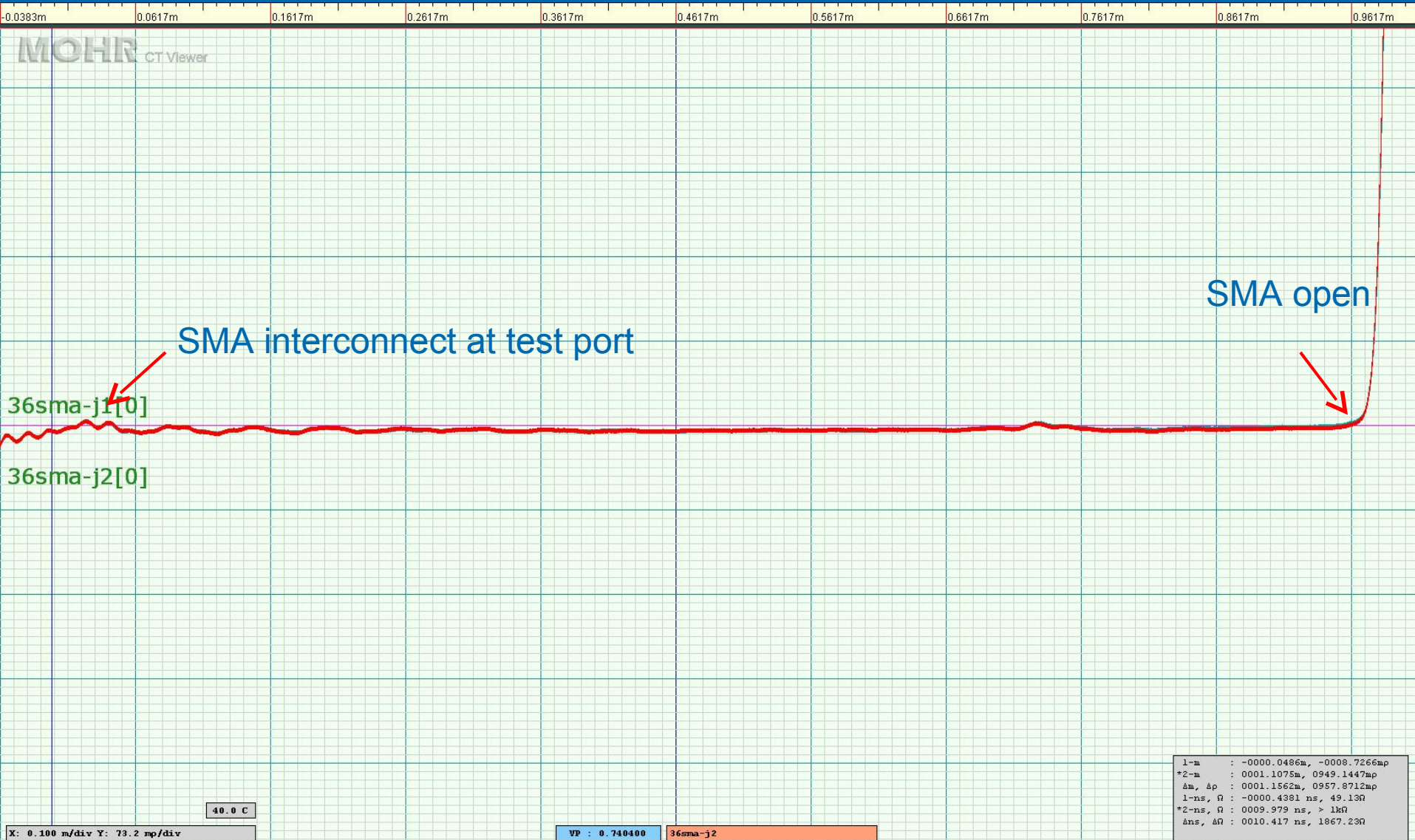


Mohr CT100 TDR and CT Viewer™
Cable and Interconnect Quality Control Example:

Interconnect Impedance Profile and Electrical Length
Variation in 50 Ohm SMA and BNC Cables

Cable A: precision 36 in. 50 Ohm SMA cable
X: 0.100 m/div, Y: 73.2 millirho/div



Cable A: 36 in. 50 Ohm SMA cable, tested from both ends
X: 0.100 m/div, Y: 73.2 millirho/div

