



Test Monitoring Center

203 Armstrong Drive, Freeport, PA 16229, USA

www.astmtmc.org
412-365-1000

MEMORANDUM: 24-007
DATE: May 14, 2024
TO: Nick Schaup, Chairman, L-37 Surveillance Panel
FROM: Dylan Beck *Dylan Beck*
SUBJECT: L-37 Rater Calibration from October 1, 2023, through March 31, 2024

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

DJB/djb/mem24-007.djb.doc

cc: Jeff Clark

Sean Moyer

L-37 Surveillance Panel

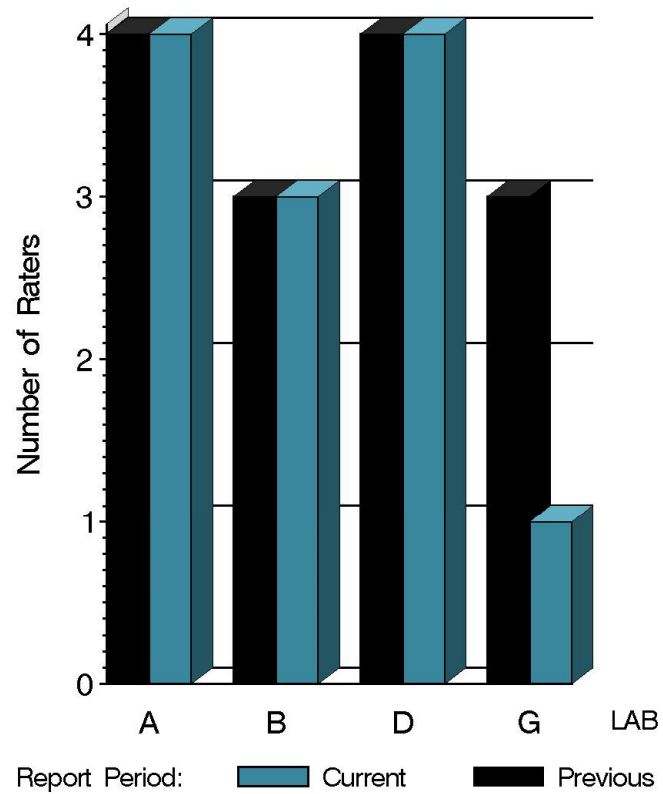
<https://www.astmtmc.org/ftp/docs/gear/l37rc/semiannualreports/l37rc-04-2024.pdf>

Distribution: email

L-37 Rater Calibration

| | Reporting Data | Calibrated on 3-31-24 |
|------------------|----------------|-----------------------|
| Number of Labs | 4 | 4 |
| Number of Raters | 12 | 12 |

BY-LAB RATER DISTRIBUTION



13:04:09 09APR2024



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L-37 Rater Calibration

Test Distribution by Validity

| | | Totals | |
|--------------------------|----|-------------|-------------|
| | | Last Period | This Period |
| Accepted for calibration | AC | 18 | 15 |
| Rejected (Mild) | OC | 1 | 3 |
| Rejected (Severe) | OC | 4 | 4 |
| Rejected (Multiple) | OC | 0 | 0 |
| Rejected (Precision) | OC | 0 | 2 |
| Workshop data | AG | 4 | 10 |
| Total | | 27 | 34 |



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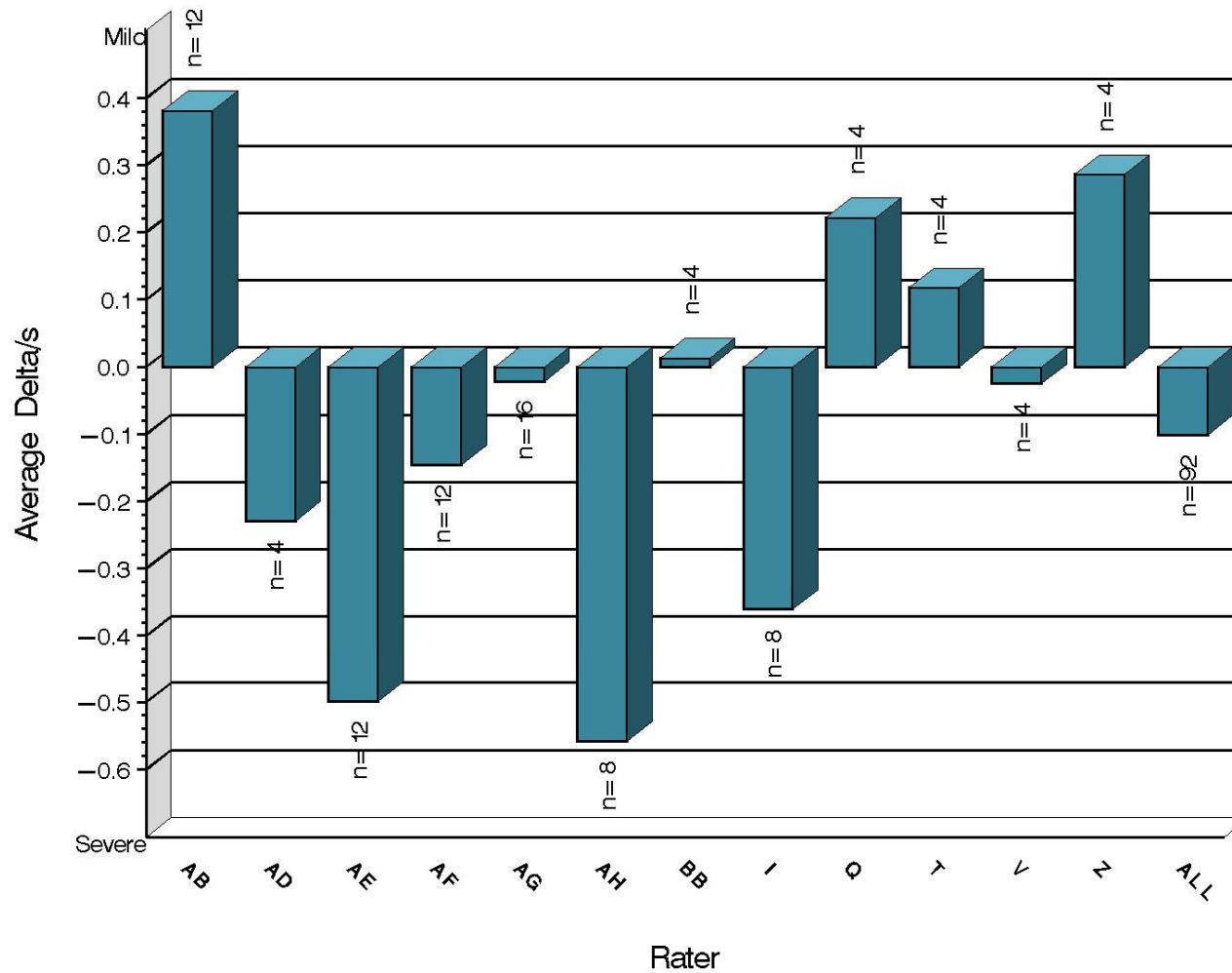
L-37 Rater Calibration

| Rater | N | RIDG | | RIPP | | SPIT | | WEAR | |
|-------|----|--------|-------|--------|-------|--------|-------|--------|-------|
| | | Avg Yi | STD* | Avg Yi | STD* | Avg Yi | STD* | Avg Yi | STD* |
| AB | 12 | 0.381 | 0.939 | 0.164 | 0.972 | -0.107 | 0.429 | 0.577 | 0.480 |
| AD | 4 | -0.229 | 0.766 | 0.090 | 0.330 | 0.338 | 0.272 | -0.462 | 1.594 |
| AE | 12 | -0.499 | 1.336 | 0.135 | 0.896 | 0.012 | 0.348 | -0.279 | 1.424 |
| AF | 12 | -0.145 | 0.969 | -0.205 | 0.936 | 0.031 | 0.398 | -0.274 | 0.406 |
| AG | 16 | -0.021 | 1.456 | 0.272 | 0.678 | -0.052 | 0.485 | 0.107 | 1.027 |
| AH | 8 | -0.558 | 1.140 | -0.605 | 1.425 | 0.393 | 1.466 | 0.107 | 1.843 |
| BB | 4 | 0.013 | 0.375 | -0.276 | 0.447 | -0.008 | 0.432 | -0.351 | 0.904 |
| I | 8 | -0.361 | 0.638 | -0.111 | 1.090 | -0.056 | 0.340 | 0.097 | 0.803 |
| Q | 4 | 0.222 | 0.605 | 0.396 | 0.842 | 0.032 | 0.394 | -0.301 | 0.876 |
| T | 4 | 0.117 | 0.830 | -0.361 | 0.549 | 0.410 | 0.463 | 0.306 | 0.724 |
| V | 4 | -0.025 | 1.126 | 0.256 | 0.652 | 0.011 | 0.292 | -0.097 | 0.910 |
| Z | 4 | 0.286 | 0.450 | 0.025 | 0.722 | 0.130 | 0.358 | -0.174 | 0.335 |
| ALL | 92 | -0.101 | 1.056 | 0.003 | 0.890 | 0.051 | 0.569 | -0.007 | 1.027 |

