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Test Monitoring Center

<http://astmtmc.cmu.edu>

ASTM Reference Testing Semi-Annual Report D7216 EOEC

Fall 2020

EOEC Test Activity*

Test Status		Fluoroelast.	Nitrile	Polyacrylate	Silicone	VAMAC	Total
Acceptable Calibration Test	AC	65	64	63	71	60	323
Failed Calibration Test	OC	0	0	0	3	4	7
Operationally Invalid, by lab	LC	0	0	0	0	0	0
Operationally Invalid, by TMC	RC	0	0	0	0	0	0
Aborted	XC	2	1	1	1	0	5
Total		67	65	64	75	64	335

*April 1, 2020 – September 30, 2020

EOEC Lost Tests*

Validity	Cause	#
XC	Unspecified bath failure	4
XC	Bath temperature off-spec	1
	Total	5

*Invalid and aborted calibration tests

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EOEC Test Severity

▶ Fluoroelastomer (FKM)

Parameter	Period Mean Δ /s	Status
Volume Change	-0.06	On-target
Points Hardness Change	0.00	On-target
Tensile Strength Change	0.16	Severe
Elongation Change	-0.75	Mild

EOEC Test Severity

▶ Nitrile (NBR)

Parameter	Period Mean Δ/s	Status
Volume Change	1.92	Severe
Points Hardness Change	0.71	Severe
Tensile Strength Change	-0.71	Mild
Elongation Change	-0.34	Mild

EOEC Test Severity

▶ Polyacrylate (ACM)

Parameter	Period Mean Δ/s	Status
Volume Change	2.33	Severe
Points Hardness Change	-0.51	Mild
Tensile Strength Change	-0.25	Mild
Elongation Change	0.20	Severe

EOEC Test Severity

▶ Silicone (VMQ)

Parameter	Period Mean Δ /s	Status
Volume Change	0.47	Severe
Points Hardness Change	-0.78	Mild
Tensile Strength Change	0.67	Severe
Elongation Change	-0.04	On-target

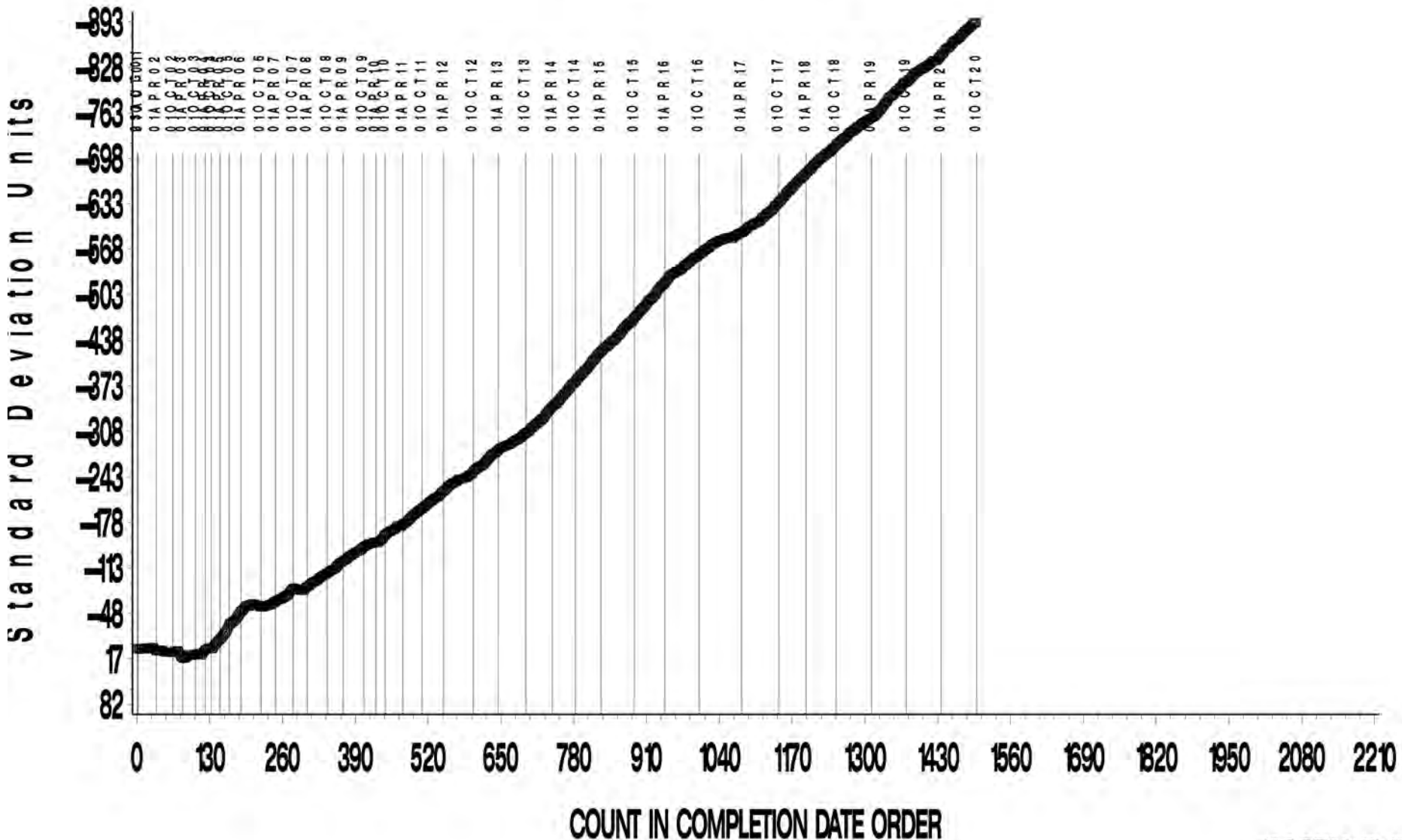
EOEC Test Severity

▶ VAMAC (MAC)

Parameter	Period Mean Δ/s	Status
Volume Change	0.40	Severe
Points Hardness Change	-0.96	Mild
Tensile Strength Change	0.05	On-target
Elongation Change	-0.30	Mild

