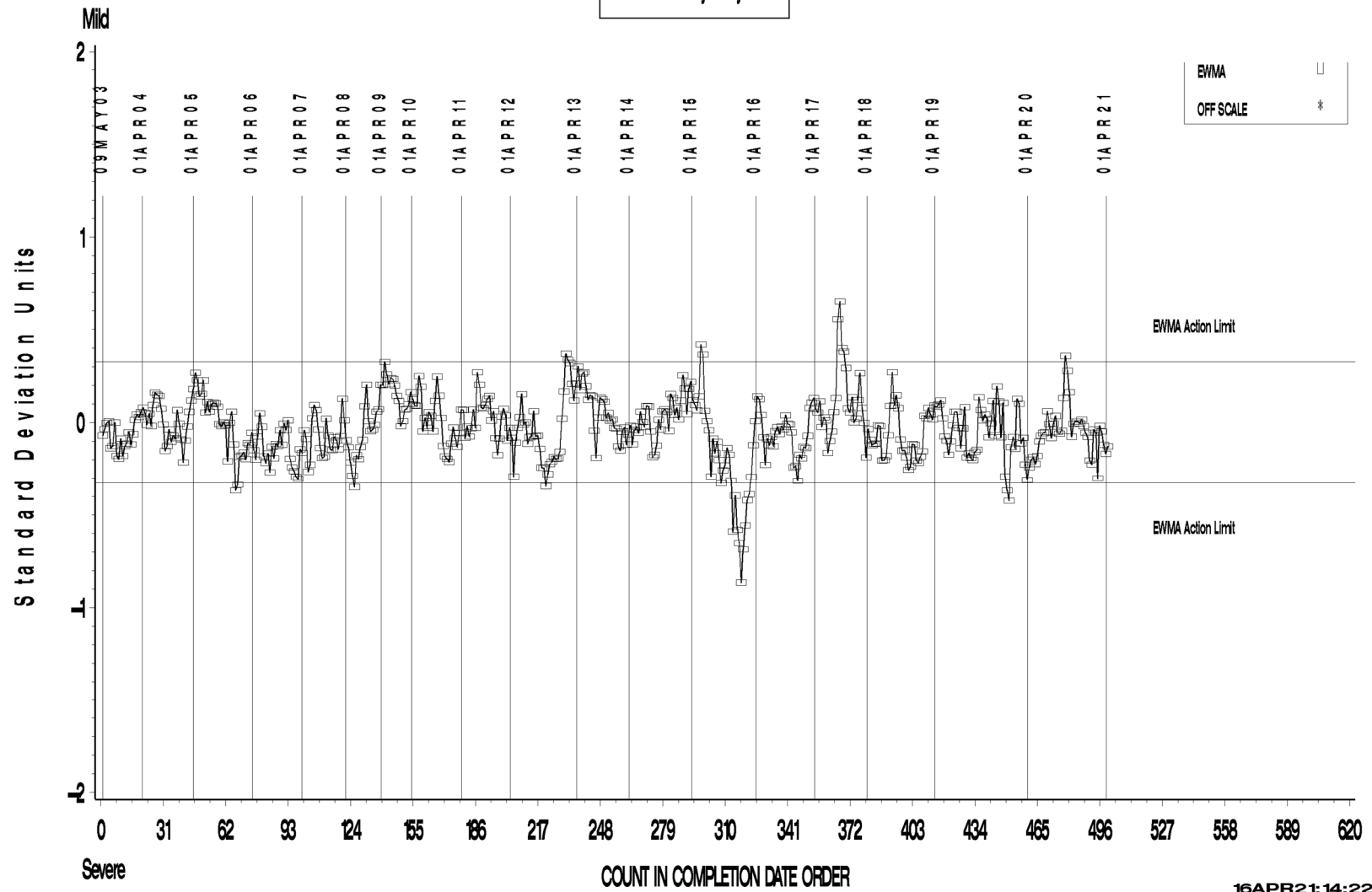
A Program of ASTM International

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

LTMS Severity Analysis



16APR21:14:22

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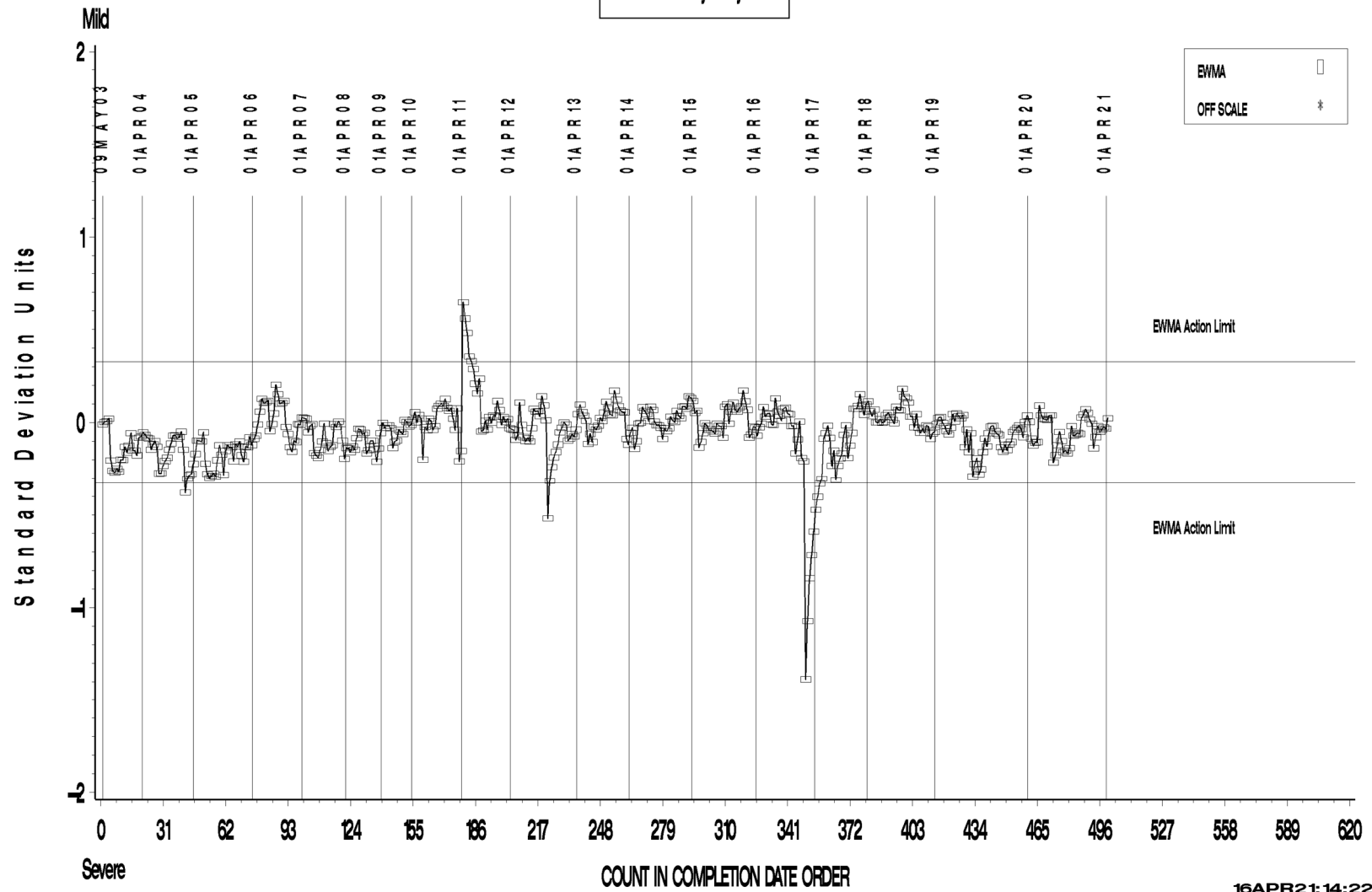