* 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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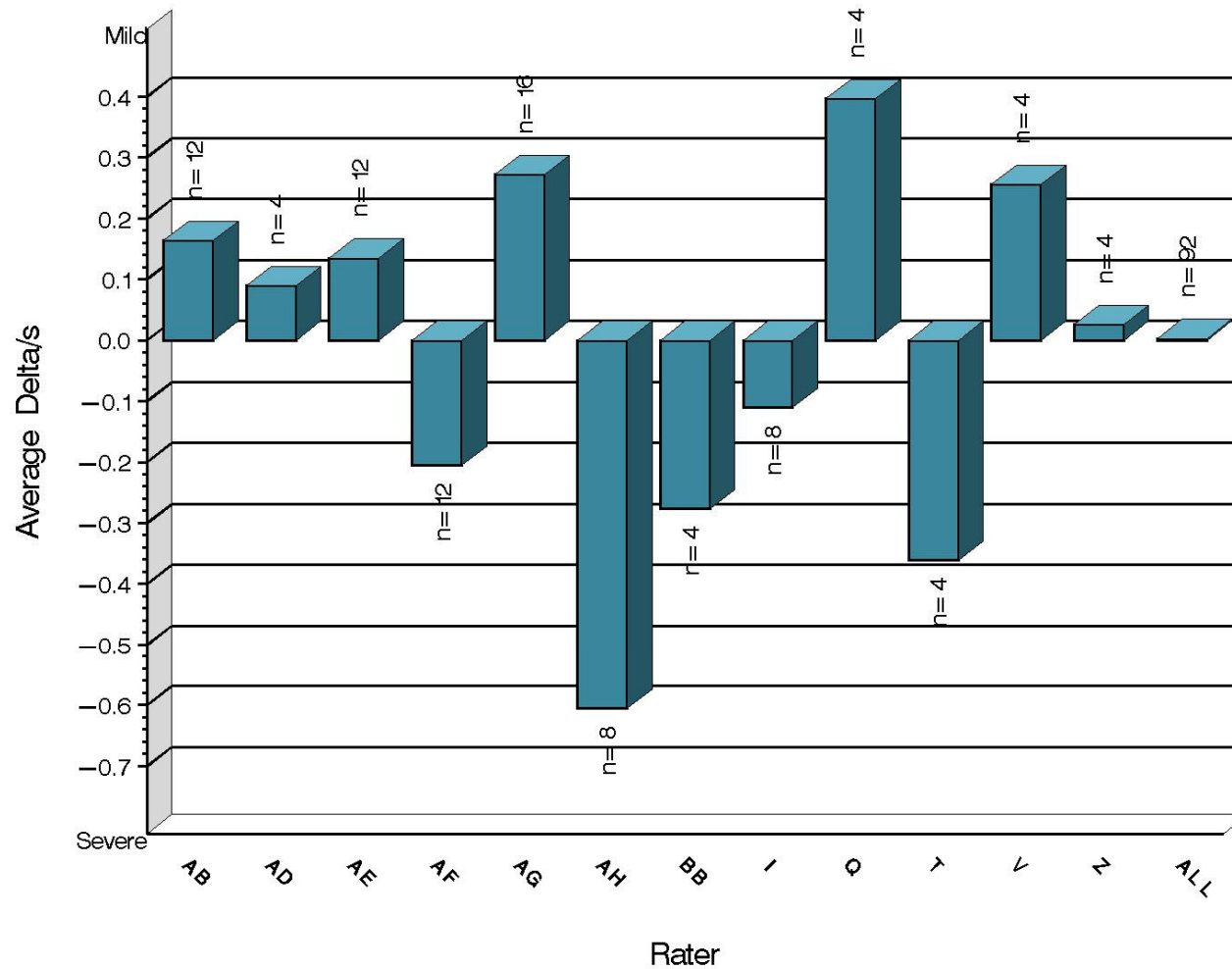
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L-37 Rater Calibration

RIPPLING

Severity as Measured by Delta/s



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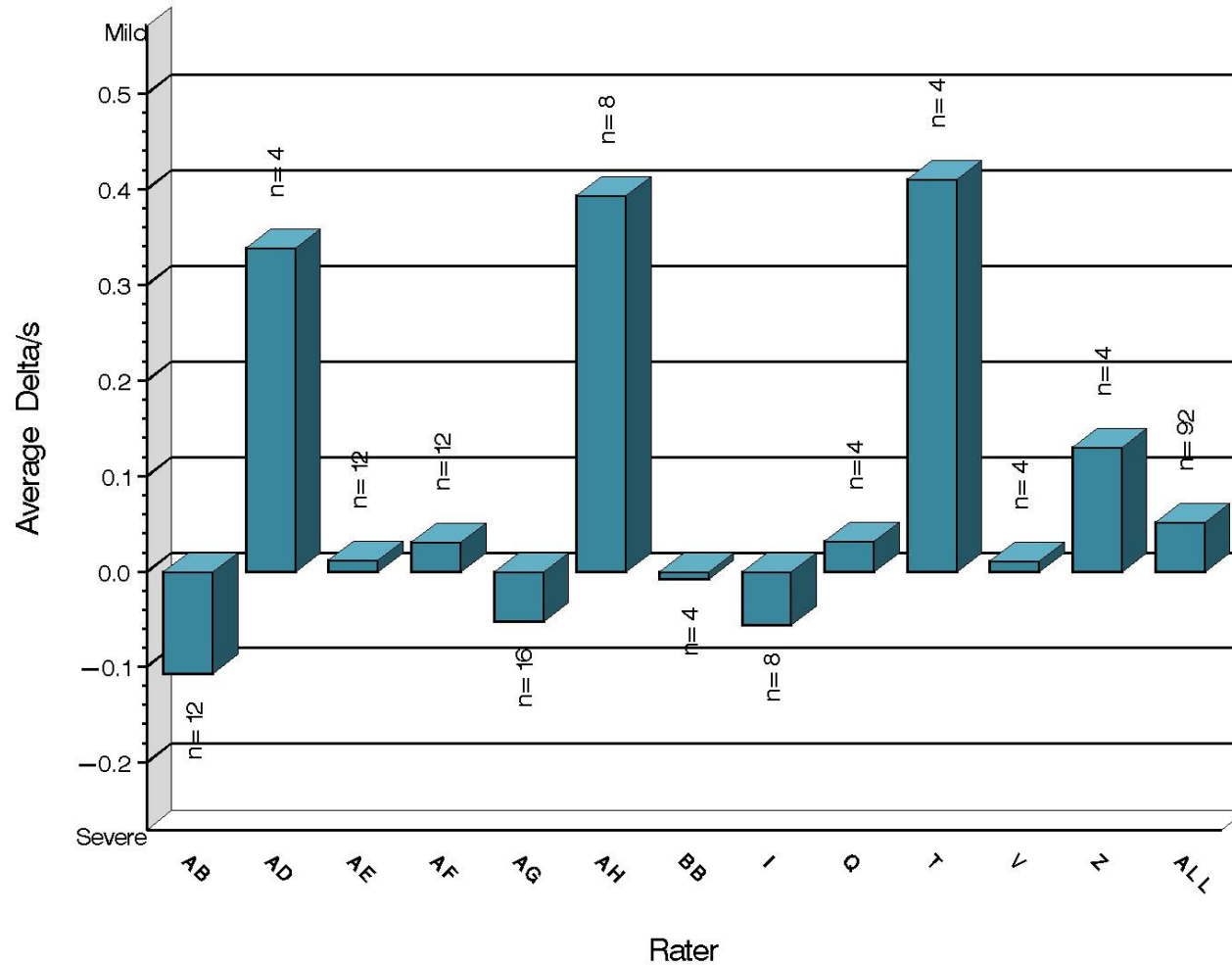
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L-37 Rater Calibration

SPITTING

Severity as Measured by Delta/s



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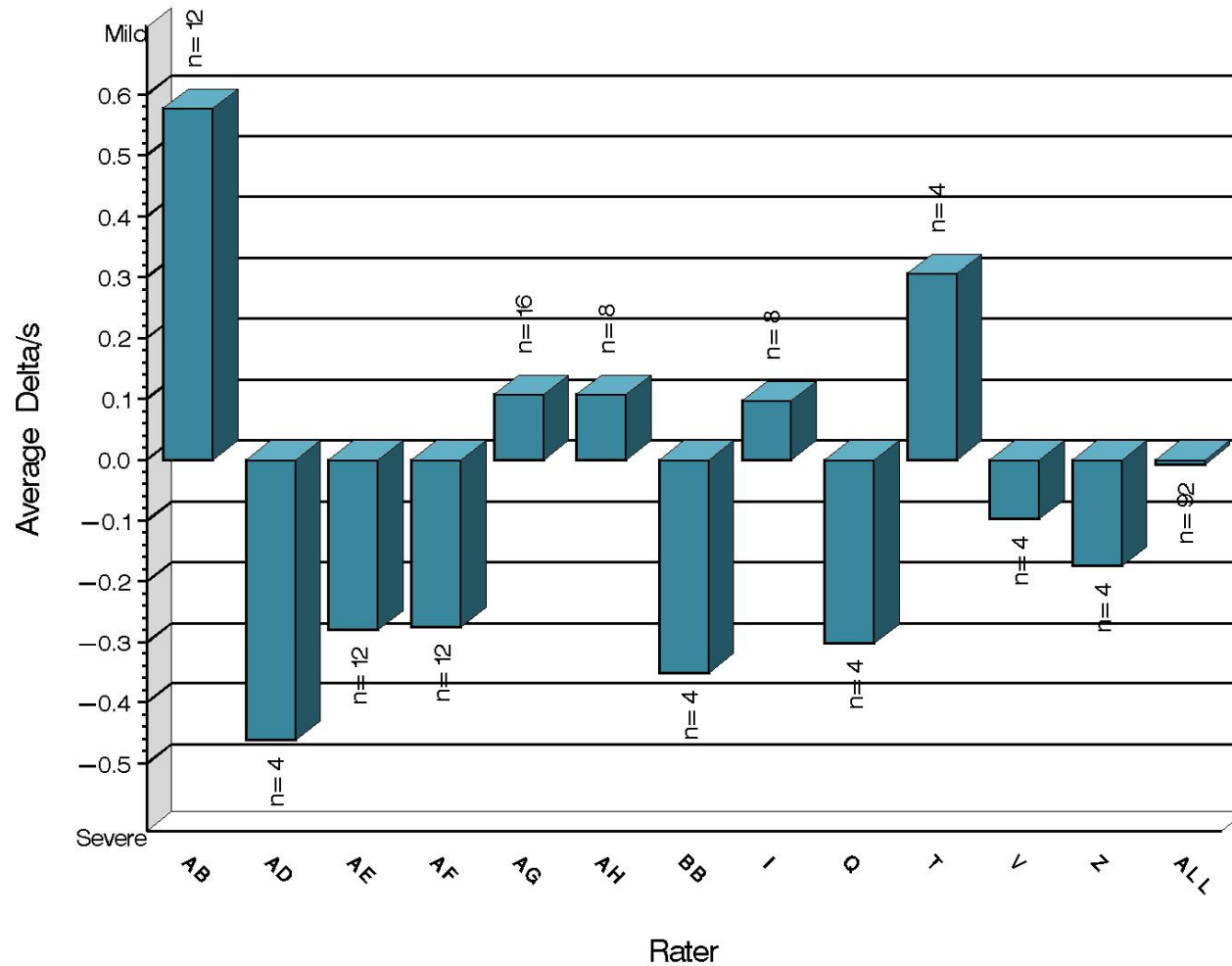
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L-37 Rater Calibration