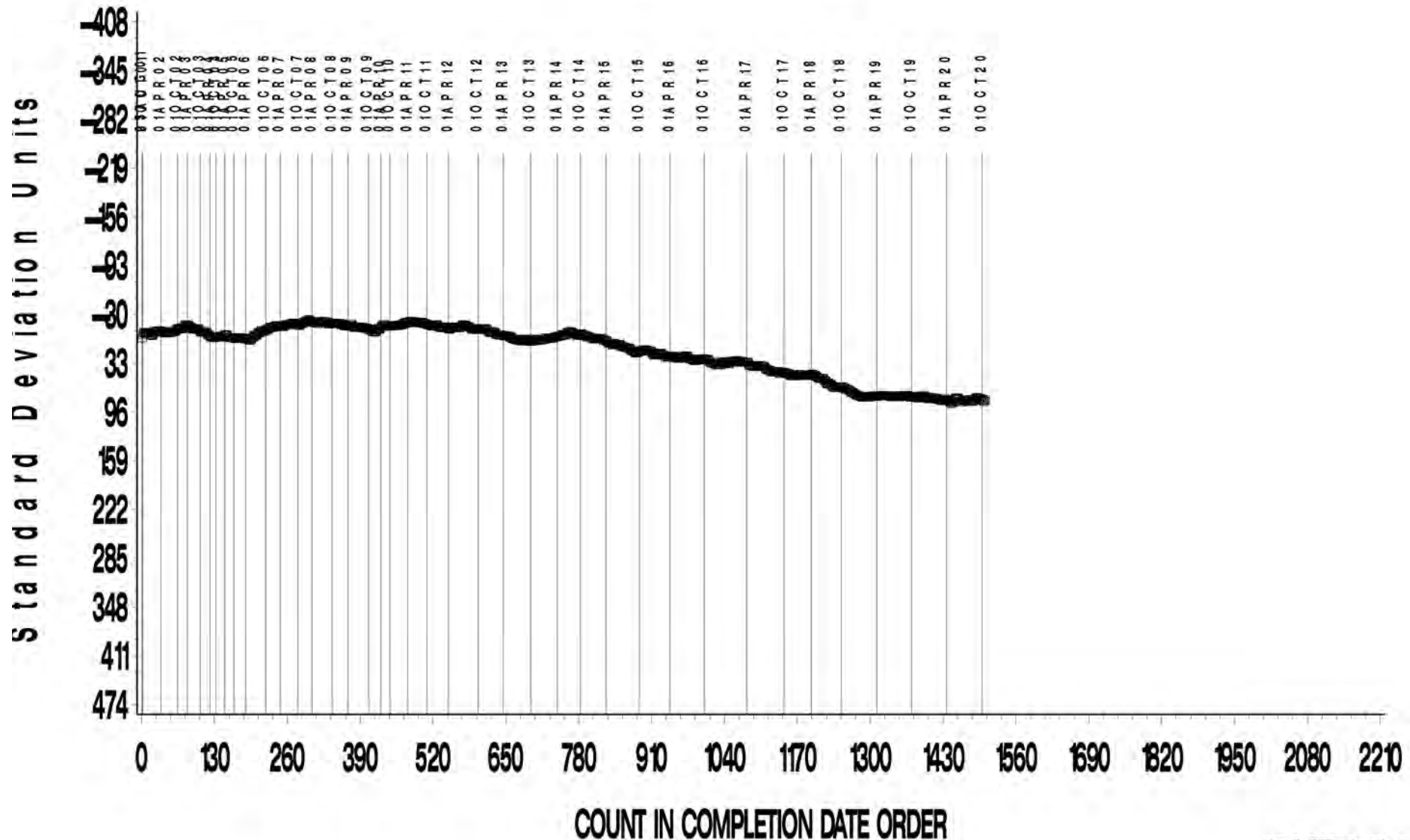
FLUROELASTOMER ELONGATION CHANGE CORRECTED AVG

CUSUM Severity Analysis



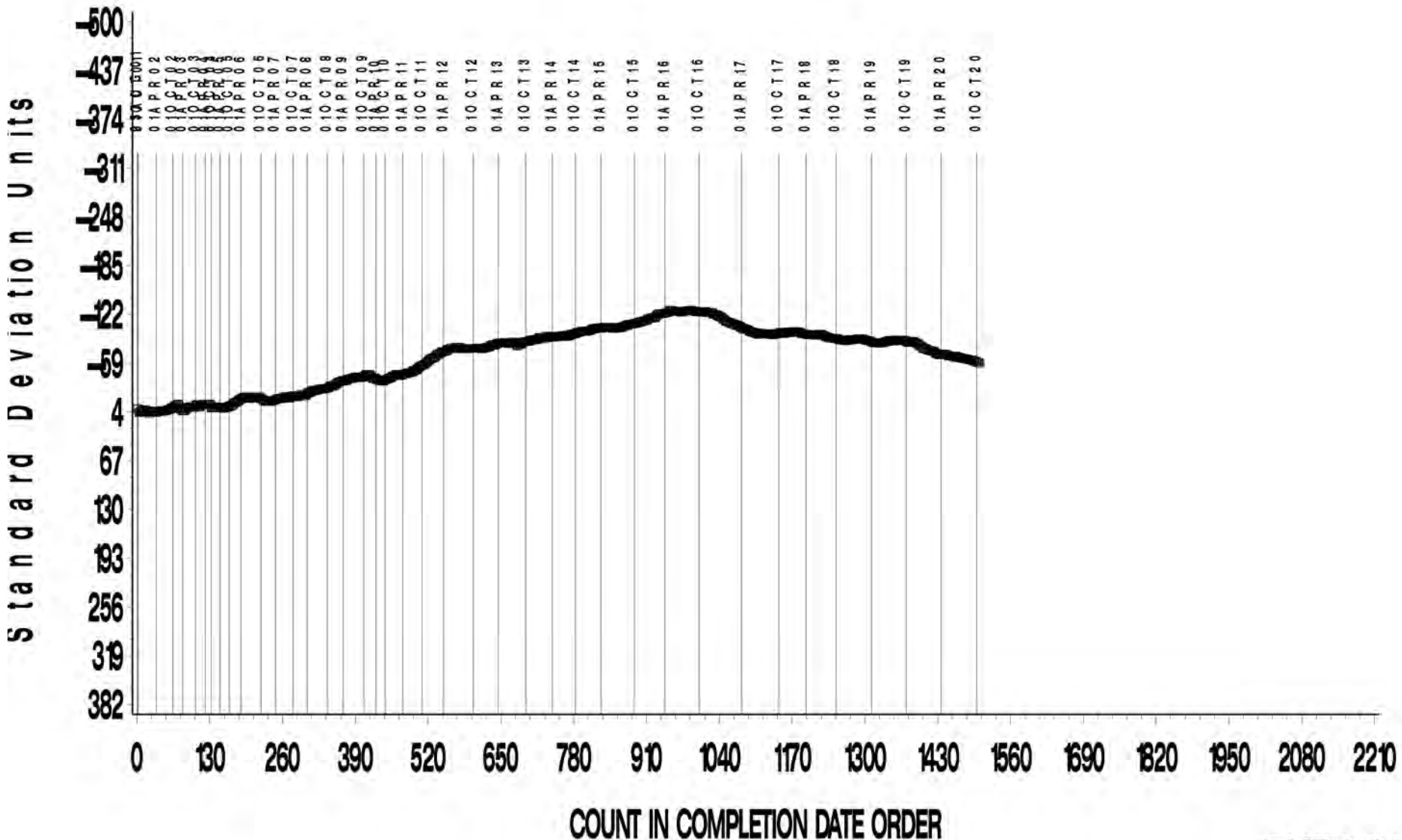
FLUOROELASTOMER PTS HARDNESS CHANGE CORRECTED AVG

CUSUM Severity Analysis



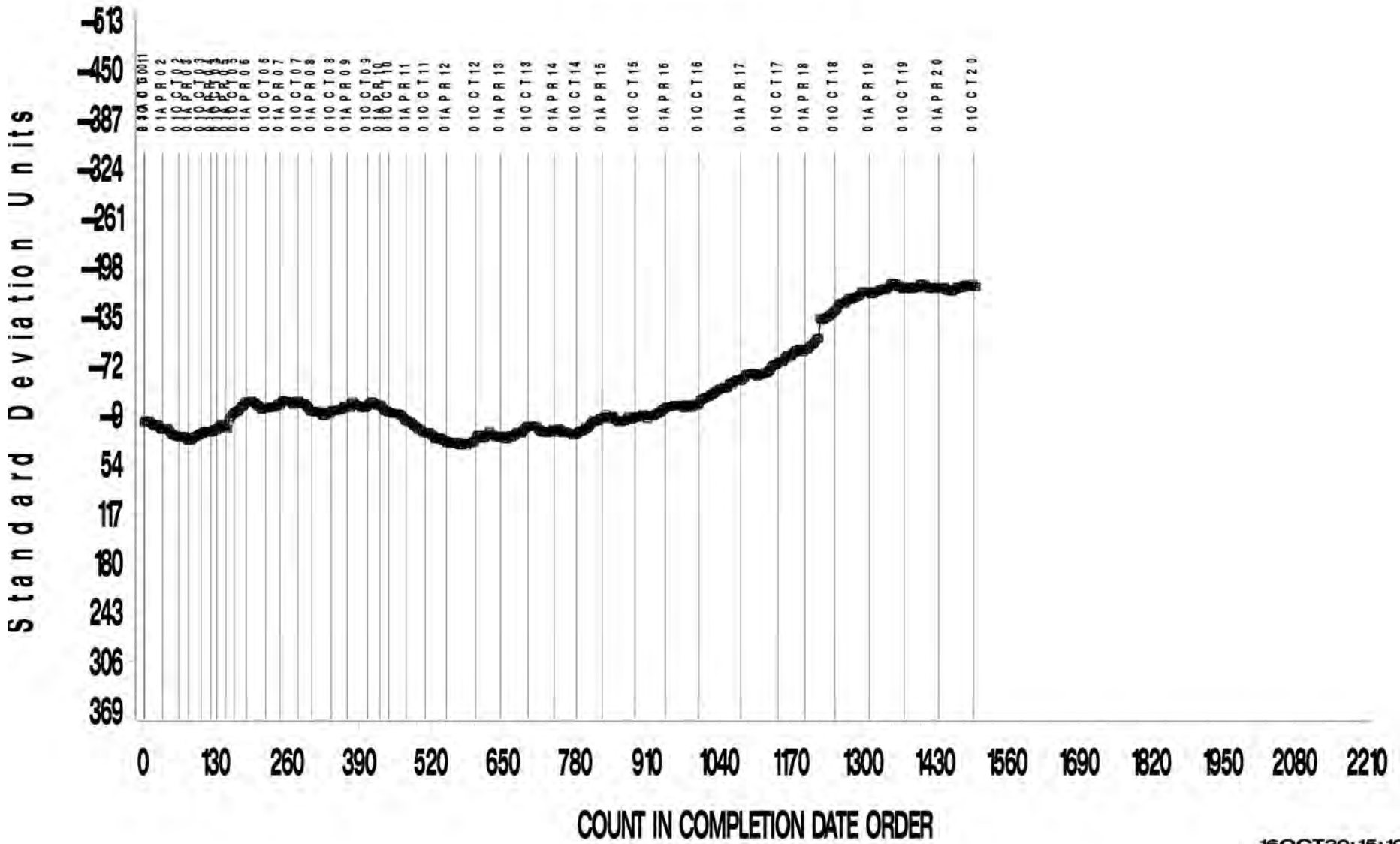
FLUROELASTOMER TENS STRENGTH CHANGE CORRECTED AVG

CUSUM Severity Analysis



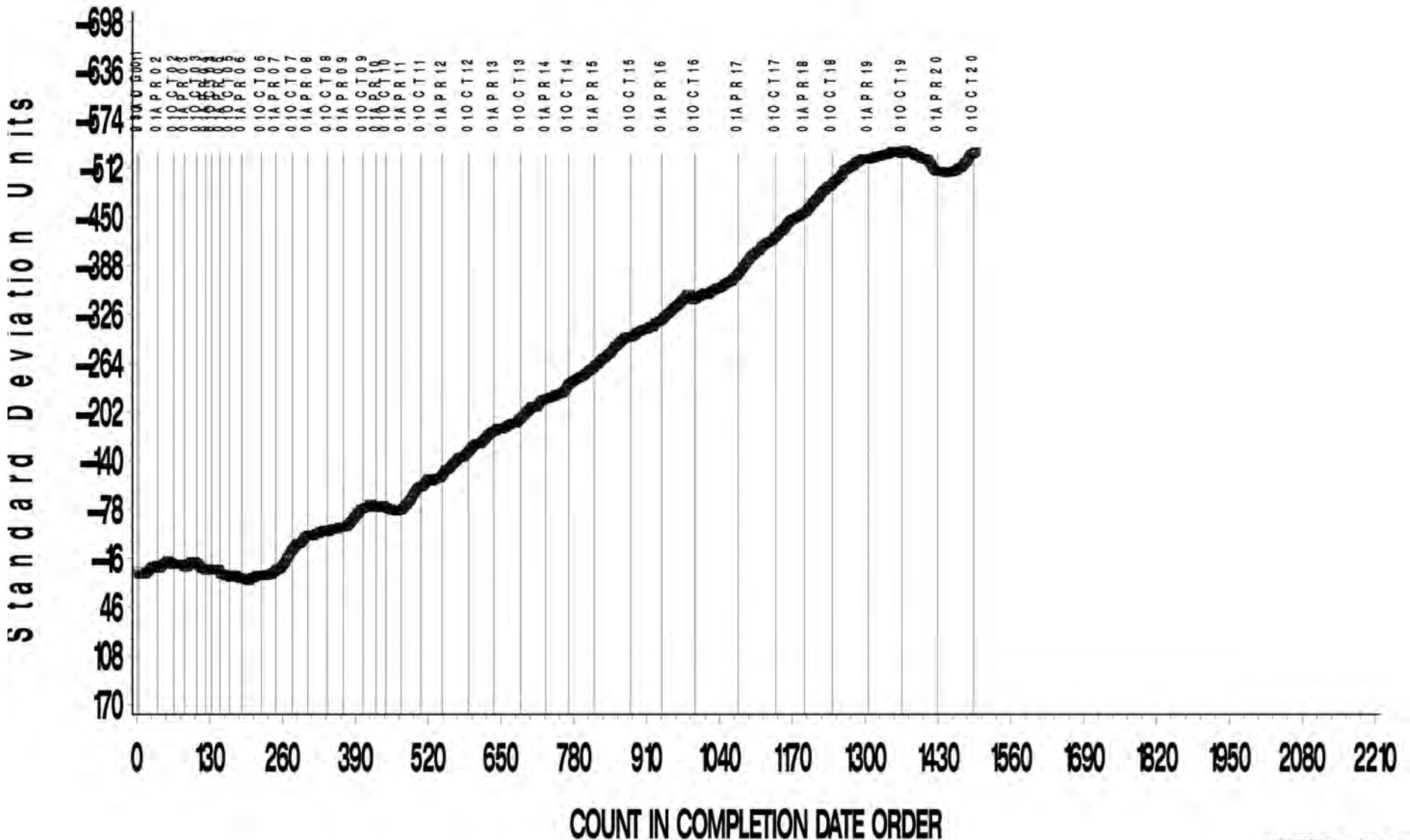
FLUOROELASTOMER VOLUME CHANGE CORRECTED AVERAGE

CUSUM Severity Analysis