A Program of ASTM International

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

SPITTING

LTMS Severity Analysis



16APR21:14:22

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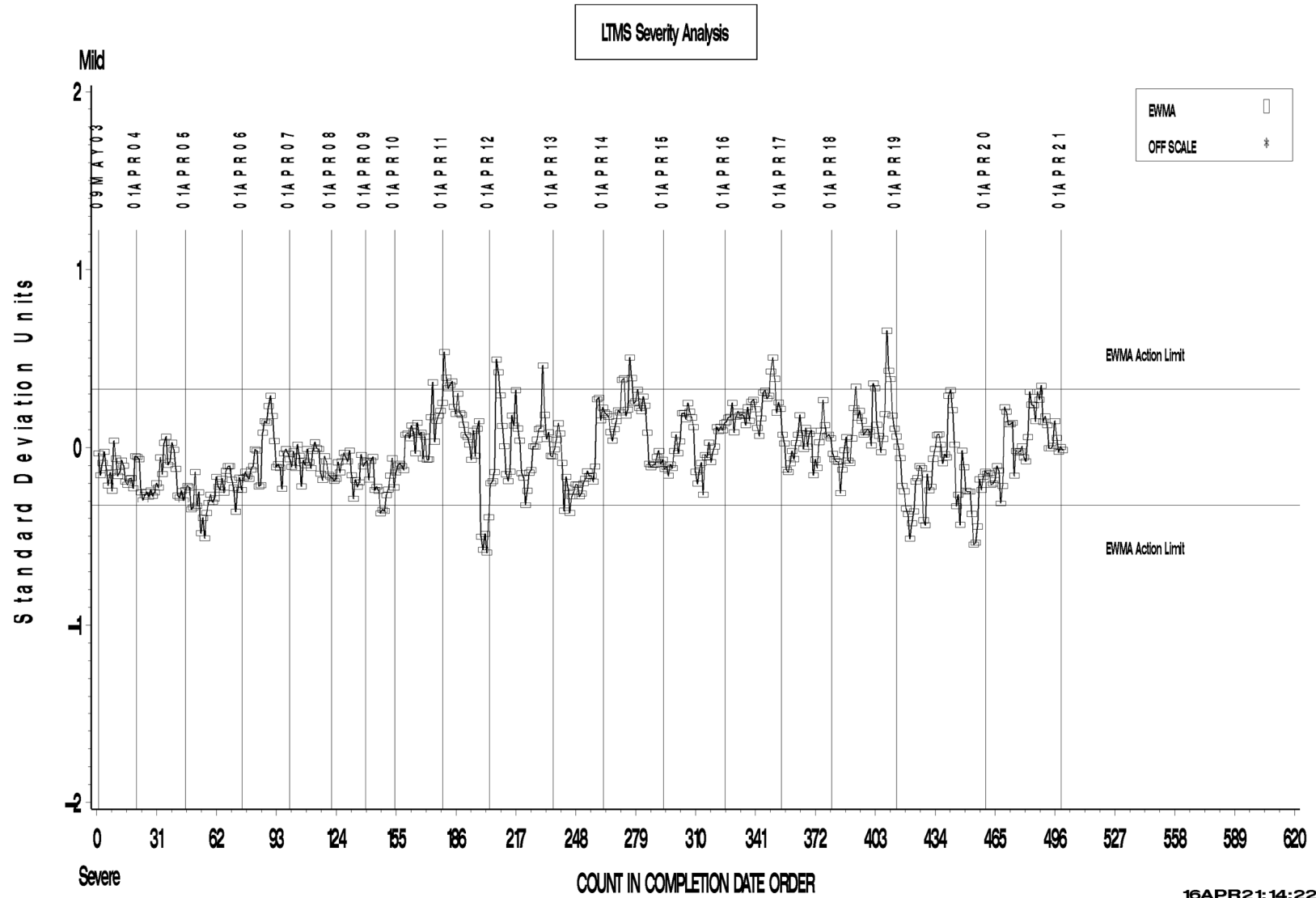