WEAR
Severity as Measured by Delta/s



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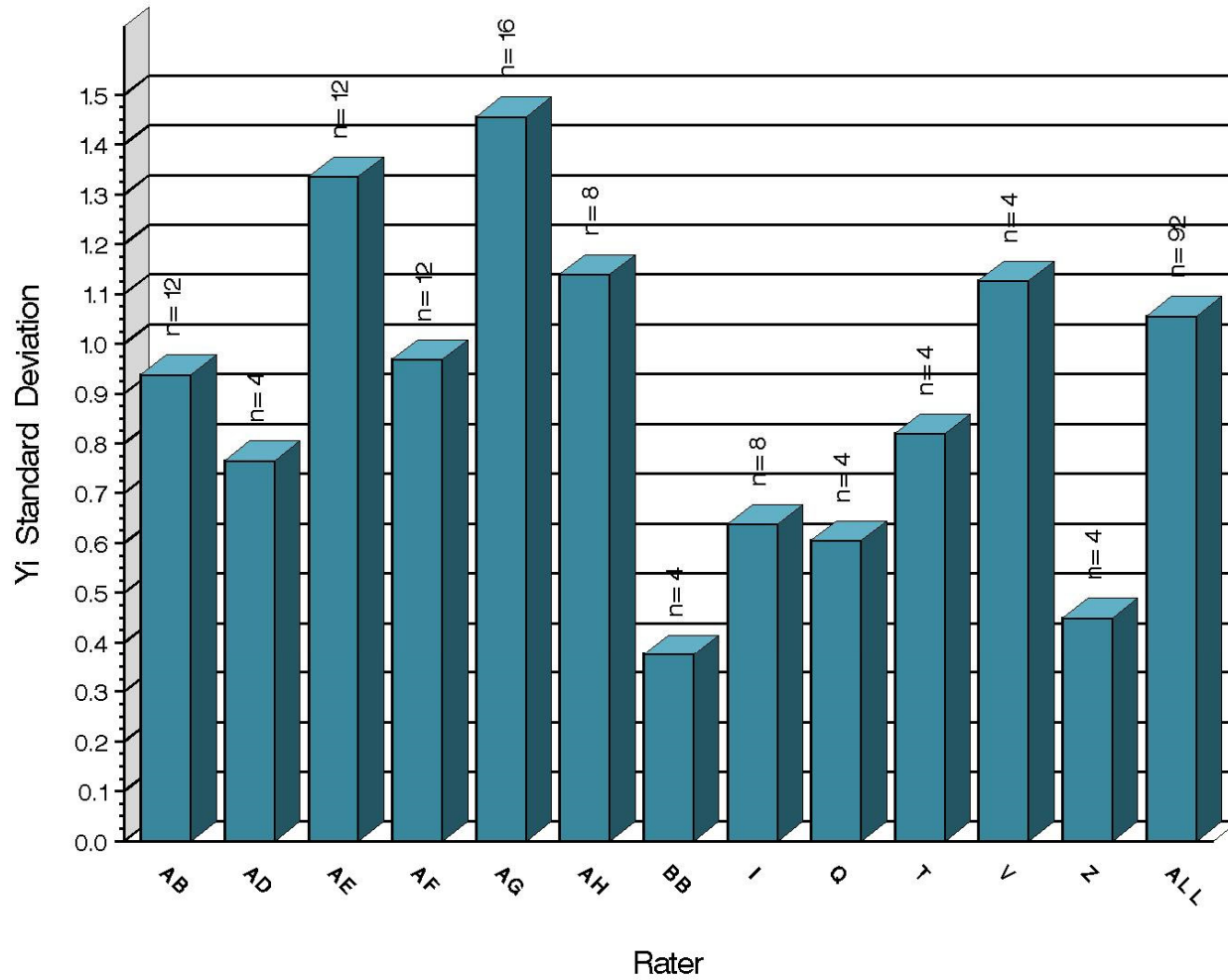
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L-37 Rater Calibration

RIDGING
Precision as Measured by Y1 STD



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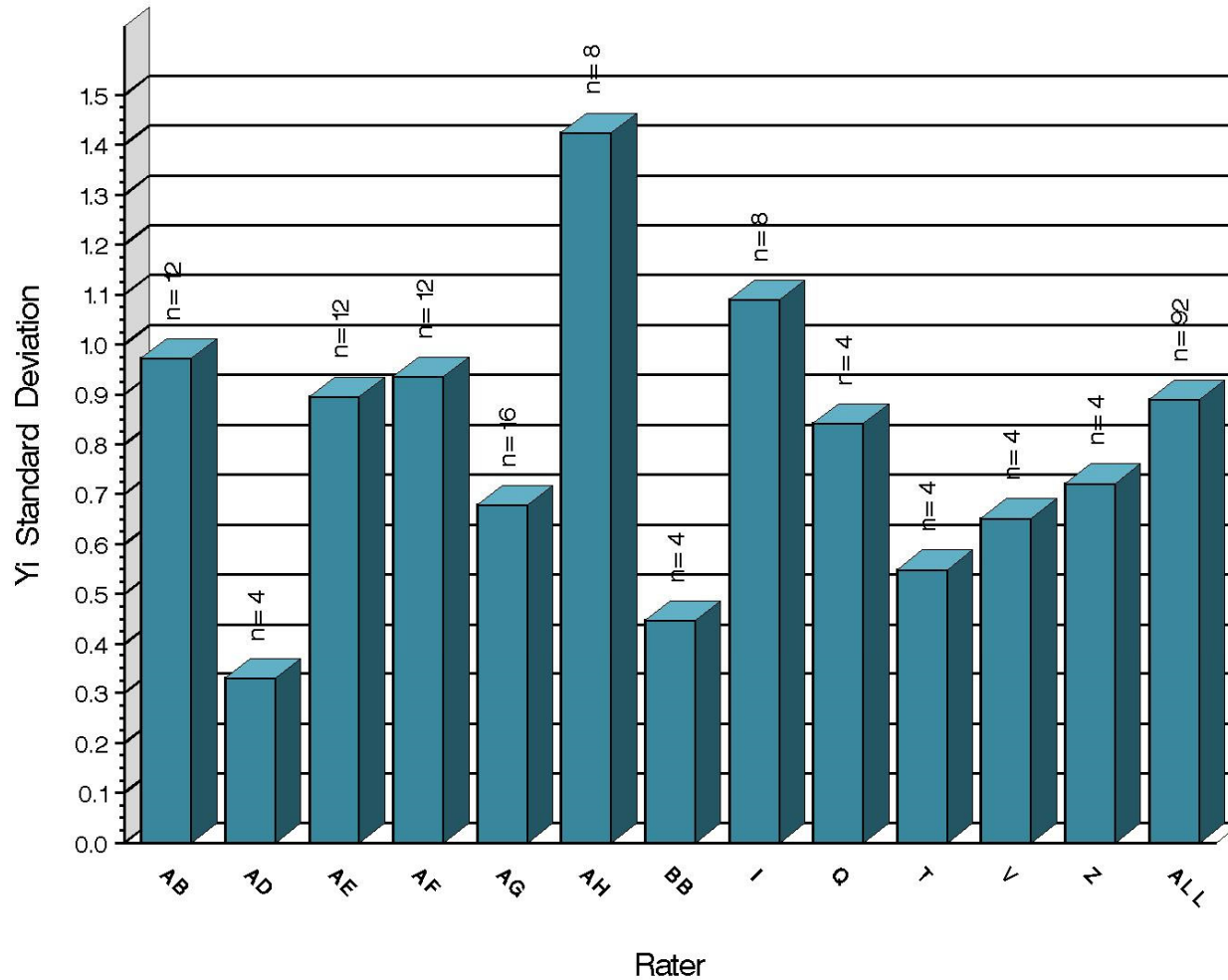
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L-37 Rater Calibration

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Precision as Measured by Y1 STD



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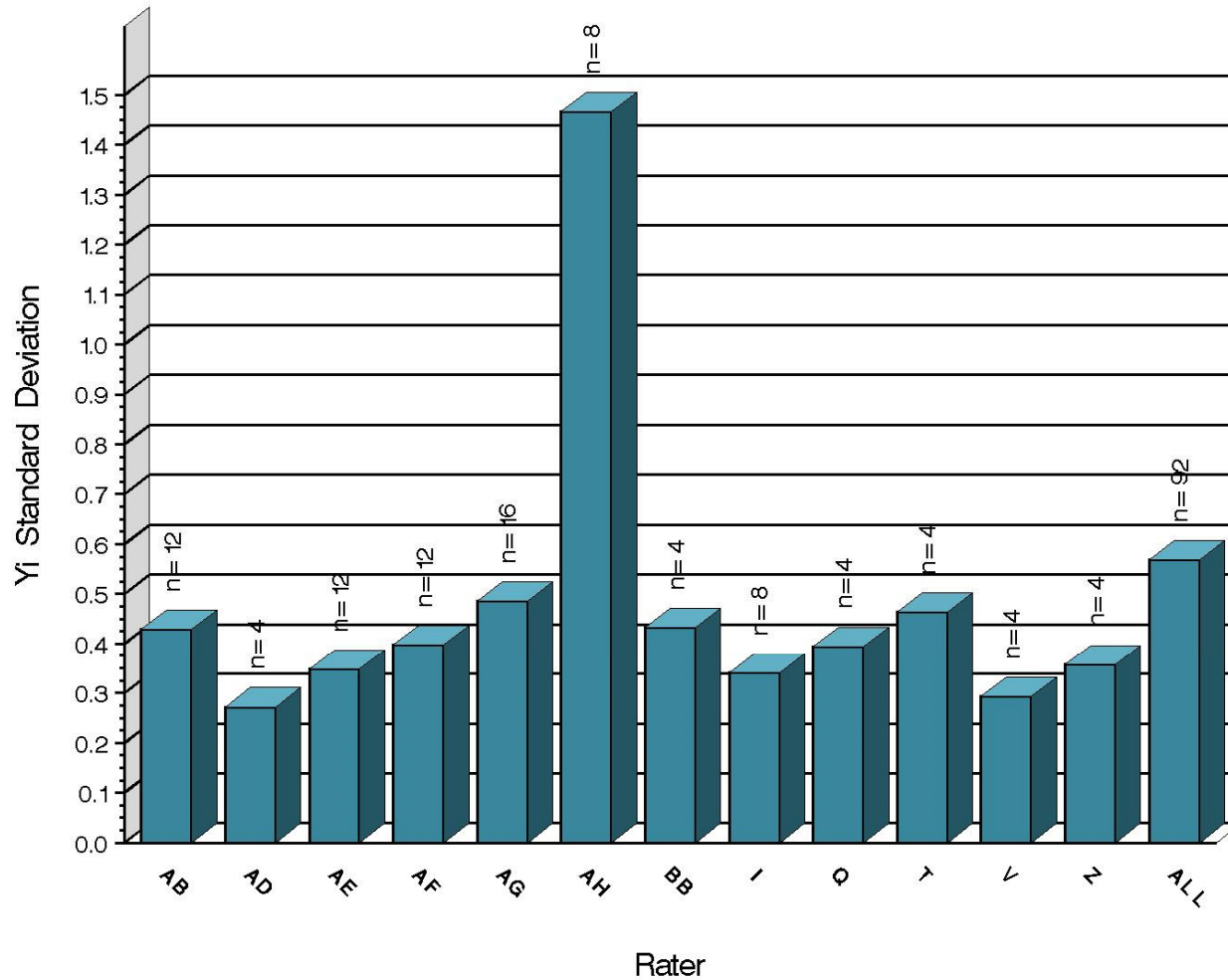
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Precision as Measured by Y1 STD



