

Keyhole Specimen Test Histories and Crack Propagation Plots

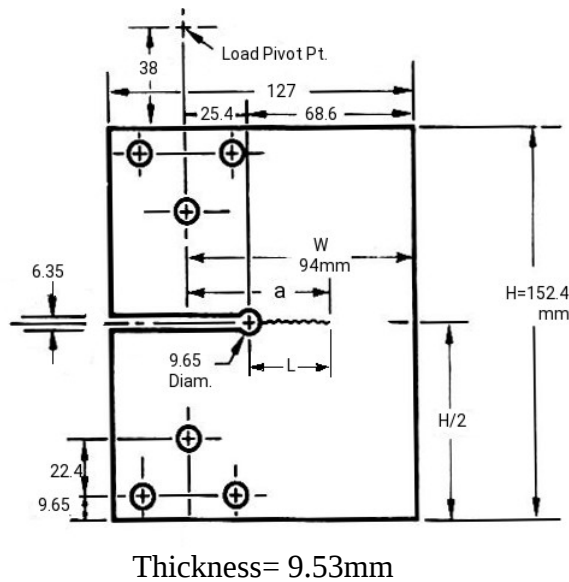
from: Fatigue Design and Evaluation Committee of SAE

Ref.: L. Tucker, S. Bussa, "The SAE Cumulative Fatigue Damage Test Program," SAE paper 750038, SAE Congress & Exposition, Detroit, Feb. 1975.

Strain - Life test information also available at:

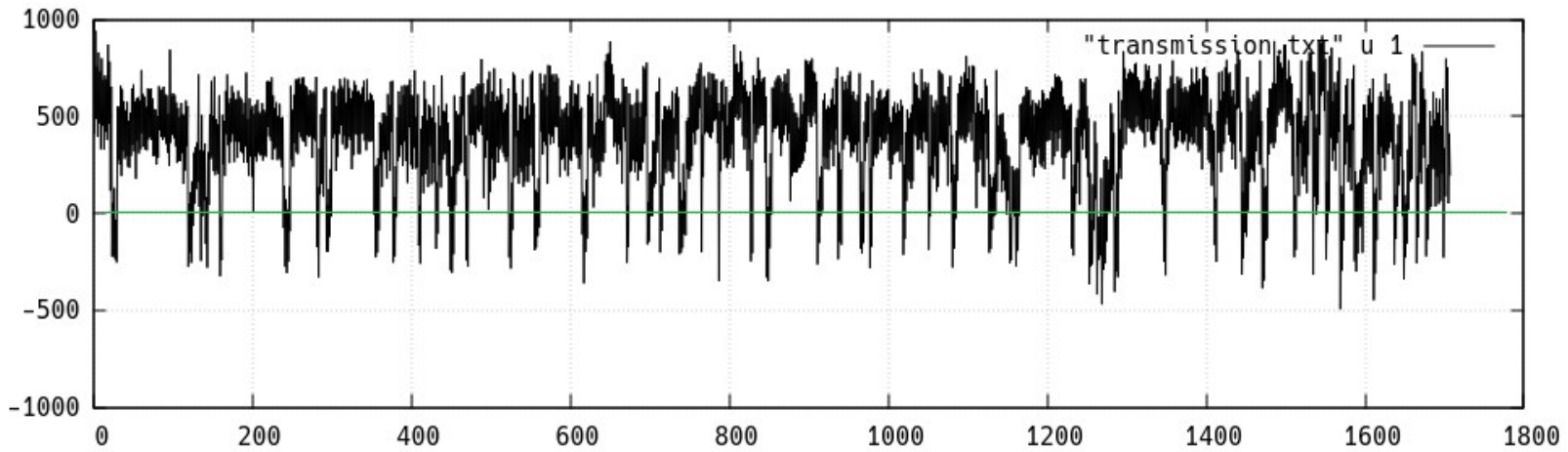
ManTen Steel: <http://fde.uwaterloo.ca/Fde/Materials/Steel/Sae1300/sae1300.html>

RQC-100 Steel: <http://fde.uwaterloo.ca/Fde/Materials/Steel/BoronSteel/boronSteel.html>

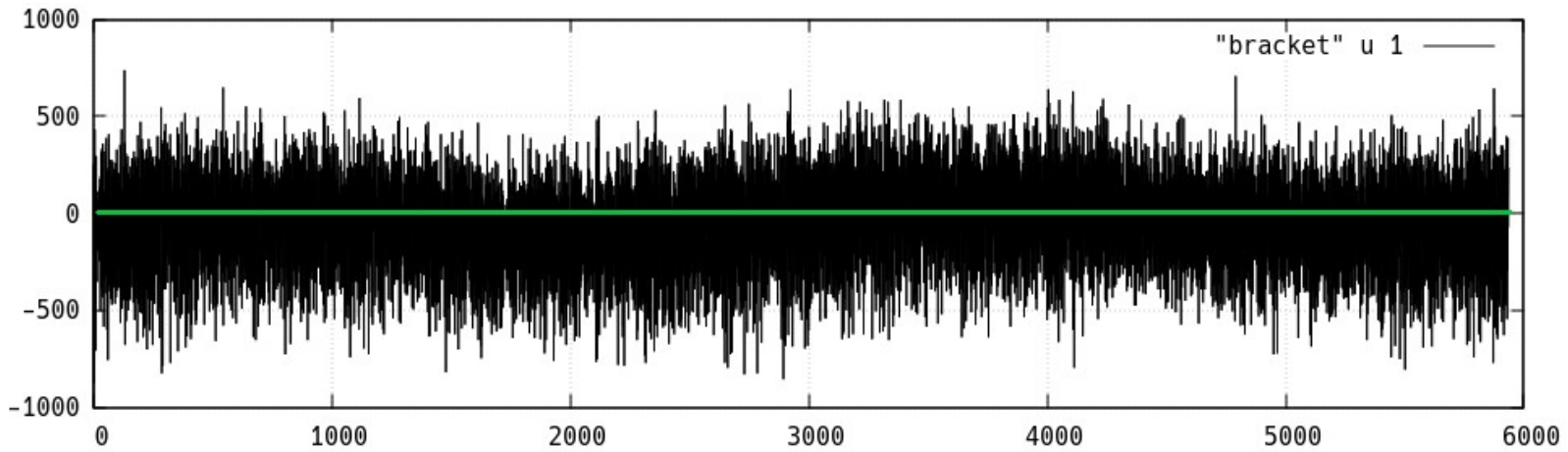


Plots of the three test histories and the test crack propagation data stated in the above reference are documented in this report.

