



A Program of ASTM International

Test Monitoring Center

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

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

MEMORANDUM: 17-036

DATE: November 2, 2017

TO: Eric Donovan, Chairman, L-42 Surveillance Panel

FROM: Dylan Beck *Dylan Beck*

SUBJECT: L-42 Rater Calibration from April 1, 2017 through September 30, 2017

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

DJB/djb/mem17-036.djb.doc

cc: Frank Farber

Jeff Clark

Scott Parke

L-42 Surveillance Panel

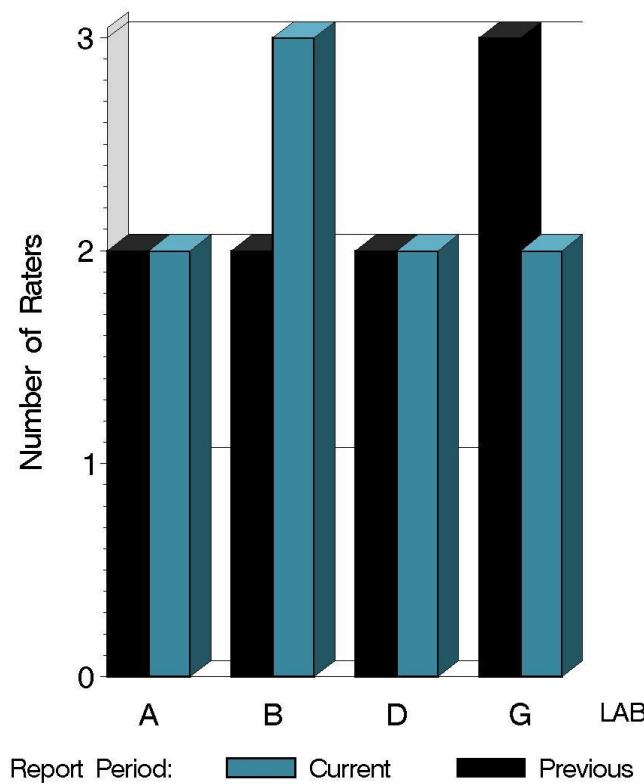
<http://www.astmtmc.cmu.edu/ftp/docs/gear/l42rc/semiannualreports/l42rc-10-2017.pdf>

Distribution: email

L-42 Rater Calibration

| | Reporting Data | Calibrated on 9-30-17 |
|------------------|----------------|-----------------------|
| Number of Labs | 4 | 4 |
| Number of Raters | 9 | 9 |

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 | 12 | 11 |
| Rejected (Mild) | OC | 1 | 0 |
| Rejected (Severe) | OC | 0 | 0 |
| Rejected (Multiple) | OC | 0 | 0 |
| Rejected (Precision) | OC | 1 | 0 |
| Workshop data | AG | 24 | 9 |
| Total | | 38 | 20 |