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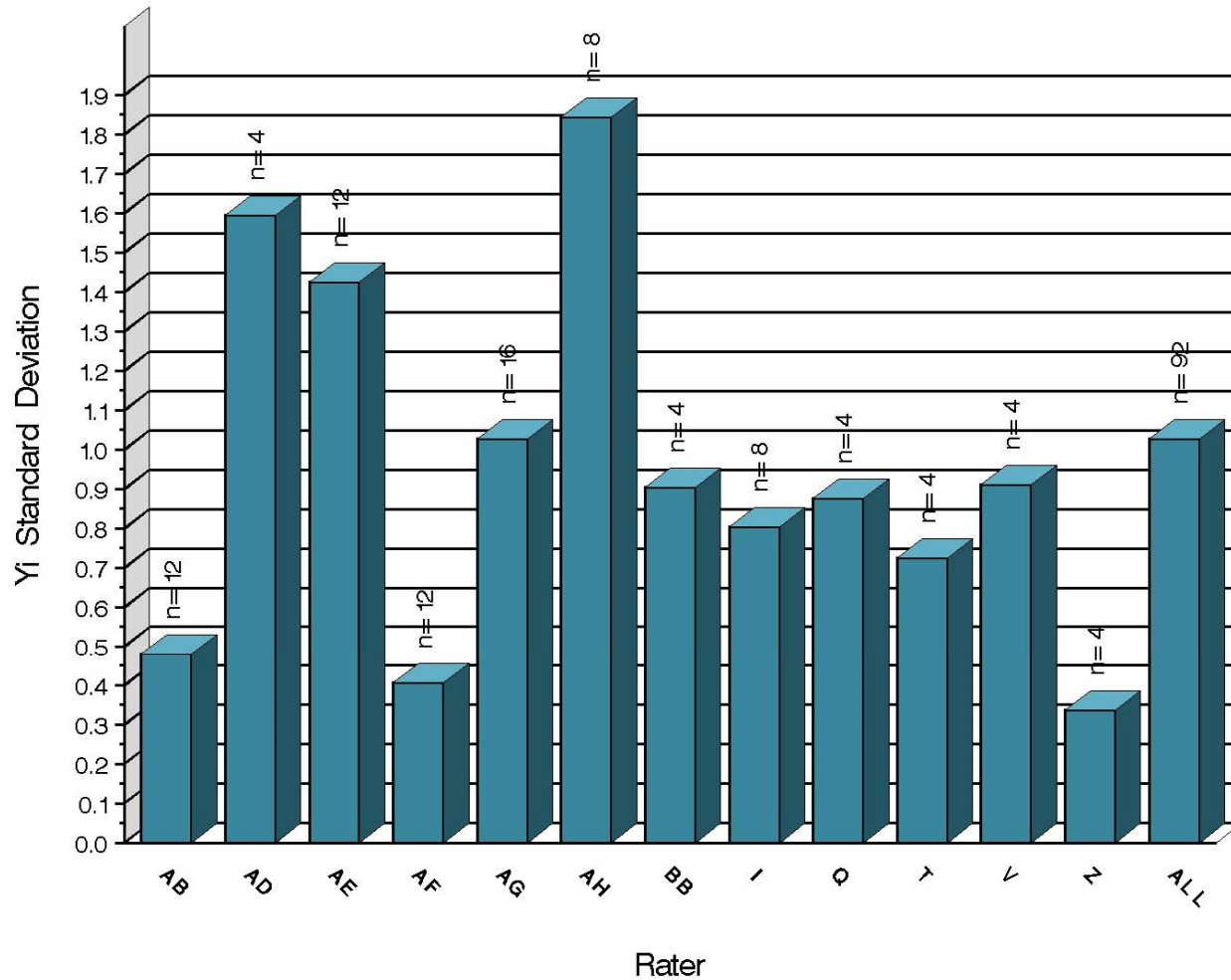
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WEAR
Precision as Measured by Y1 STD



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L-37 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

RIDG exceeded the action limit in the severe direction this period but ended the period within the limits. SPIT ended the reporting period exceeding the action limit in the severe direction.

Precision

All parameters remained within limits throughout the period.

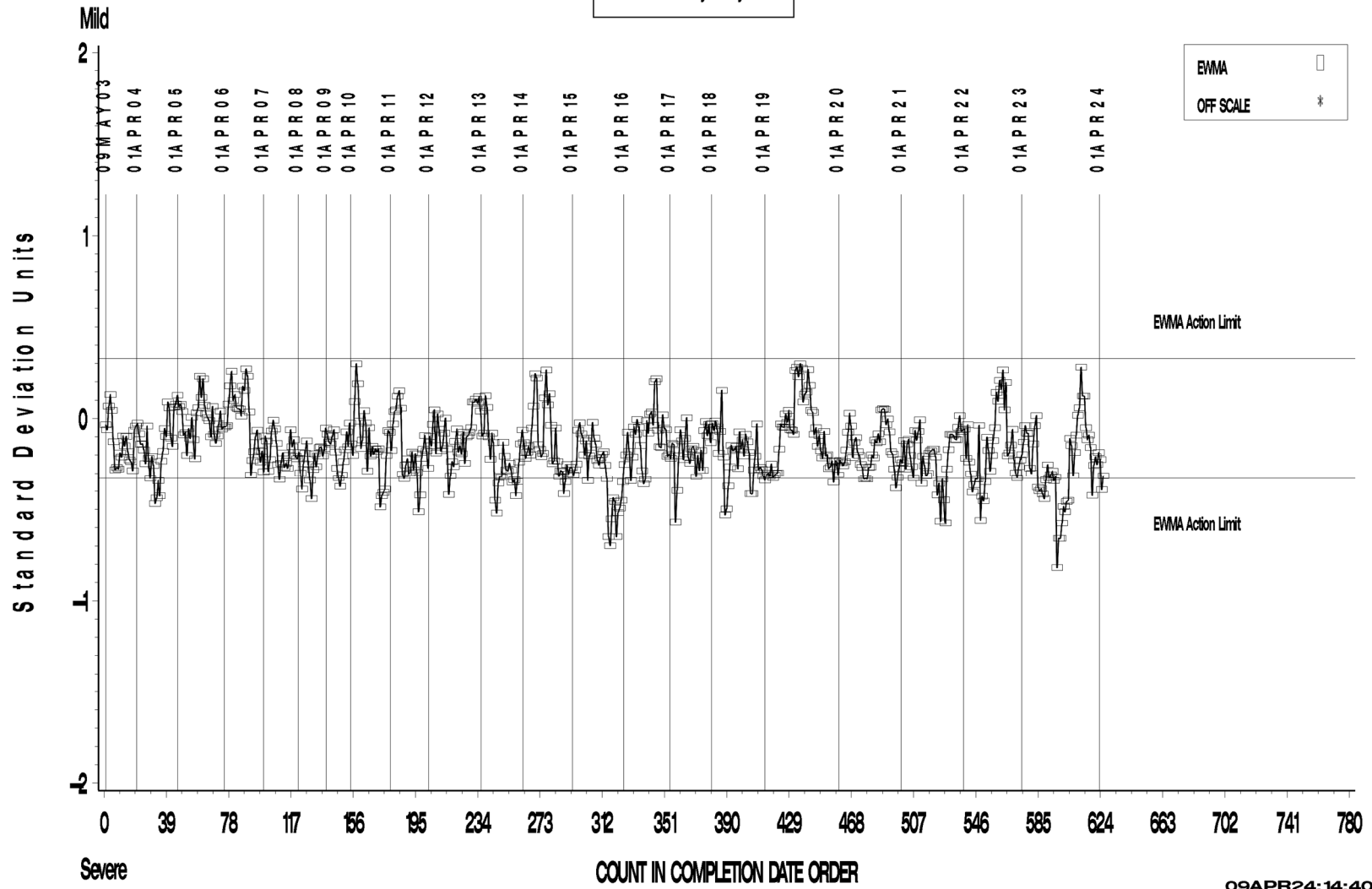
Industry rater control charts follow.