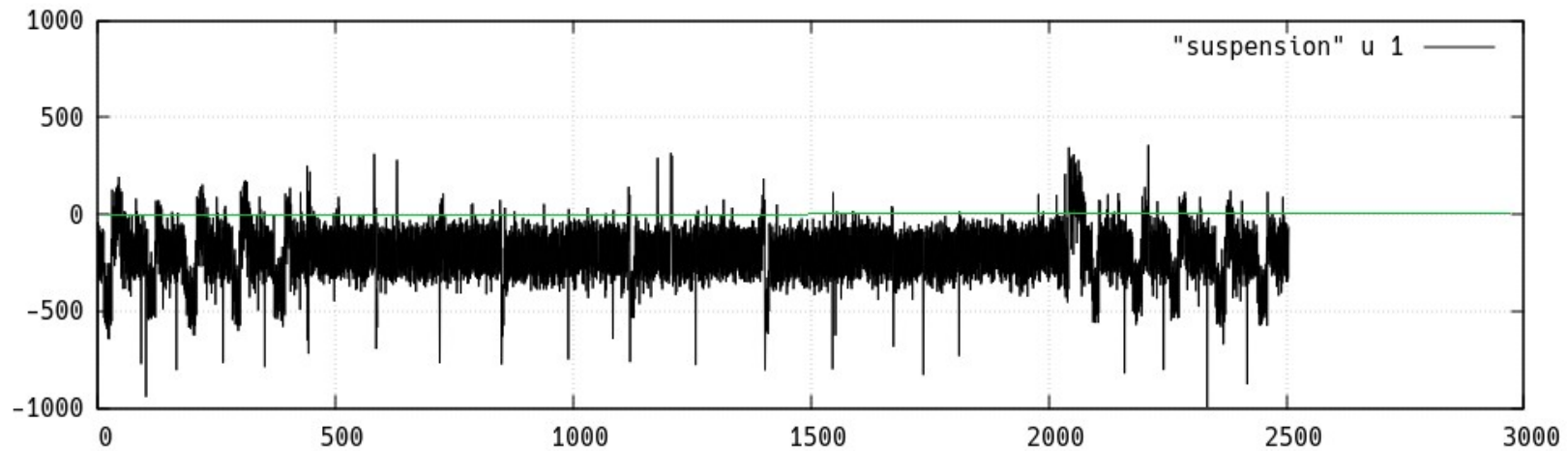
Load Histories



File



File



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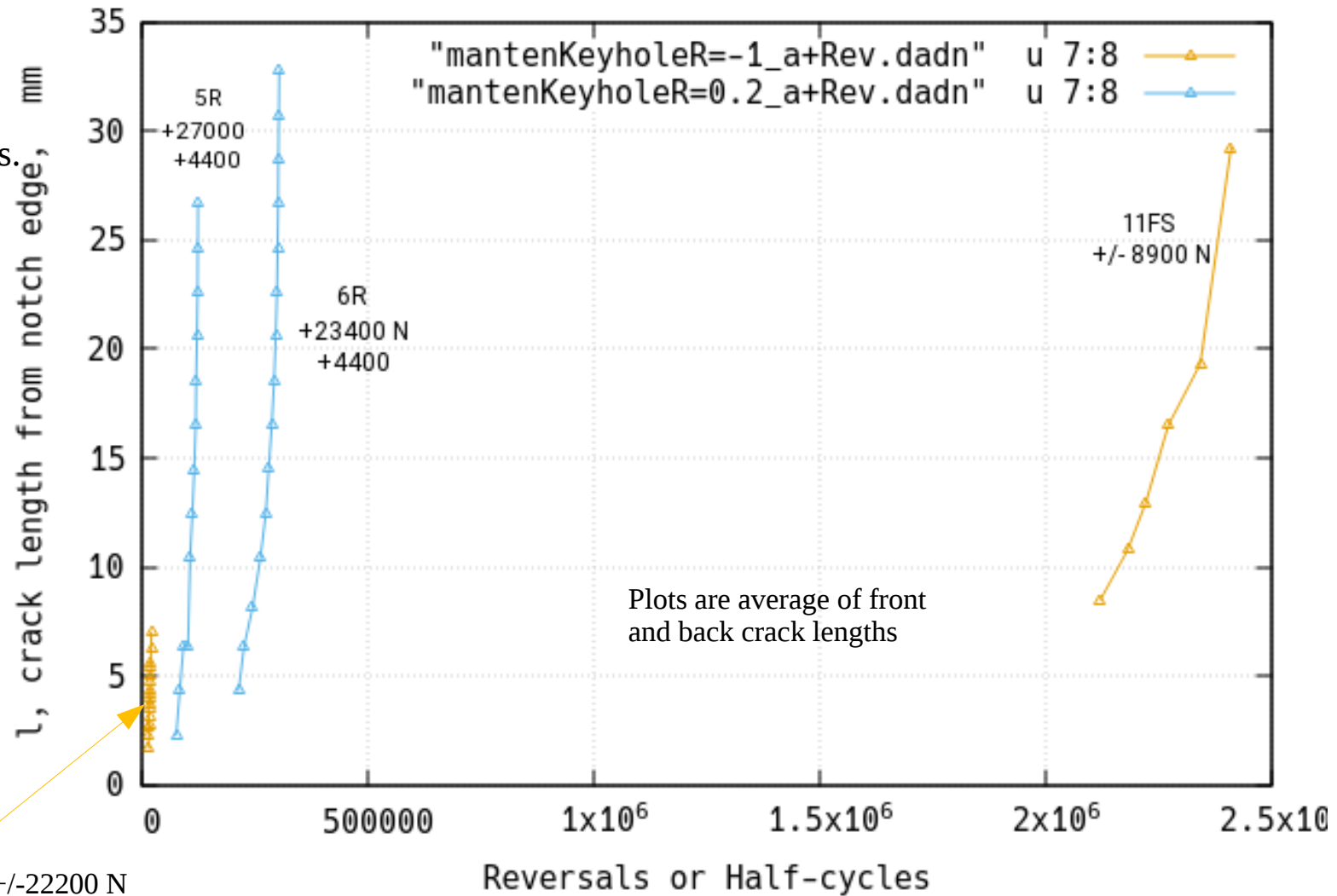
ManTen CA Test results

Crack initiation defined as 2.54mm crack

SAE Keyhole ManTen CA tests

Data points from tables in Ref. [1]
Points are the average of front & back measurements.

For CA the specimen numbering system is simply a number followed by the test lab ID letters.

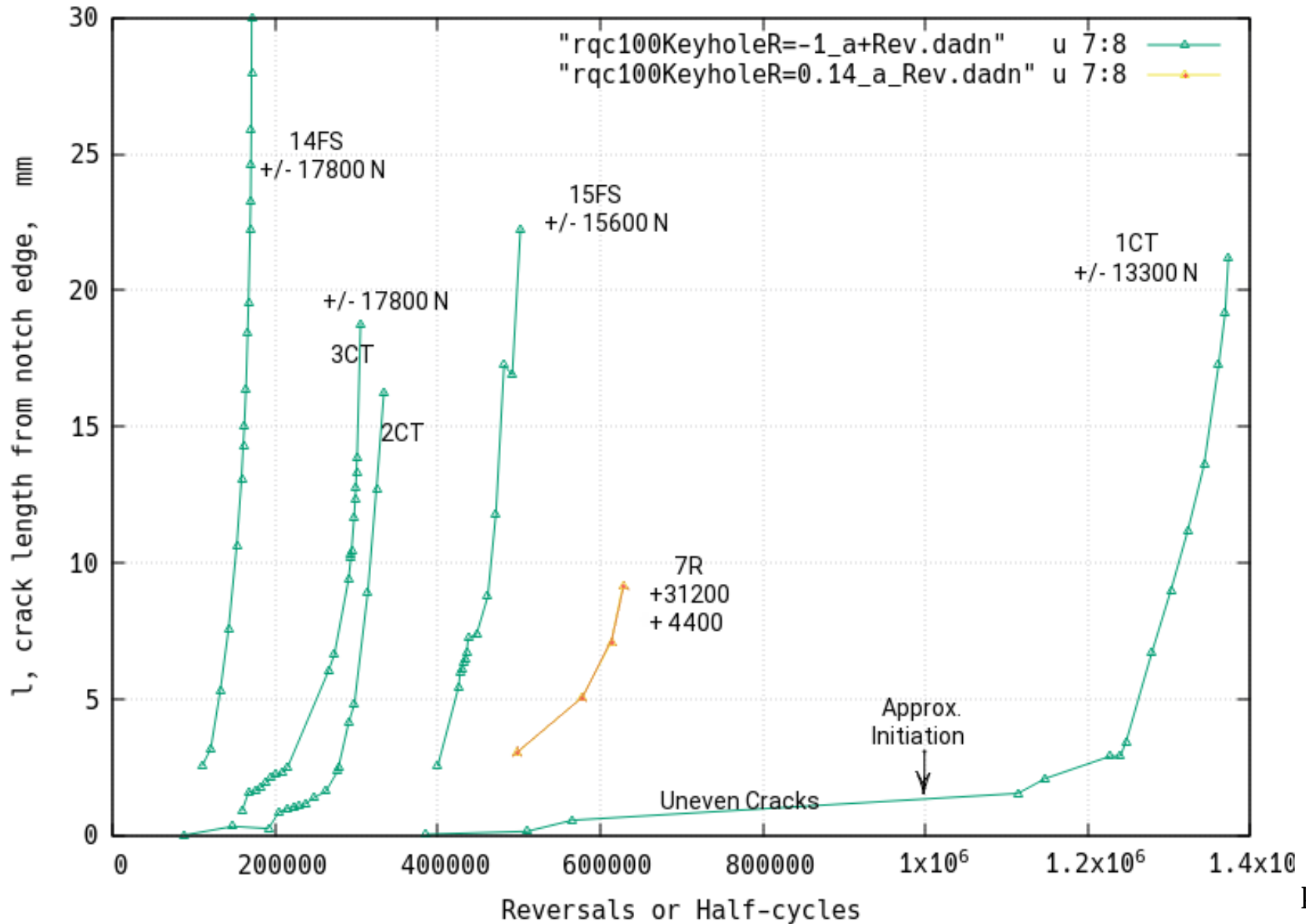


Test 10FS +/-22200 N
Very short life test:
 $2N_f=21000$

RQC-100 CA Test results

Data from tables in Ref. [1]
Points are the average of
front & back measurements.