L-42 Rater Calibration

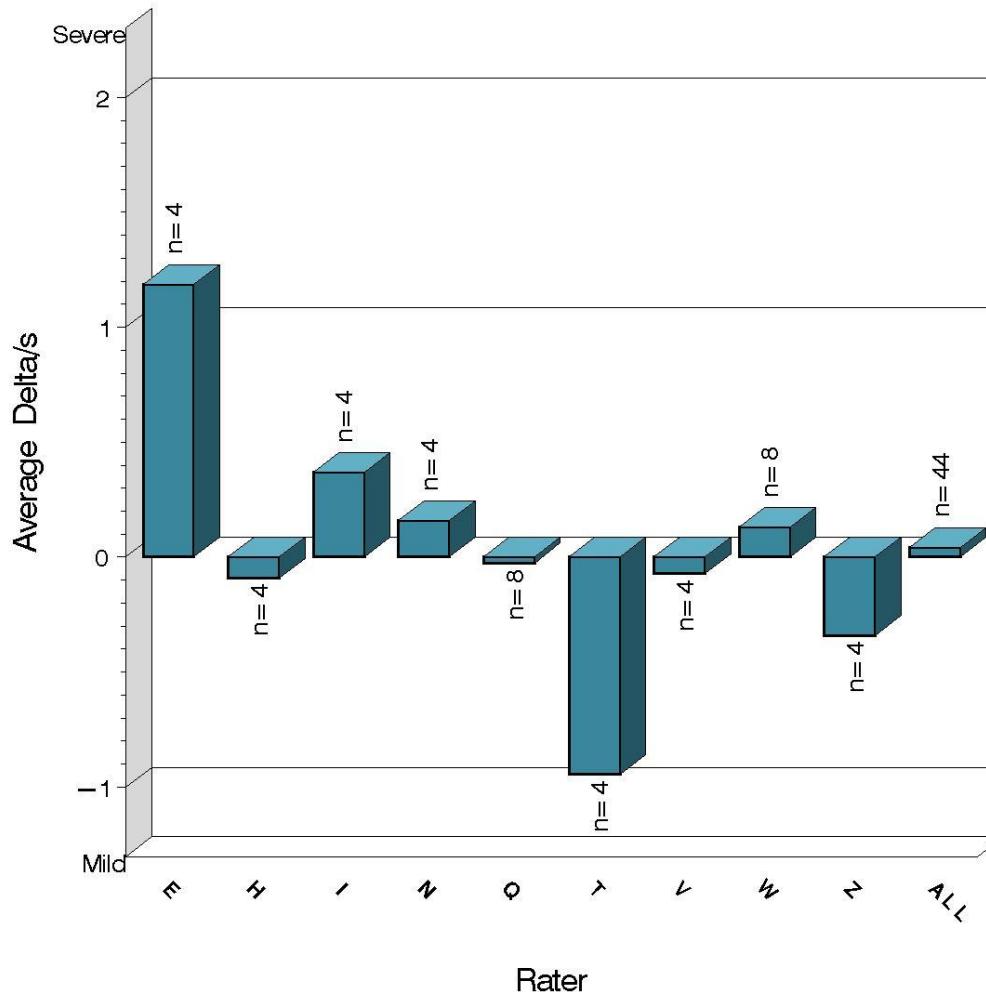
| Rater | N | PSCR | | RSCR | |
|-------|----|--------|-------|--------|-------|
| | | Avg Yi | STD* | Avg Yi | STD* |
| E | 4 | 1.188 | 0.419 | 1.030 | 0.449 |
| H | 4 | -0.092 | 0.197 | -0.015 | 0.365 |
| I | 4 | 0.369 | 0.086 | -0.269 | 0.479 |
| N | 4 | 0.160 | 0.467 | -0.101 | 0.410 |
| Q | 8 | -0.025 | 0.380 | 0.035 | 0.558 |
| T | 4 | -0.946 | 0.800 | -0.564 | 0.934 |
| V | 4 | -0.073 | 0.865 | -0.710 | 0.703 |
| W | 8 | 0.129 | 1.005 | 0.612 | 1.170 |
| Z | 4 | -0.340 | 0.195 | 0.118 | 0.389 |
| ALL | 44 | 0.043 | 0.749 | 0.071 | 0.824 |

