



Test Monitoring Center

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

MEMORANDUM: 20-044
DATE: October 12, 2020
TO: Matthew Sangpeal, Chairman, L-42 Surveillance Panel
FROM: Dylan Beck *Dylan Beck*
SUBJECT: L-42 Rater Calibration from April 1, 2020 through September 30, 2020

Attached is a summary of L-42 rater calibration activity this period.

DJB/djb/mem20-044.djb.doc

cc: Frank Farber
Jeff Clark

L-42 Surveillance Panel

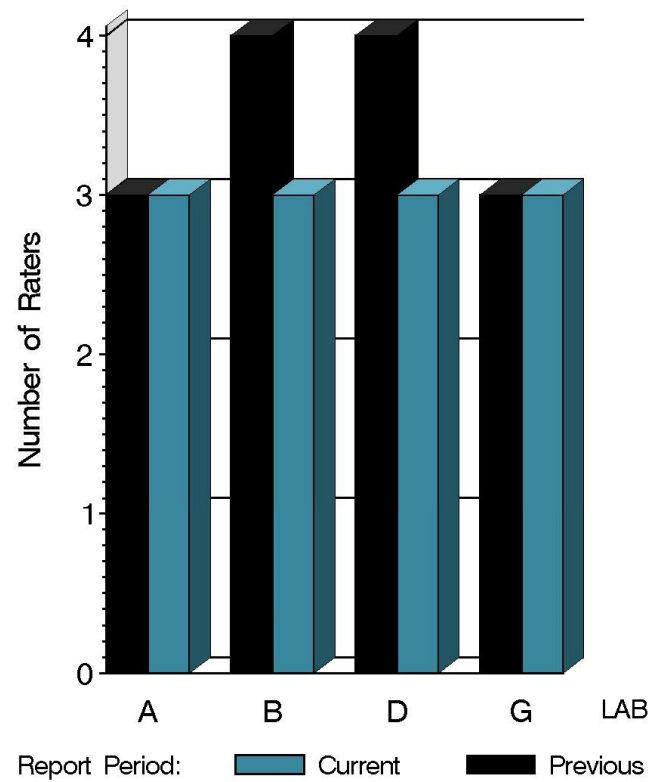
<http://www.astmtmc.cmu.edu/ftp/docs/gear/l42rc/semiannualreports/l42rc-10-2020.pdf>

Distribution: email

L-42 Rater Calibration

| | Reporting Data | Calibrated on 9-30-20 |
|------------------|----------------|-----------------------|
| Number of Labs | 4 | 4 |
| Number of Raters | 12 | 12 |

BY-LAB RATER
DISTRIBUTION



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L-42 Rater Calibration

Test Distribution by Validity

| | | Totals | |
|--------------------------|----|-------------|-------------|
| | | Last Period | This Period |
| Accepted for calibration | AC | 17 | 15 |
| Rejected (Mild) | OC | 0 | 0 |
| Rejected (Severe) | OC | 1 | 0 |
| Rejected (Multiple) | OC | 0 | 0 |
| Rejected (Precision) | OC | 0 | 0 |
| Workshop data | AG | 10 | 0 |
| Total | | 28 | 15 |

