



## Test Monitoring Center

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

MEMORANDUM: 21-013  
DATE: April 20, 2021  
TO: Matthew Sangpeal, Chairman, L-42 Surveillance Panel  
FROM: Dylan Beck *Dylan Beck*  
SUBJECT: L-42 Rater Calibration from October 1, 2020 through March 31, 2021

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

DJB/djb/mem21-013.djb.doc

cc: Frank Farber  
Jeff Clark

L-42 Surveillance Panel

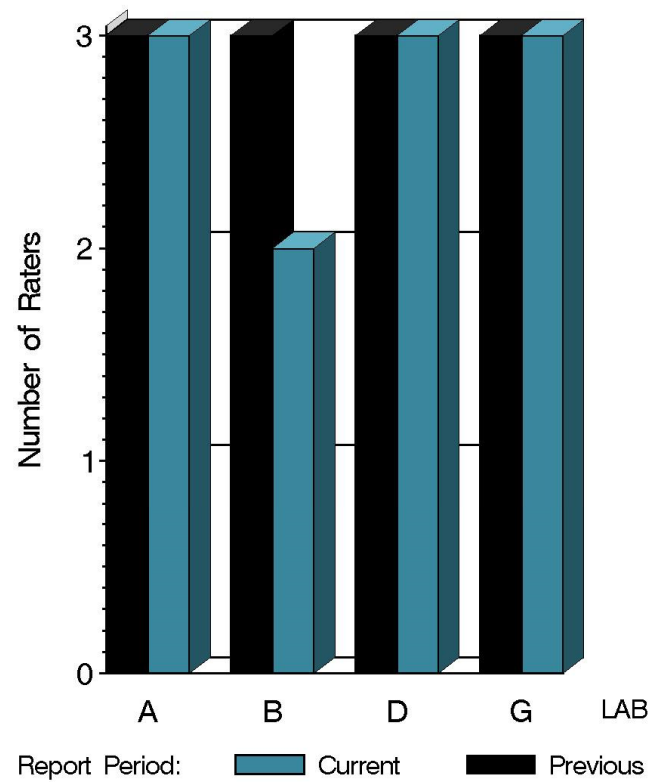
<http://www.astmtmc.cmu.edu/ftp/docs/gear/l42rc/semiannualreports/l42rc-04-2021.pdf>

Distribution: email

# L-42 Rater Calibration

	Reporting Data	Calibrated on 3-31-21
Number of Labs	4	4
Number of Raters	11	11

BY-LAB RATER DISTRIBUTION



15:48:17 16APR2021

# L-42 Rater Calibration

## Test Distribution by Validity

		Totals	
		Last Period	This Period
Accepted for calibration	AC	15	28
Rejected (Mild)	OC	0	1
Rejected (Severe)	OC	0	2
Rejected (Multiple)	OC	0	0
Rejected (Precision)	OC	0	0
Workshop data	AG	0	0
Total		15	31