-0.0397m 0.0603m 0.1603m 0.2603m 0.3603m 0.4603m 0.5603m 0.6603m 0.7603m 0.8603m 0.9603m

MOHR CT Viewer

SMA interconnect variation
(red forward test, blue reverse test)

36sma-k2[0]

36sma-k1[0]

40.0 C

X: 0.100 m/div Y: 73.2 mρ/div

VP : 0.740400

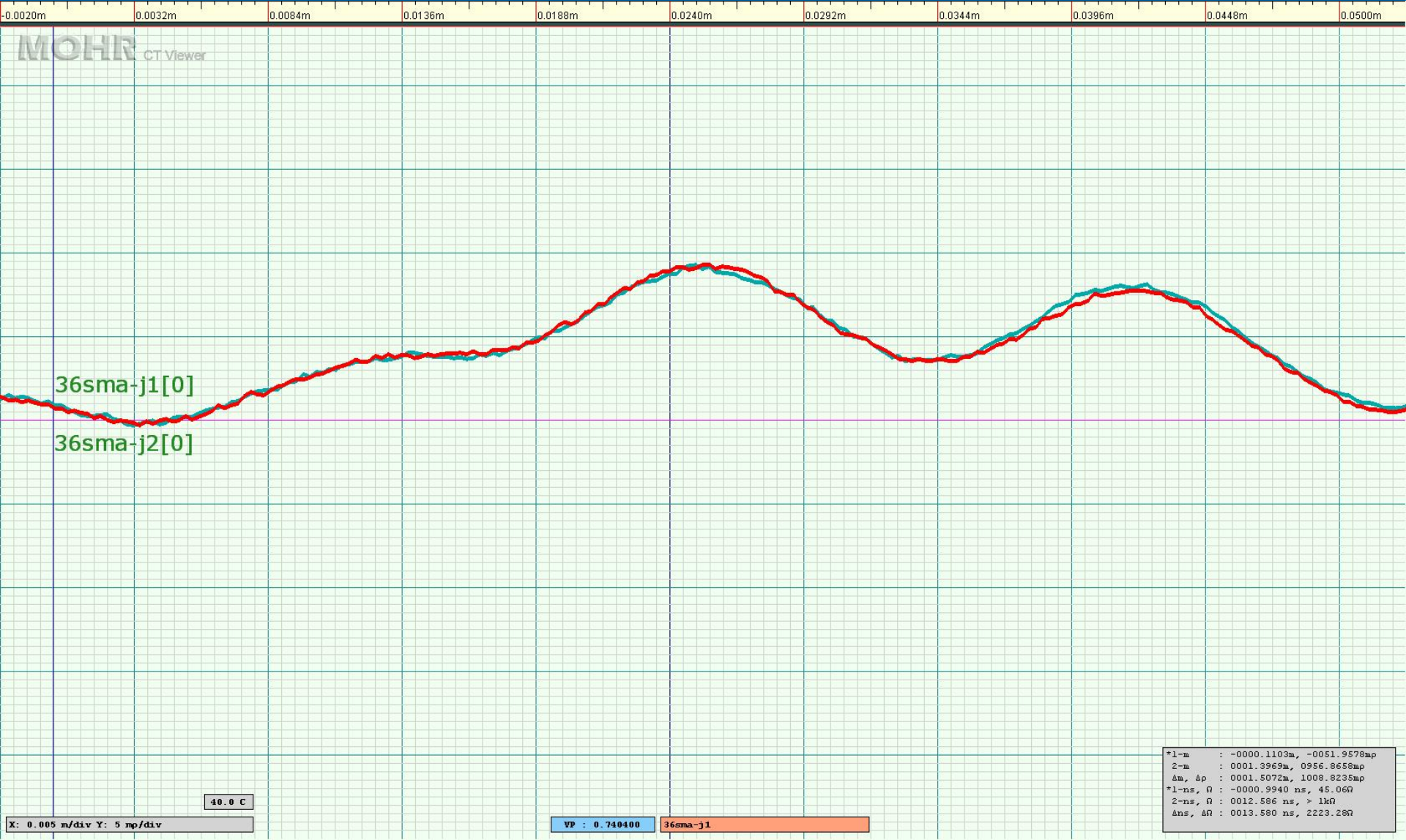
36sma-k1

*1-m	:	-0000.1103m	, -0052.3004mρ
2-m	:	0001.3969m	, 0956.3735mρ
Δm, Δρ	:	0001.5072m	, 1008.6739mρ
*1-ns, Ω	:	-0000.9940 ns	, 45.03Ω
2-ns, Ω	:	0012.586 ns	, > 1kΩ
Δns, ΔΩ	:	0013.580 ns	, 2197.16Ω