A Program of ASTM International

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

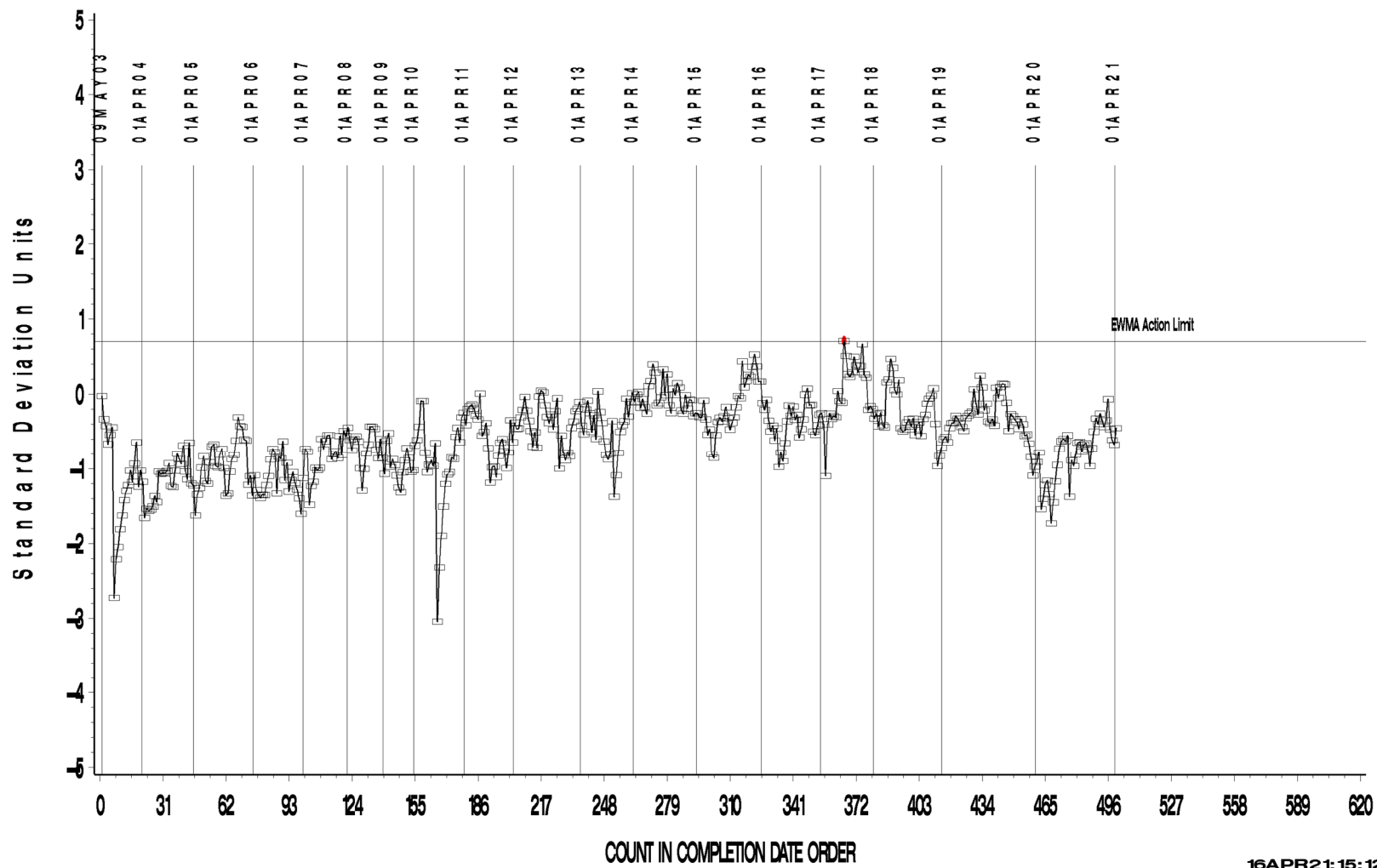


L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

LTMS Precision Analysis



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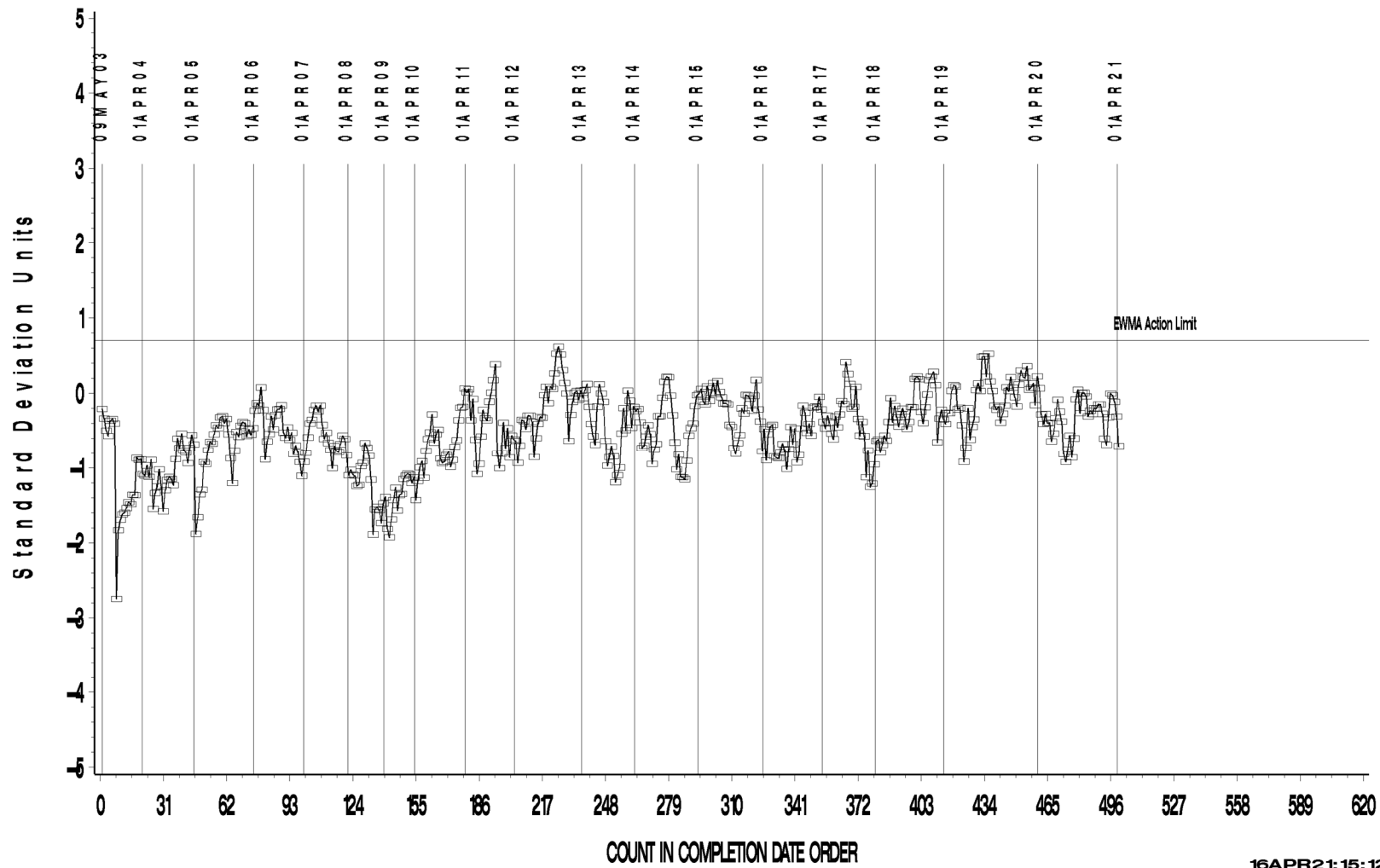
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L-37 Rater Calibration