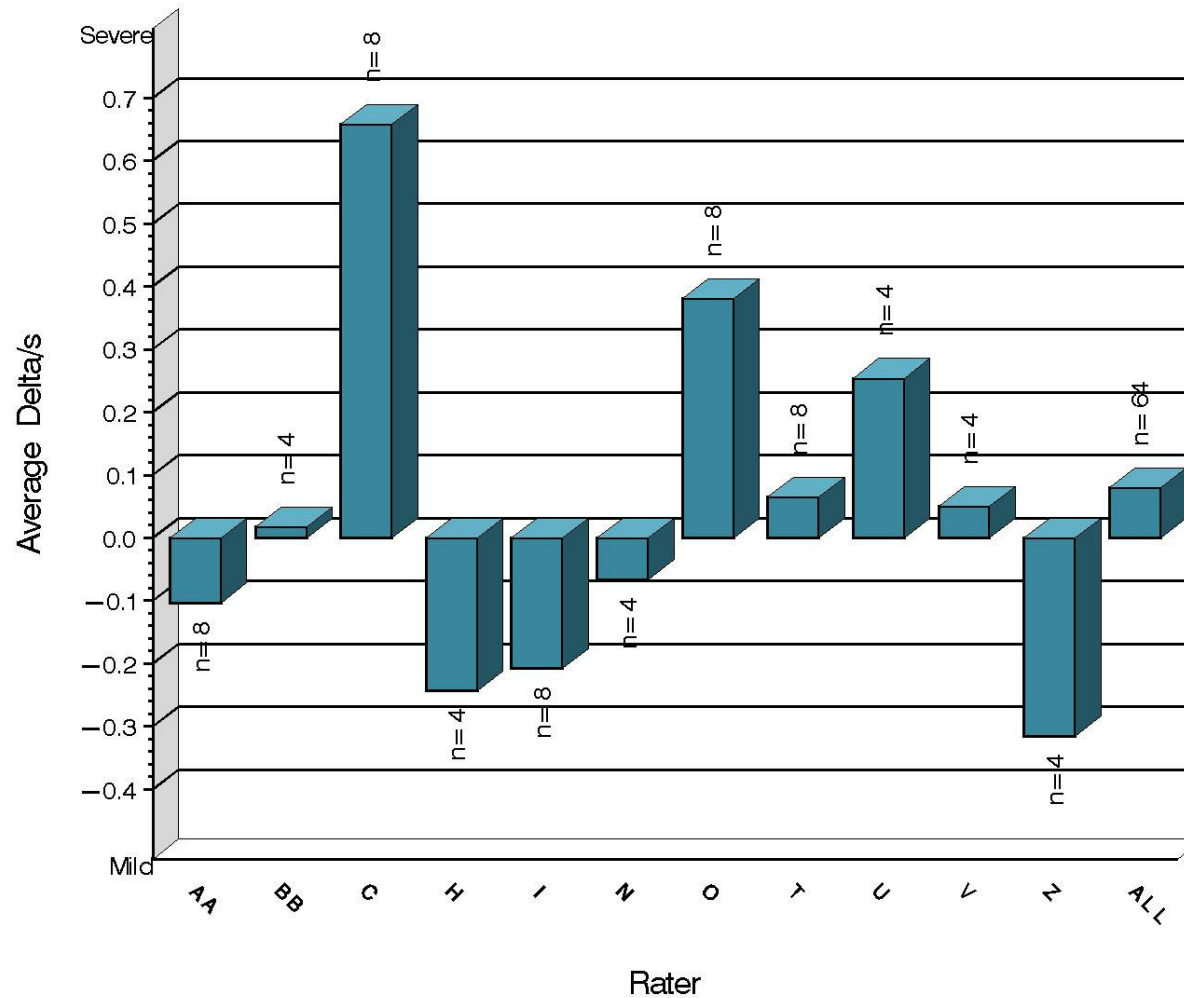
# L-42 Rater Calibration

Rater	N	PSCR		RSCR	
		Avg Yi	STD*	Avg Yi	STD*
AA	8	-0.103	1.363	0.190	1.864
BB	4	0.018	0.355	-0.306	0.515
C	8	0.657	0.580	-0.0200	0.863
H	4	-0.244	0.472	-0.144	0.398
I	8	-0.208	0.256	-0.242	0.793
N	4	-0.066	0.446	-0.187	0.568
O	8	0.381	4.343	-0.108	1.246
T	8	0.065	0.544	0.066	0.446
U	4	0.254	0.523	-0.947	0.918
V	4	0.050	0.303	0.135	0.435
Z	4	-0.315	0.586	0.201	0.379
ALL	64	0.080	1.590	-0.092	0.949

\* 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

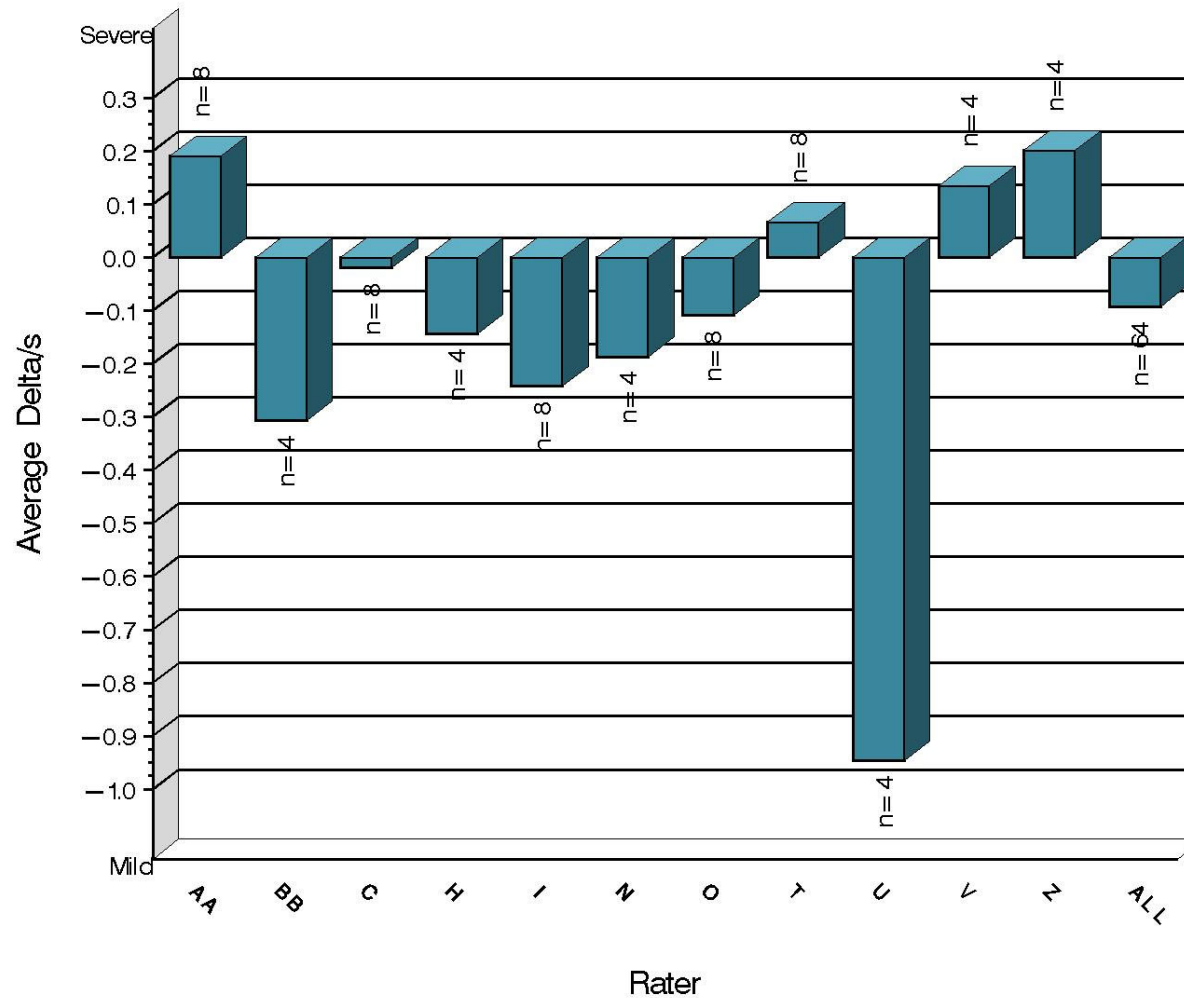
PINION SCORING  
Severity as Measured by Delta/s