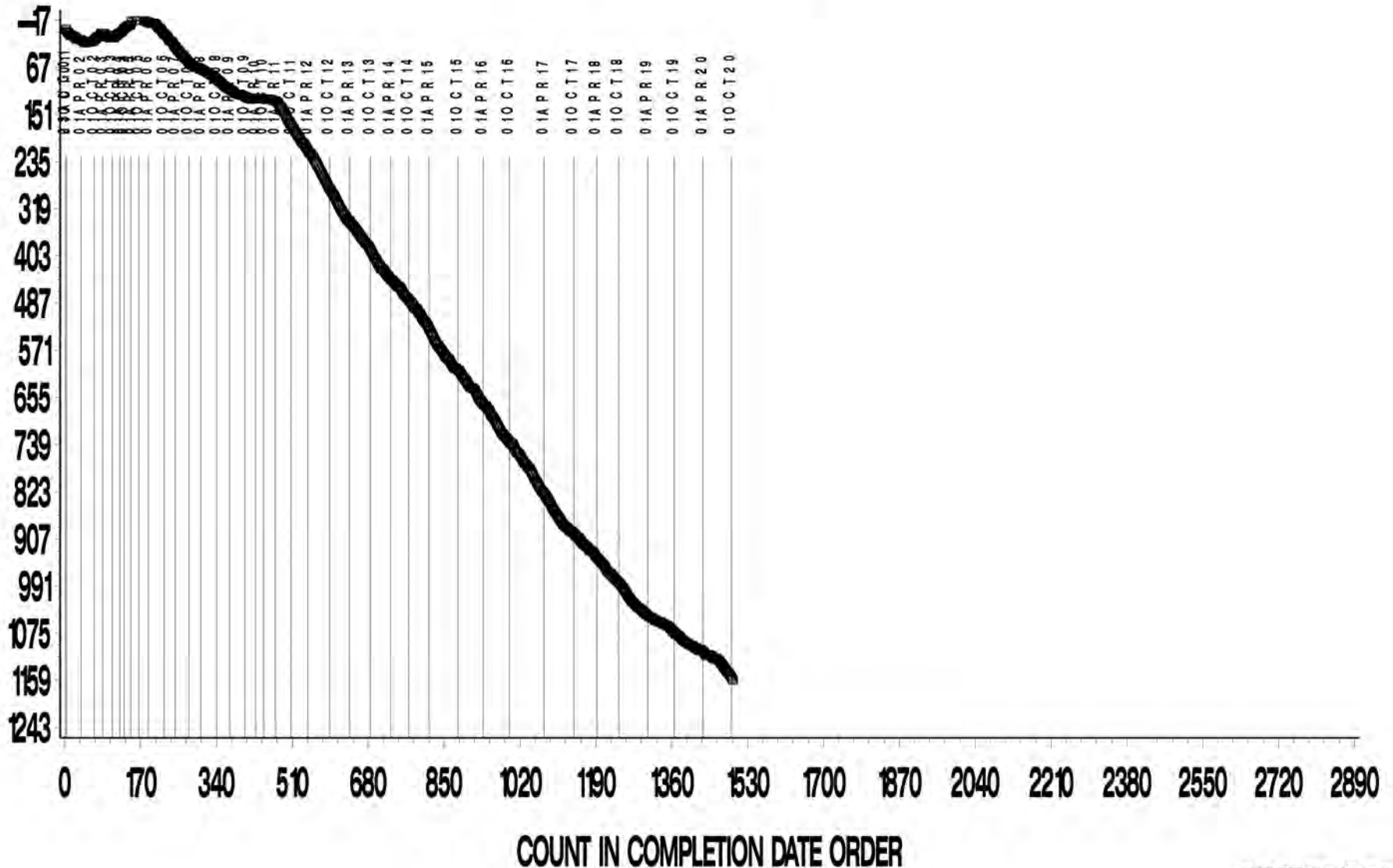
REF NITRILE ELONGATION CHANGE CORRECTED AVERAGE

CUSUM Severity Analysis



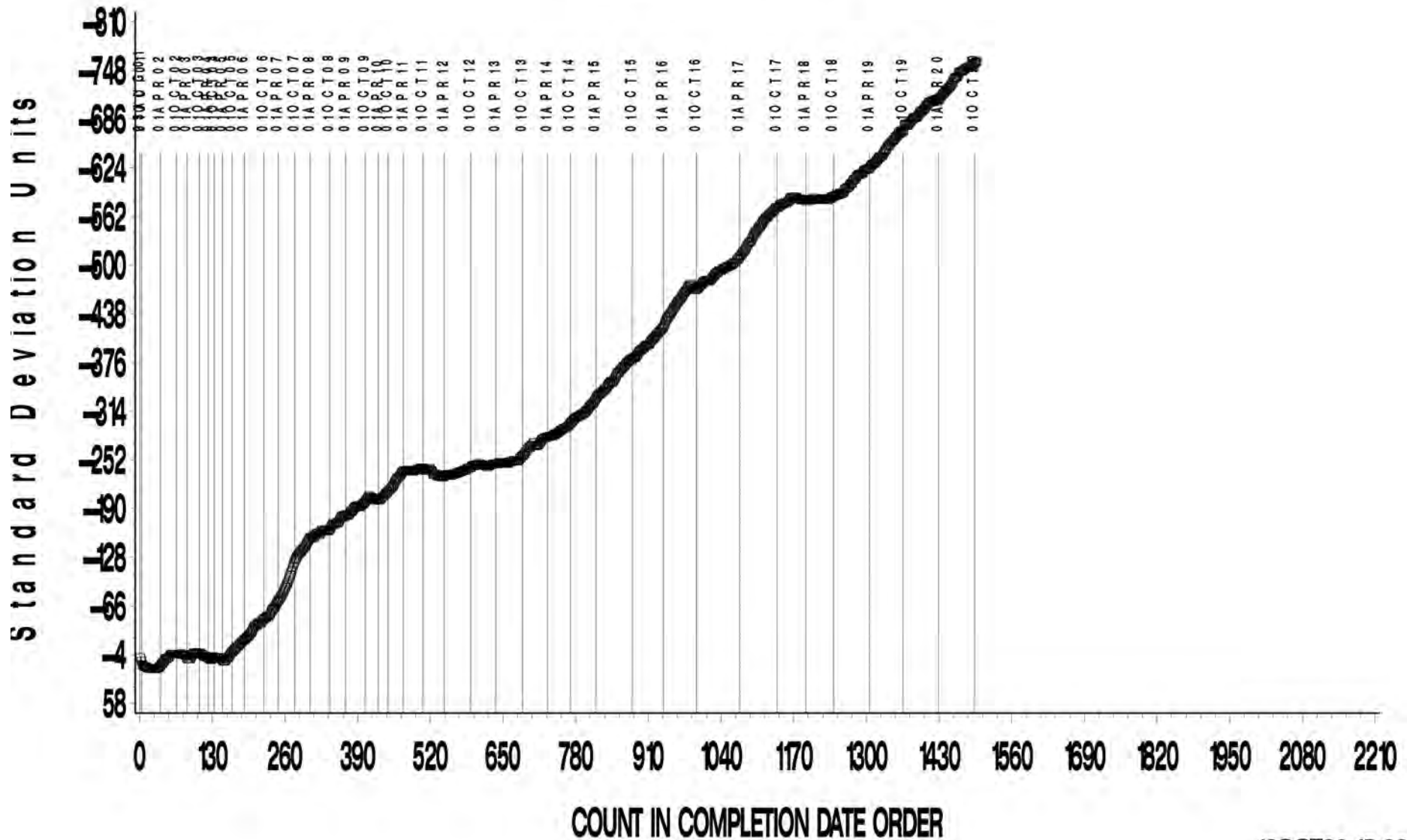
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CUSUM Severity Analysis



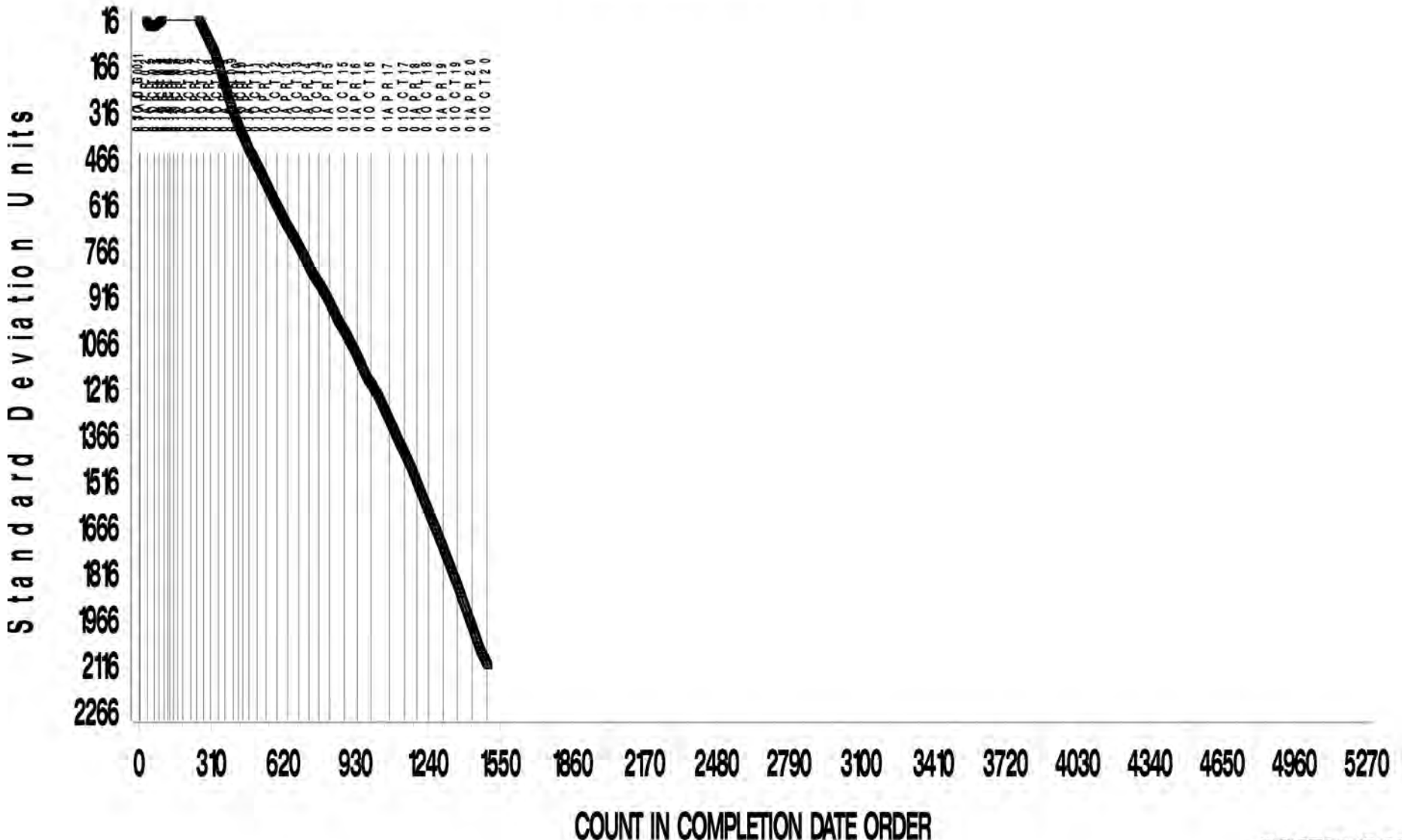
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CUSUM Severity Analysis



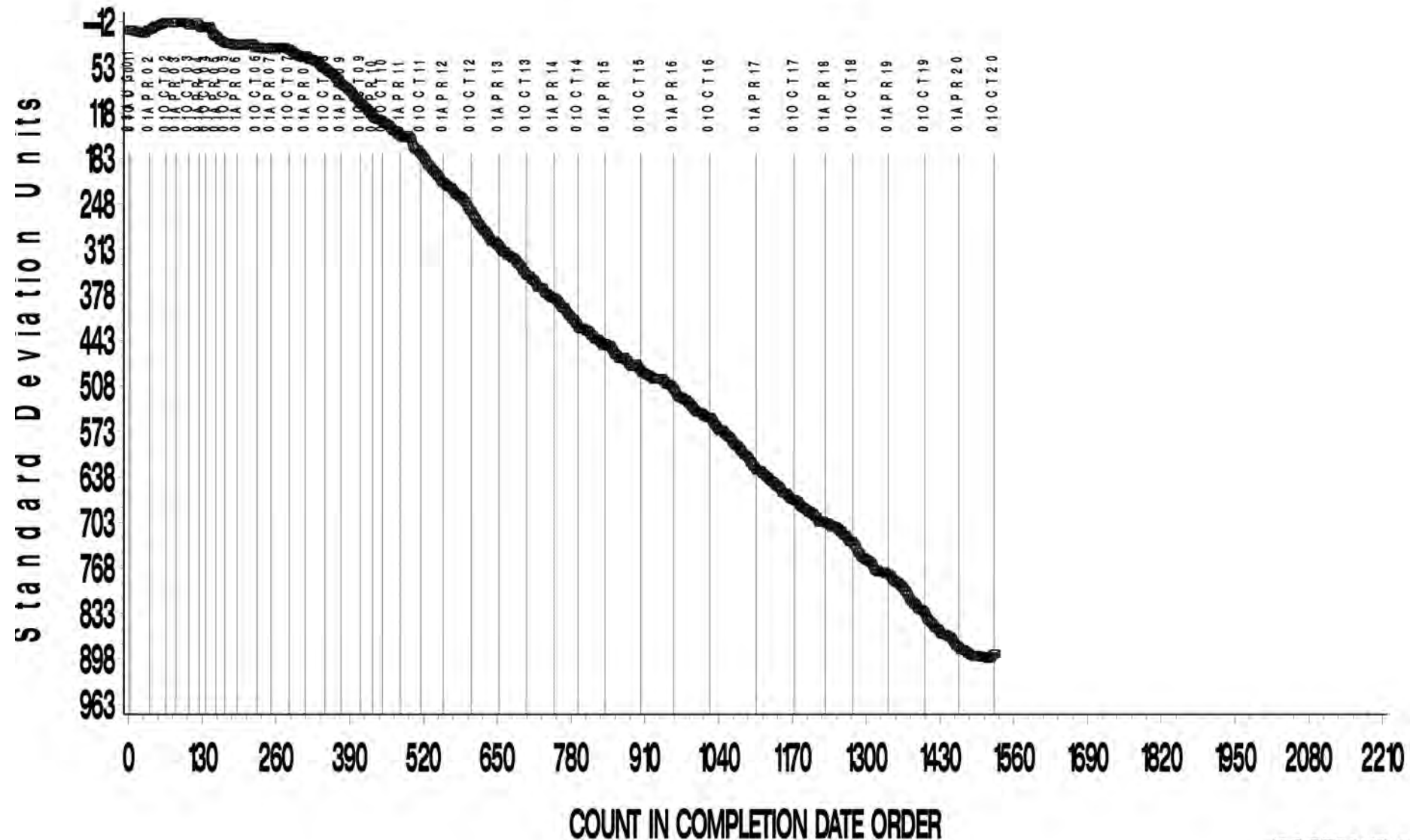
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CUSUM Severity Analysis