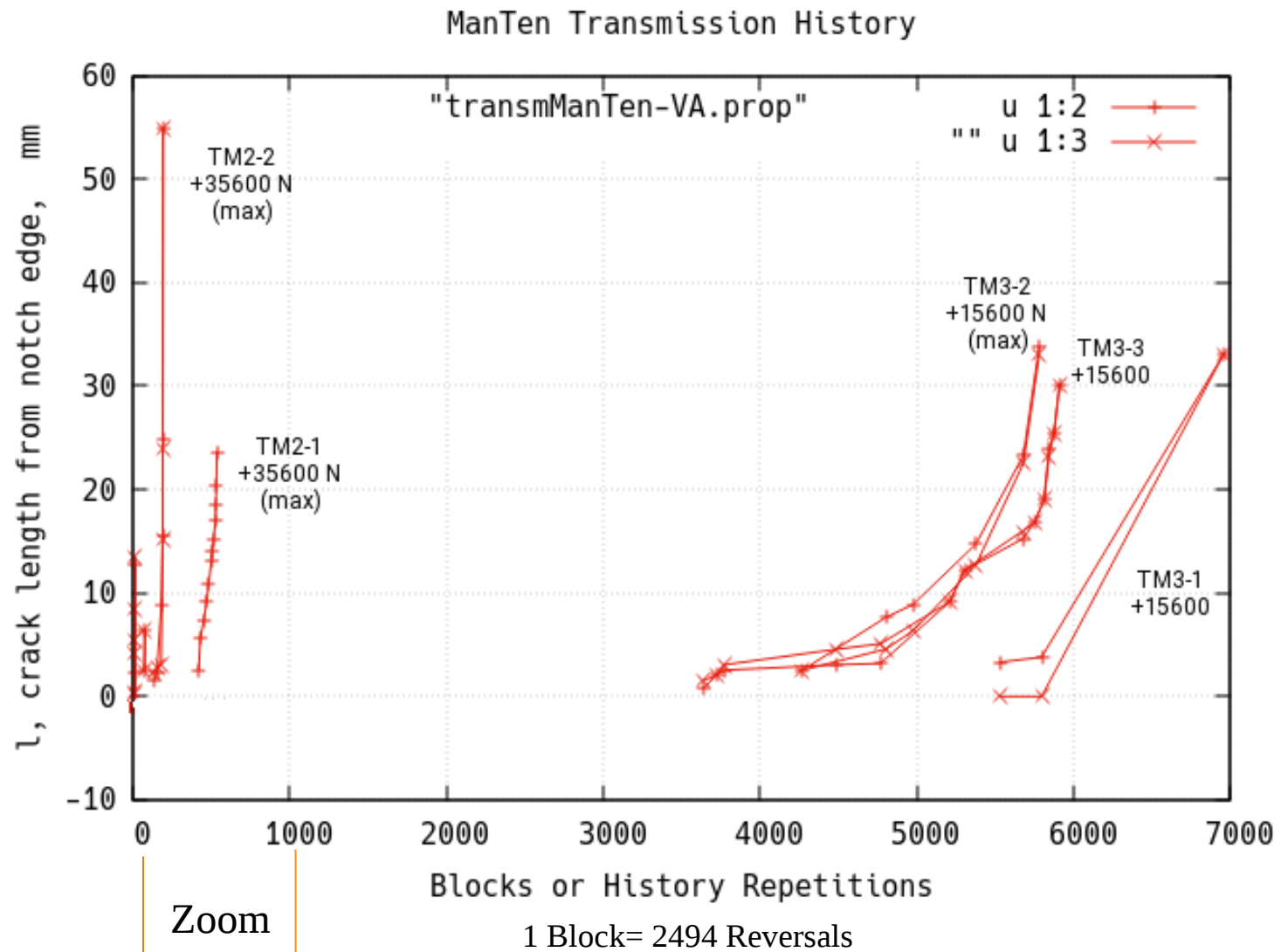
SAE Keyhole RQC-100 CA tests



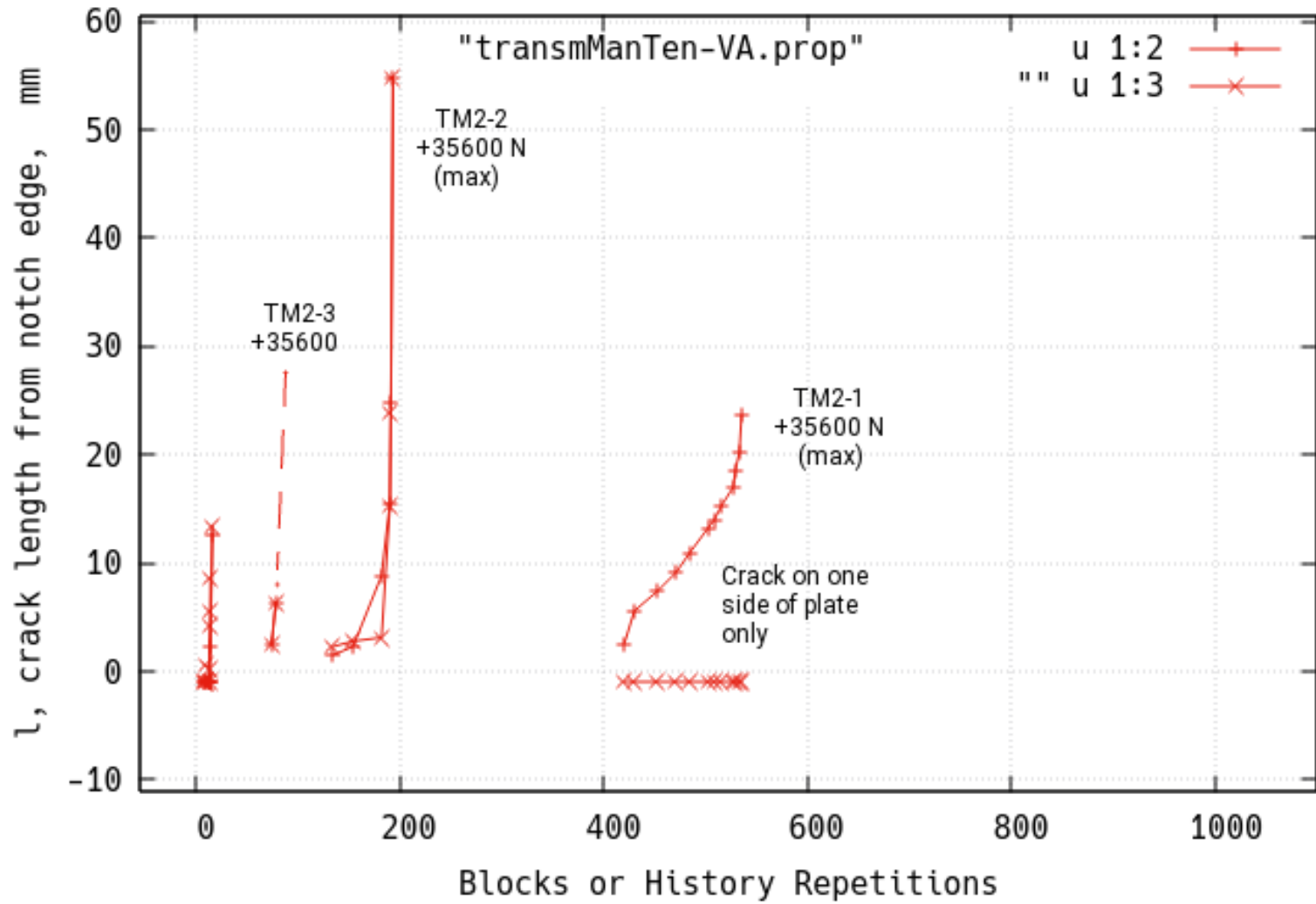
ManTen VA Crack Propagation :

Results as recorded in Ref. [1] Initiation was defined as crack length $L=2.54\text{mm}$
It was not observed in all tests. Tests were done in 8 different laboratories.
Both back and front crack lengths are plotted where available.

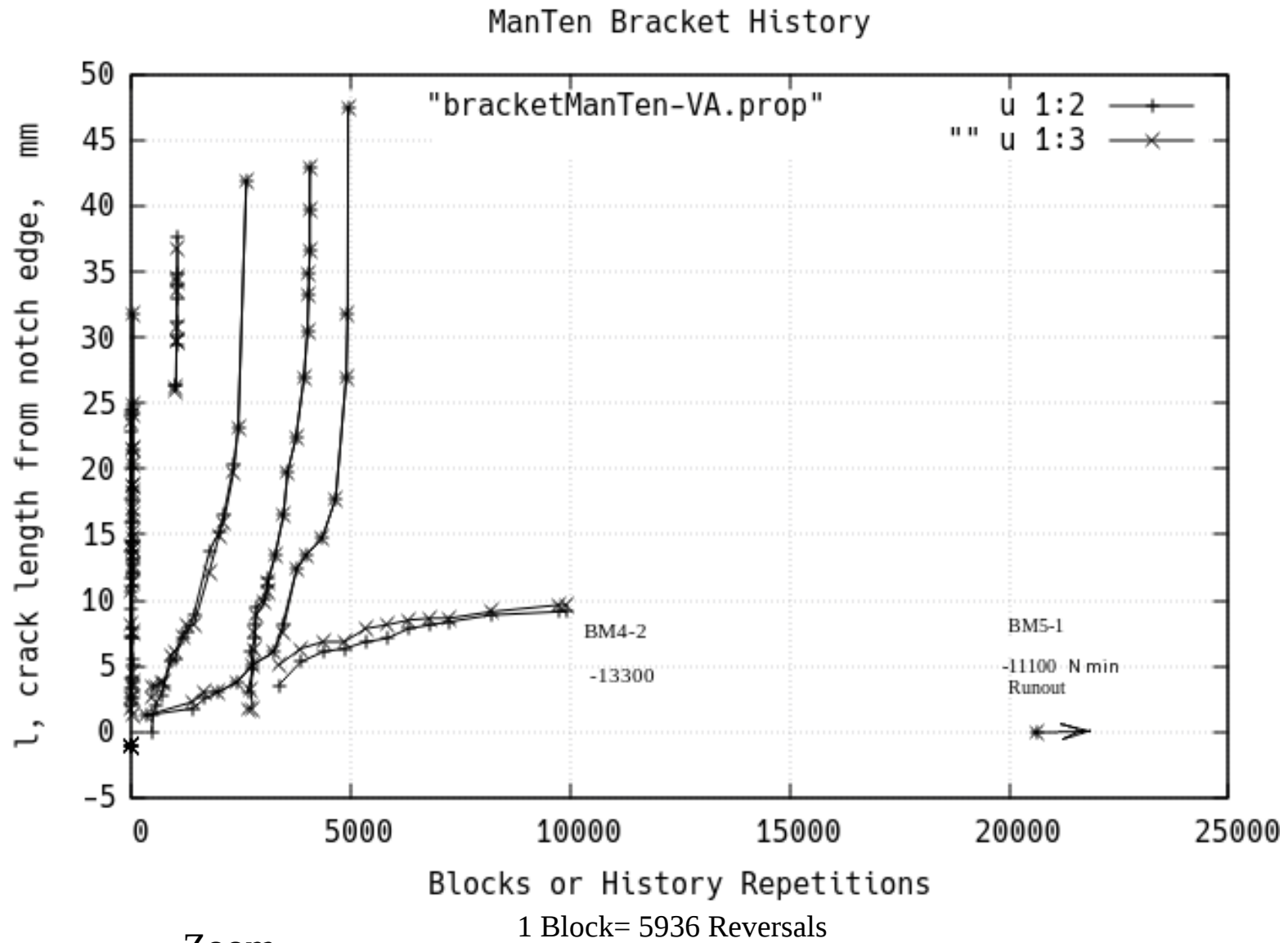
Specimen ID code e.g.:
TM3-1
T= Transmission history
M= Manten material
3= Load level ID
1= Test repetition no.