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# L-42 Rater Calibration

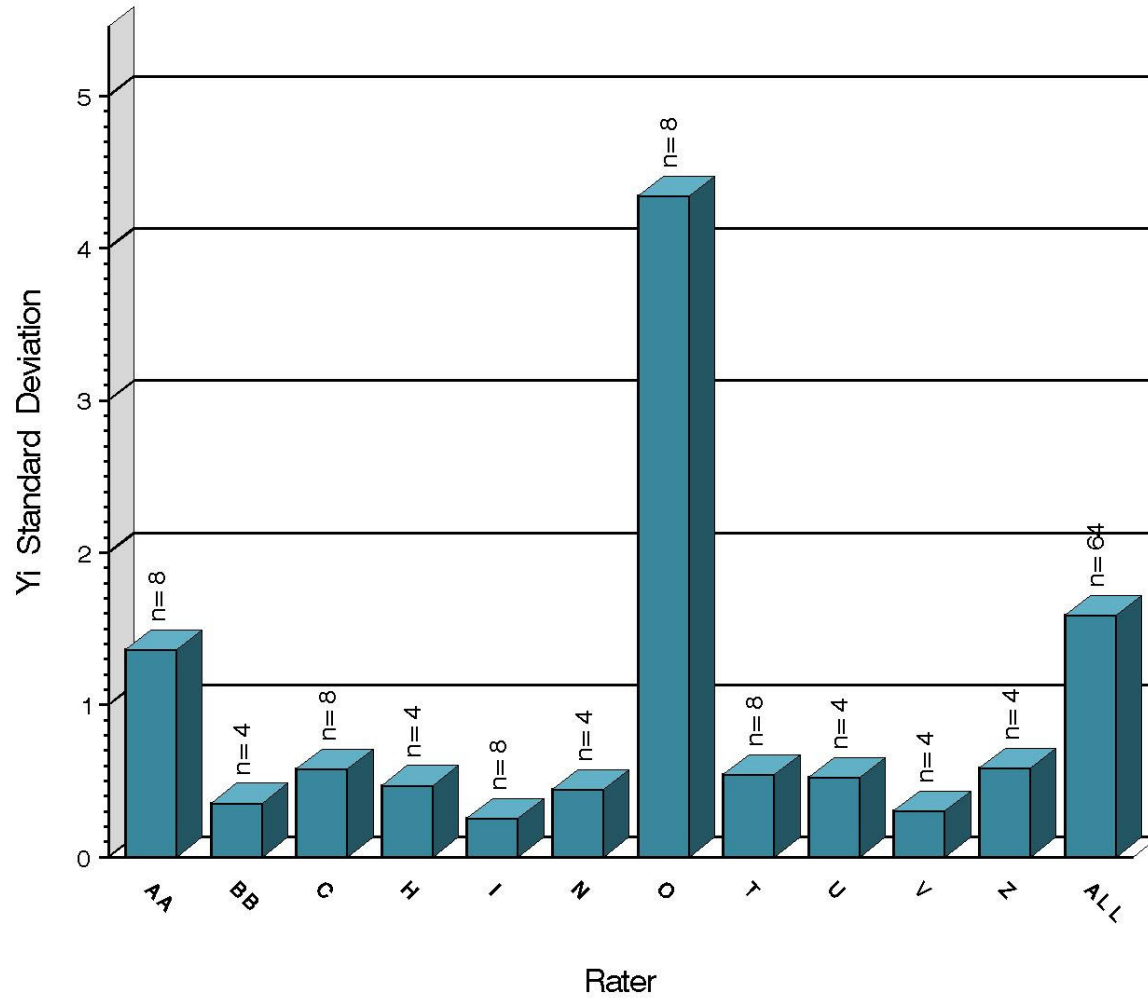
RING SCORING  
Severity as Measured by Delta/s