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RIPPLING

LTMS Precision Analysis



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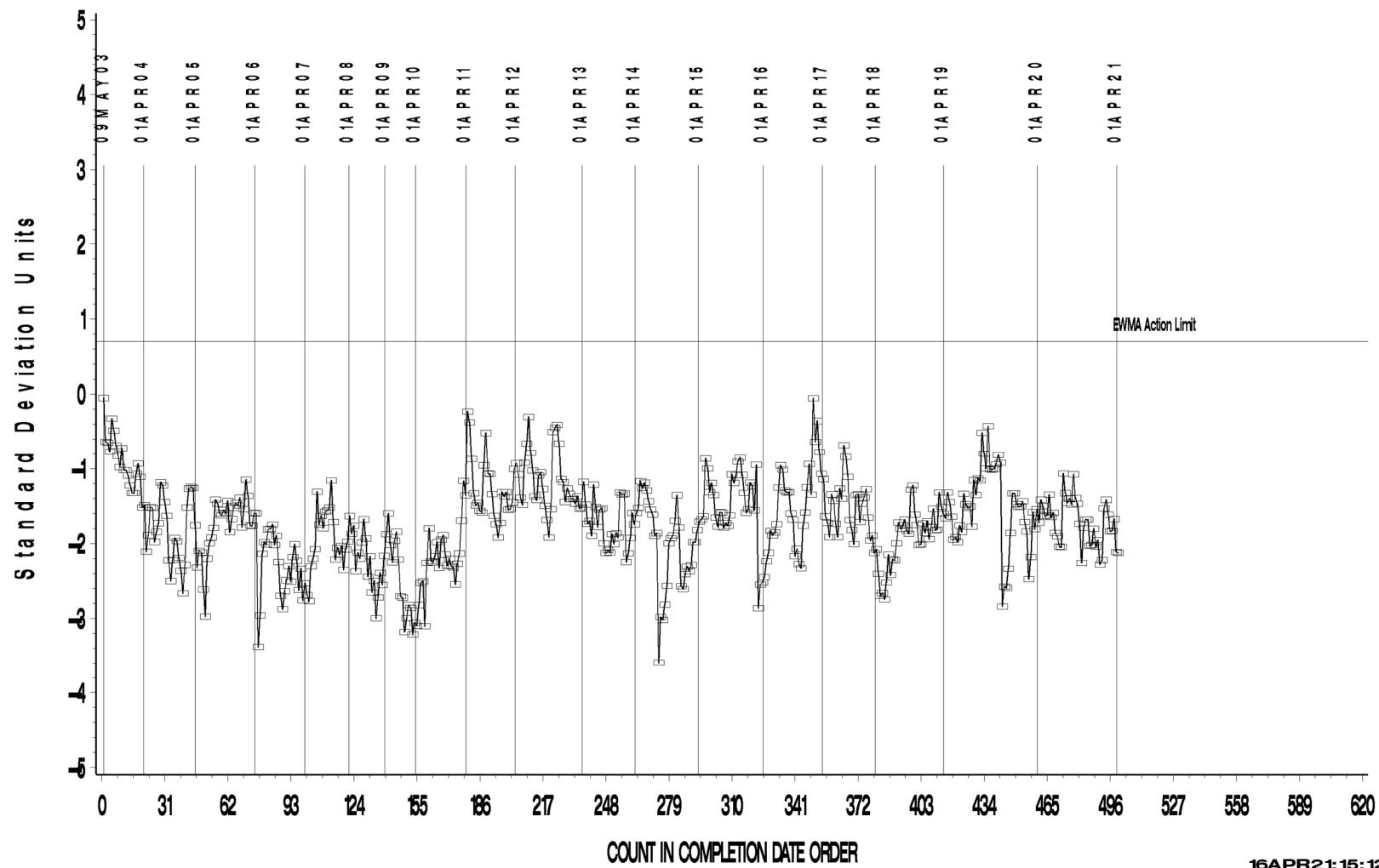
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L-37 