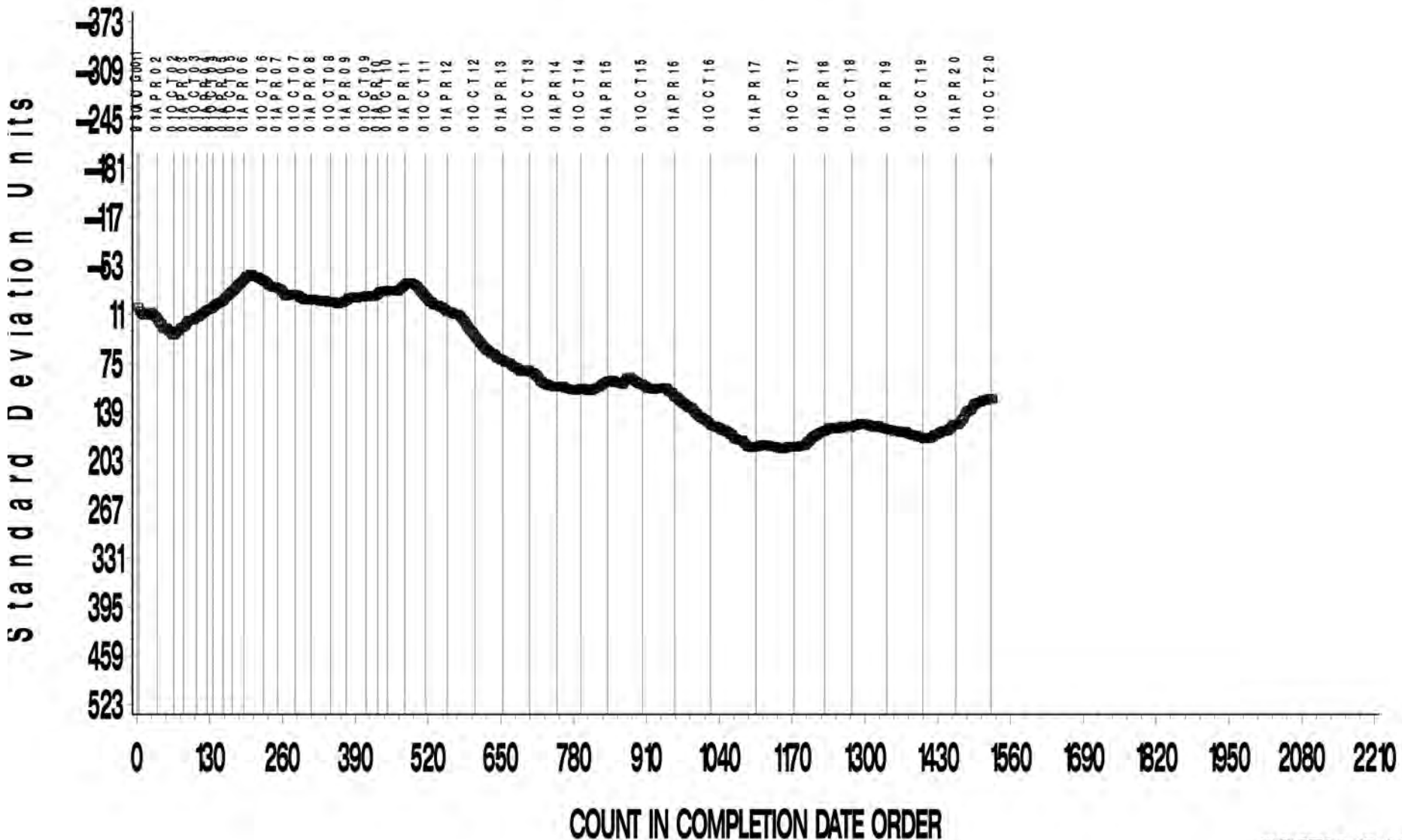
REF POLYACRYLATE ELONGATION CHANGE CORRECTED AVG

CUSUM Severity Analysis

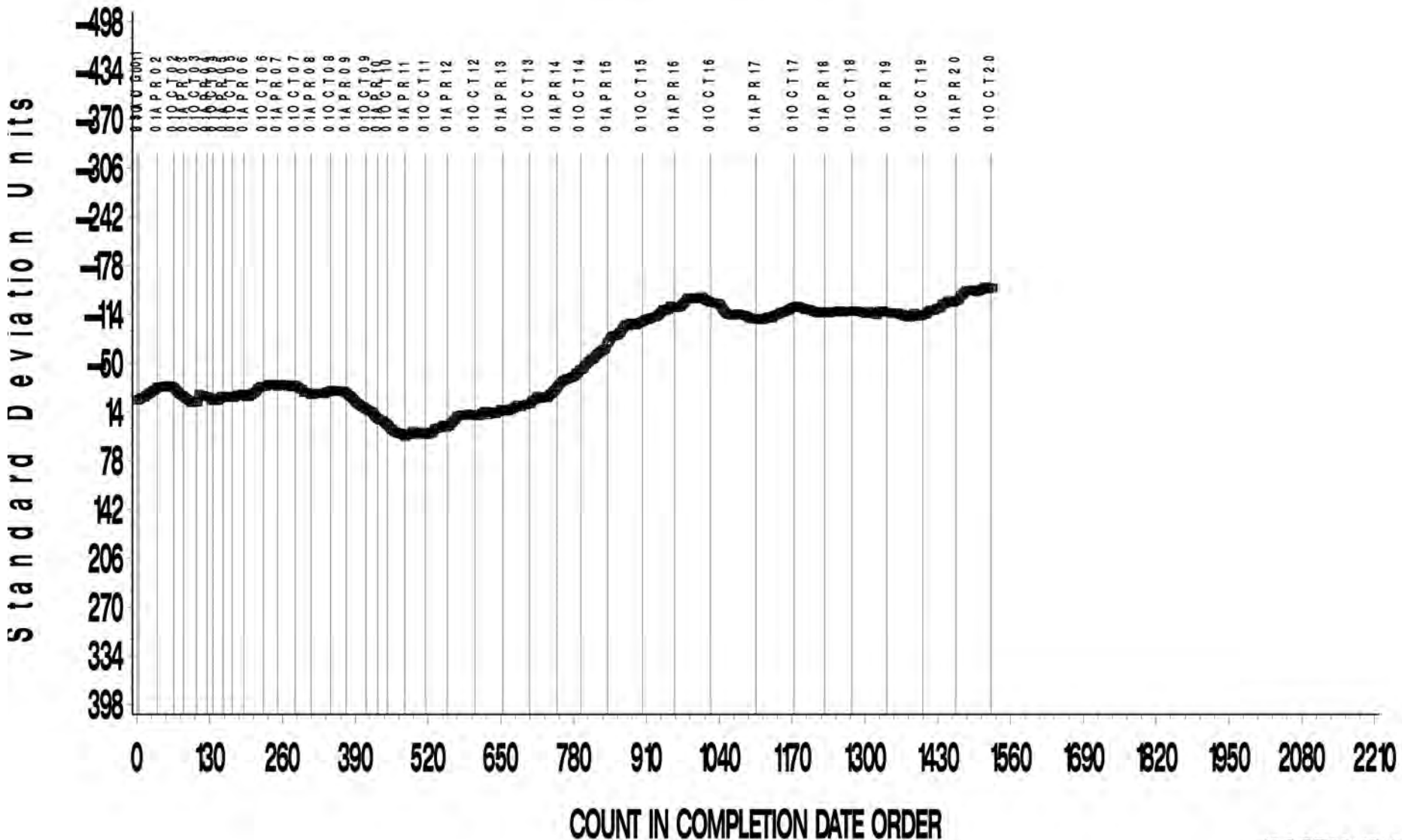


REF POLYACRYLATE PTS HARD CHANGE CORRECTED AVG

CUSUM Severity Analysis

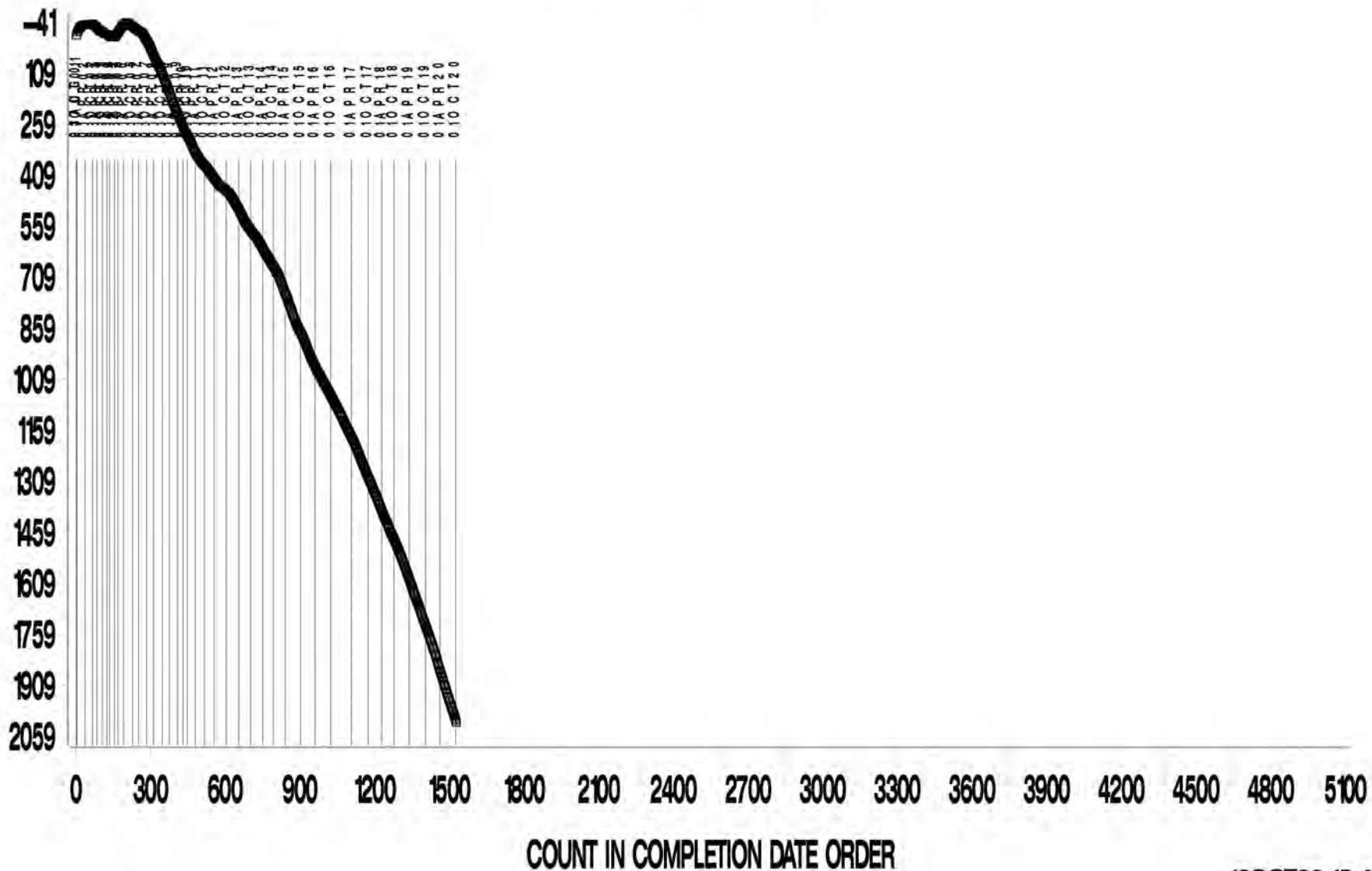


CUSUM Severity Analysis



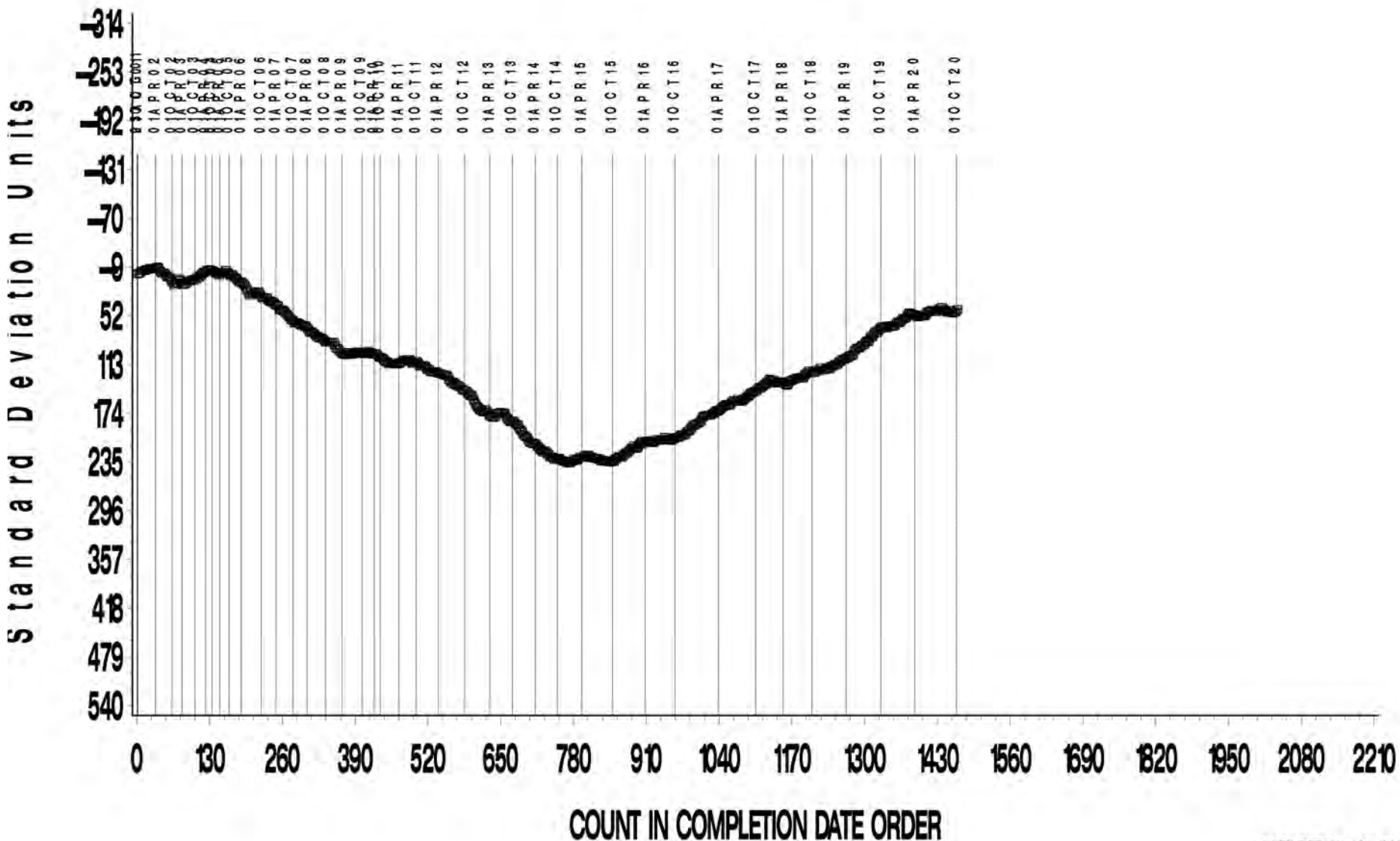
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CUSUM Severity Analysis