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# L-42 Rater Calibration

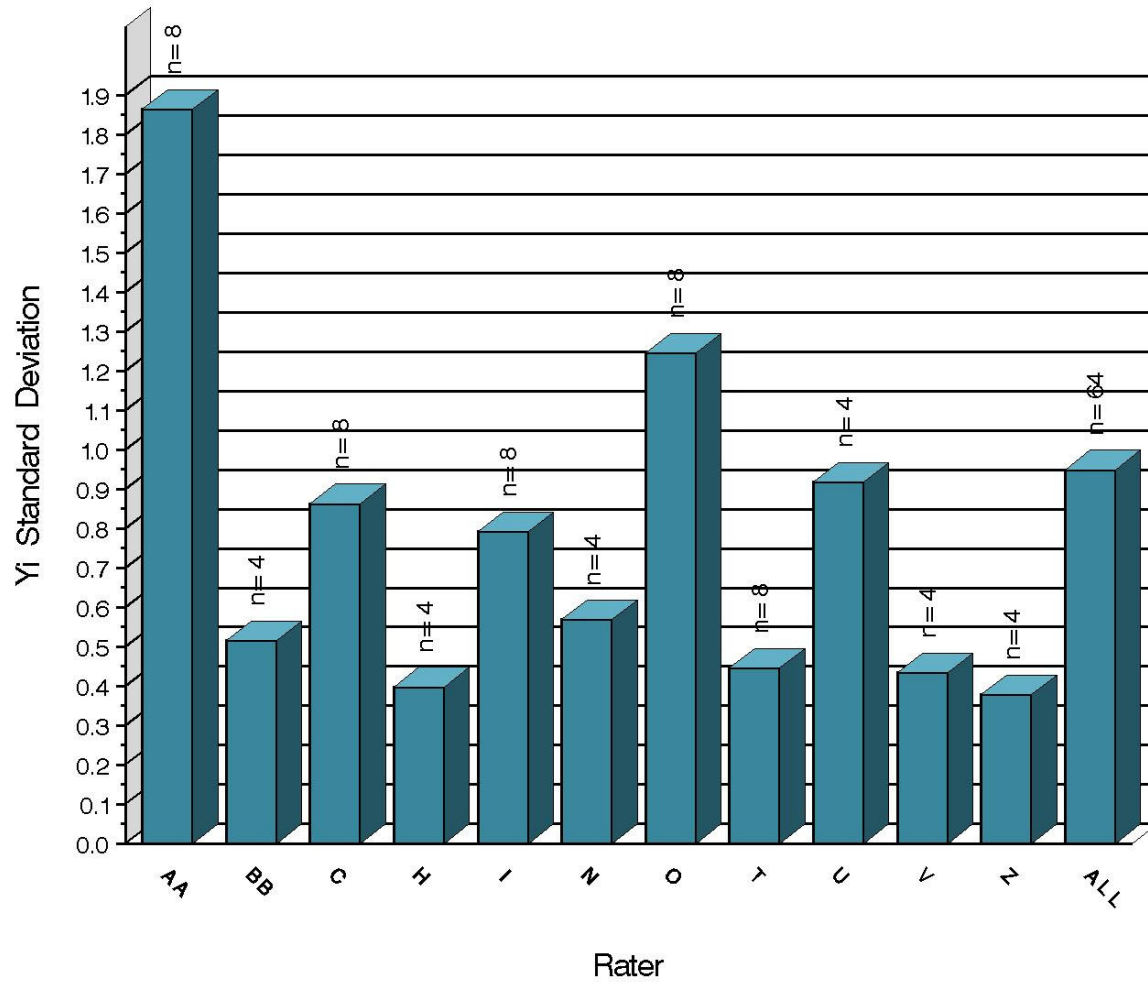
PINION SCORING  
Precision as Measured by Yi STD