ManTen Transmission History

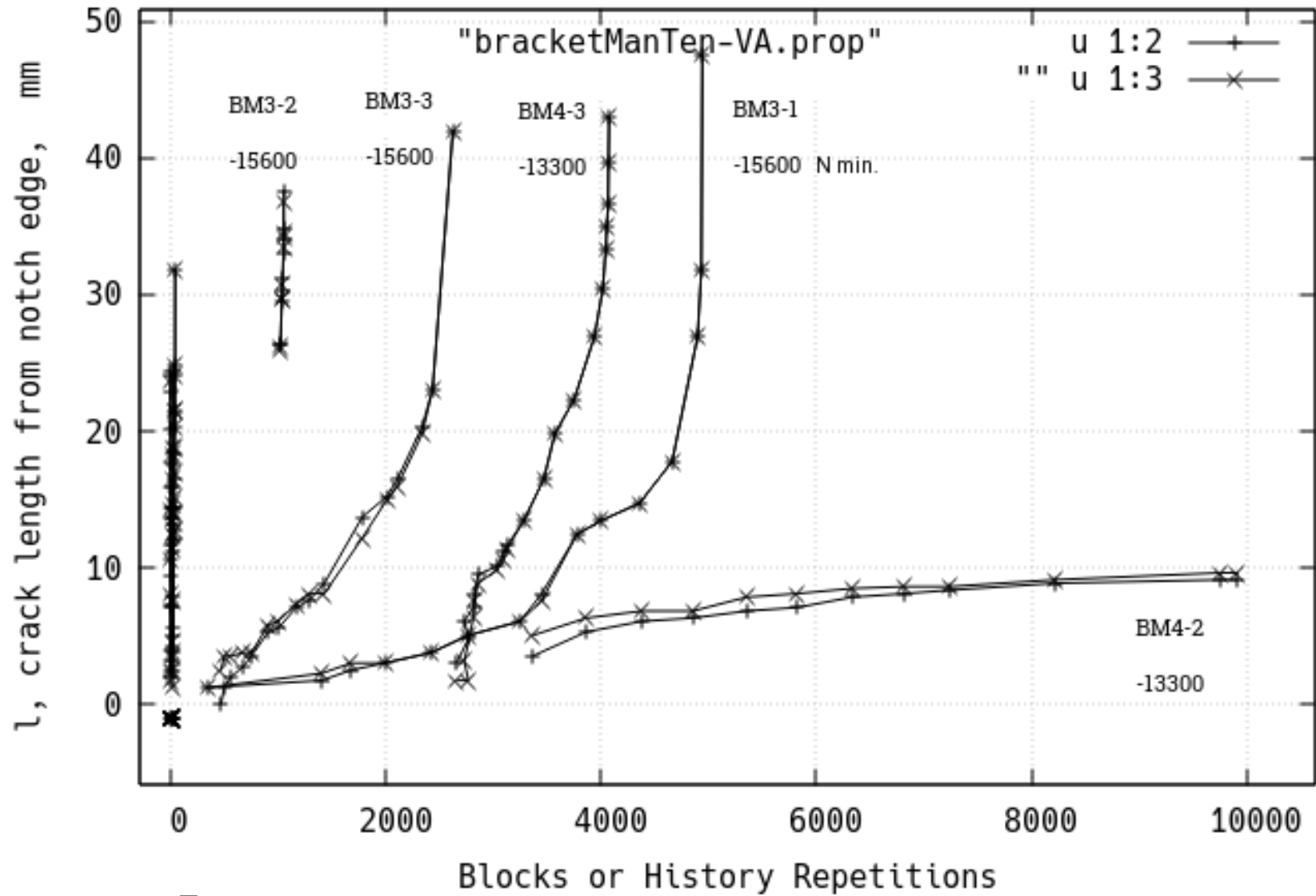


VA Crack Propagation Test results



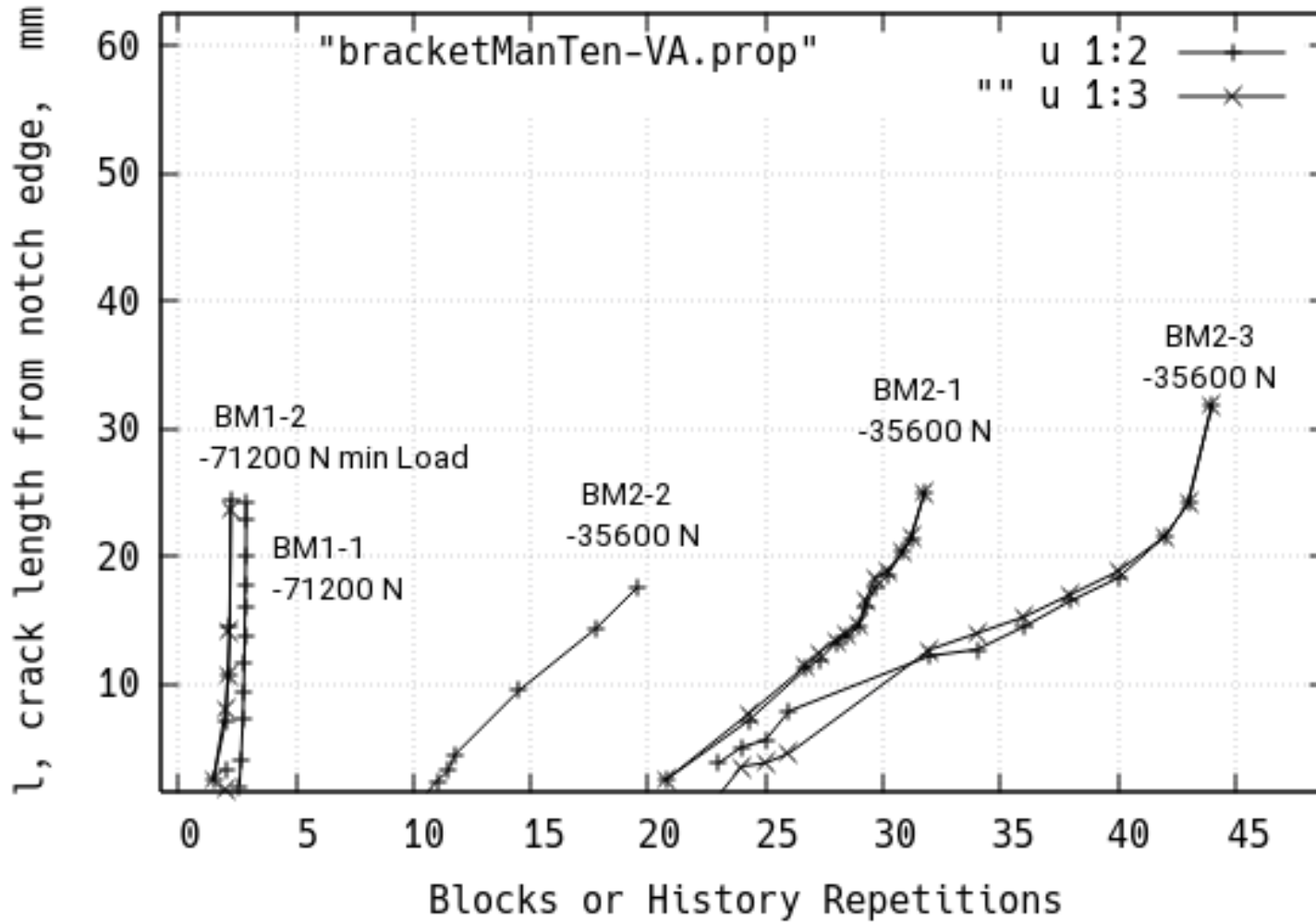
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ManTen Bracket History