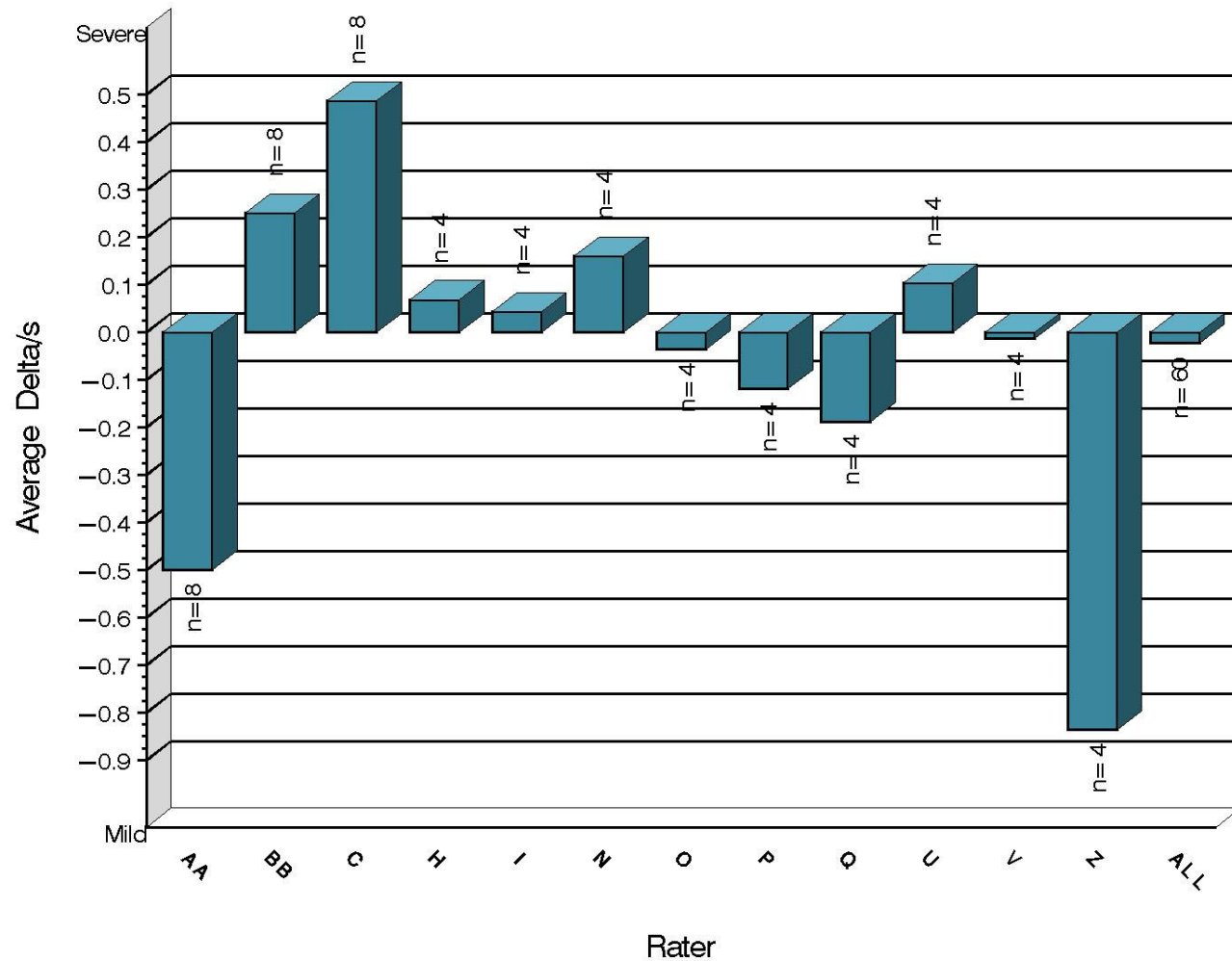
L-42 Rater Calibration

| Rater | N | PSCR | | RSCR | |
|-------|----|--------|-------|--------|-------|
| | | Avg Yi | STD* | Avg Yi | STD* |
| AA | 8 | -0.499 | 1.266 | -0.151 | 1.077 |
| BB | 8 | 0.251 | 0.821 | 0.279 | 0.786 |
| C | 8 | 0.487 | 0.768 | -0.049 | 0.897 |
| H | 4 | 0.068 | 0.643 | -0.086 | 0.815 |
| I | 4 | 0.043 | 0.310 | -0.446 | 0.761 |
| N | 4 | 0.160 | 0.267 | 0.077 | 0.439 |
| O | 4 | -0.036 | 0.777 | 0.716 | 0.895 |
| P | 4 | -0.119 | 0.159 | 0.151 | 0.438 |
| Q | 4 | -0.188 | 0.346 | -0.150 | 0.314 |
| U | 4 | 0.104 | 0.704 | -0.584 | 0.254 |
| V | 4 | -0.014 | 0.069 | 0.031 | 0.151 |
| Z | 4 | -0.837 | 0.484 | -1.185 | 0.766 |
| ALL | 60 | -0.023 | 0.757 | -0.088 | 0.804 |