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# L-42 Rater Calibration

RING SCORING  
Precision as Measured by Y1 STD



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# L-42 Rater Calibration

## SUMMARY OF SEVERITY & PRECISION

### Severity

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

### Precision

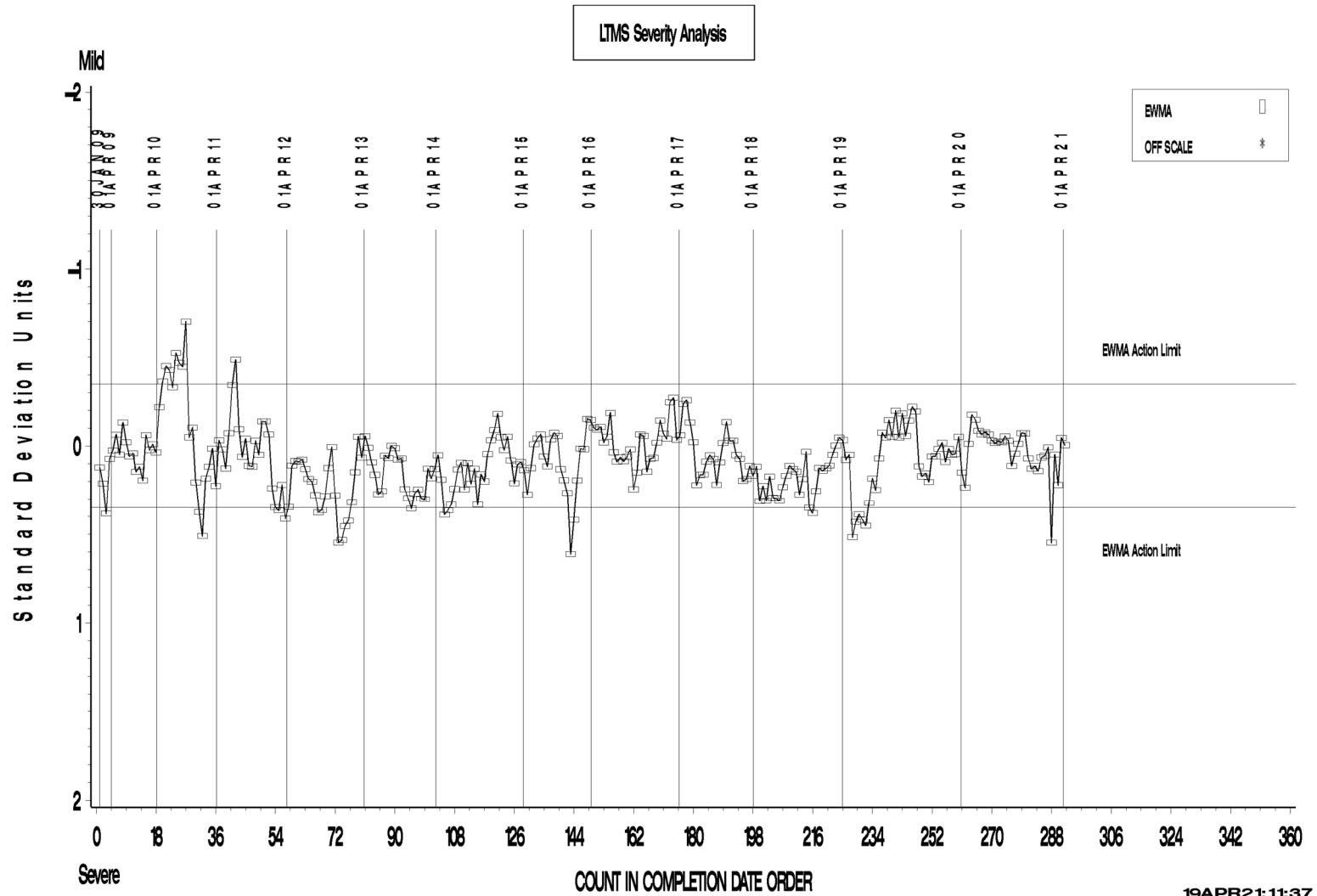
Precision for both parameters remained within acceptable limits.

Industry control charts follow.