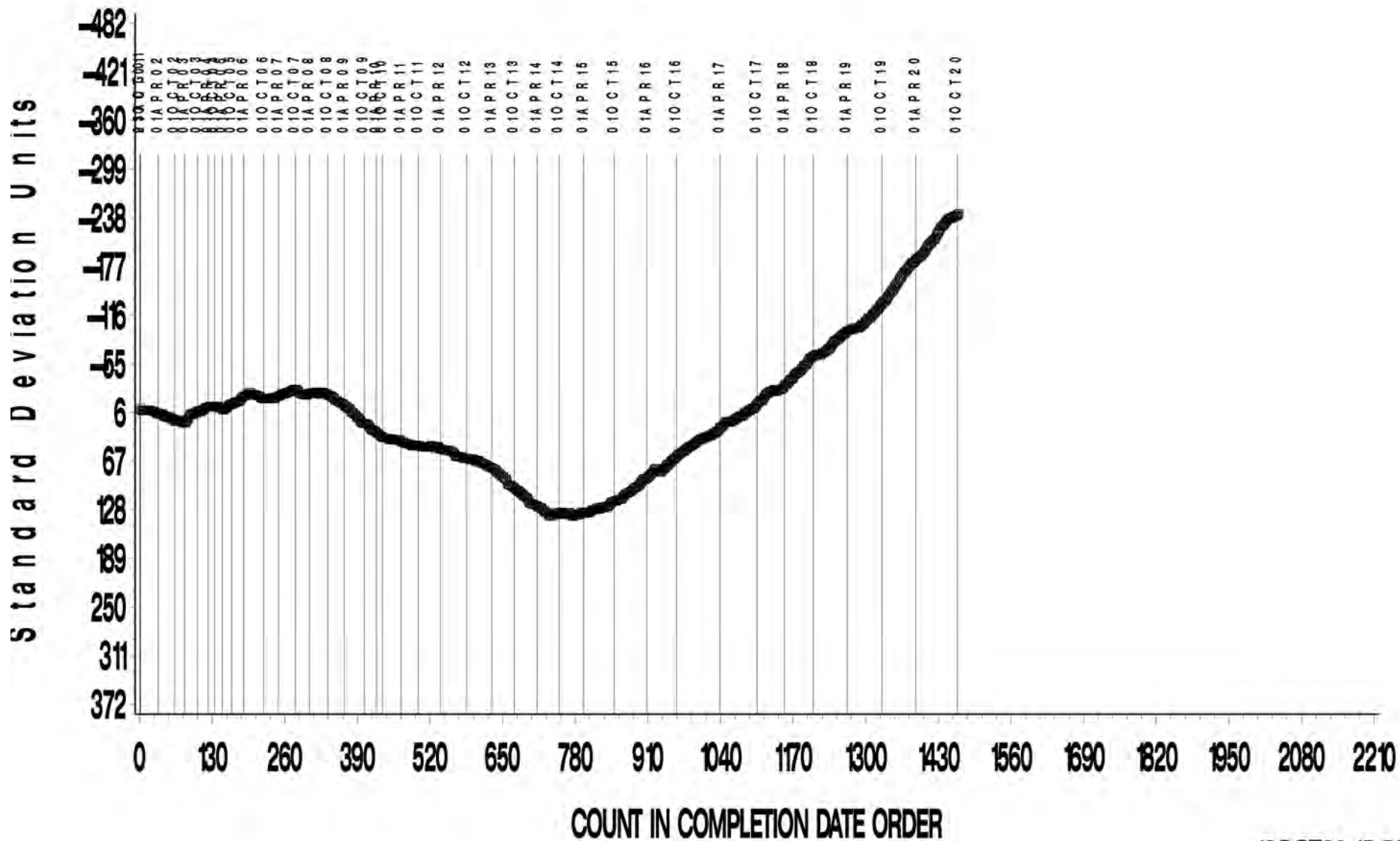
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CUSUM Severity Analysis



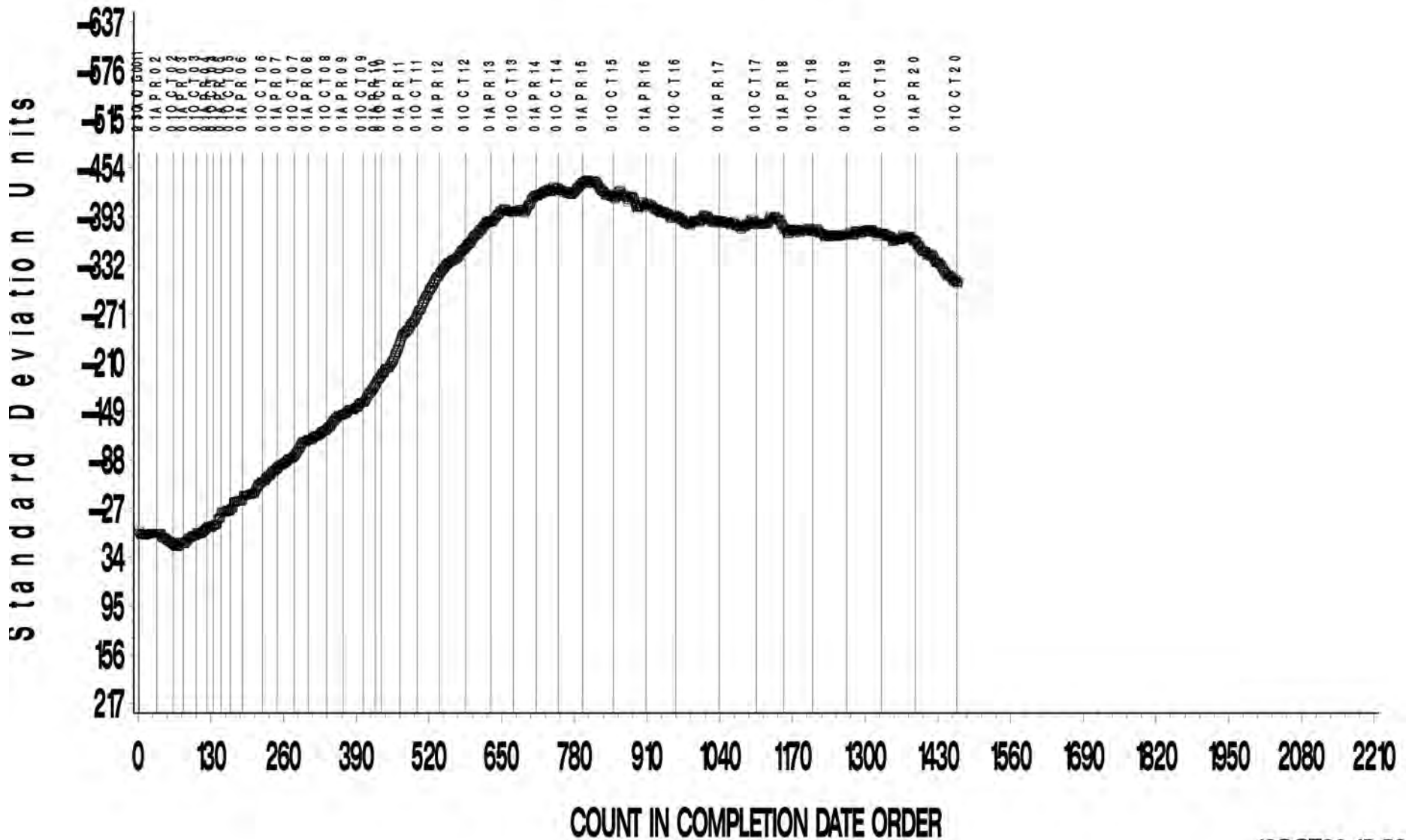
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CUSUM Severity Analysis



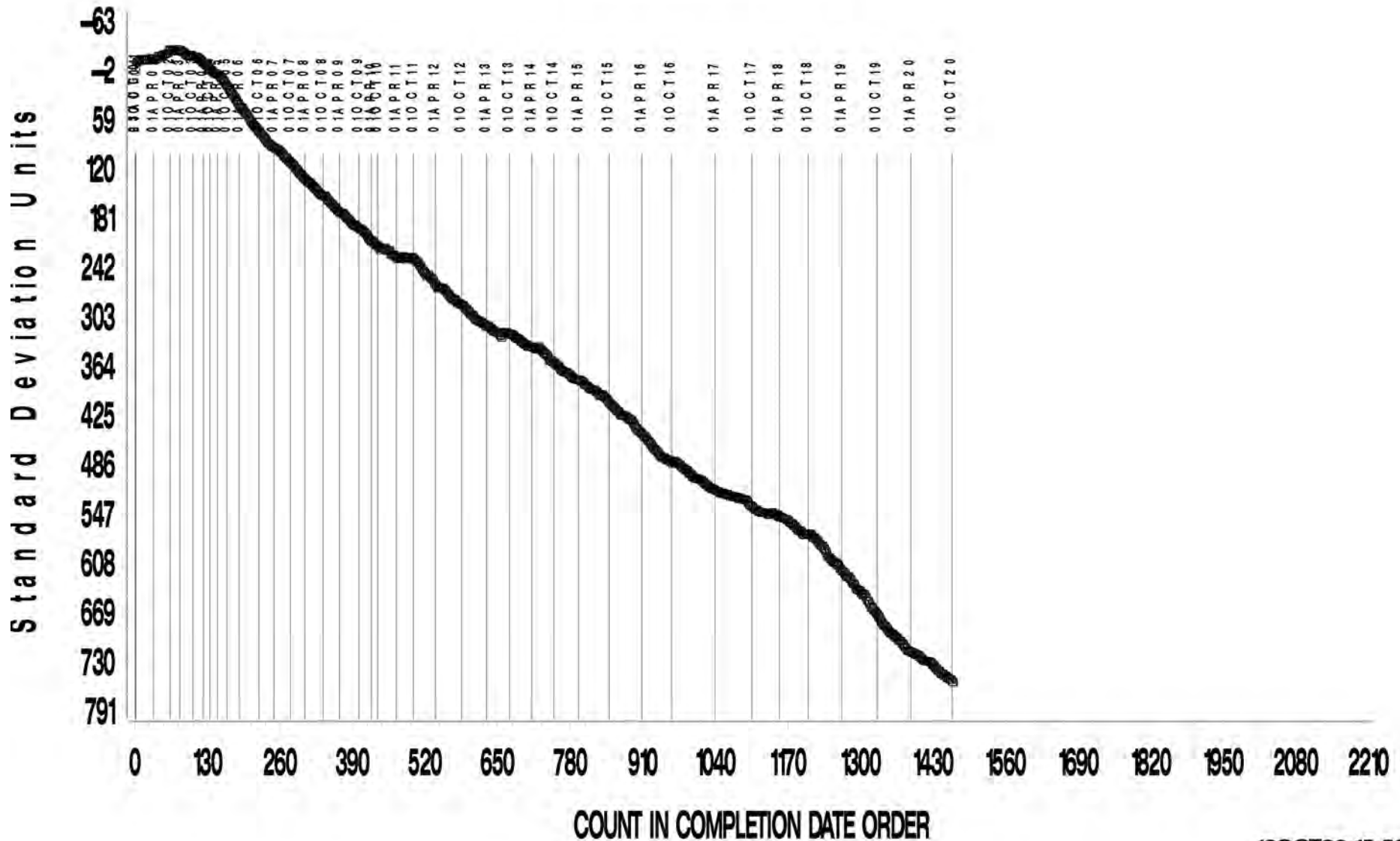
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CUSUM Severity Analysis