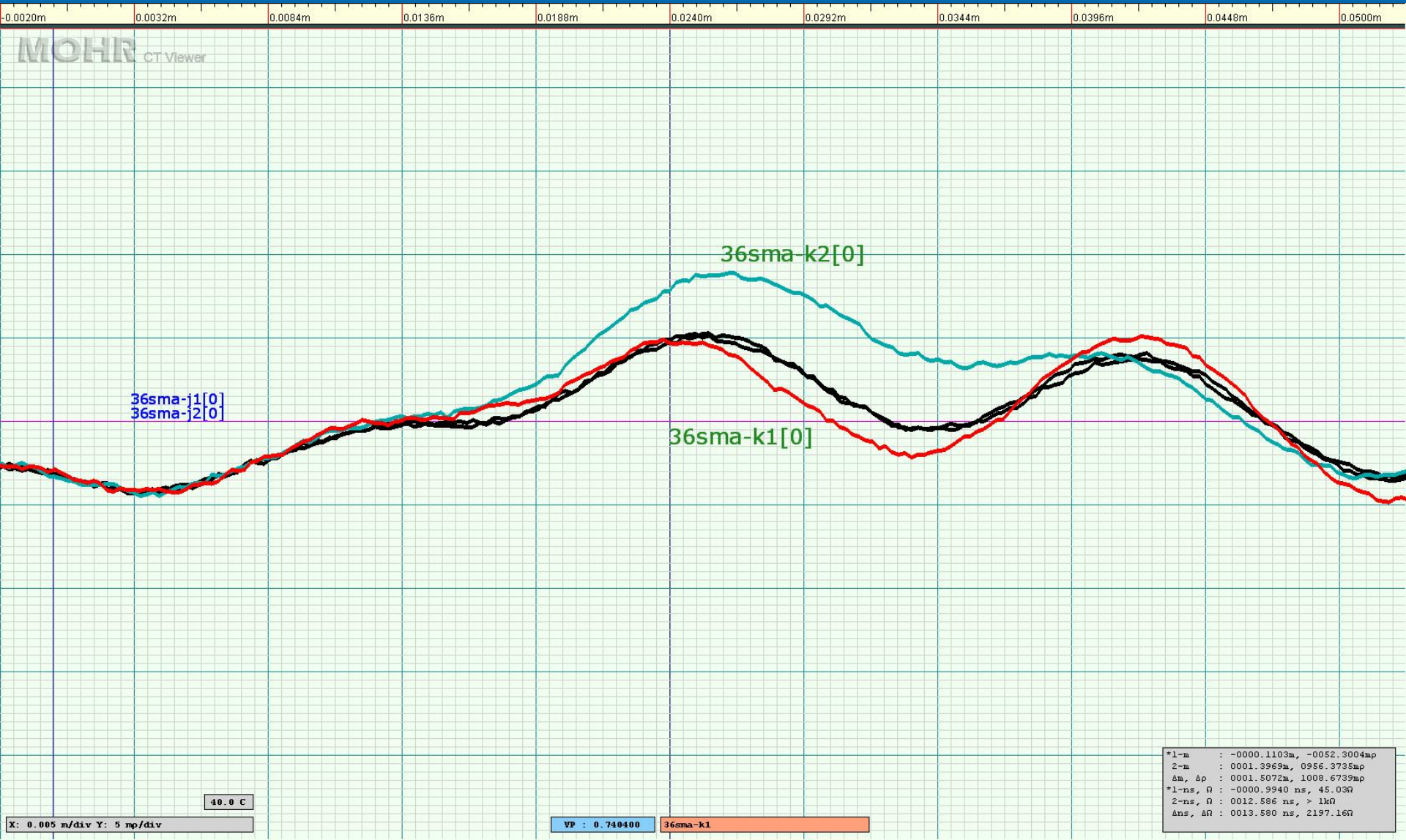
Cable A: 36 in. 50 Ohm SMA interconnects, detail comparison SMA interconnects show different impedance profiles X: 0.005 m/div, Y: 5 millirho/div