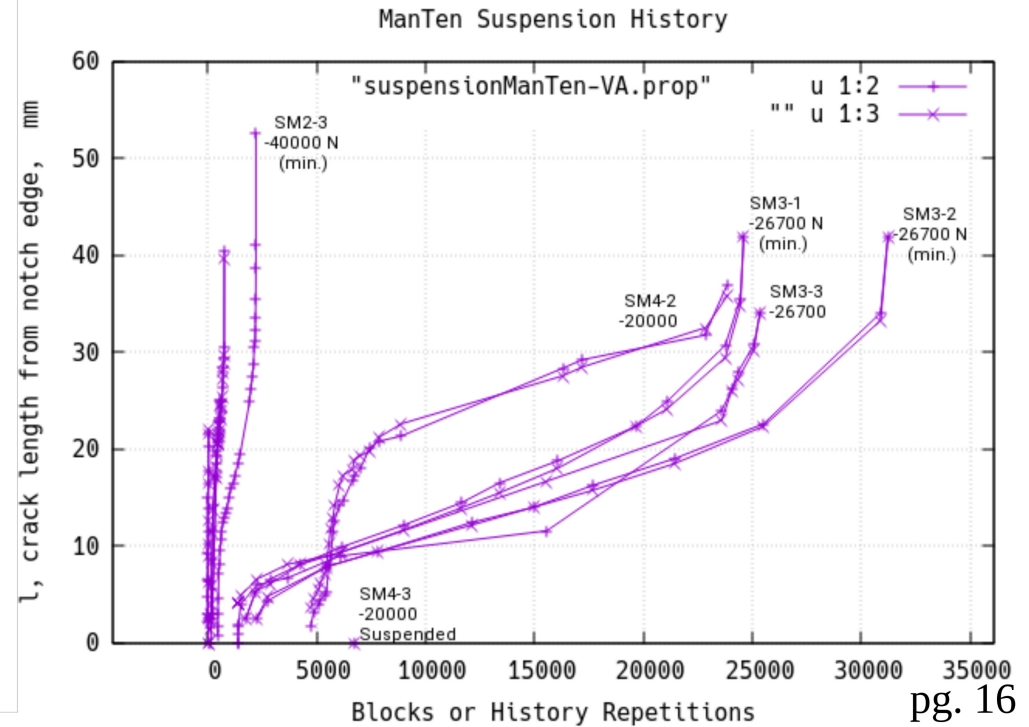
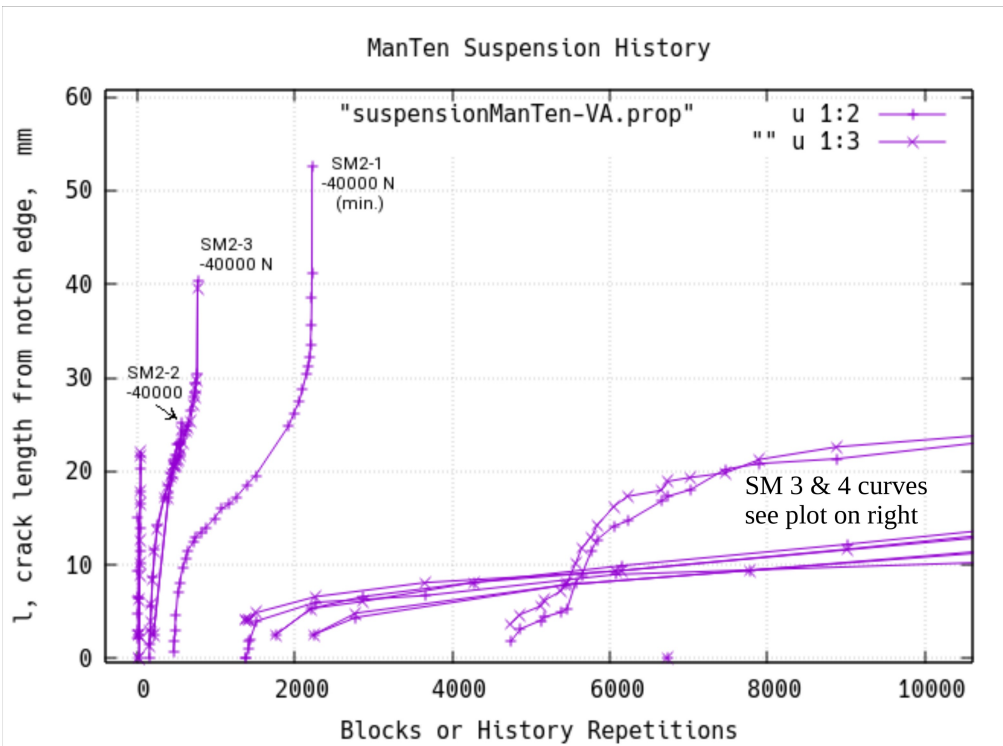
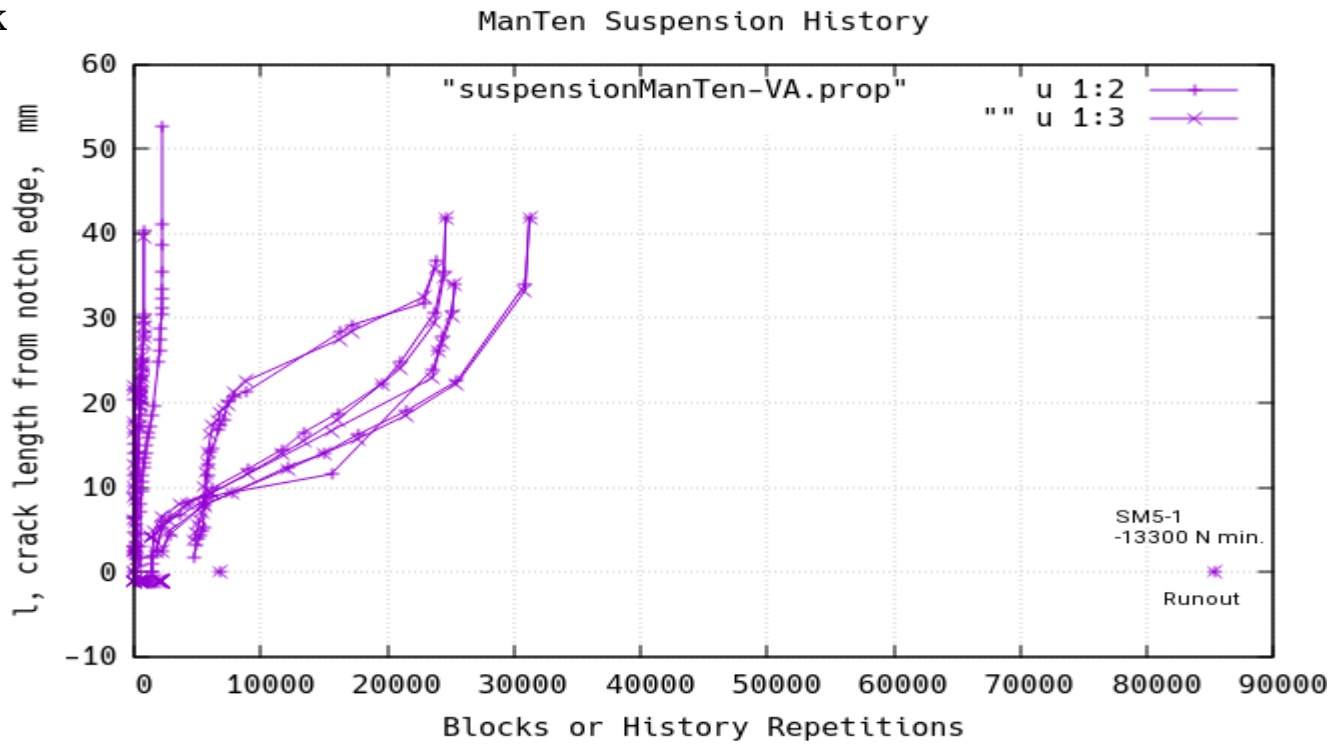