# L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

## PINION SCORING

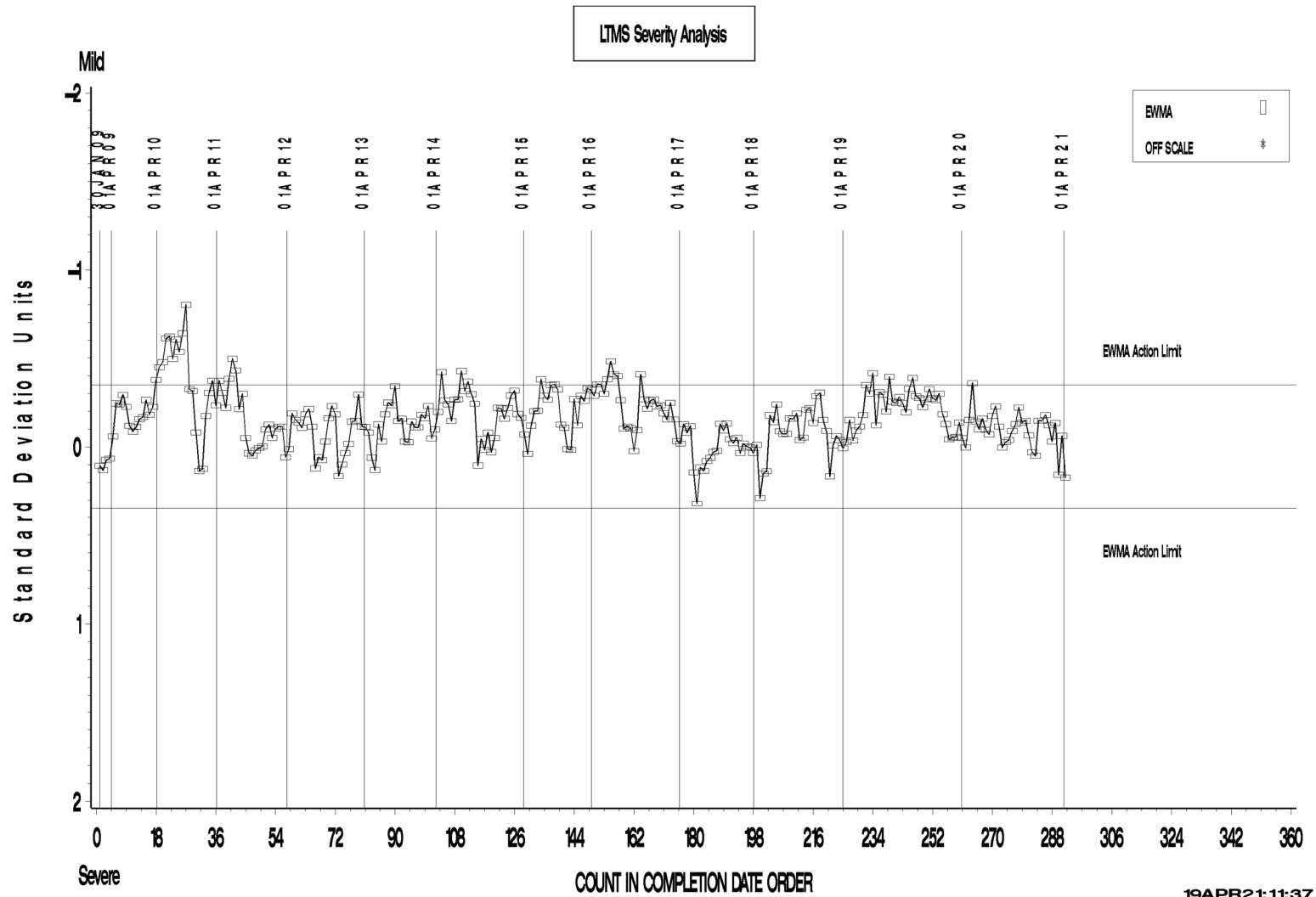


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# L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

## RING SCORING



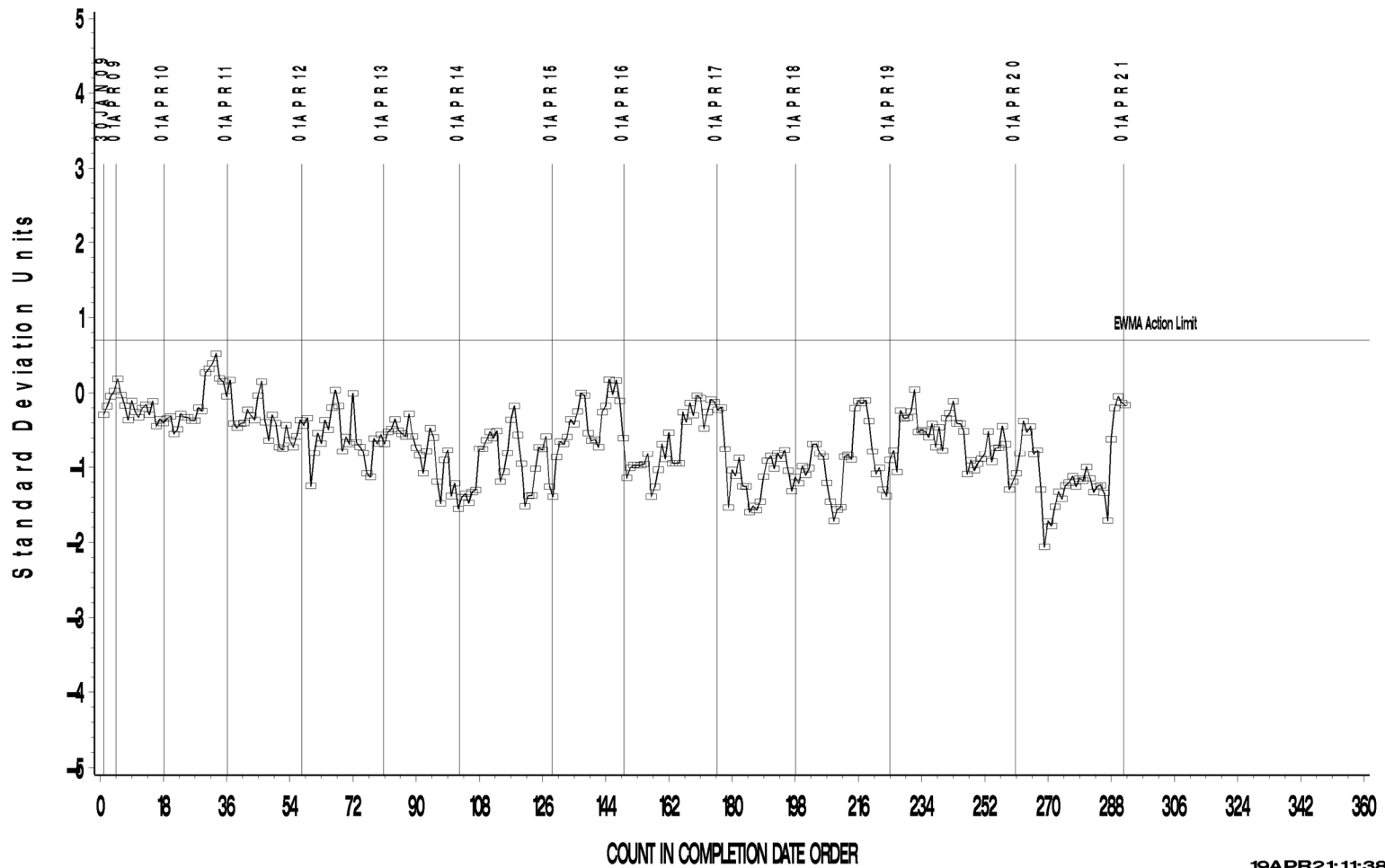
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# L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