L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

LTMS Severity Analysis



09APR24: 14:40



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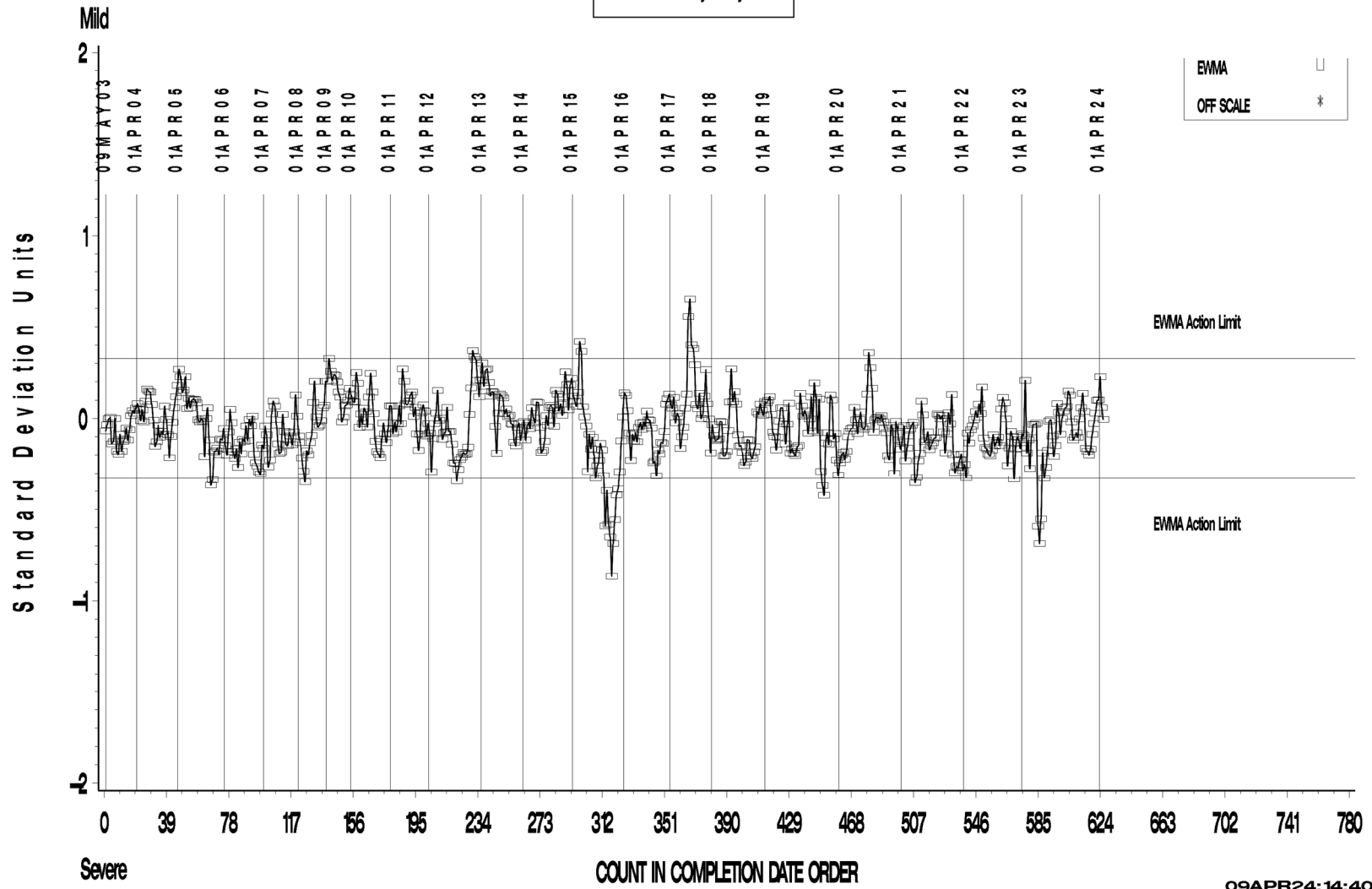
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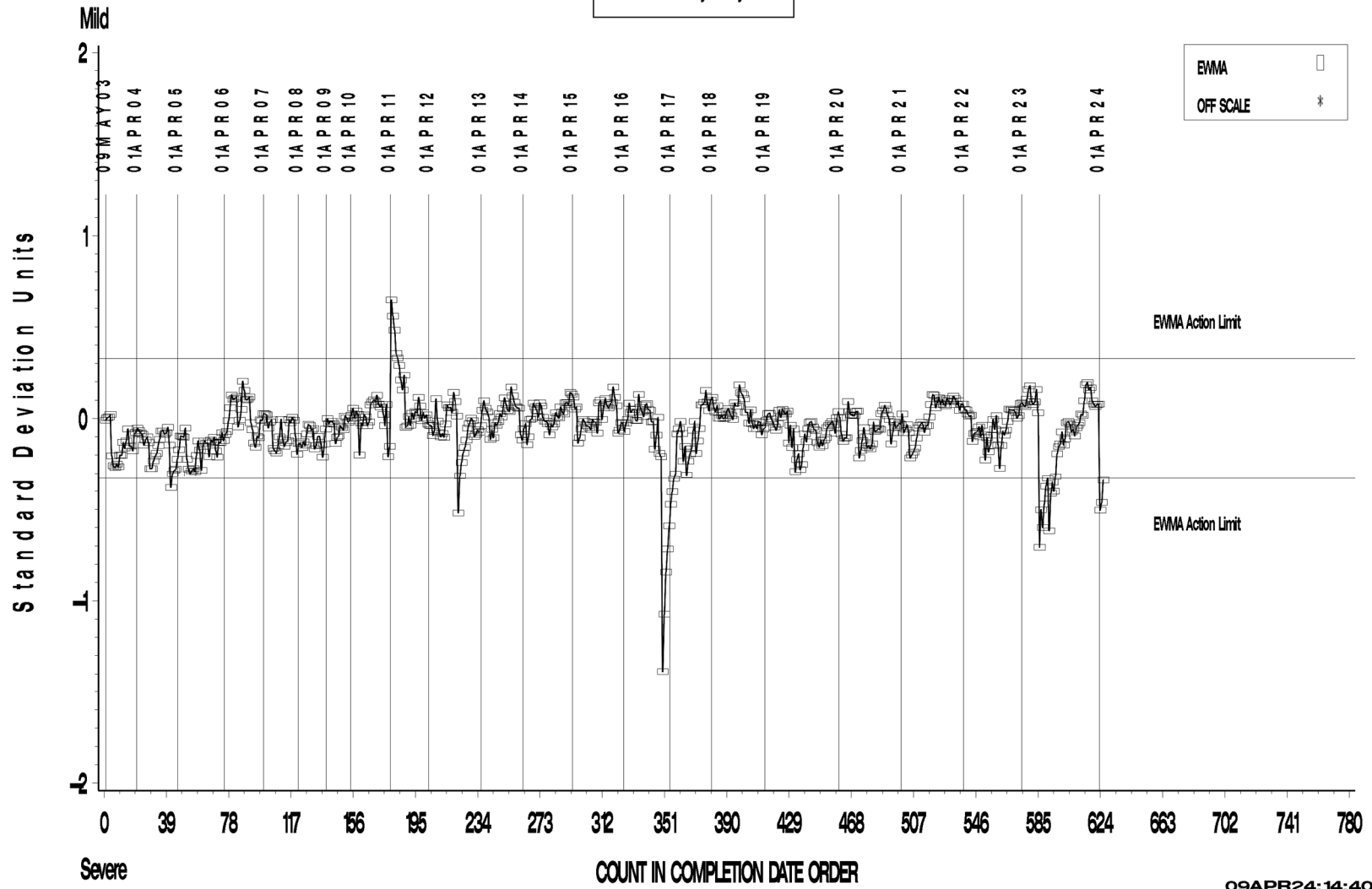