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

L-42 Rater Calibration

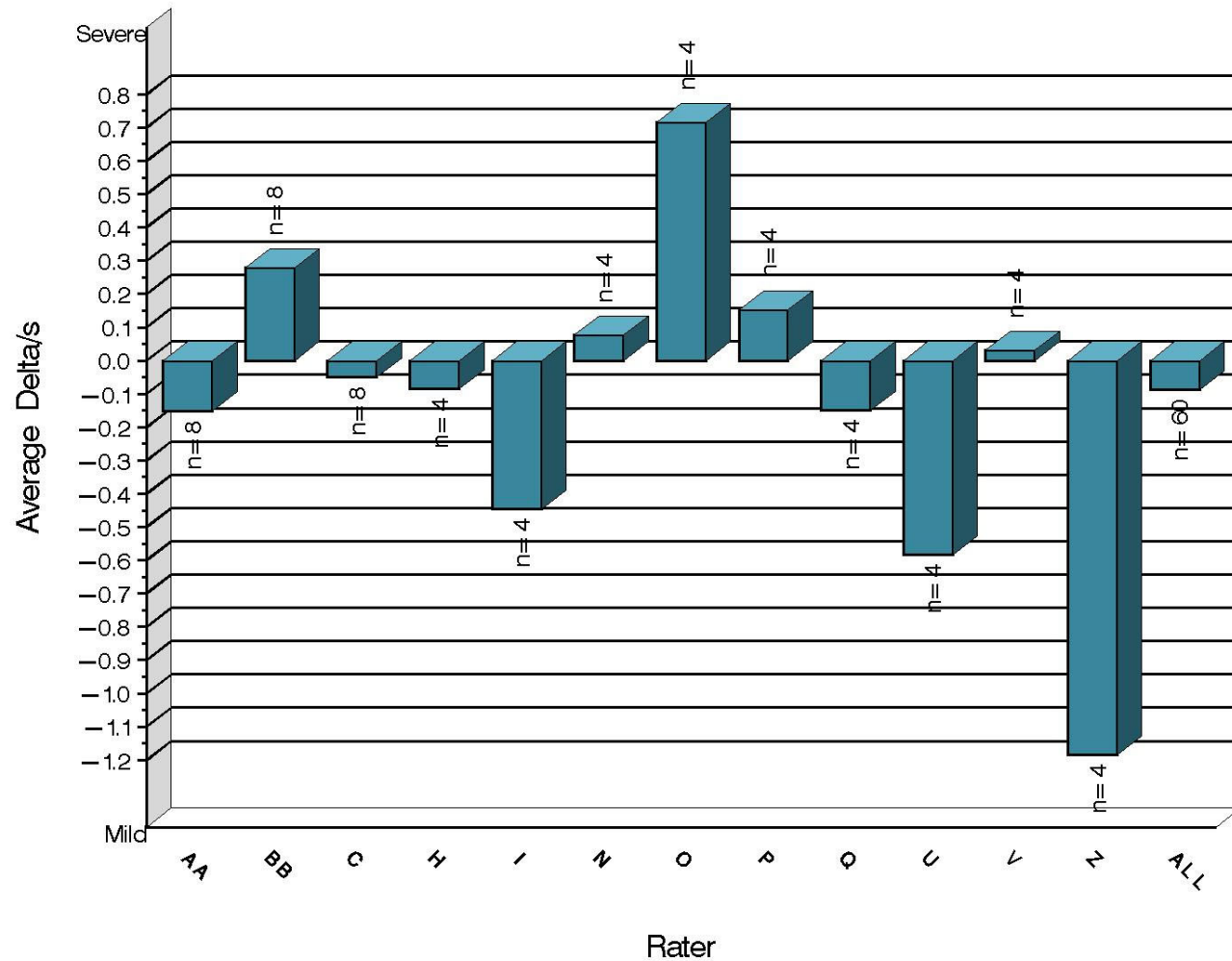
PINION SCORING
Severity as Measured by Delta/s



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L-42 Rater Calibration

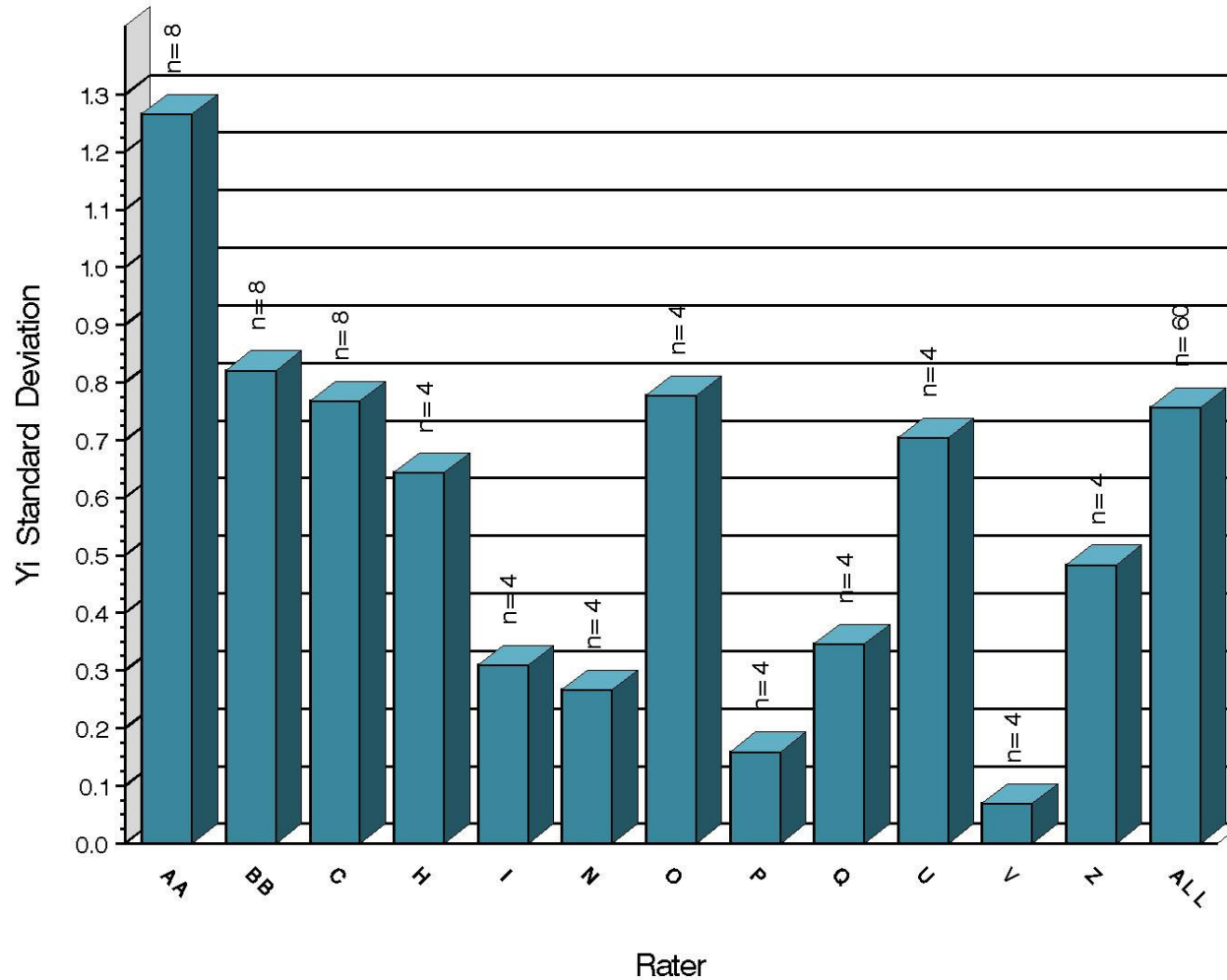
RING SCORING
Severity as Measured by Delta/s