* 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

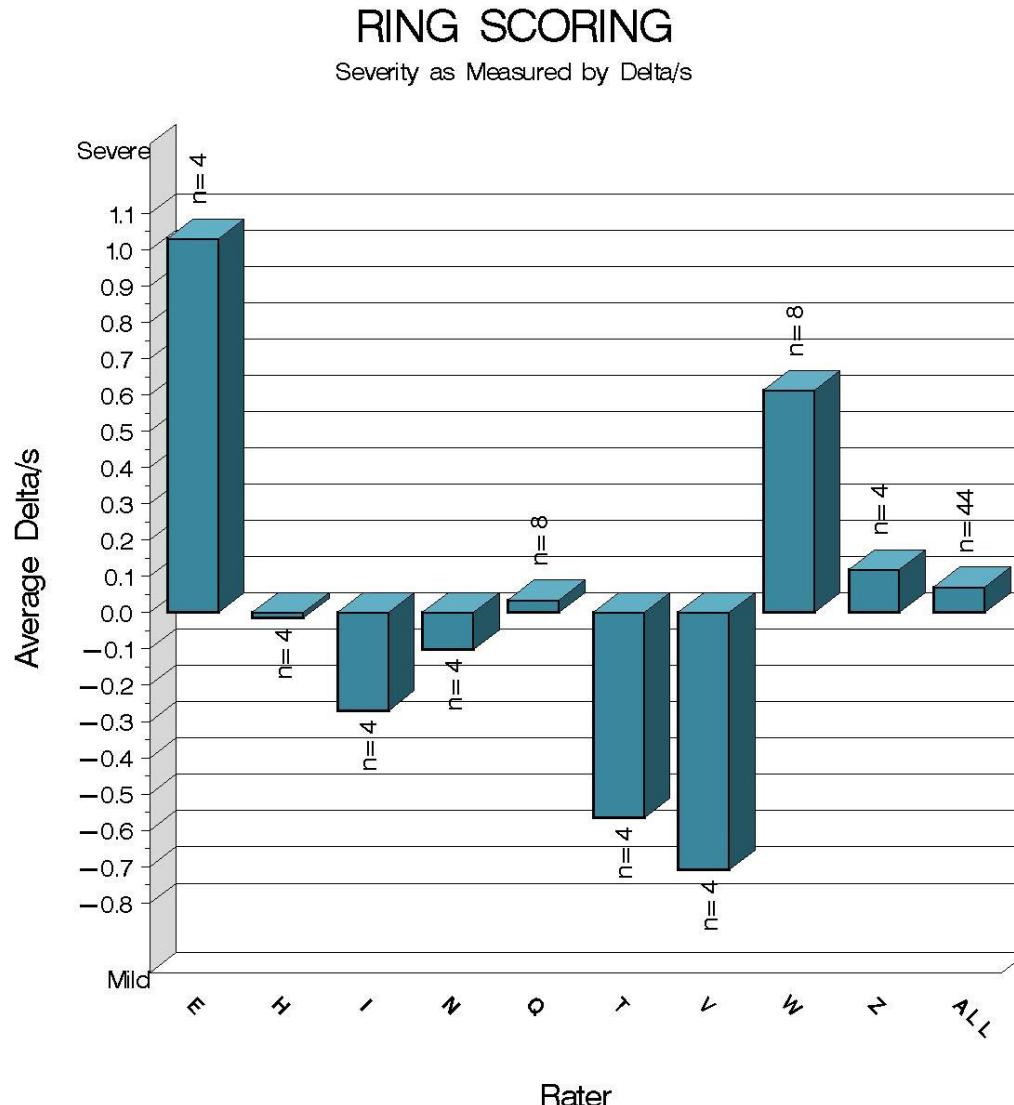
PINION SCORING

Severity as Measured by Delta/s



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L-42 Rater Calibration

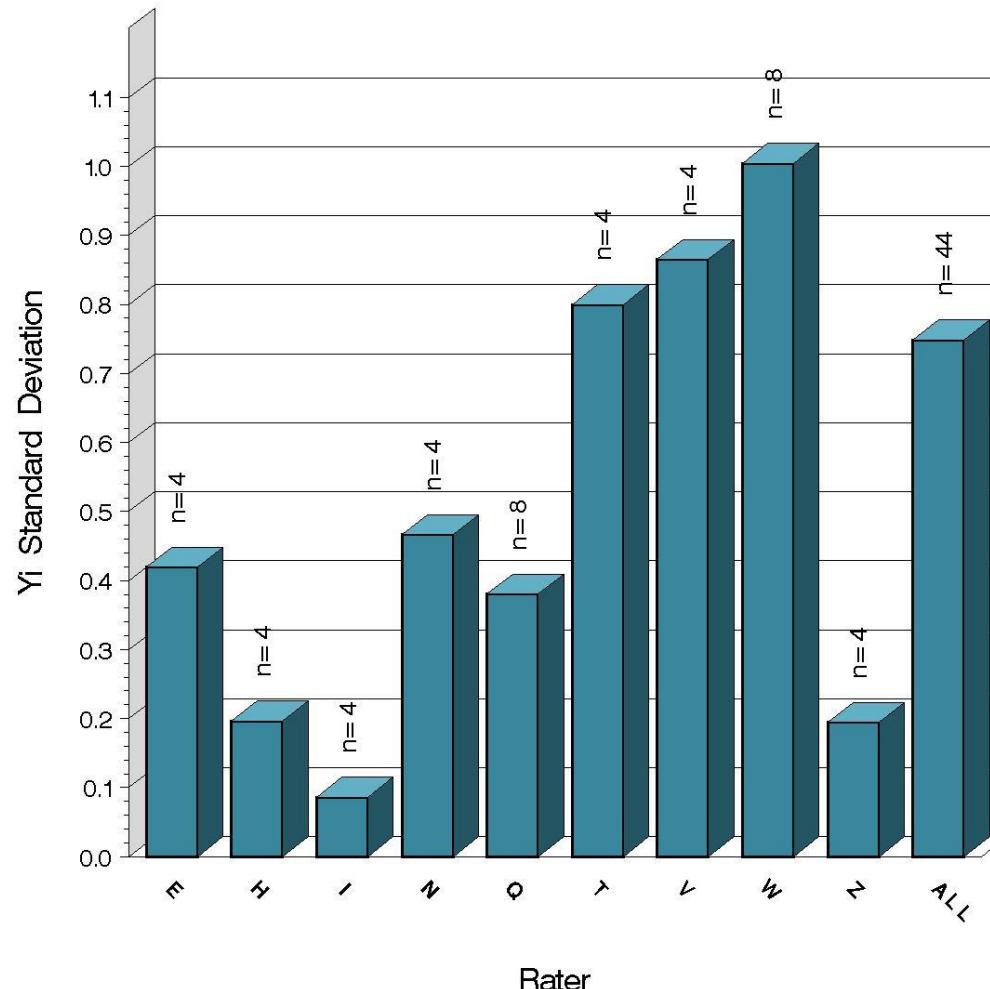


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L-42 Rater Calibration

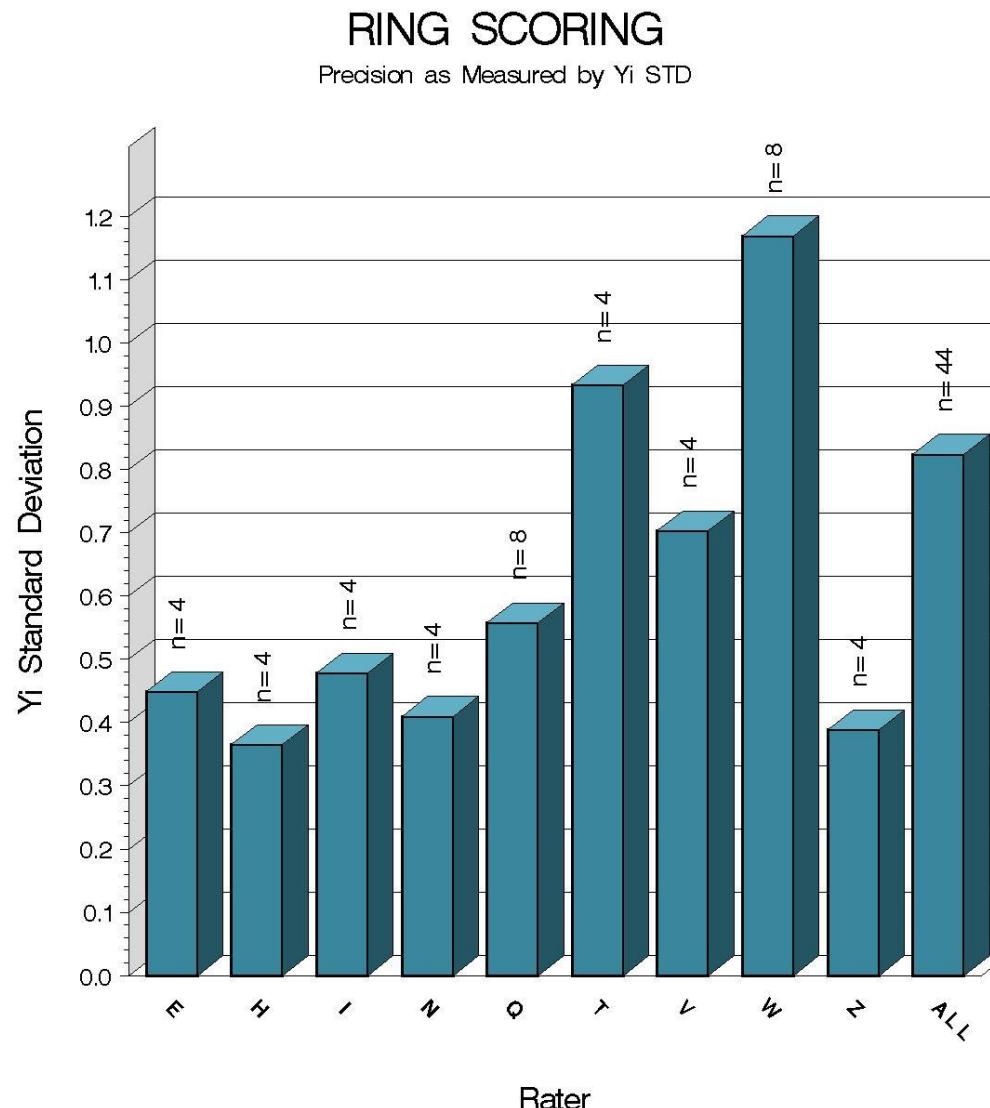
PINION SCORING

Precision as Measured by \bar{Y}_I STD



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L-42 Rater Calibration



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L-42 Rater Calibration

SUMMARY OF SEVERITY & PRECISION

Severity

Both PSCR and RSCR remained within limits over this report period.

Precision

Precision for both parameters remained within acceptable limits.