Rater Calibration

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SPITTING

LTMS Precision Analysis



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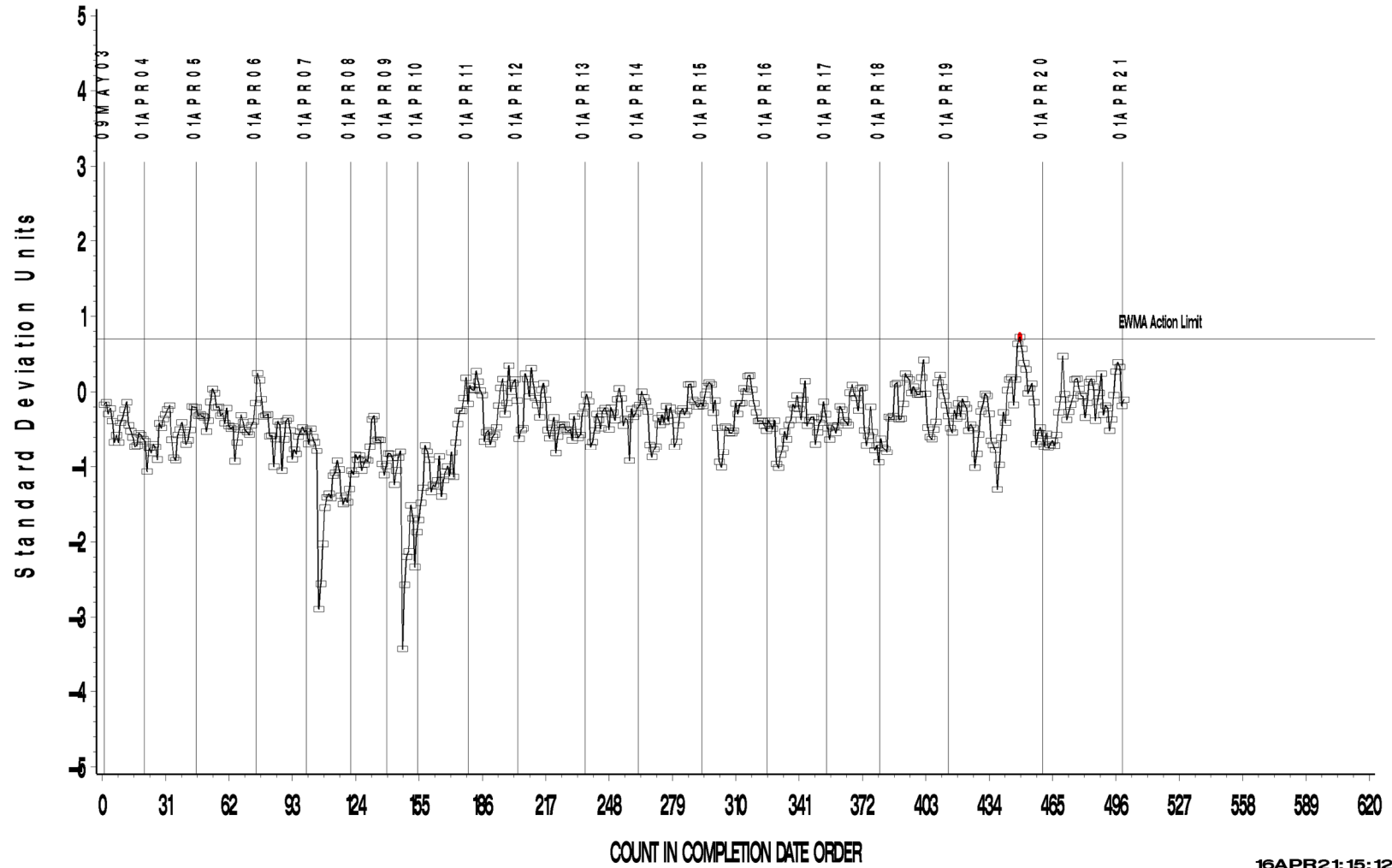