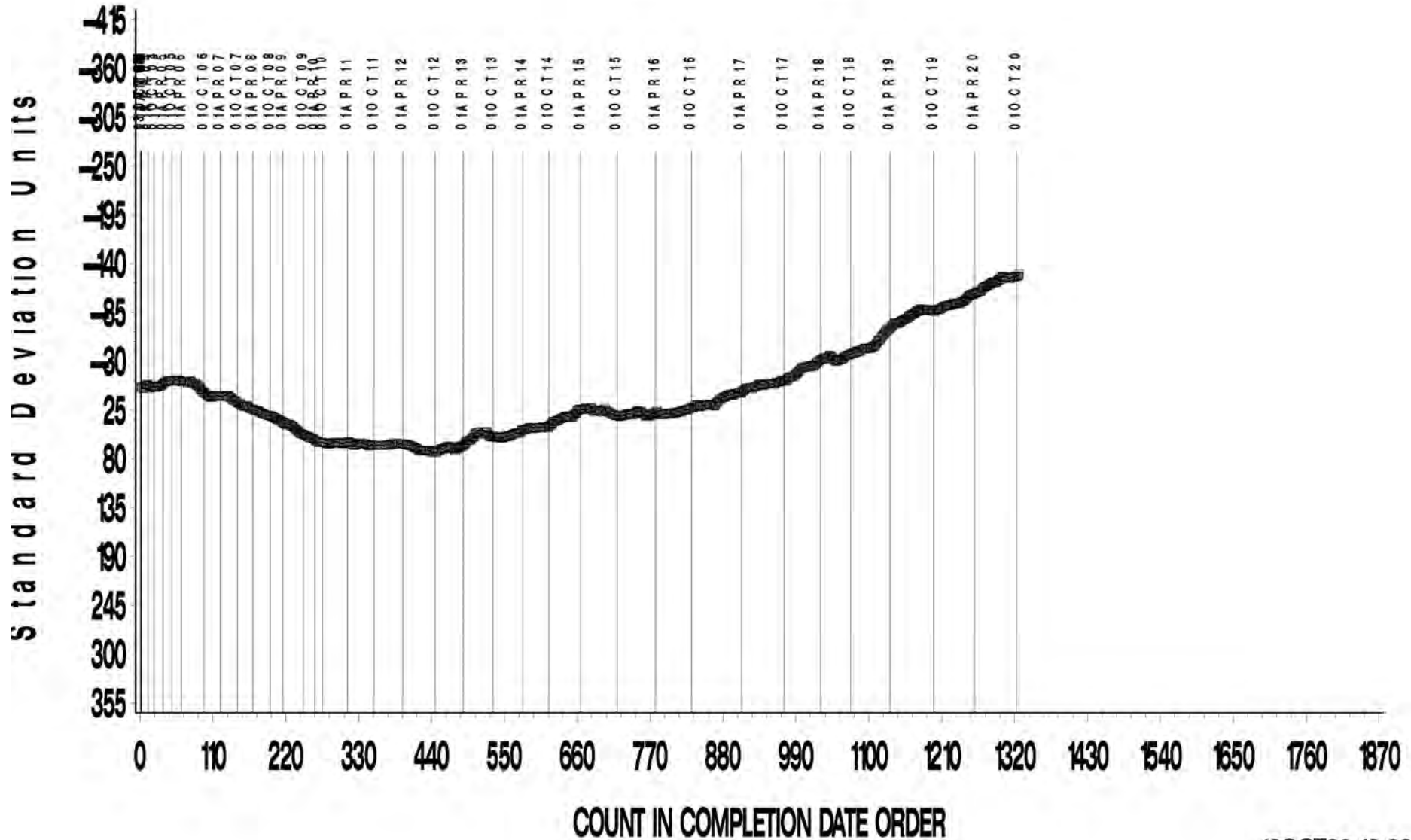
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CUSUM Severity Analysis