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L-42 Rater Calibration

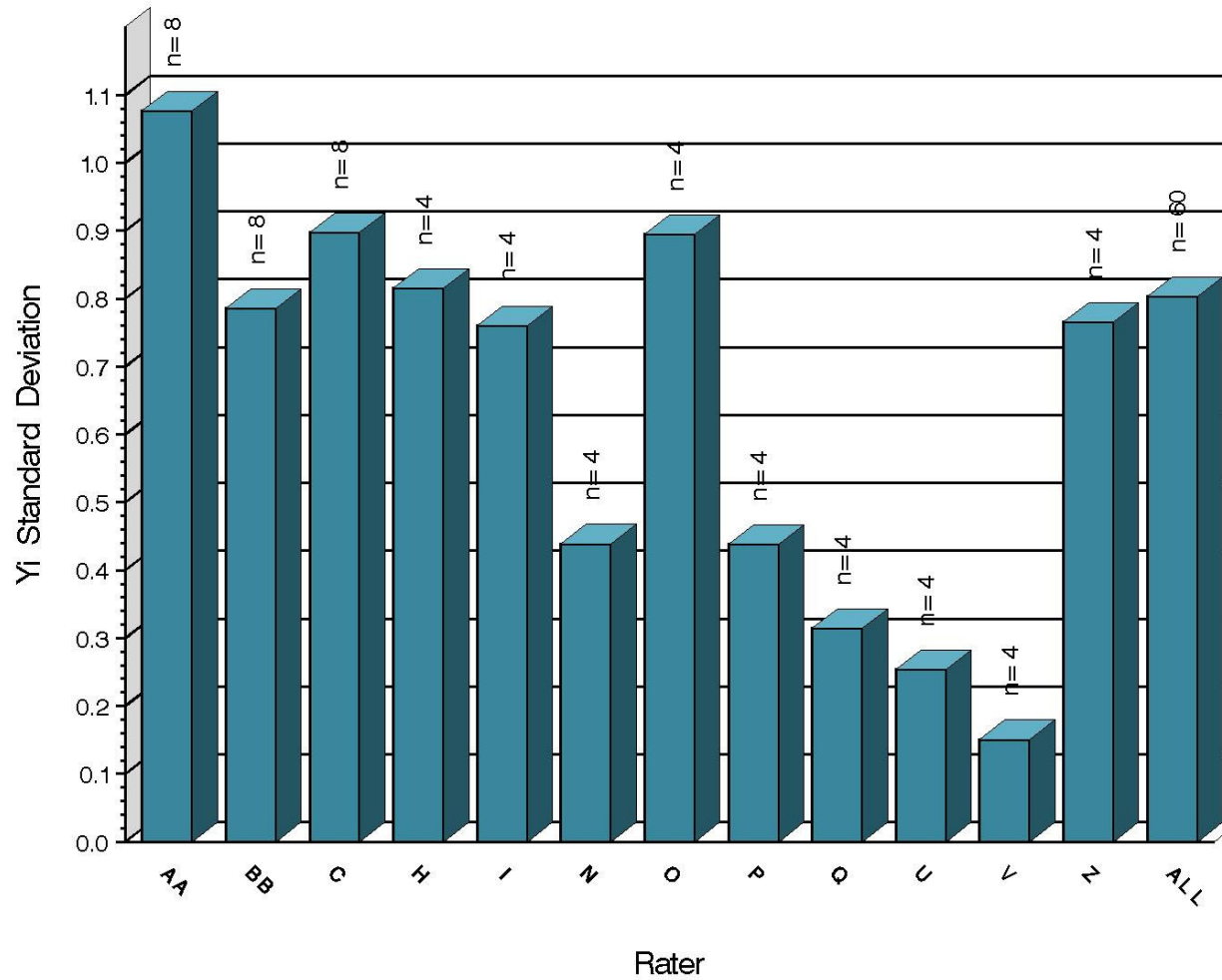
PINION SCORING
Precision as Measured by Yi STD



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L-42 Rater Calibration

RING SCORING
Precision as Measured by Yi STD



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L-42 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

PSCR remained within limits this period. RSCR exceeded the action limit with one test this period but finished the period within limits.