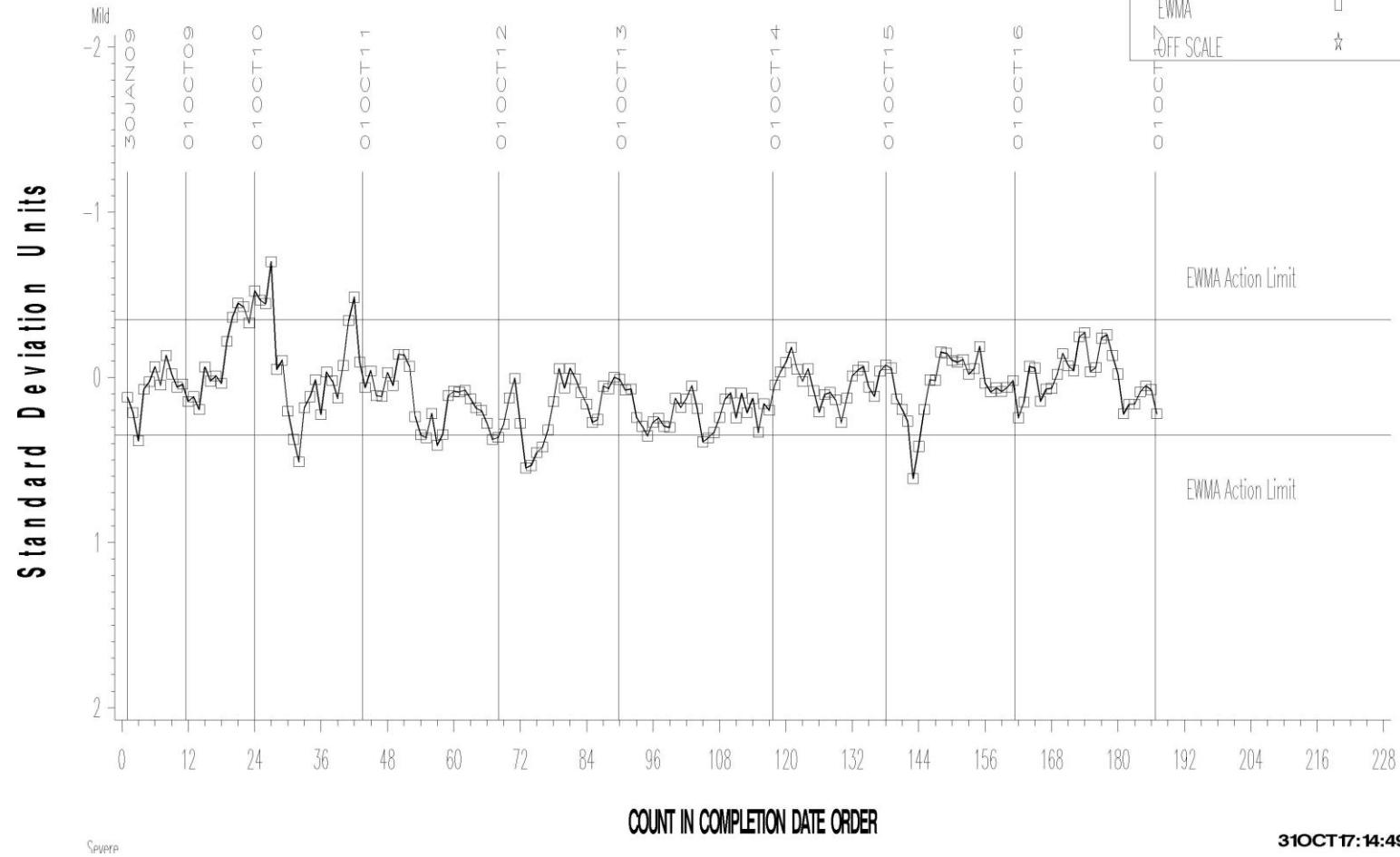
Industry control charts follow.