## PINION SCORING

LTMS Precision Analysis



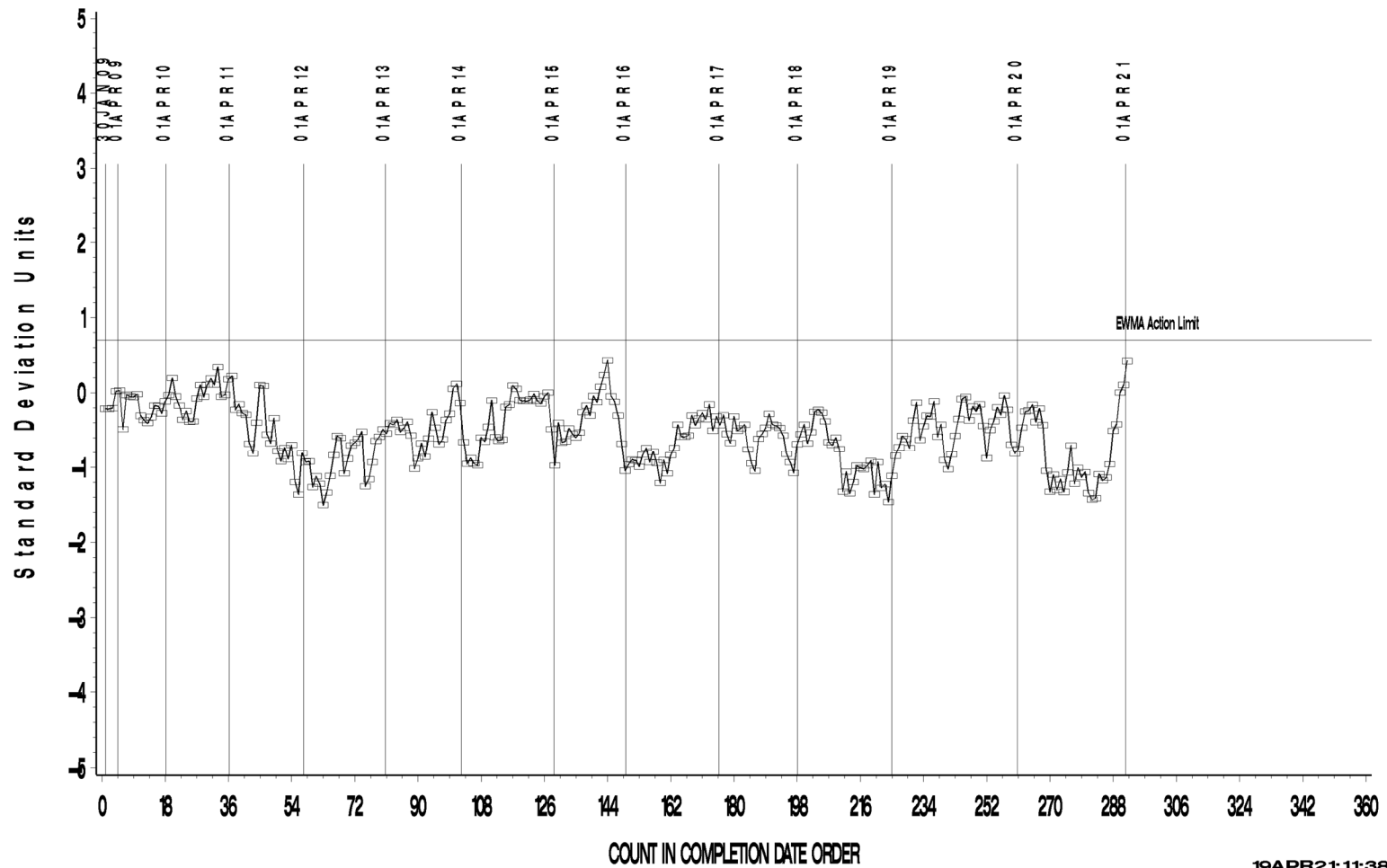
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# L-42 Rater Calibration