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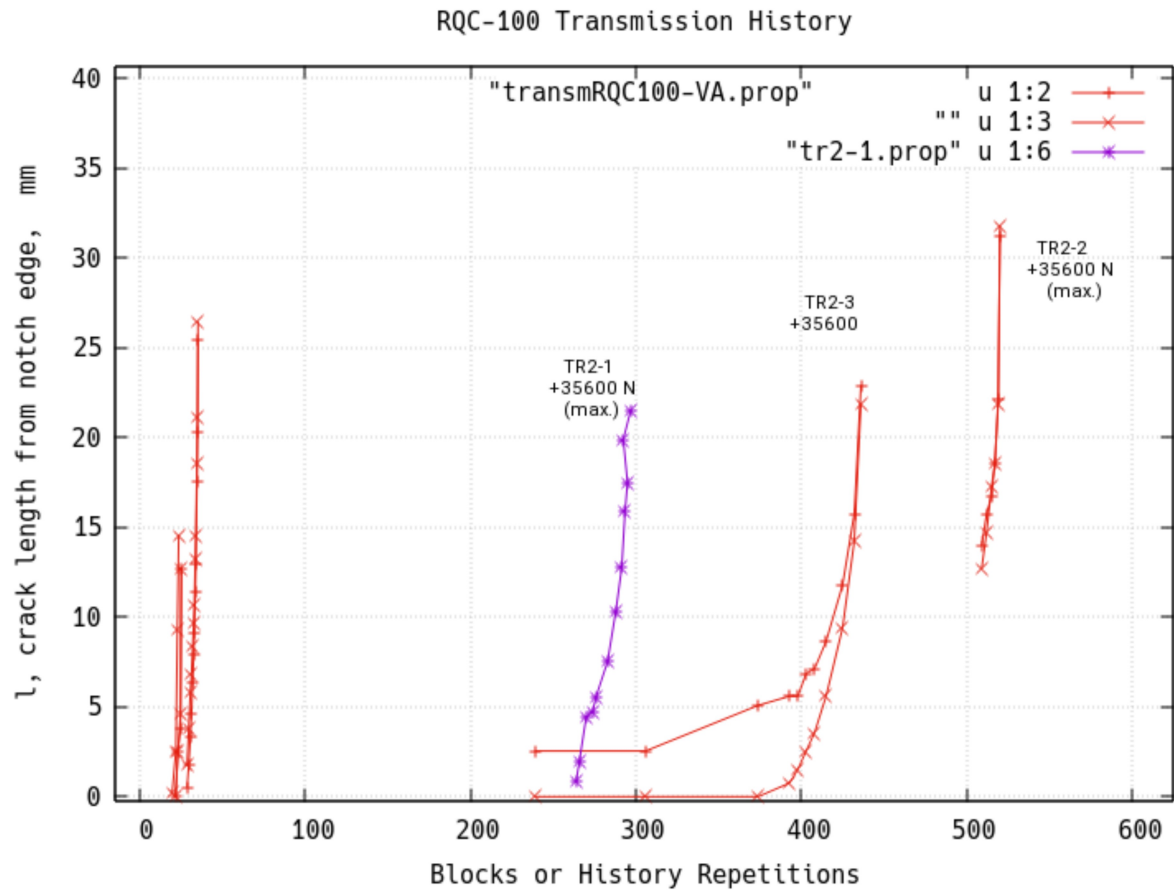
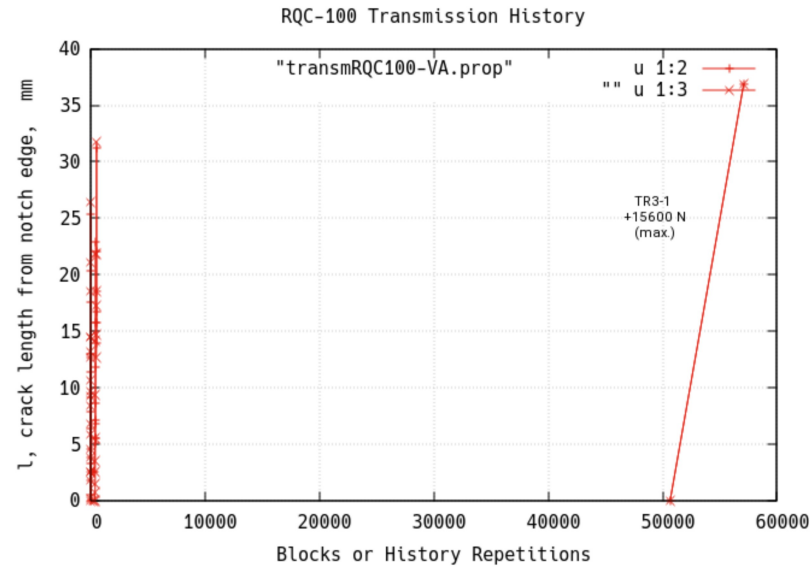
ManTen Bracket History