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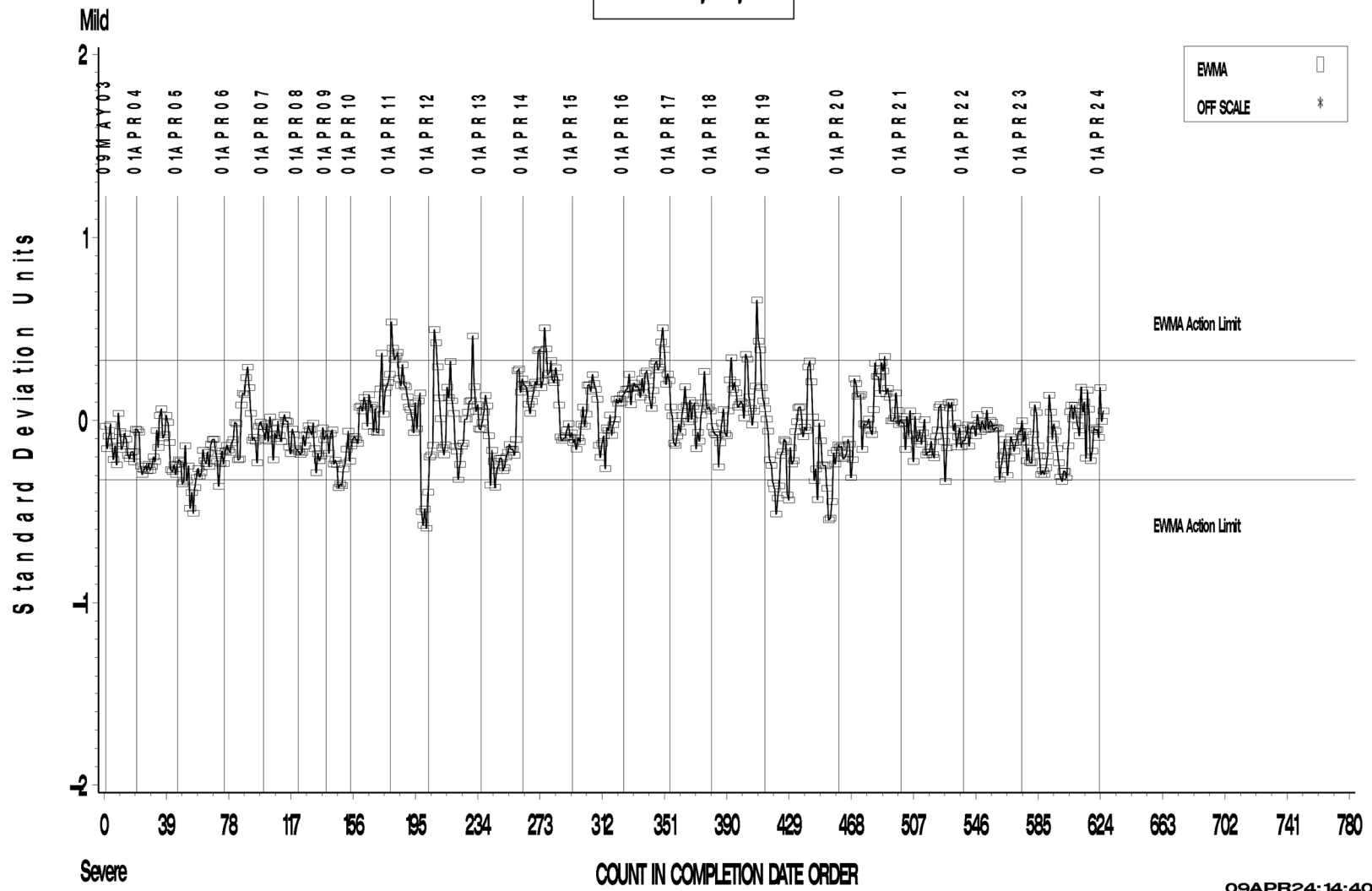
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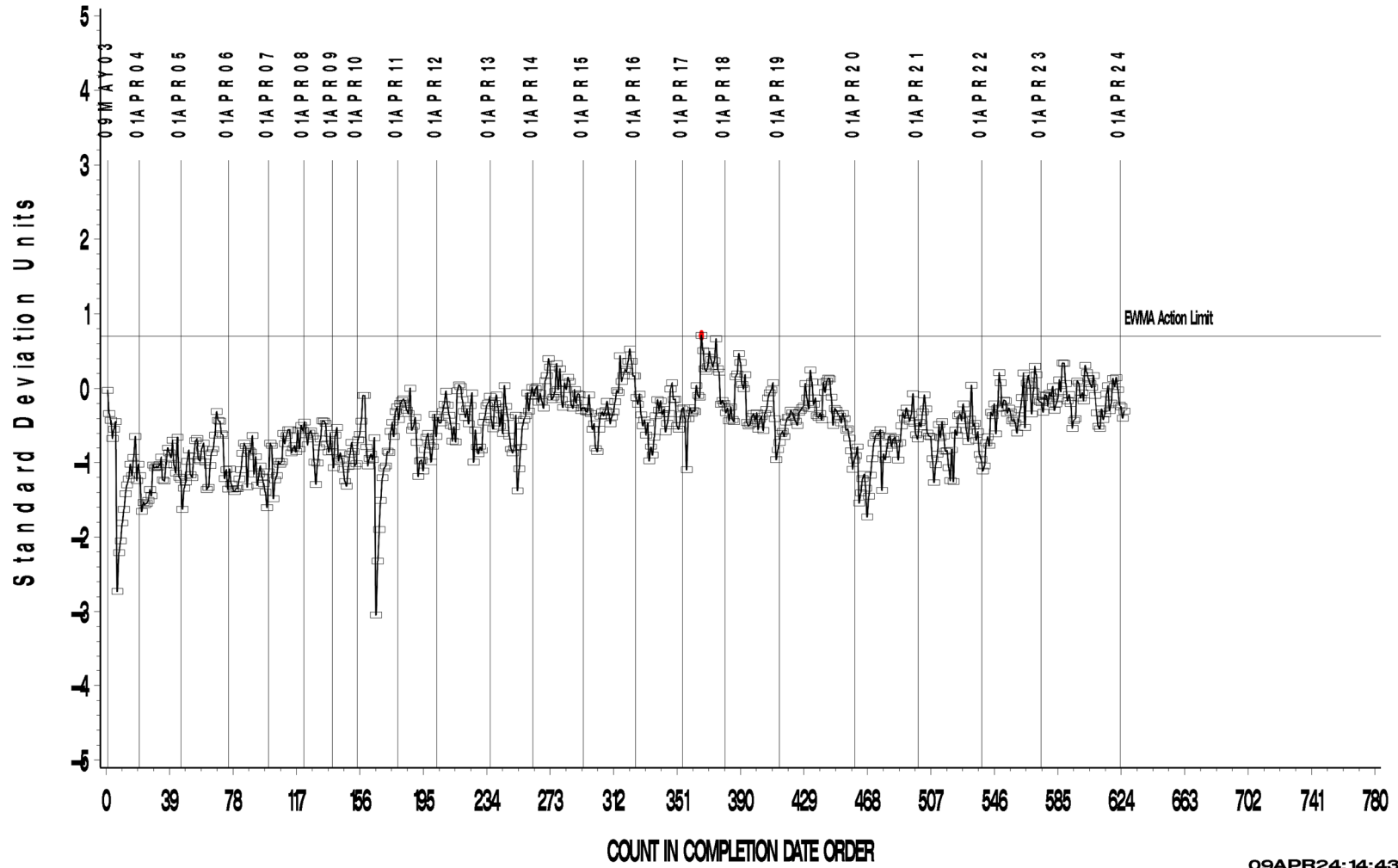
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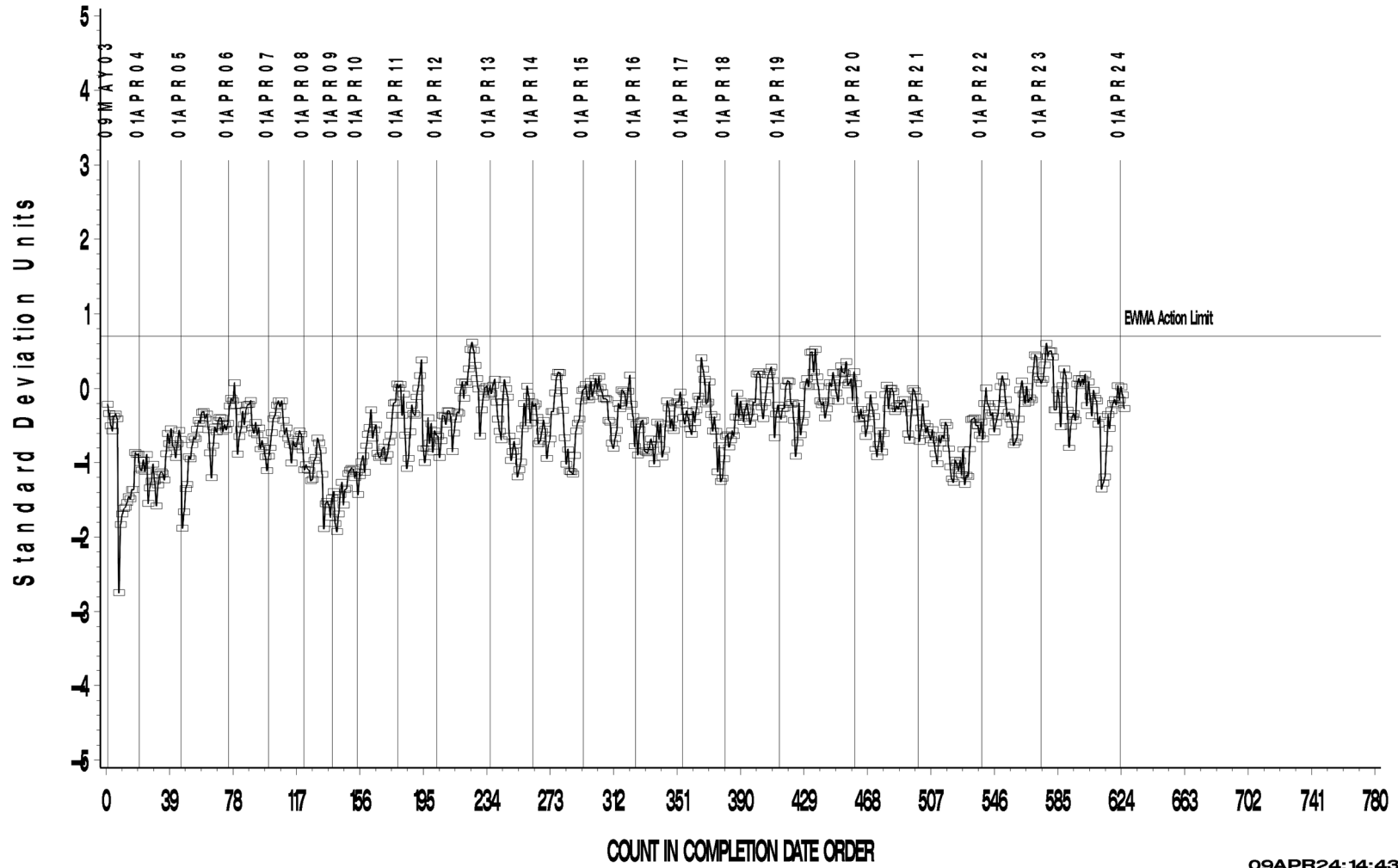
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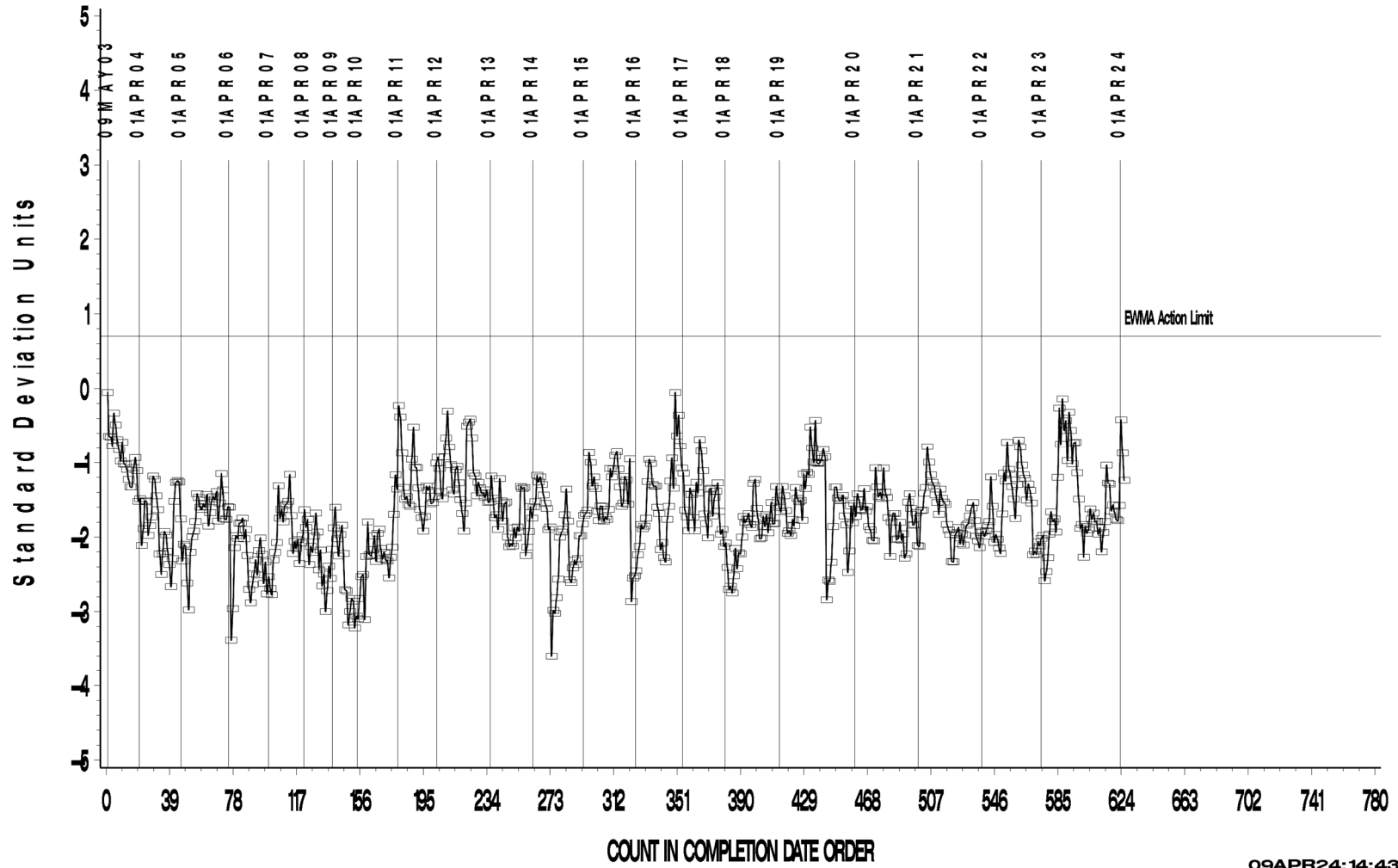