L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

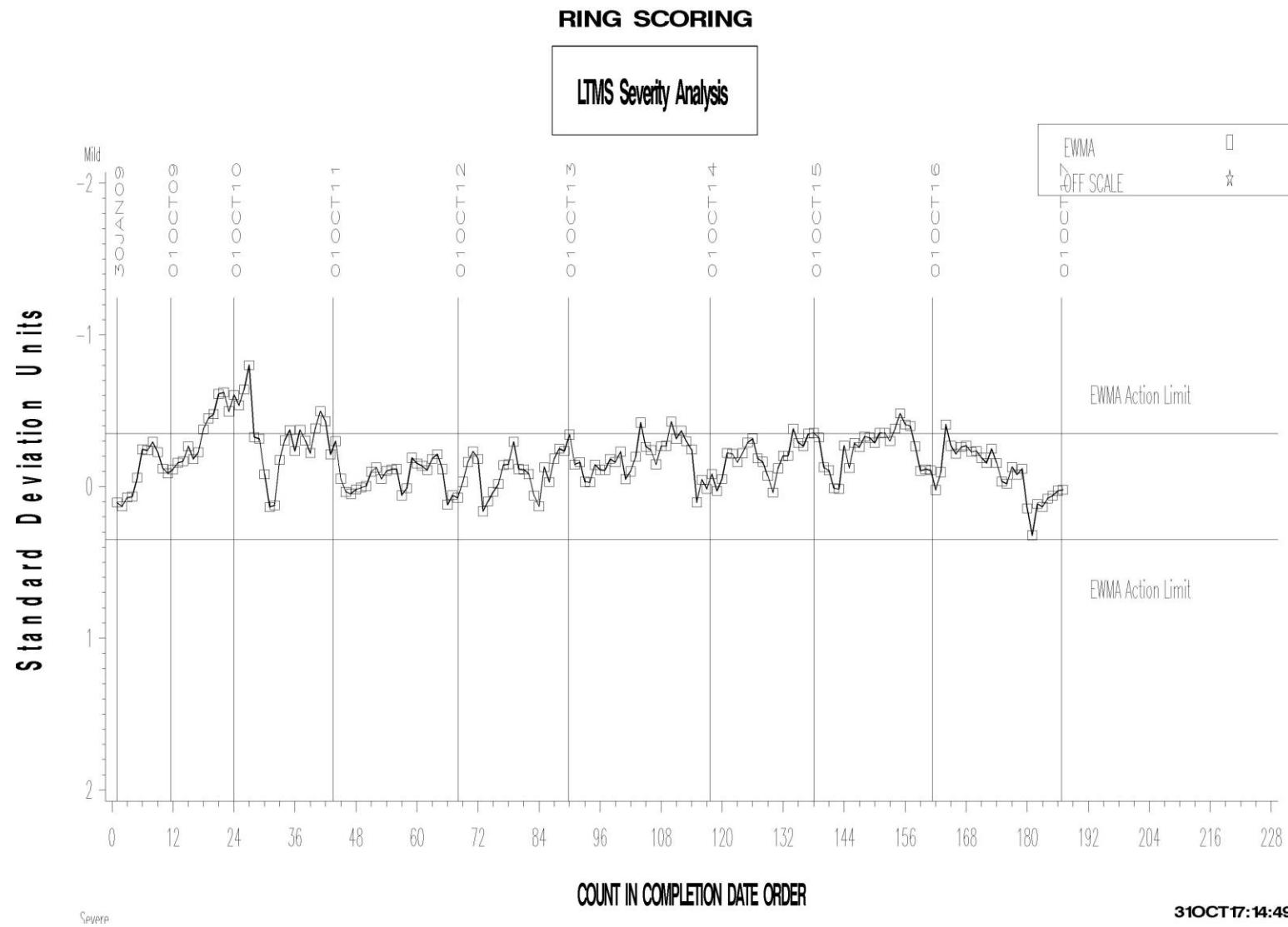
PINION SCORING

LTMS Severity Analysis



L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

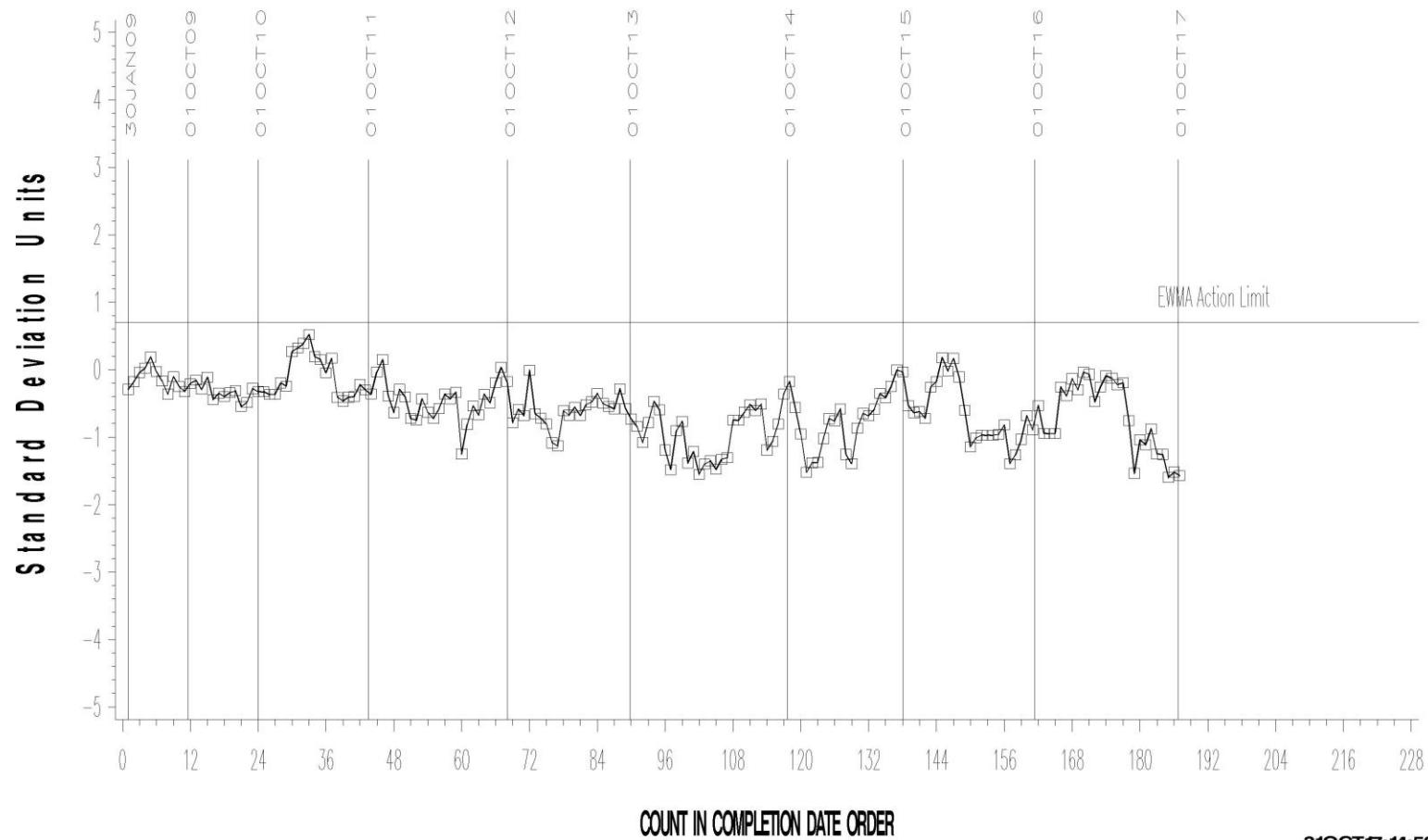


L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