Precision

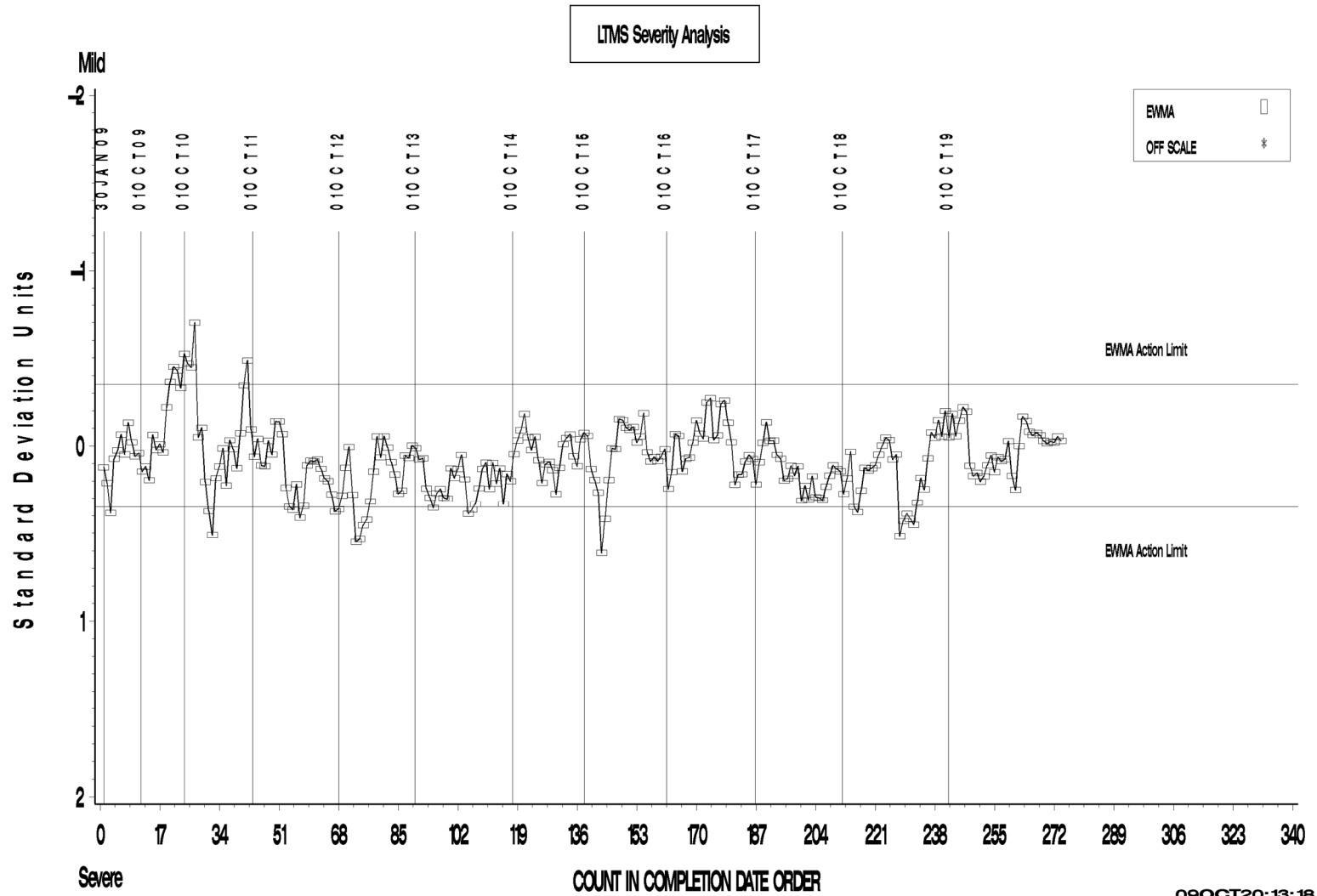
Precision for both parameters remained within acceptable limits.

Industry control charts follow.