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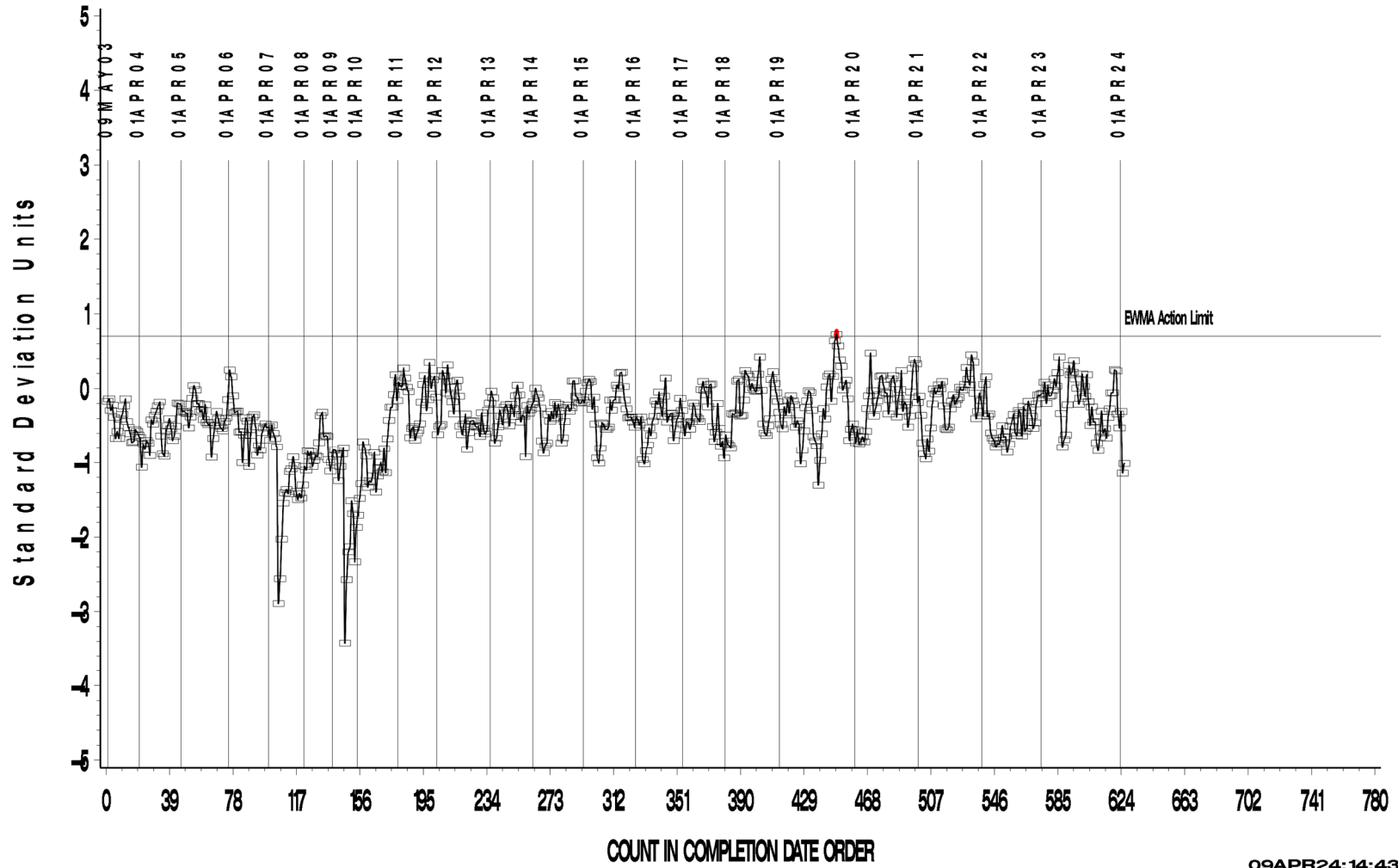
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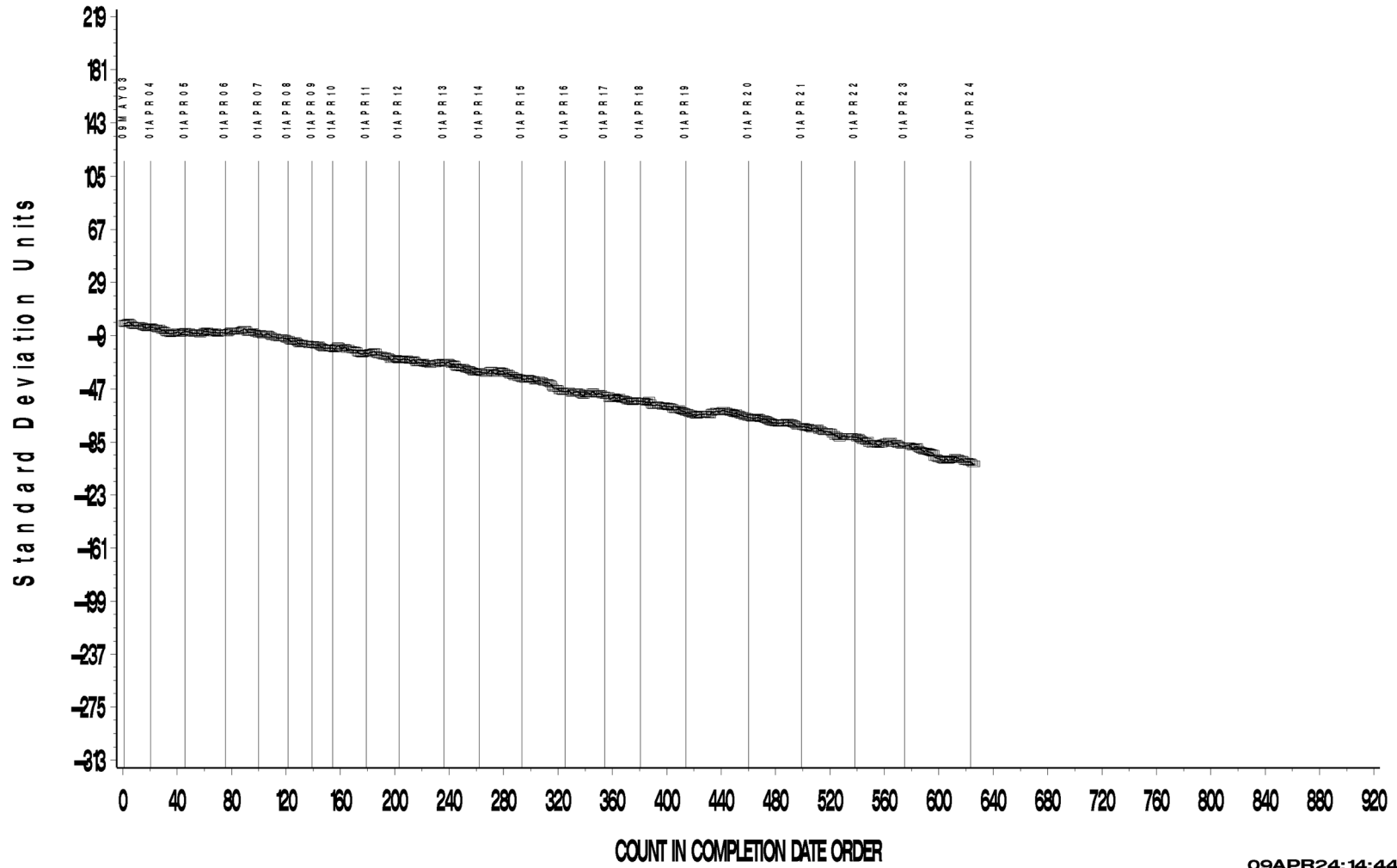
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L-37 Rater Calibration