L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

WEAR

LTMS Precision Analysis



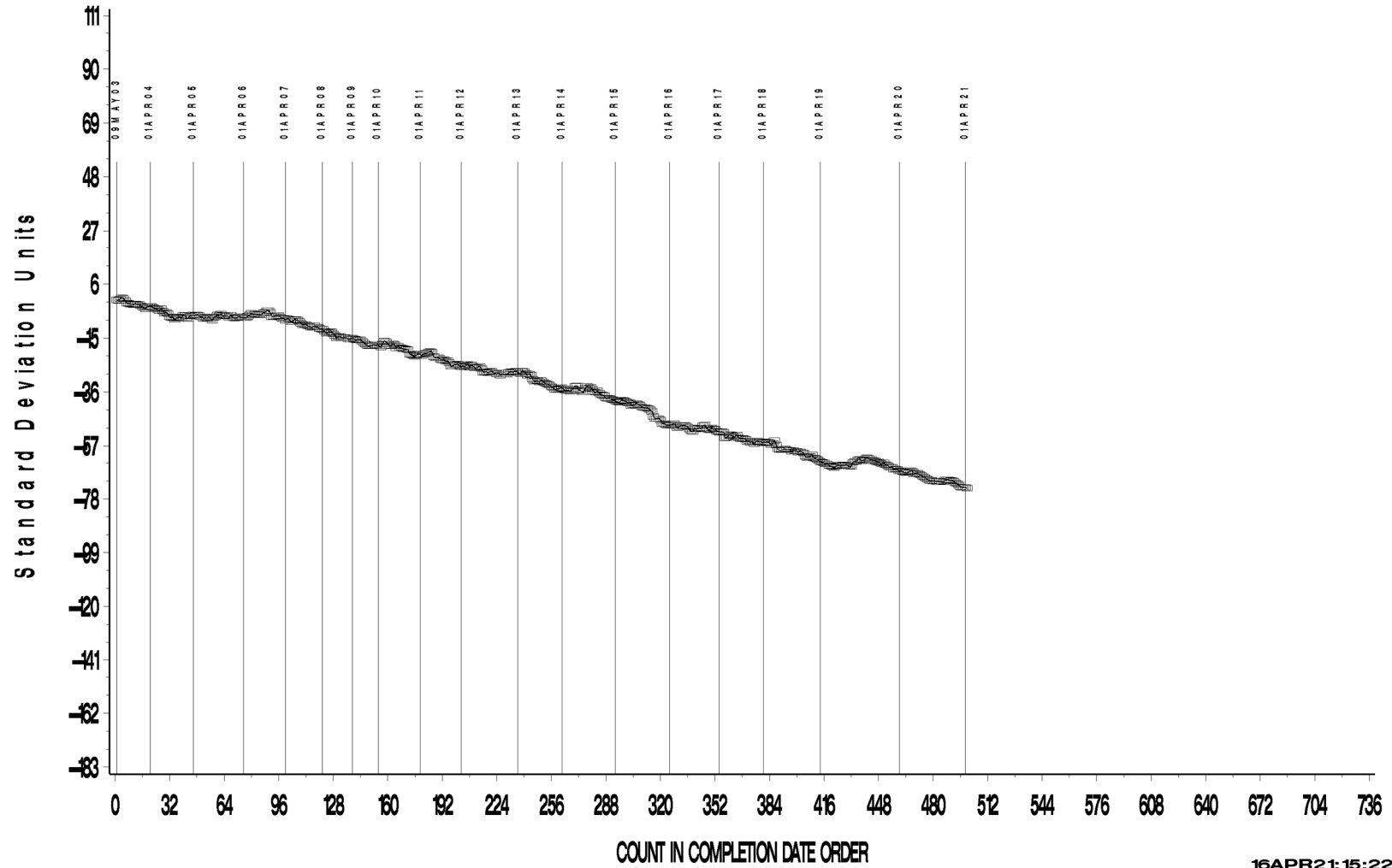
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