L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

PINION SCORING

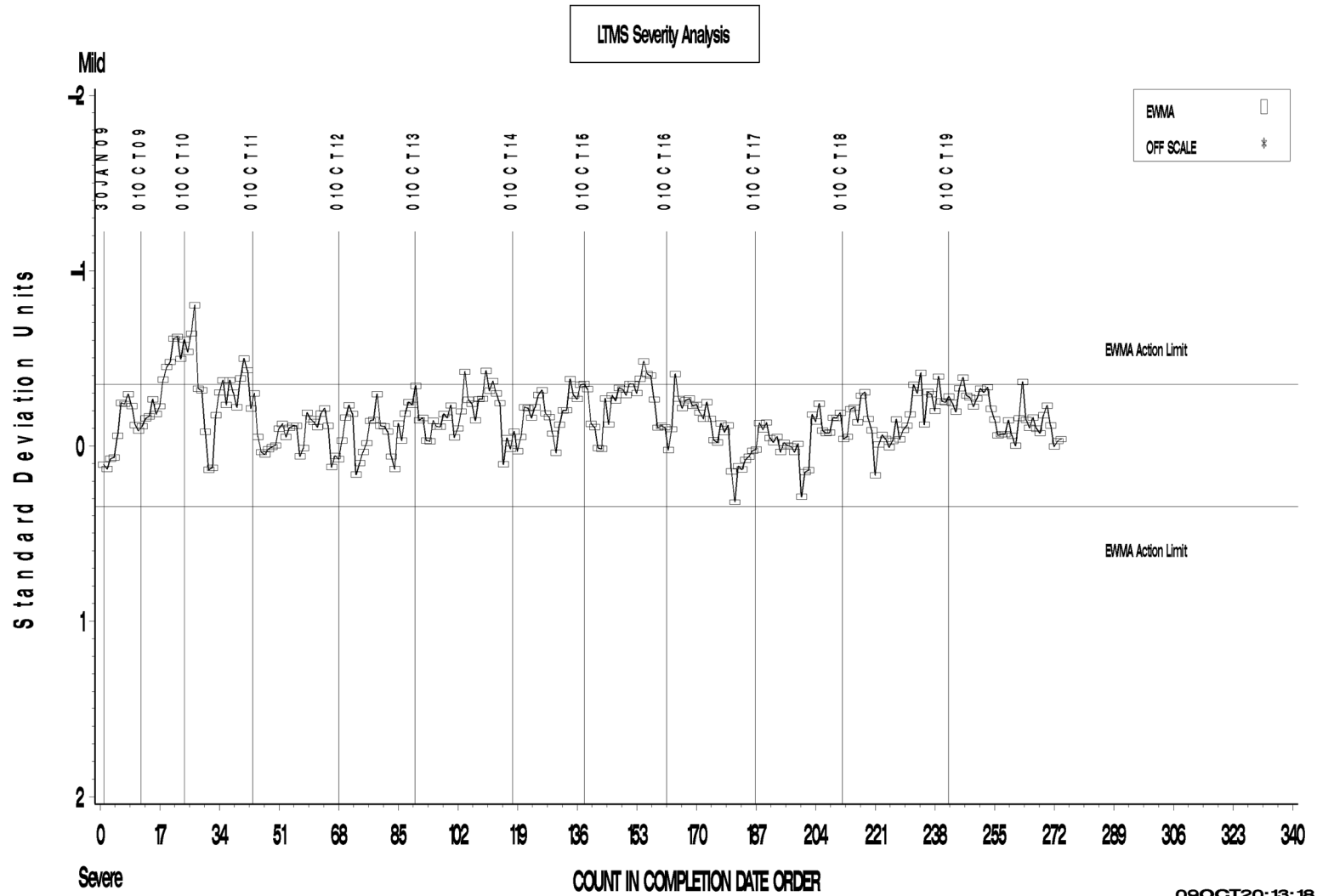


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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RING SCORING