L-37 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RIDGING

CUSUM Severity Analysis



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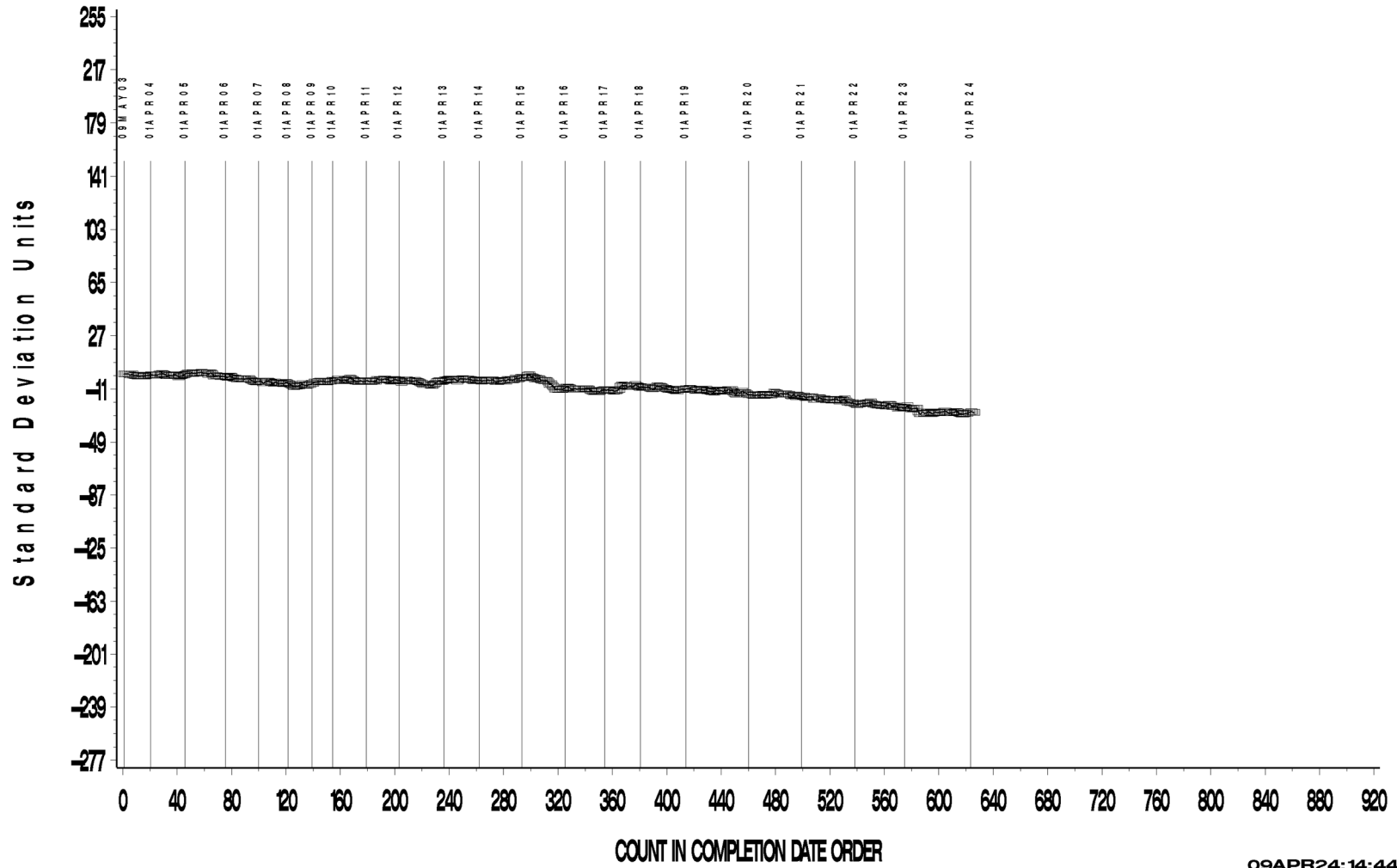
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RIPPLING

CUSUM Severity Analysis



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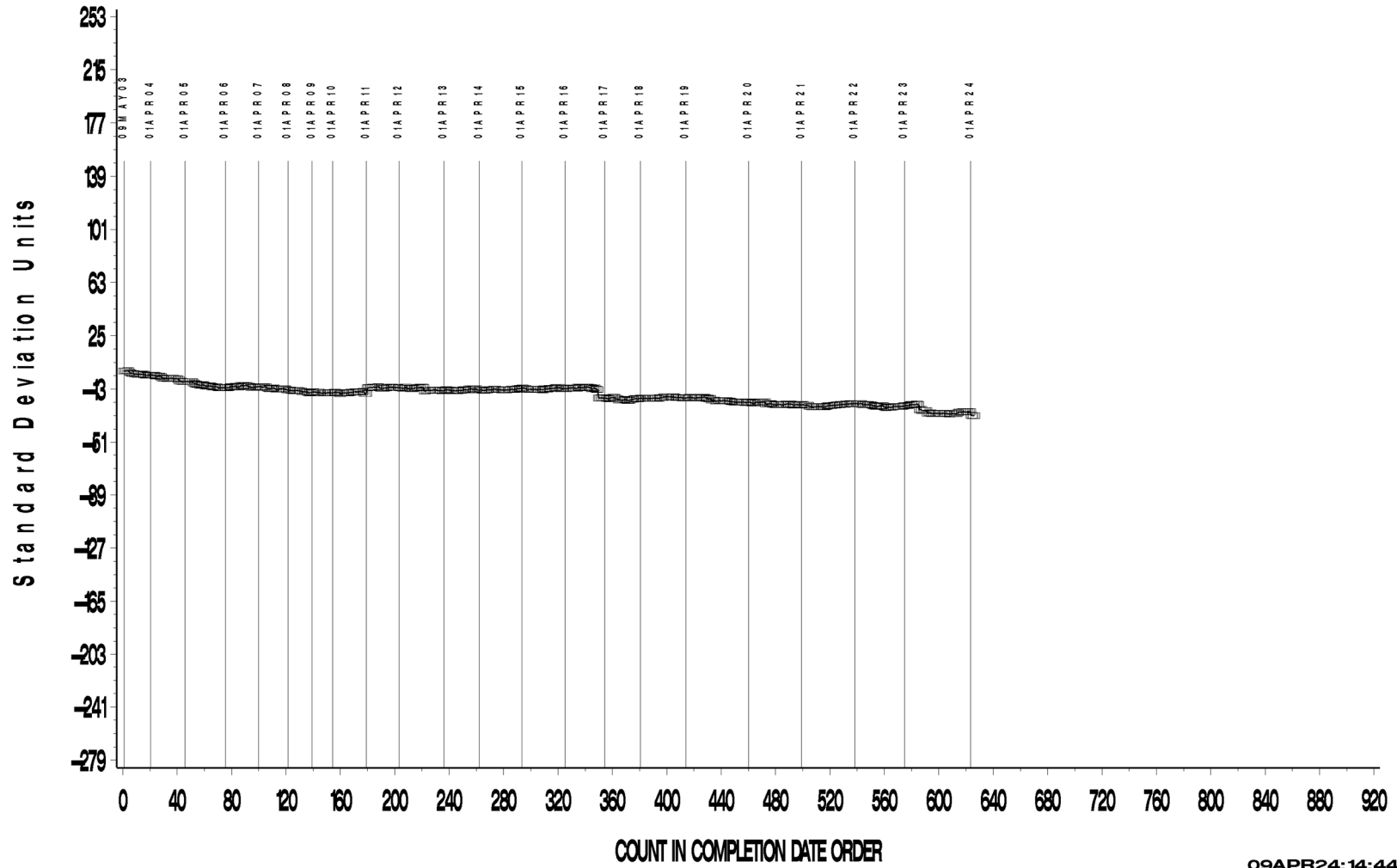
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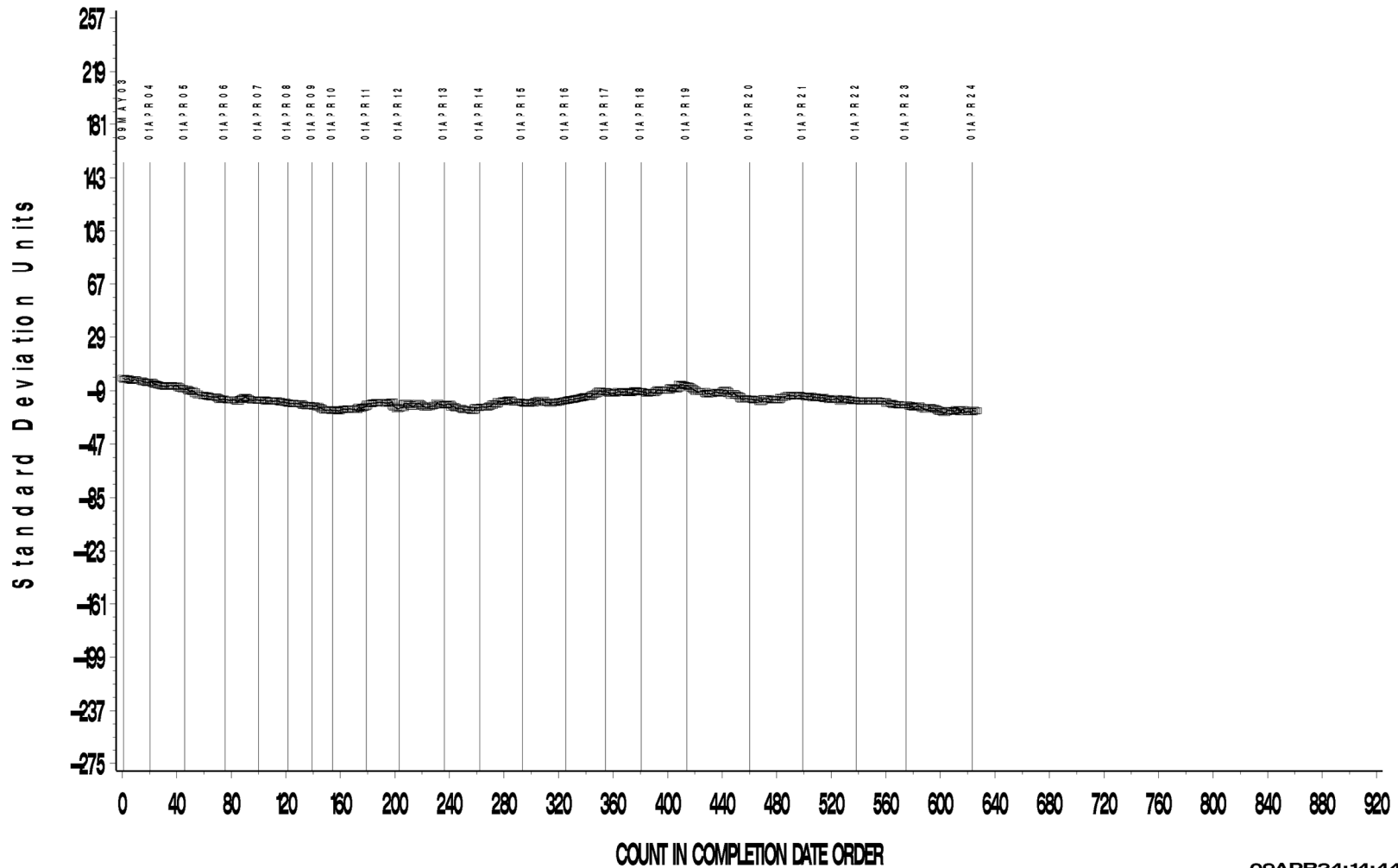
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