PINION SCORING

LTMS Precision Analysis



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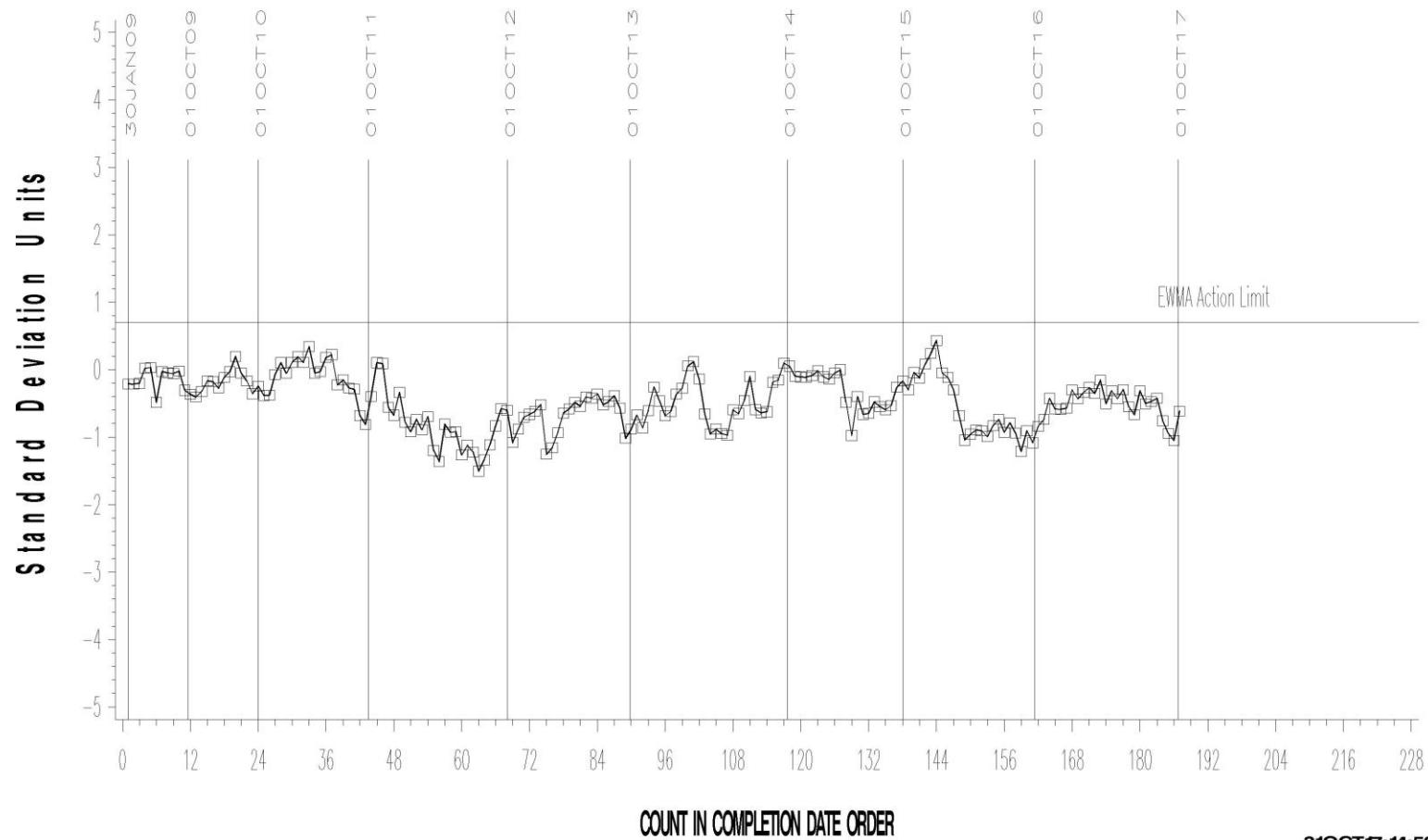
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L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