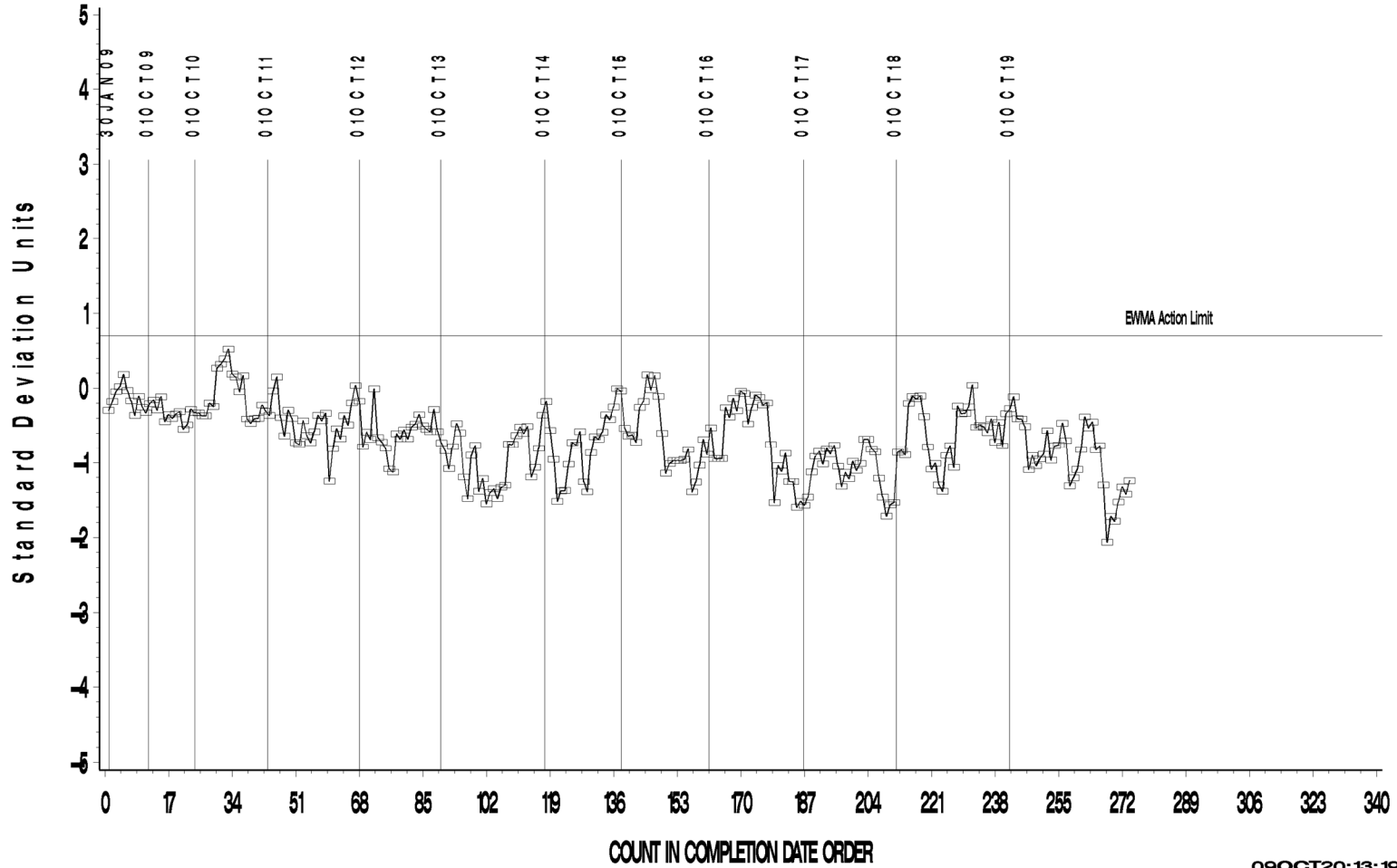
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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

PINION SCORING

LTMS Precision Analysis



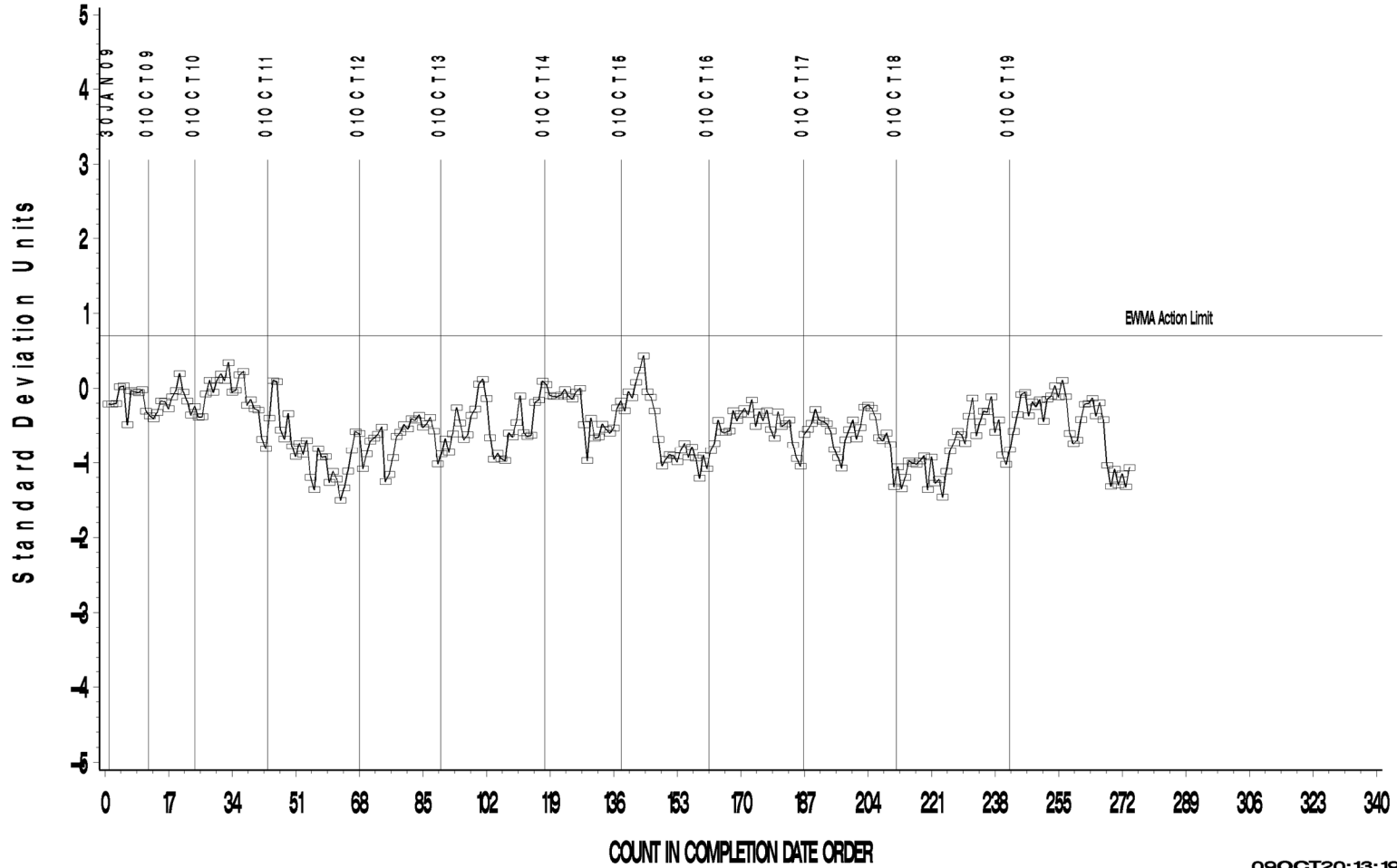
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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RING SCORING