ManTen VA Crack
Propagation
Test results

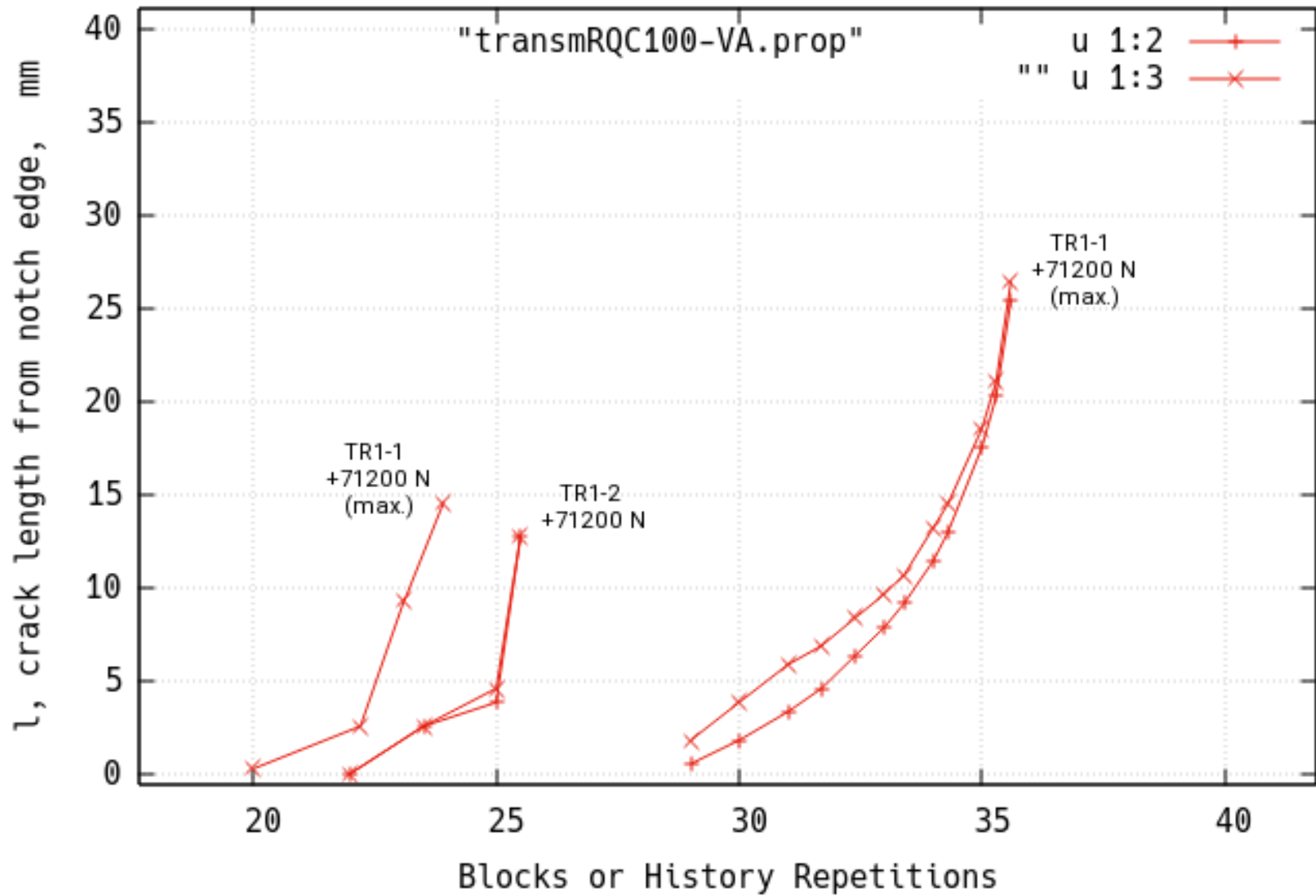


RQC-100 VA Crack Propagation Test results

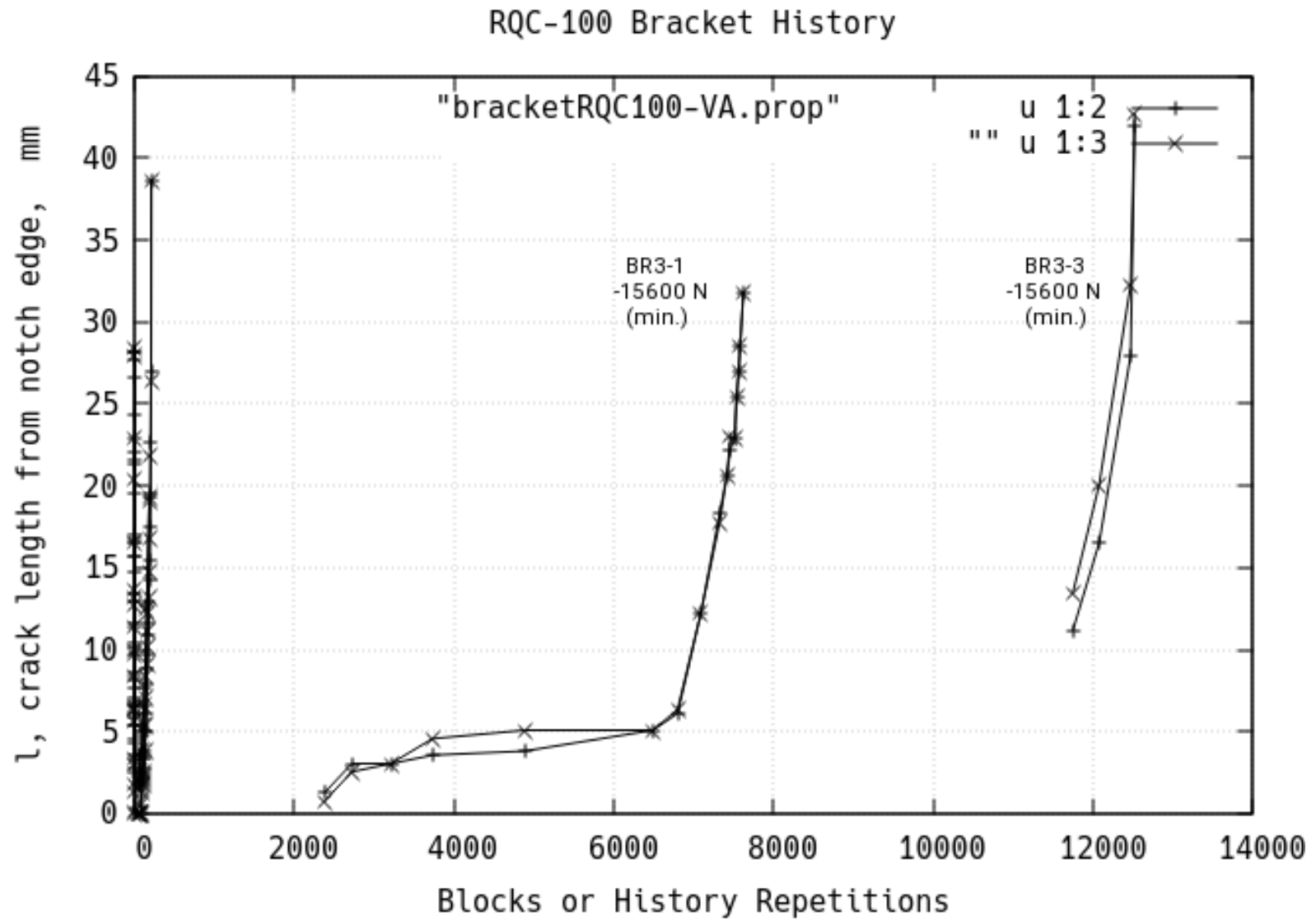


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RQC-100 Transmission History

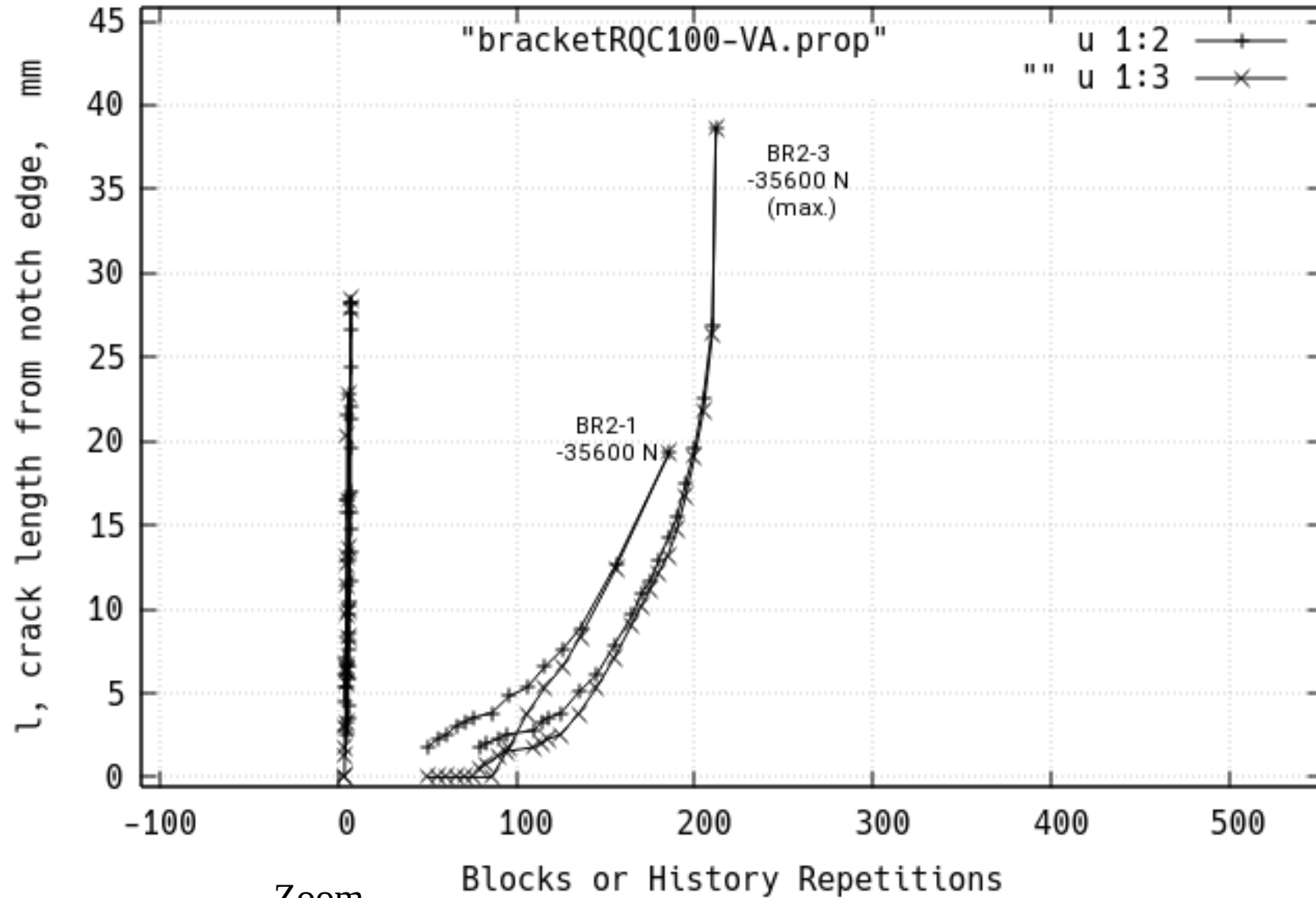


VA Crack Propagation Test results



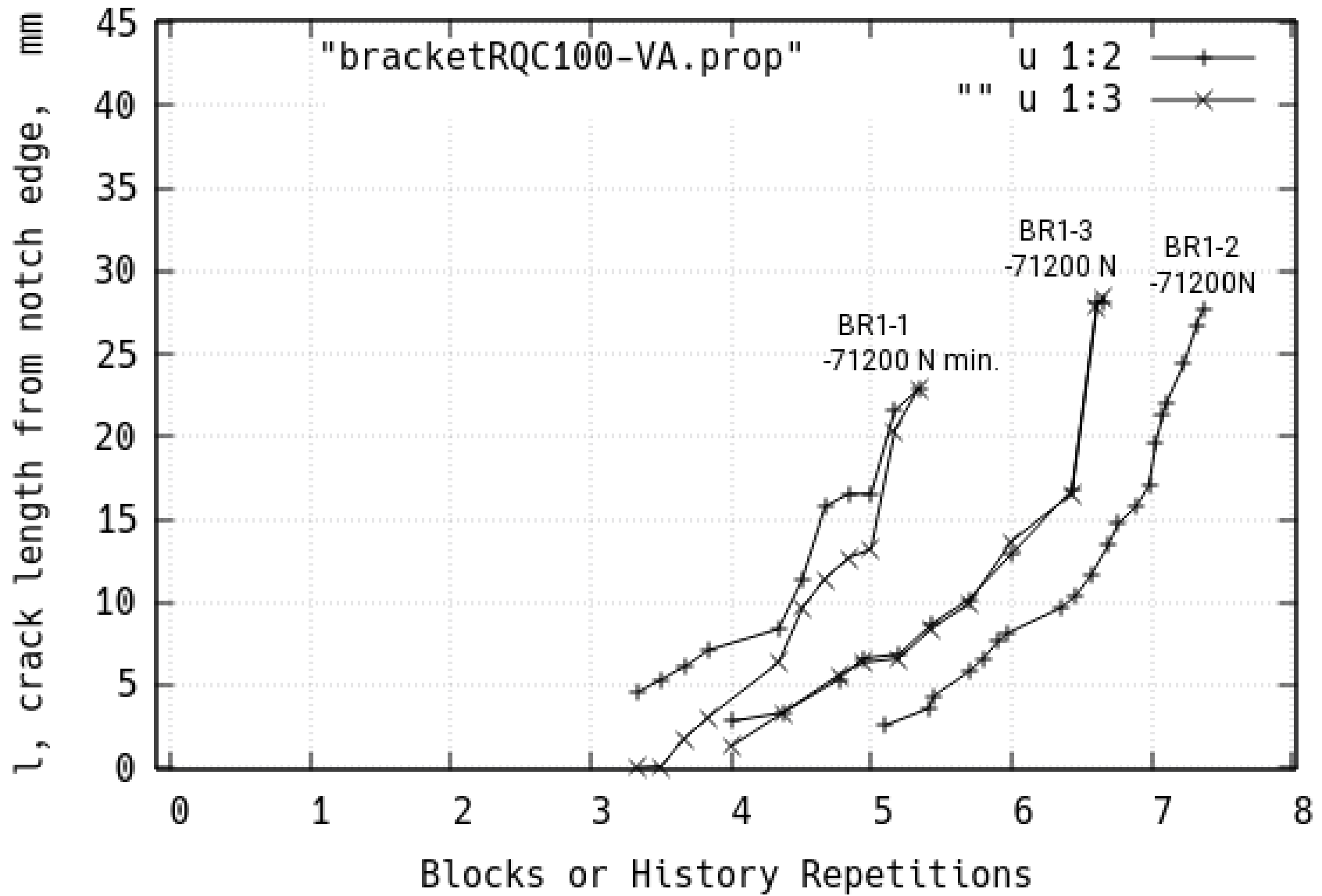
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RQC-100 Bracket History