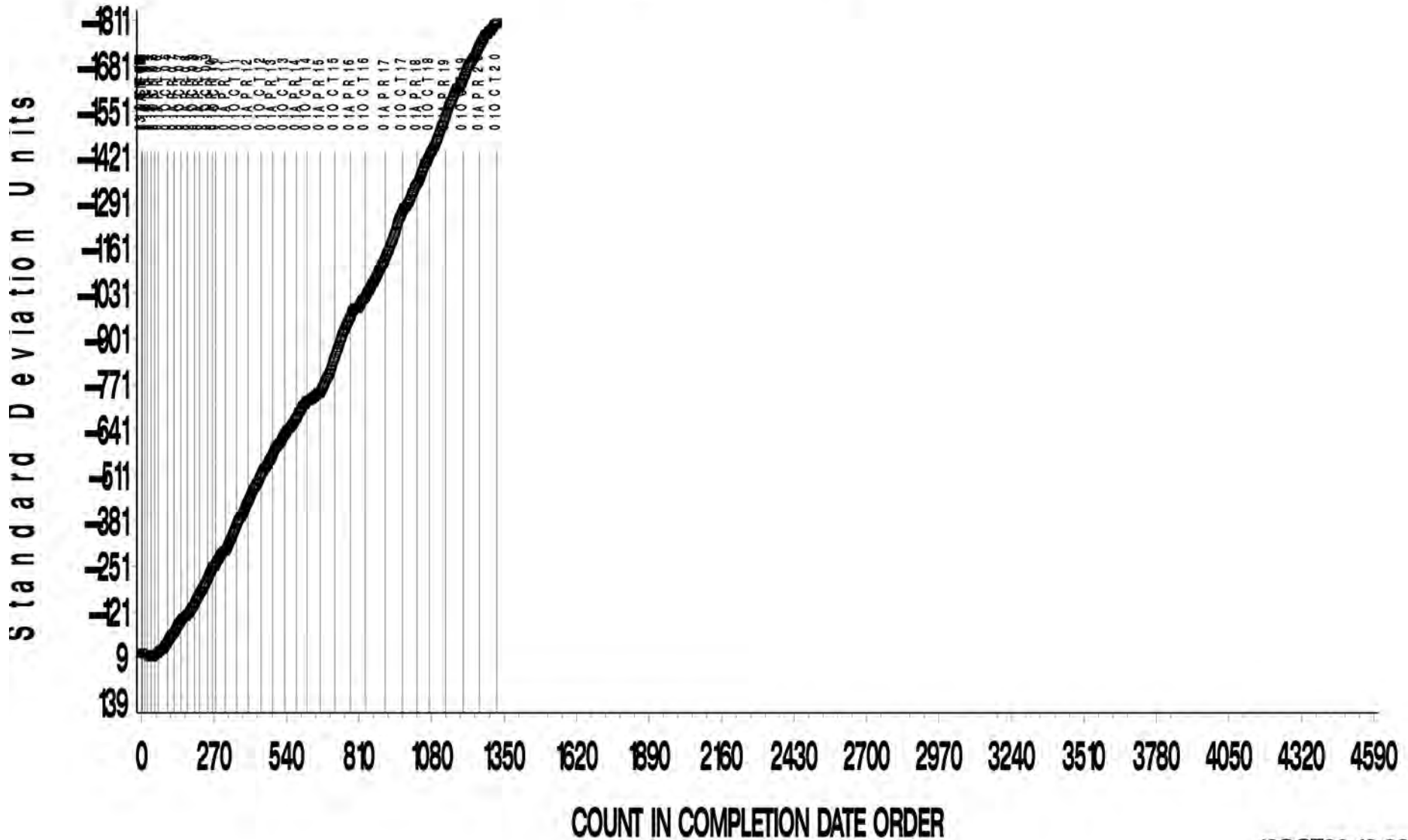
REF VAMAC G ELONGATION CHANGE CORRECTED AVG

CUSUM Severity Analysis



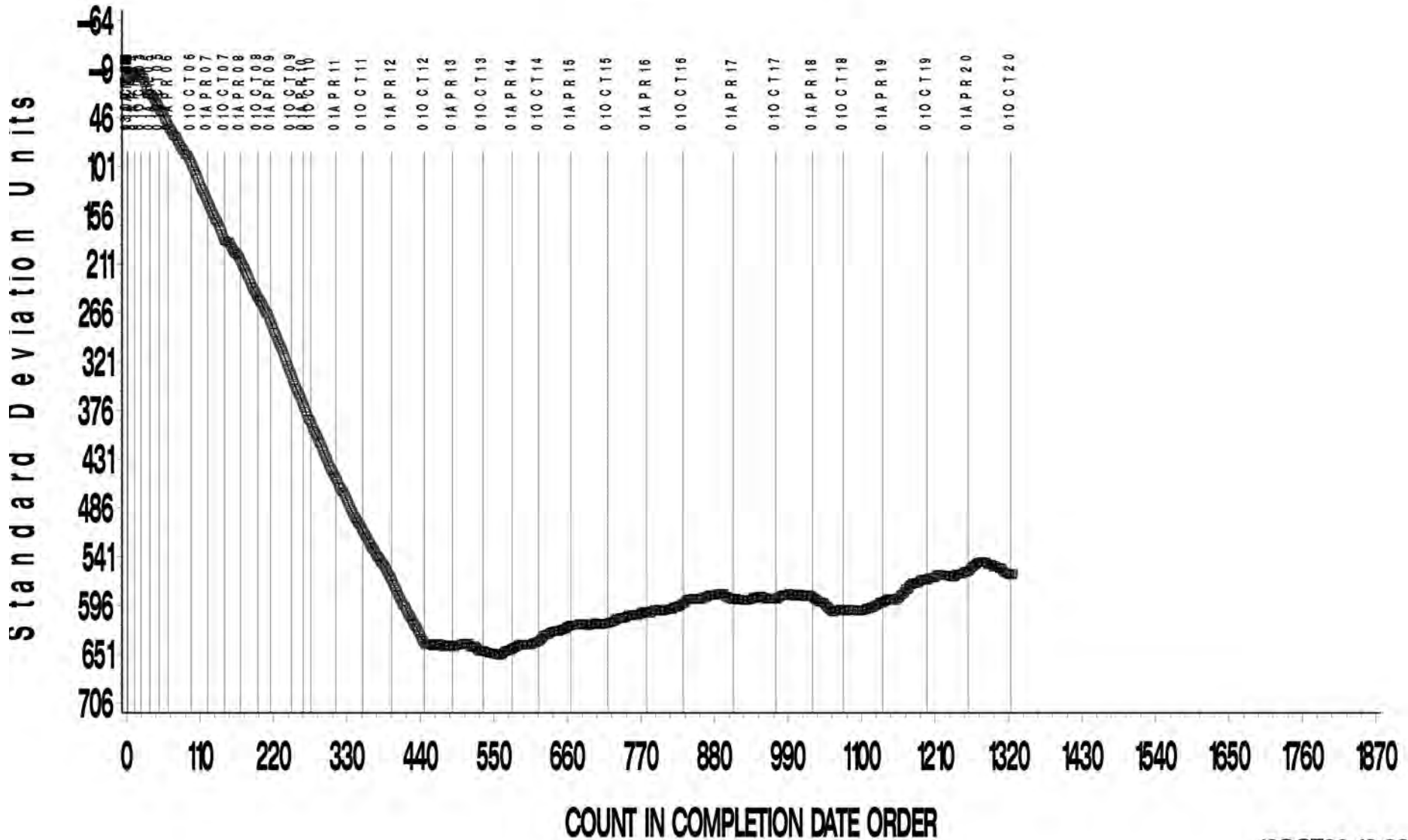
REF VAMAC G POINTS HARDNESS CHANGE CORRECTED AVG

CUSUM Severity Analysis



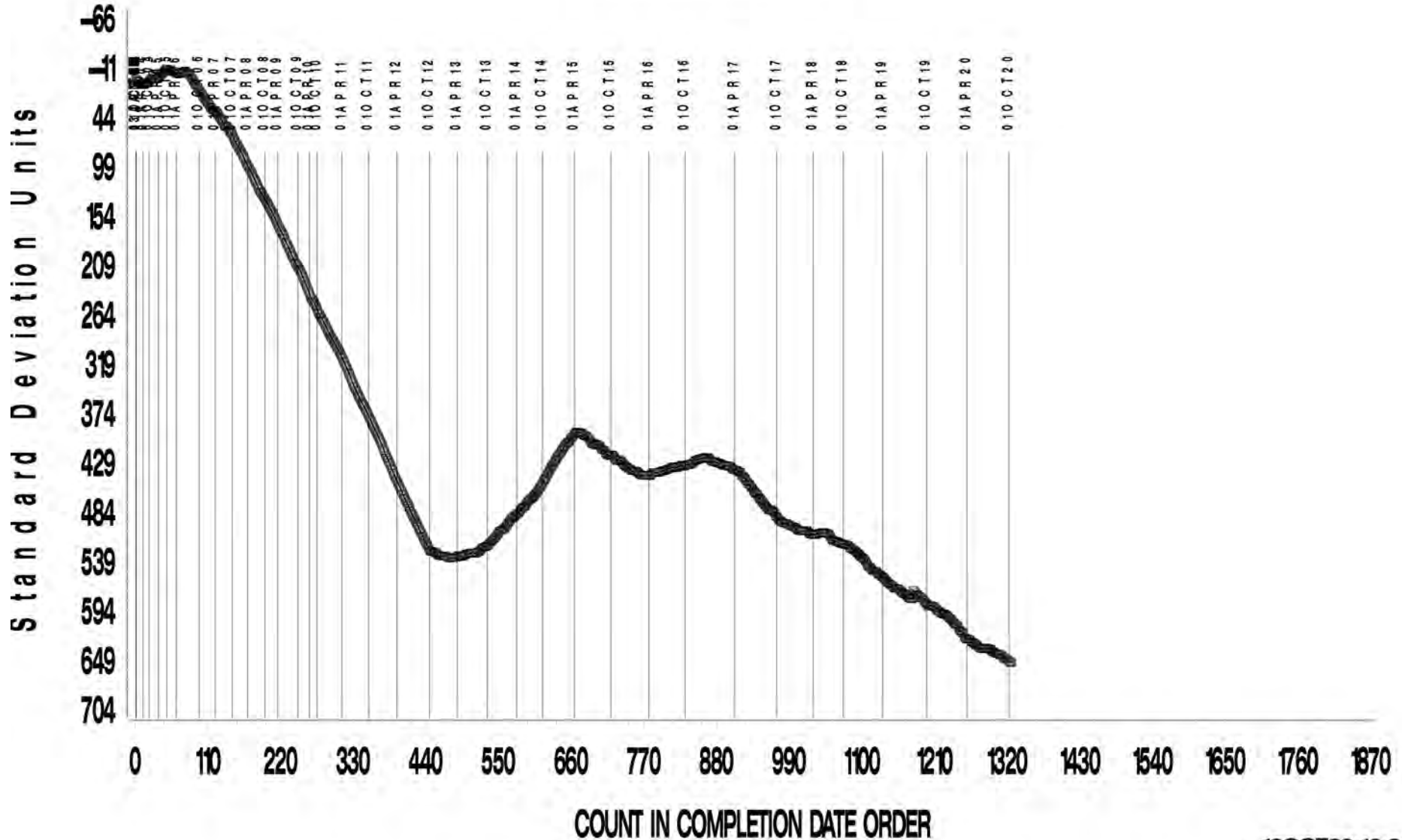
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CUSUM Severity Analysis

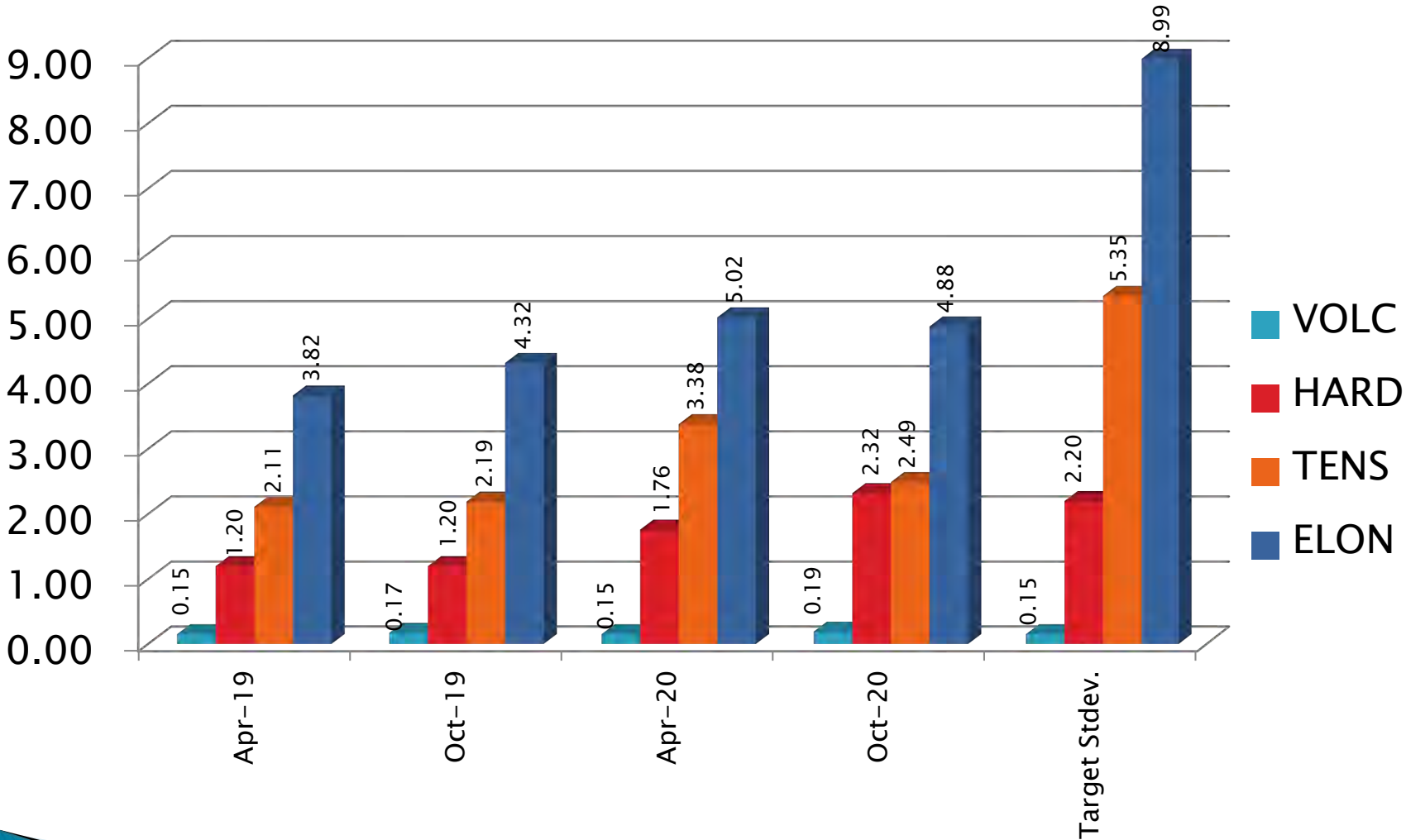


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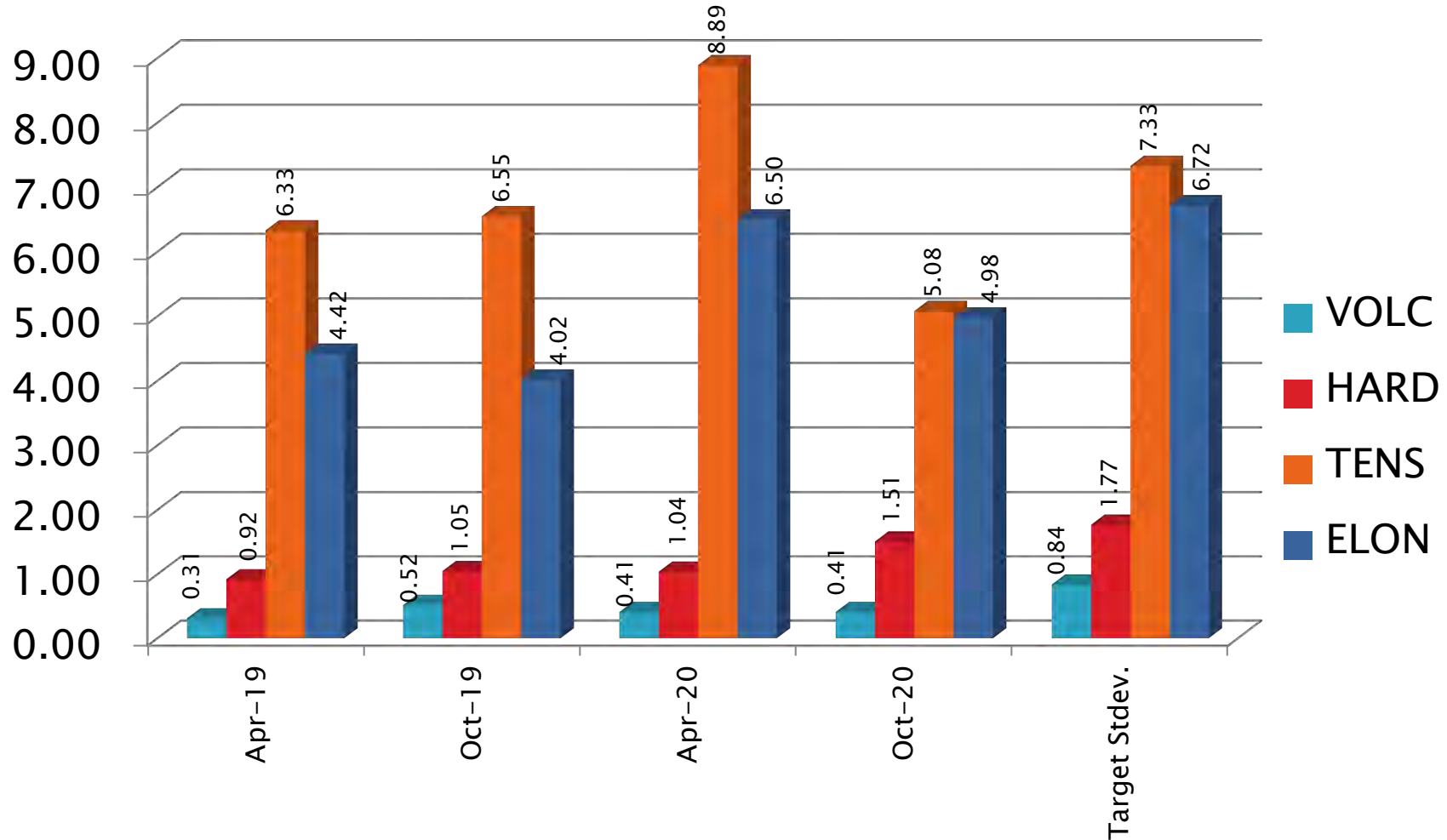
CUSUM Severity Analysis