LTMS Precision Analysis



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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

PINION SCORING

CUSUM Severity Analysis



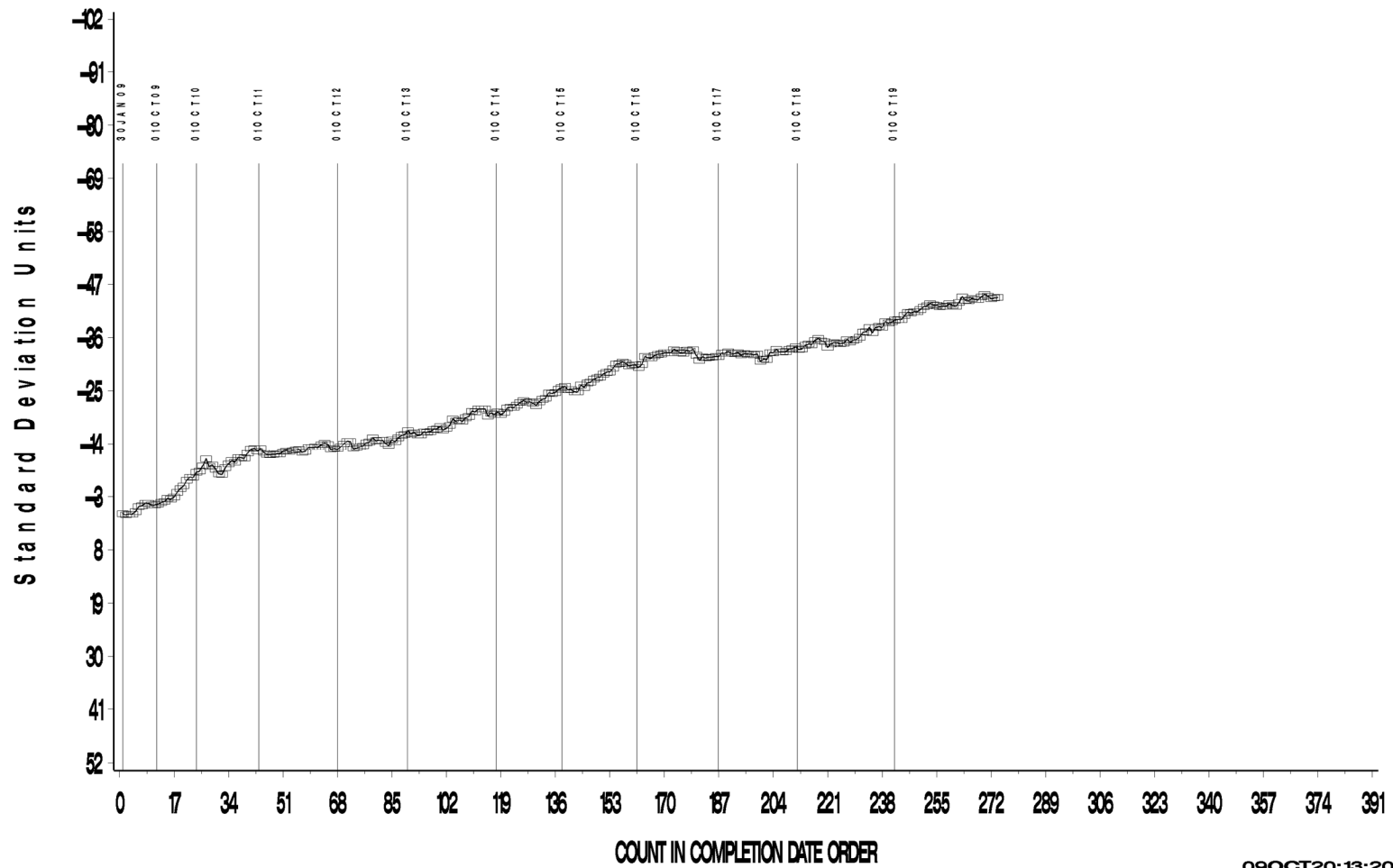
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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RING SCORING

CUSUM Severity Analysis



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