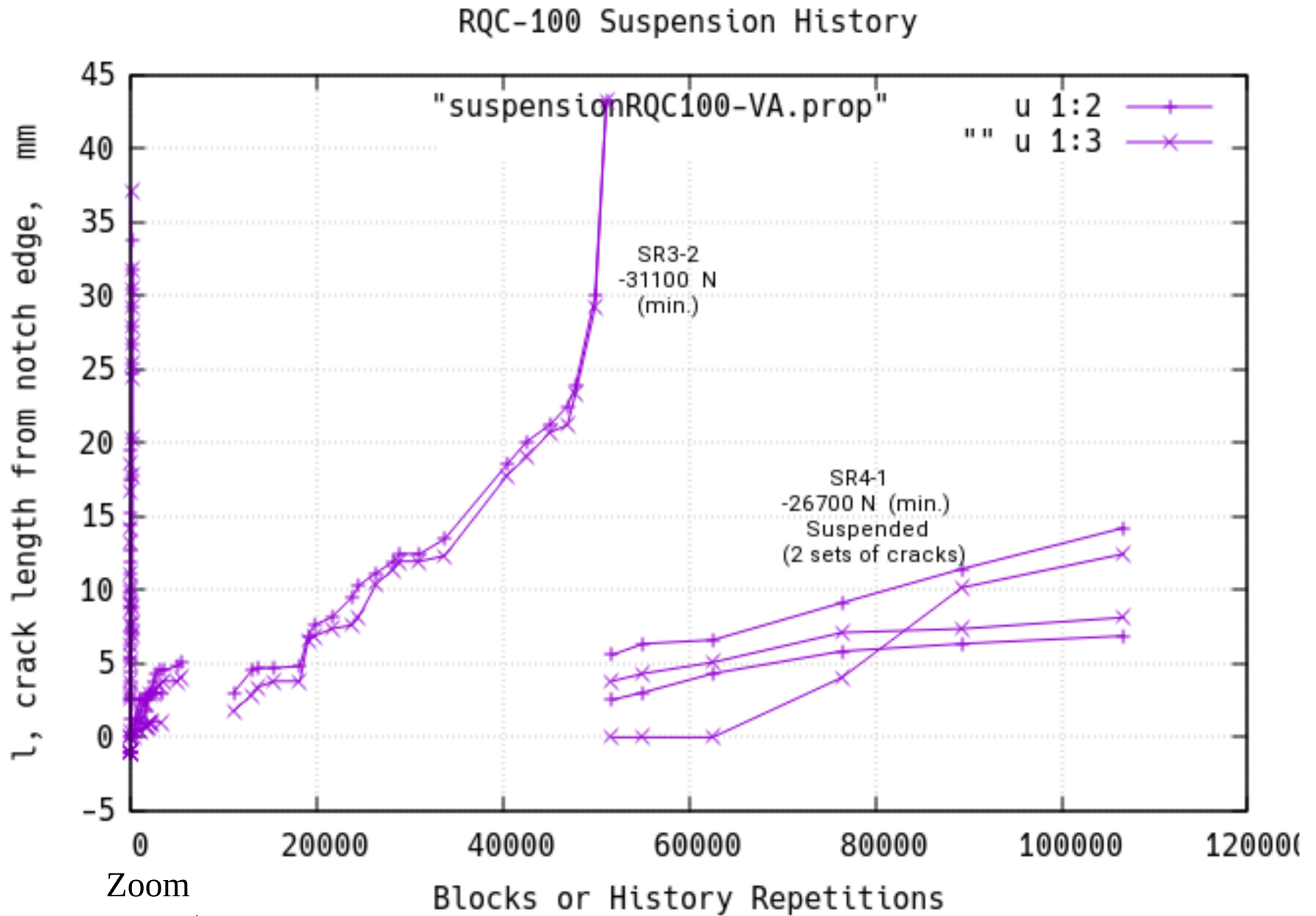


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RQC-100 Bracket History

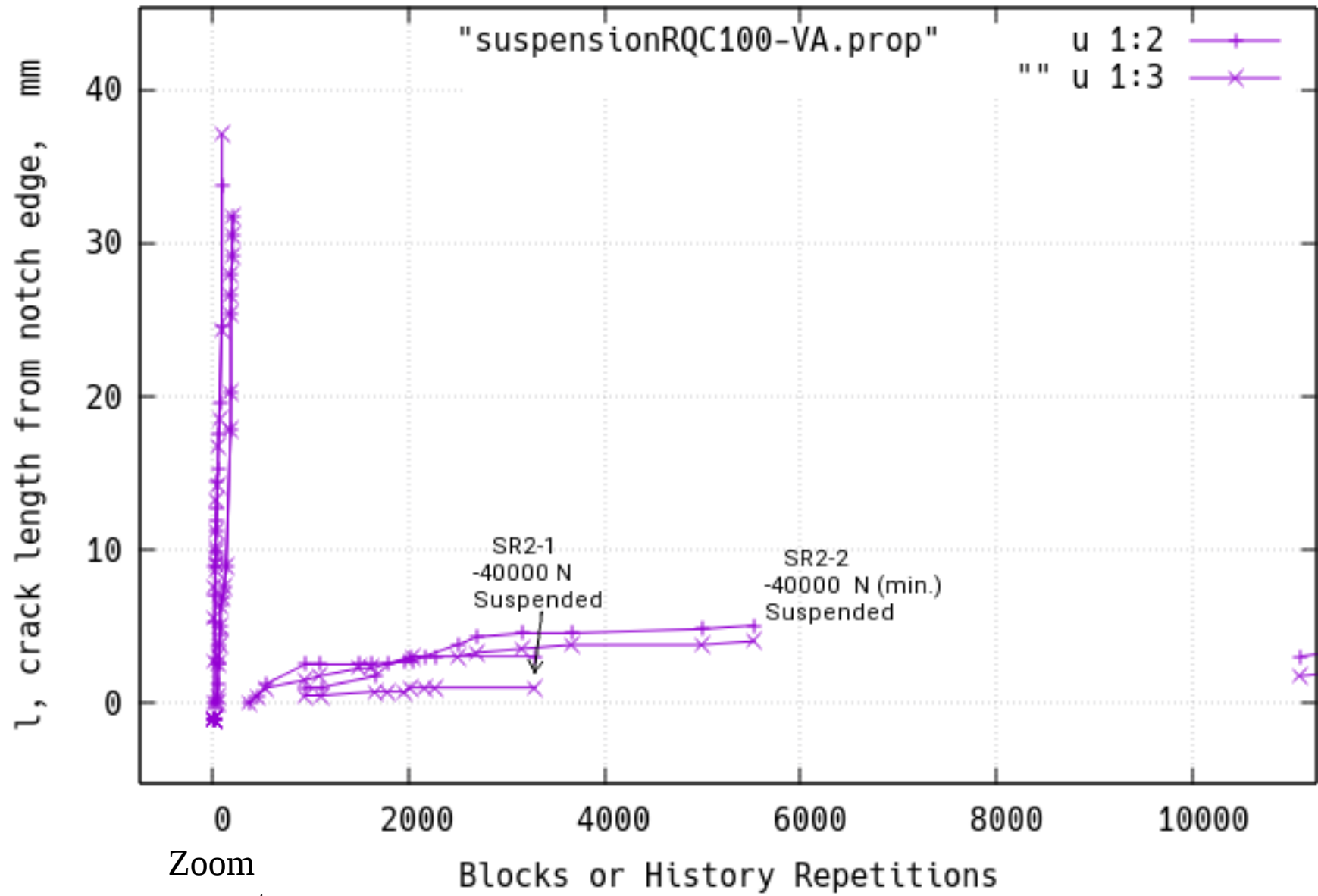


RQC-100 VA Crack Propagation Test results



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RQC-100 Suspension History



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RQC-100 Suspension History