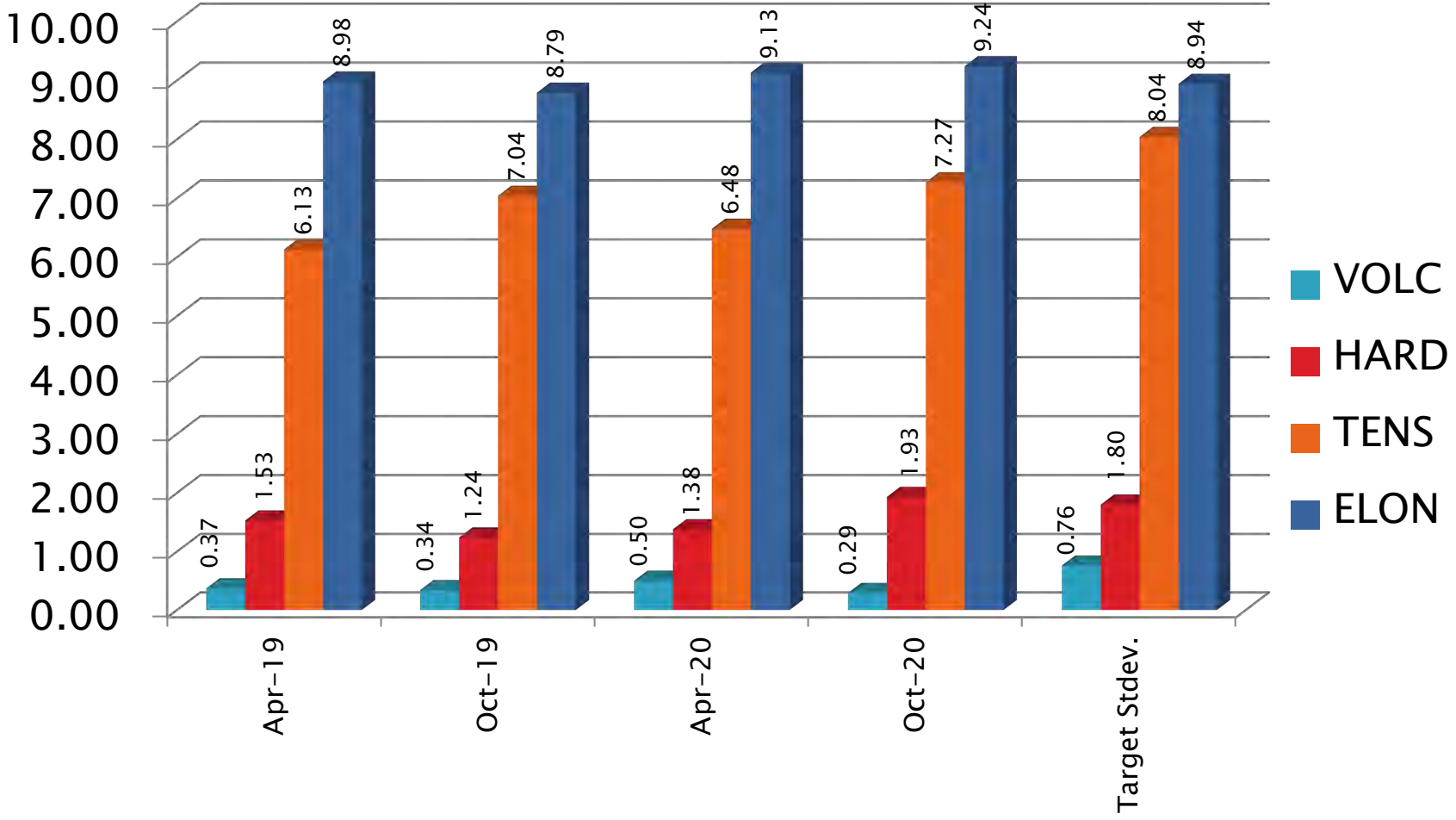
EOEC Precision Estimates - Fluoroelastomer



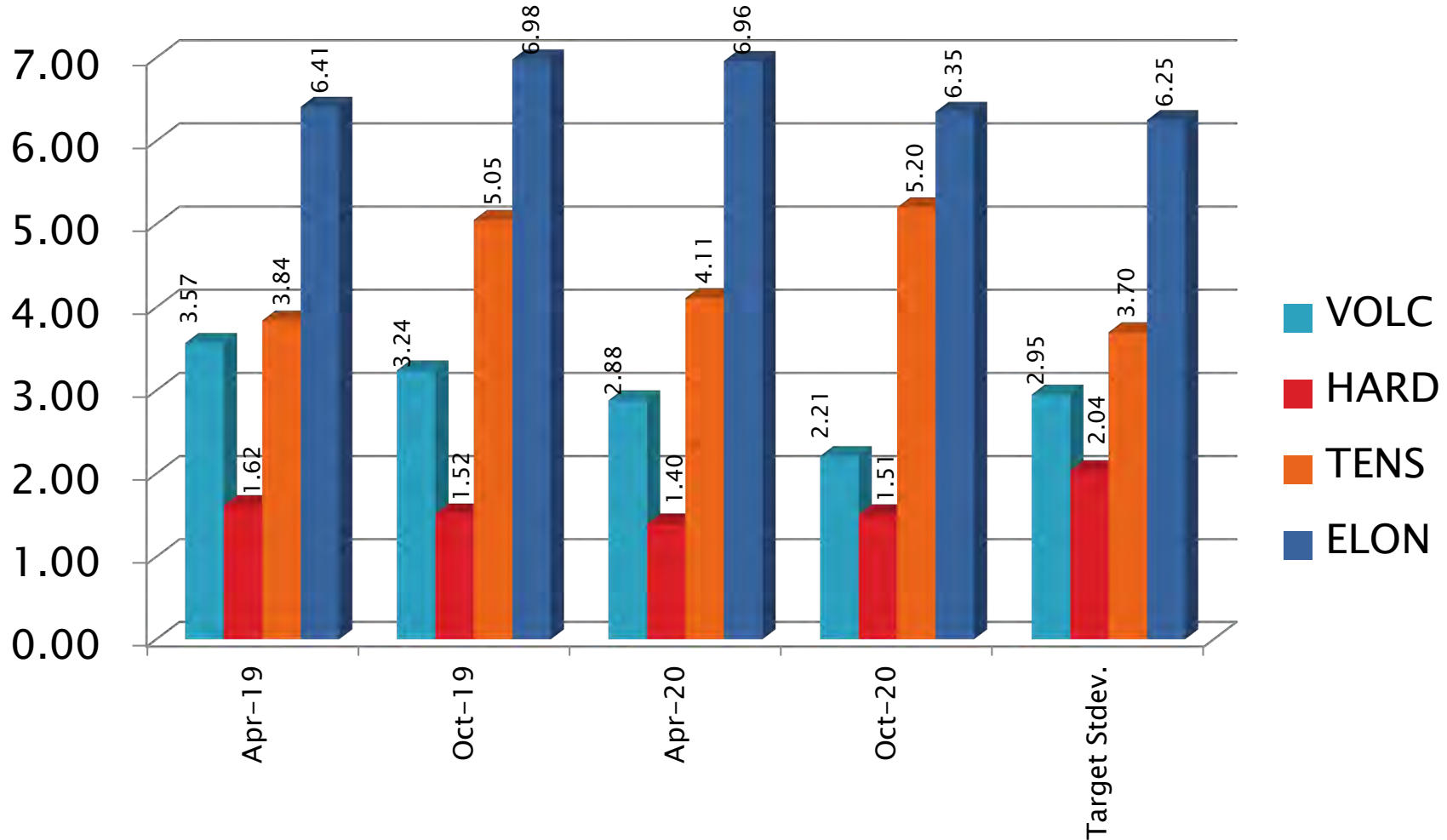
EOEC Precision Estimates - Nitrile



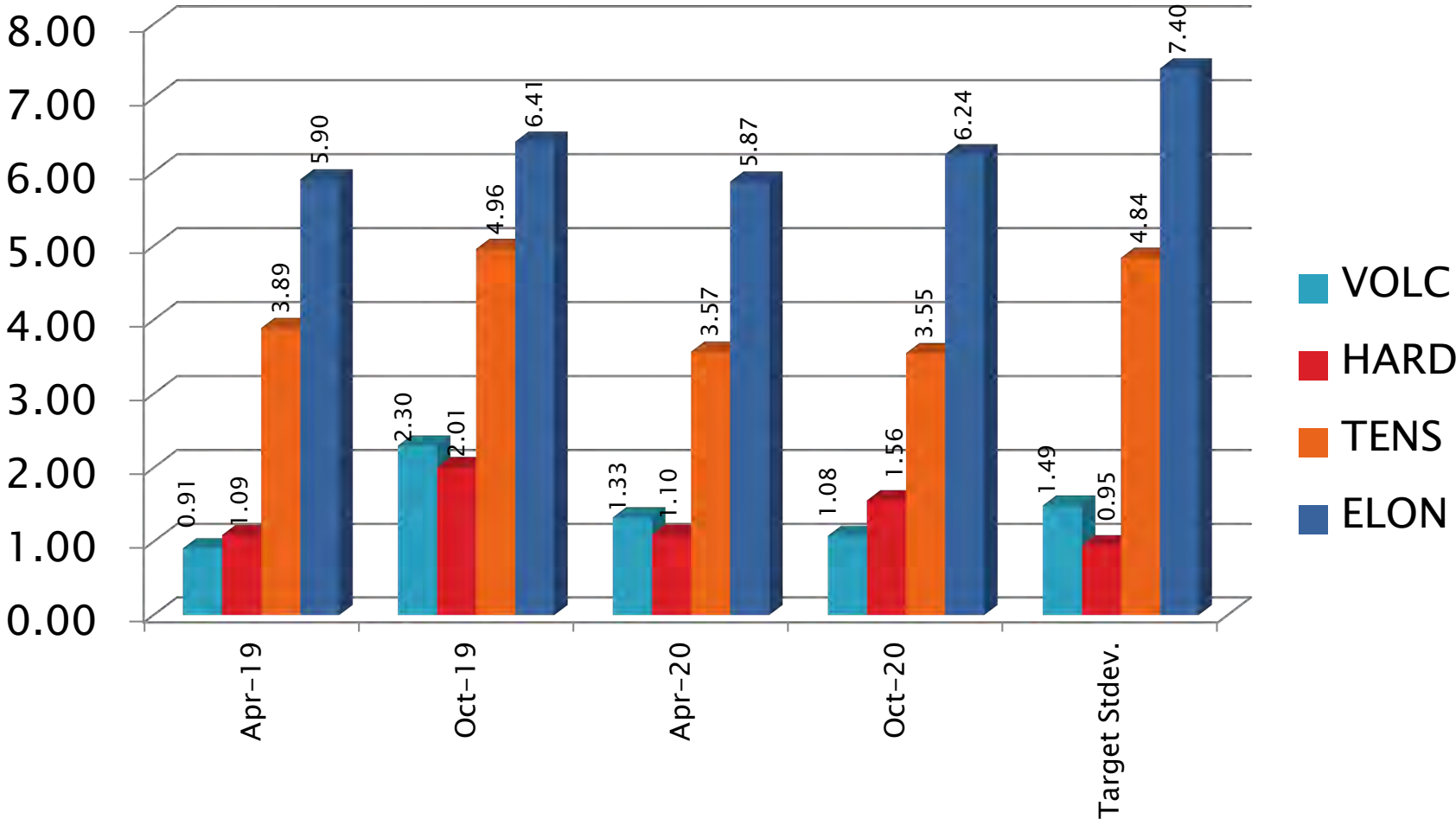
EOEC Precision Estimates – Polyacrylate



EOEC Precision Estimates - Silicone



EOEC Precision Estimates - VAMAC



Information Letters & Technical Updates*

Test	Date	IL or Memo Number	Topic
EOEC		None	Nothing issued this report period

*Available from TMC Website

Reference Oil Inventory Estimated Life

Oil	TMC Inventory Gallons	Gallons Shipped Past 12 Months	Estimated Life
SL107 ^{A, B}	3348	418	5+ years

^ATMC Inventory is used across several test methods

^BSL107 replaces oil 1006; still assigning existing lab inventories of 1006 batches where available.

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<http://astmtmc.cmu.edu>



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Miscellaneous Information

- ▶ Available on TMC Website:
 - Oil Assignment Request and Test File Upload
 - Live Reference Test Data Bases
 - Surveillance Panel Meeting Minutes
- ▶ www.astmtmc.cmu.edu



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