CUSUM Severity Analysis



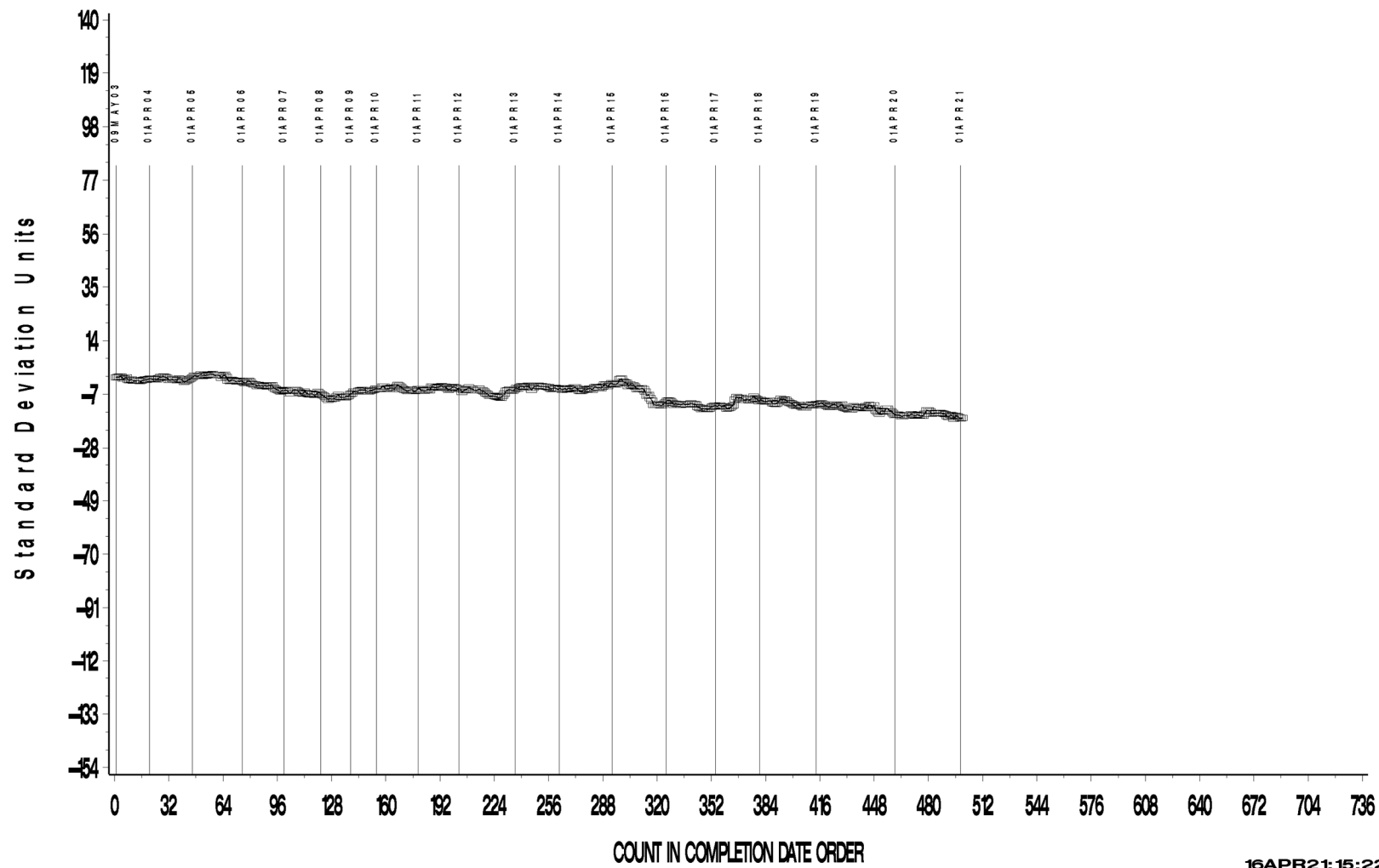
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIPPLING

CUSUM Severity Analysis



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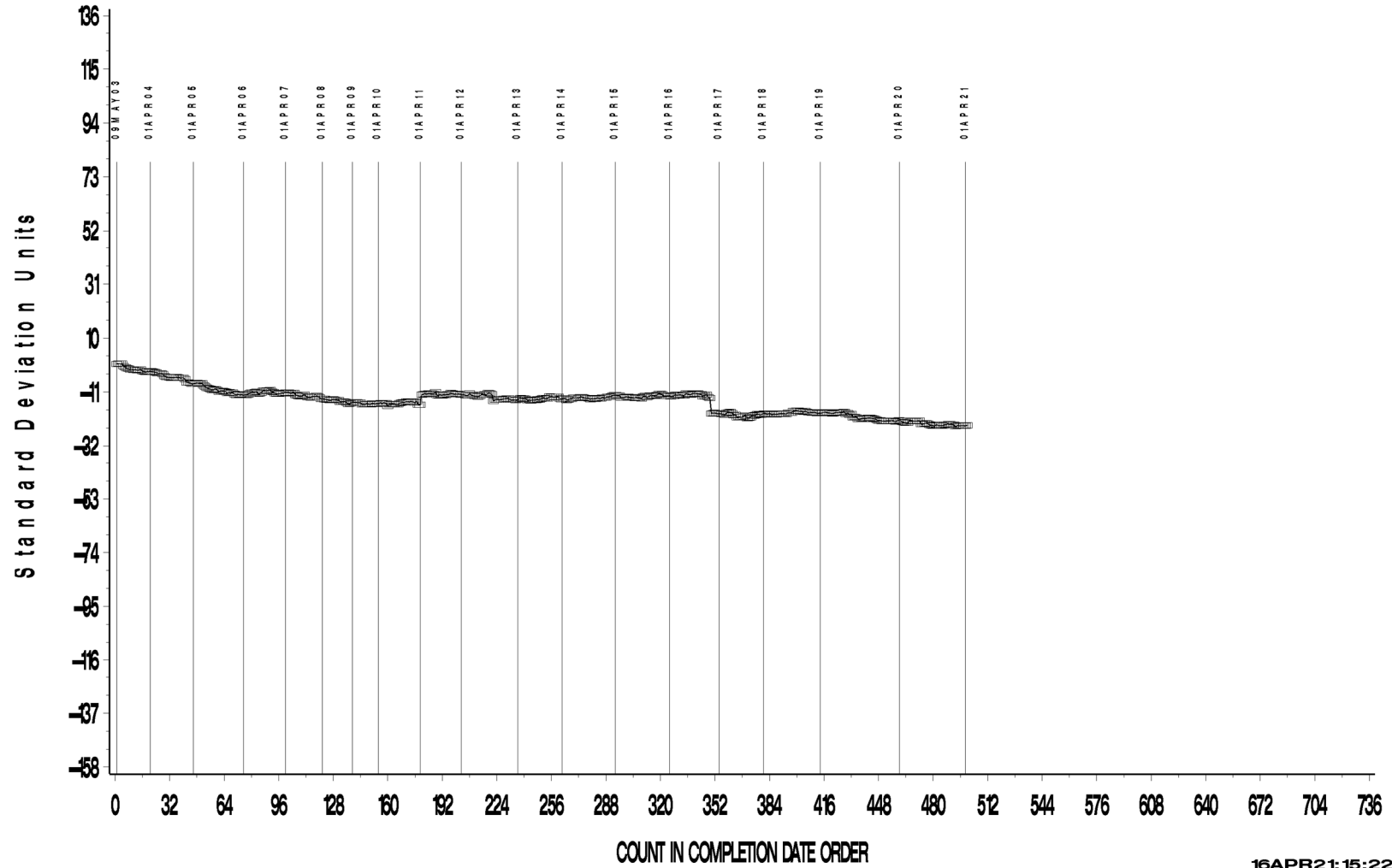
A Program of ASTM International