L-42 RATER CALIBRATION INDUSTRY OPERATIONALLY VALID DATA

## RING SCORING

LTMS Precision Analysis



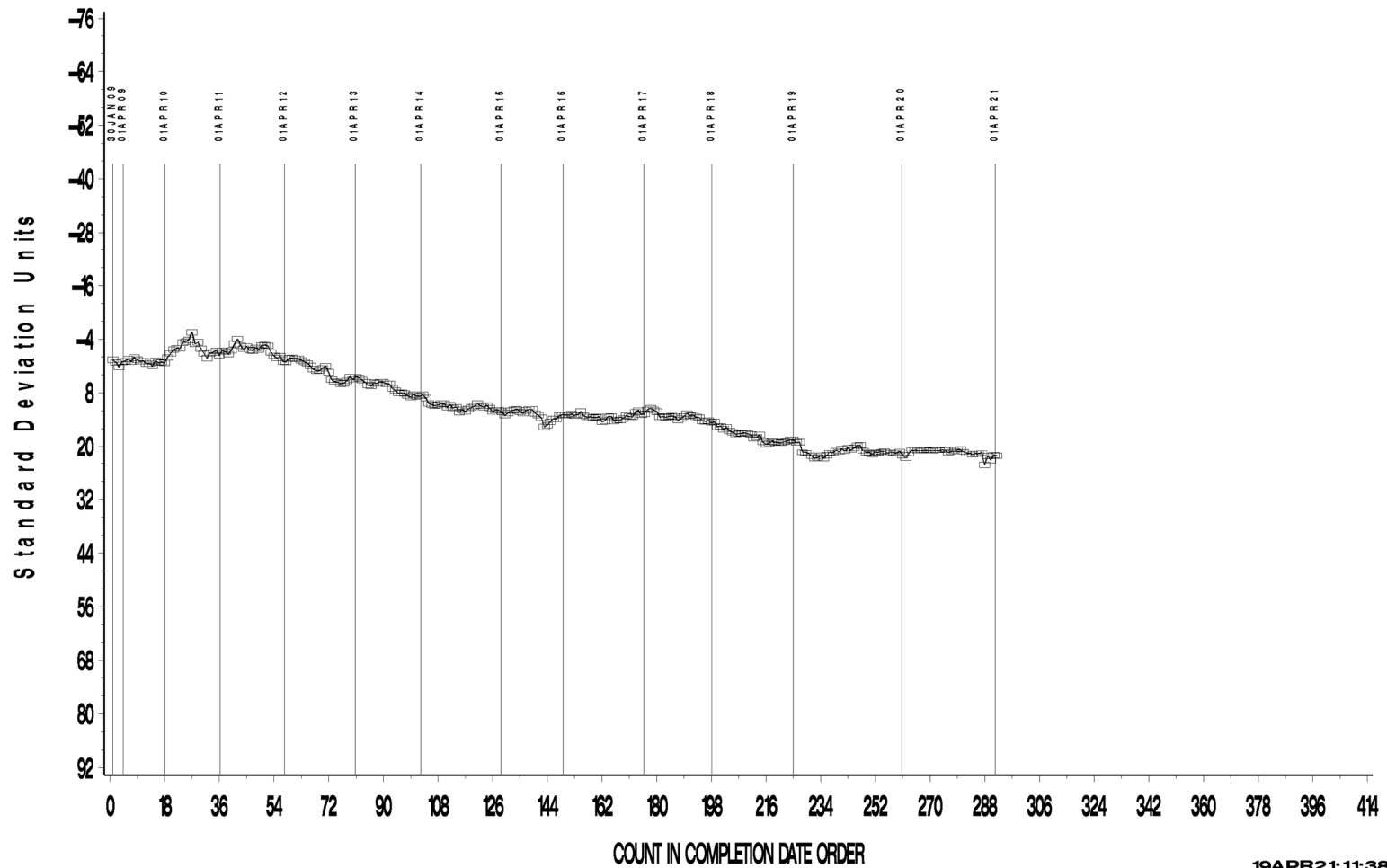
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# L-42 Rater Calibration

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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