Cable B: Another 36 in. 50 Ohm SMA cable, interconnect detail
Essentially identical appearance of both interconnects
X: 0.005 m/div, Y: 5 millirho/div



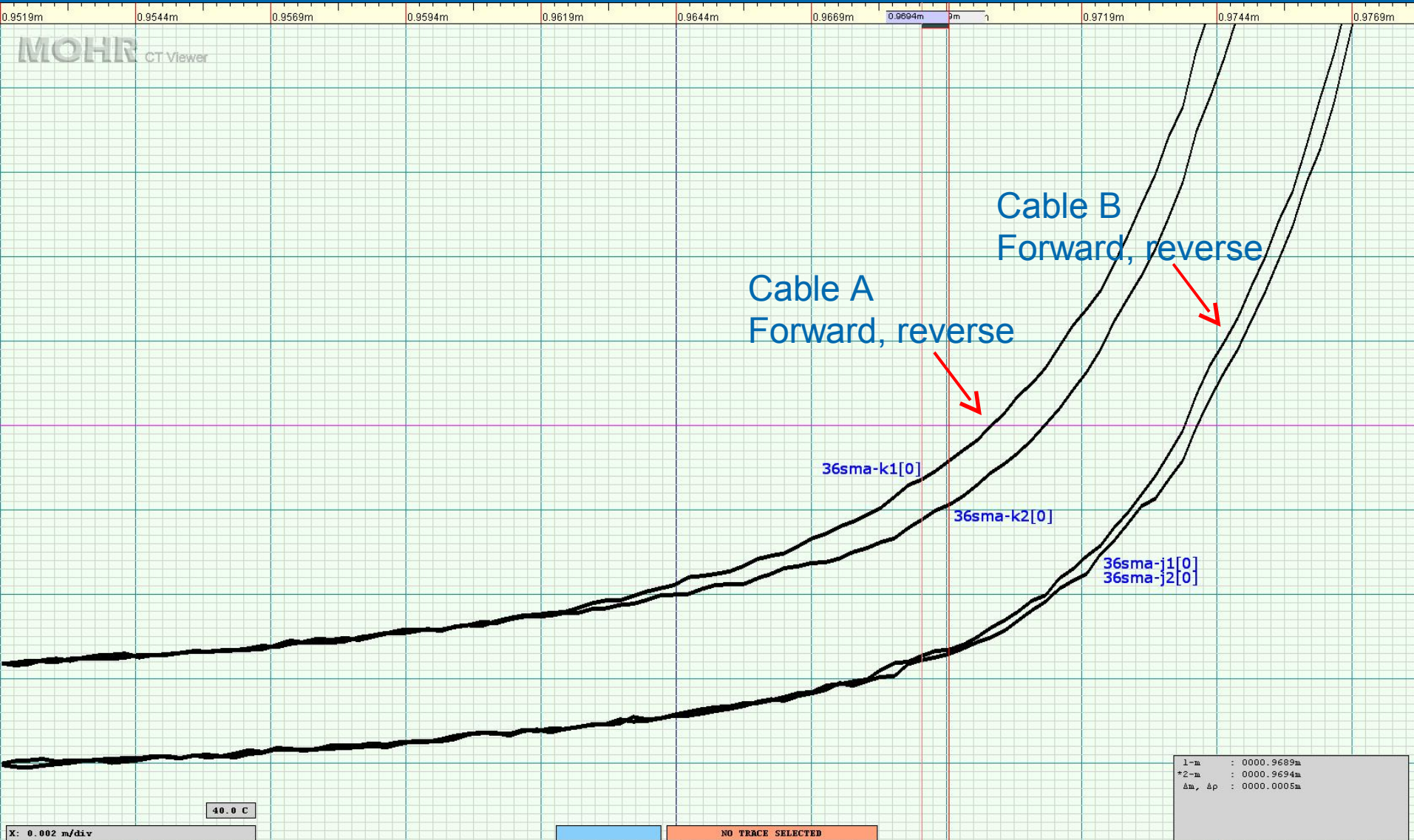
Comparison of Cable A (color traces) to Cable B (black traces)
Cable A shows much greater variation between cable ends
X: 0.005 m/div, Y: 5 millirho/div