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DAT

SPITTING

CUSUM Severity Analysis



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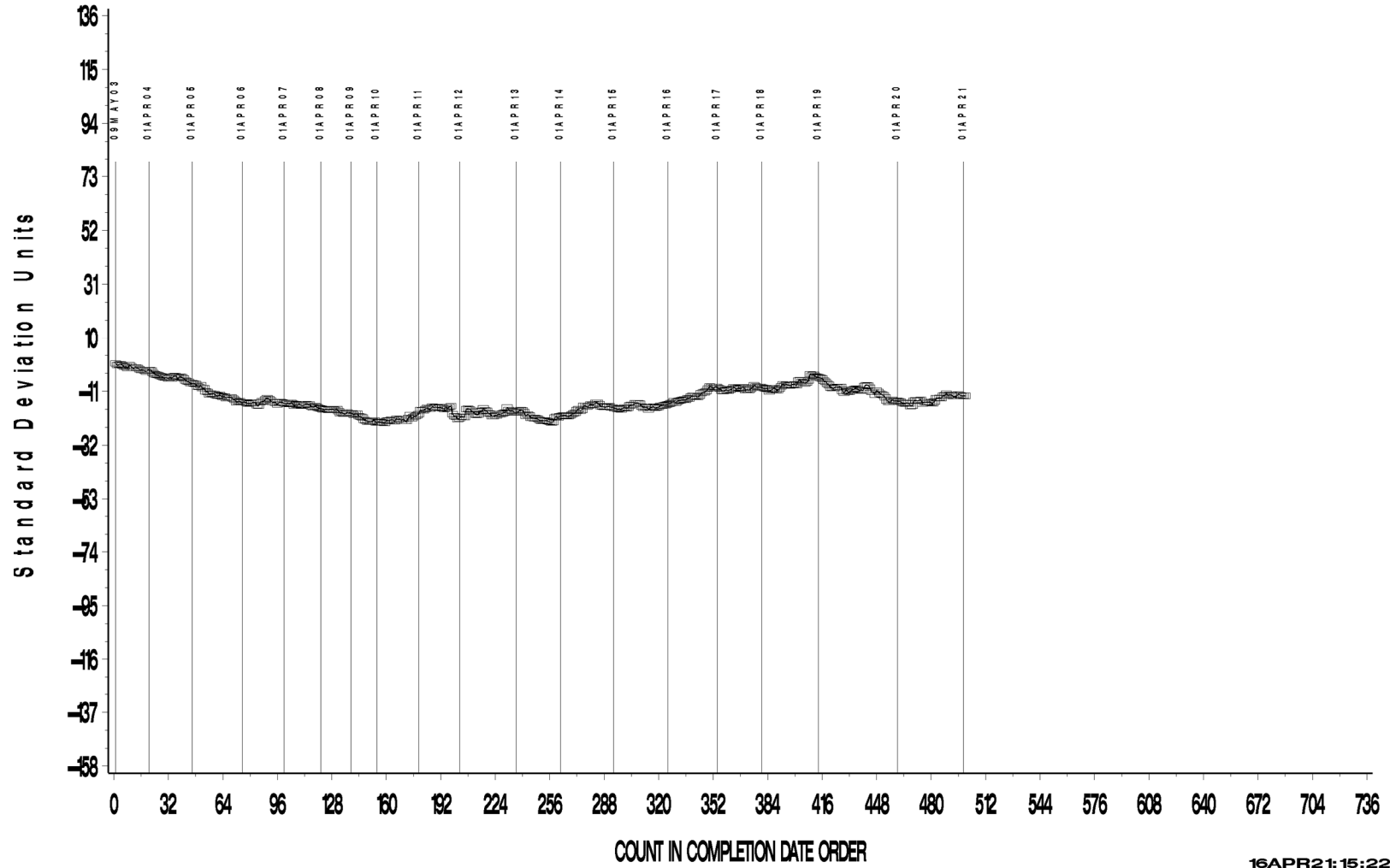


L-37 Rater Calibration

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WEAR

CUSUM Severity Analysis



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