RING SCORING

LTMS Precision Analysis

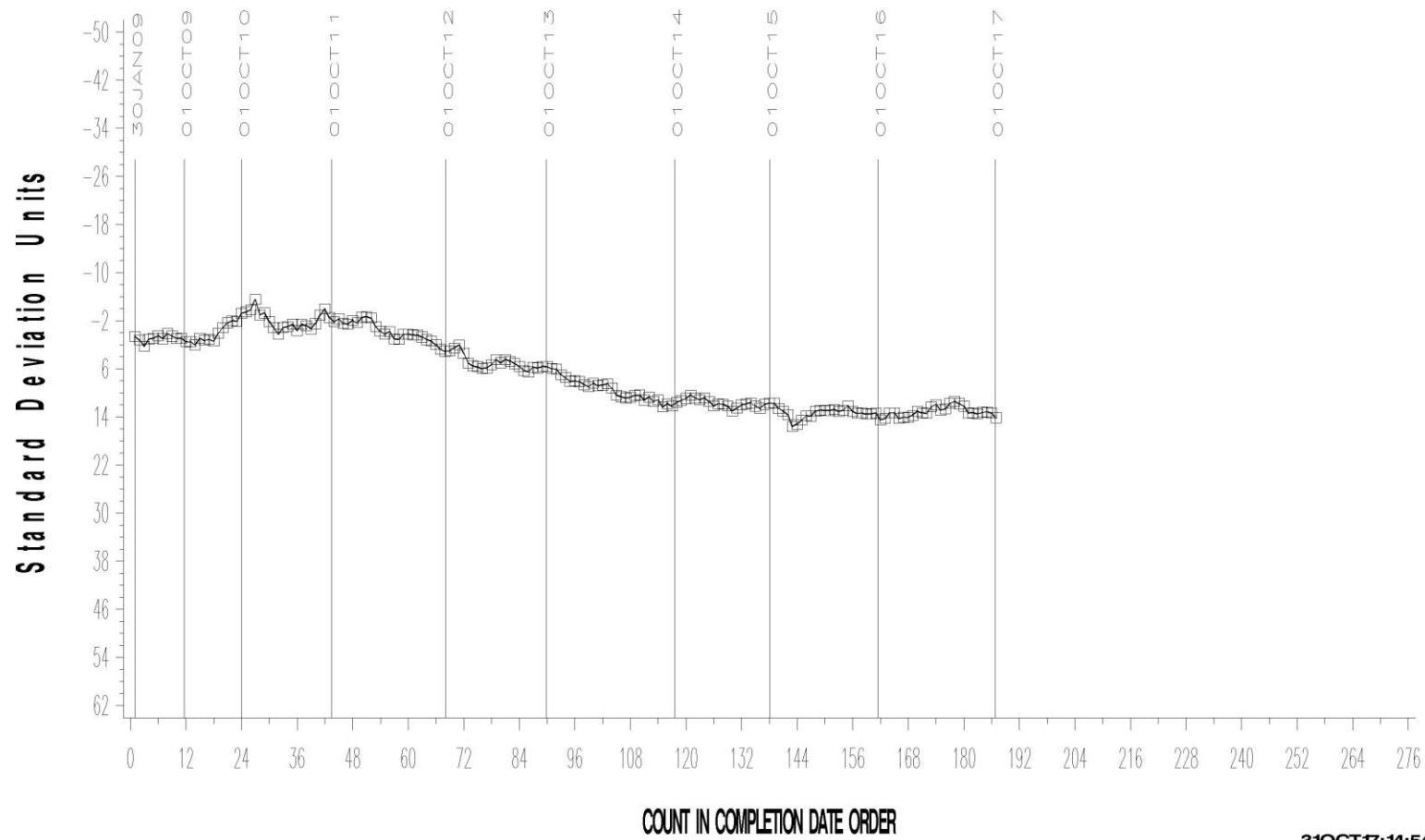


L-42 Rater Calibration

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