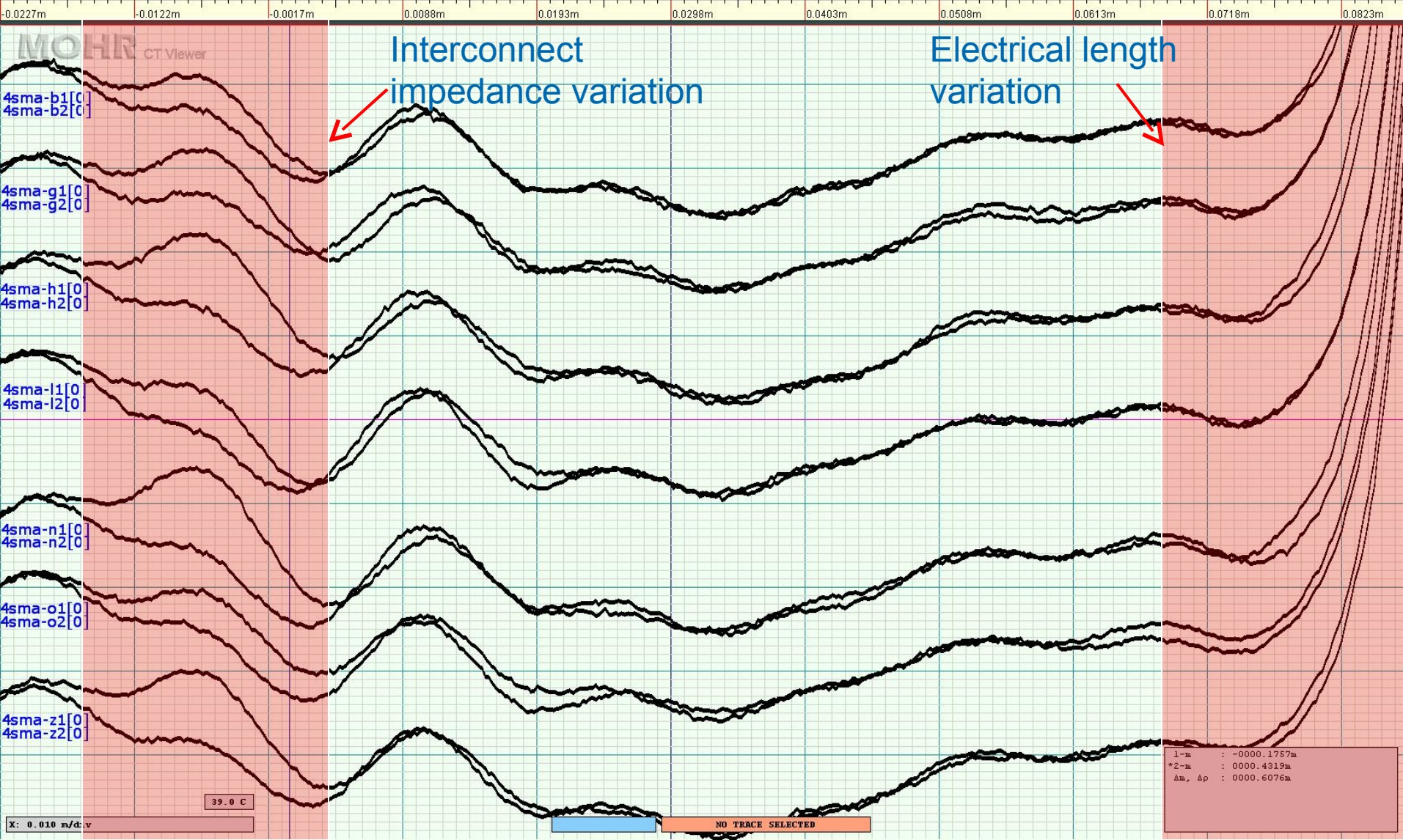
Cable A vs. Cable B: Electrical length measurements

Much greater variation in electrical length of cable A
due to interconnect impedance variation

X: 0.002 m/div



Several 50 Ohm SMA cables with interconnect defects
All show varying degrees of directional variation
X: 0.010 m/div



Manufacturing batch of 36 in. 50 Ohm BNC cables: Comparing electrical lengths of precision cables X: 0.004 m/div

