October 28, 1996

To: T. Sullivan
Nuclear Regulatory Commission

Subject: Byron Unit 1 1996 Cold Leg Inspection Results

During the exit meeting held on 10/25/95 for the NRC inspection of the Braidwood Unit 1 Steam Generator tube inspection M. Holmberg of NRC Region III requested that the Byron Unit 1 1996 cold leg inspection results be forwarded to you on 10/28/96. The information requested includes: the number of indications, description and voltages. The results of the inspection are provided in this letter.

Due to the increase in the number of Byron 1 TTS HL indications observed in the 1995 and 1996 inspections an inspection sample in the cold leg was performed. The scope of the inspection was as follows:

- A 20% inspection in 4 SG's was performed with the same inspection techniques as the hot leg inspection (+point, 0.115" & 0.080" Pancake Coils)
- Due to discovery of circumferential indications in SG C, inspection in that steam generator was expanded to 100%
- TTS Inspection Results
    - 2 volumetric (in 1 tube) and 3 circumferential indications found in SG C

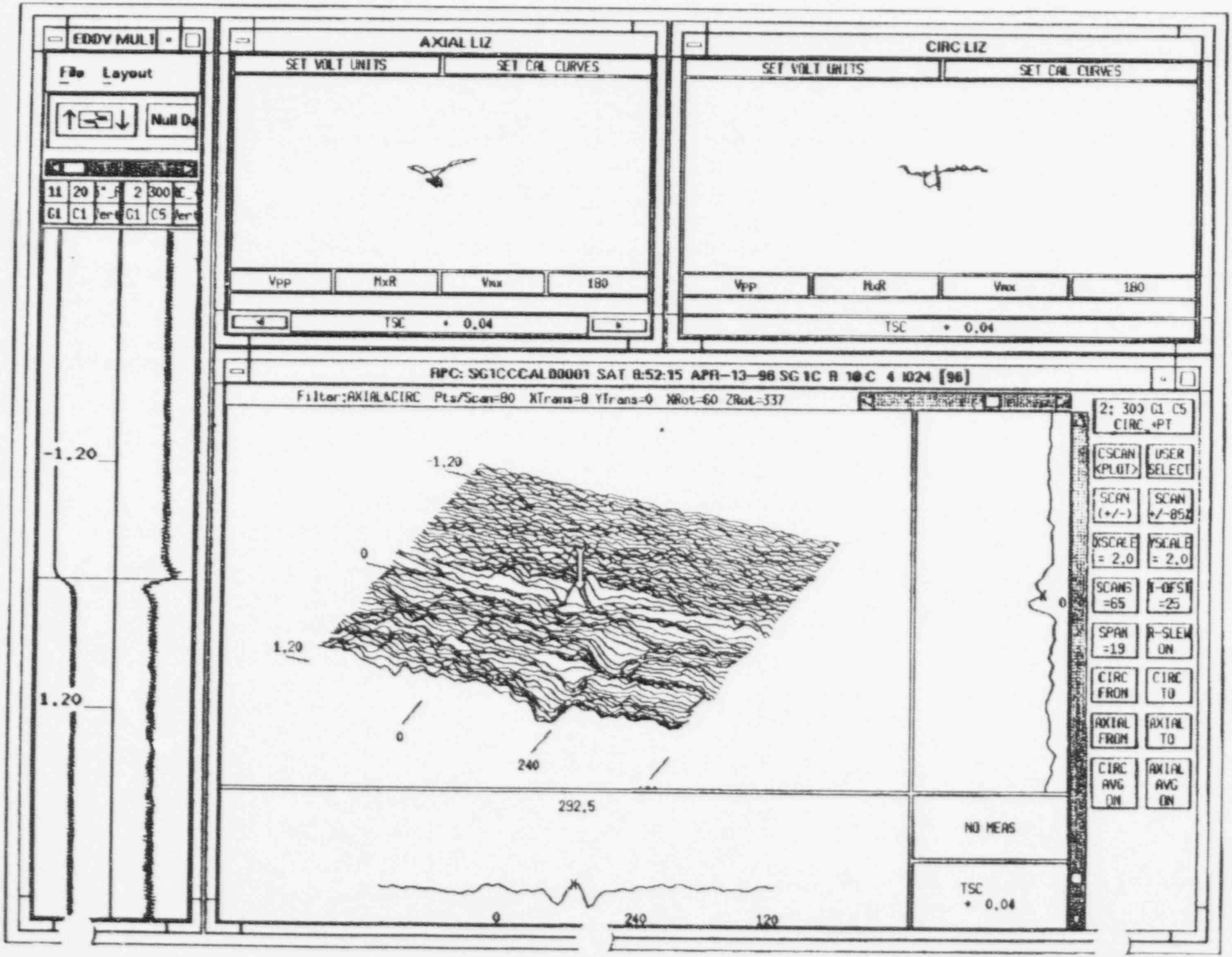
The attached table provides a summary of the TTS indications detected and repaired during the Byron Unit 1 TTS CL inspection

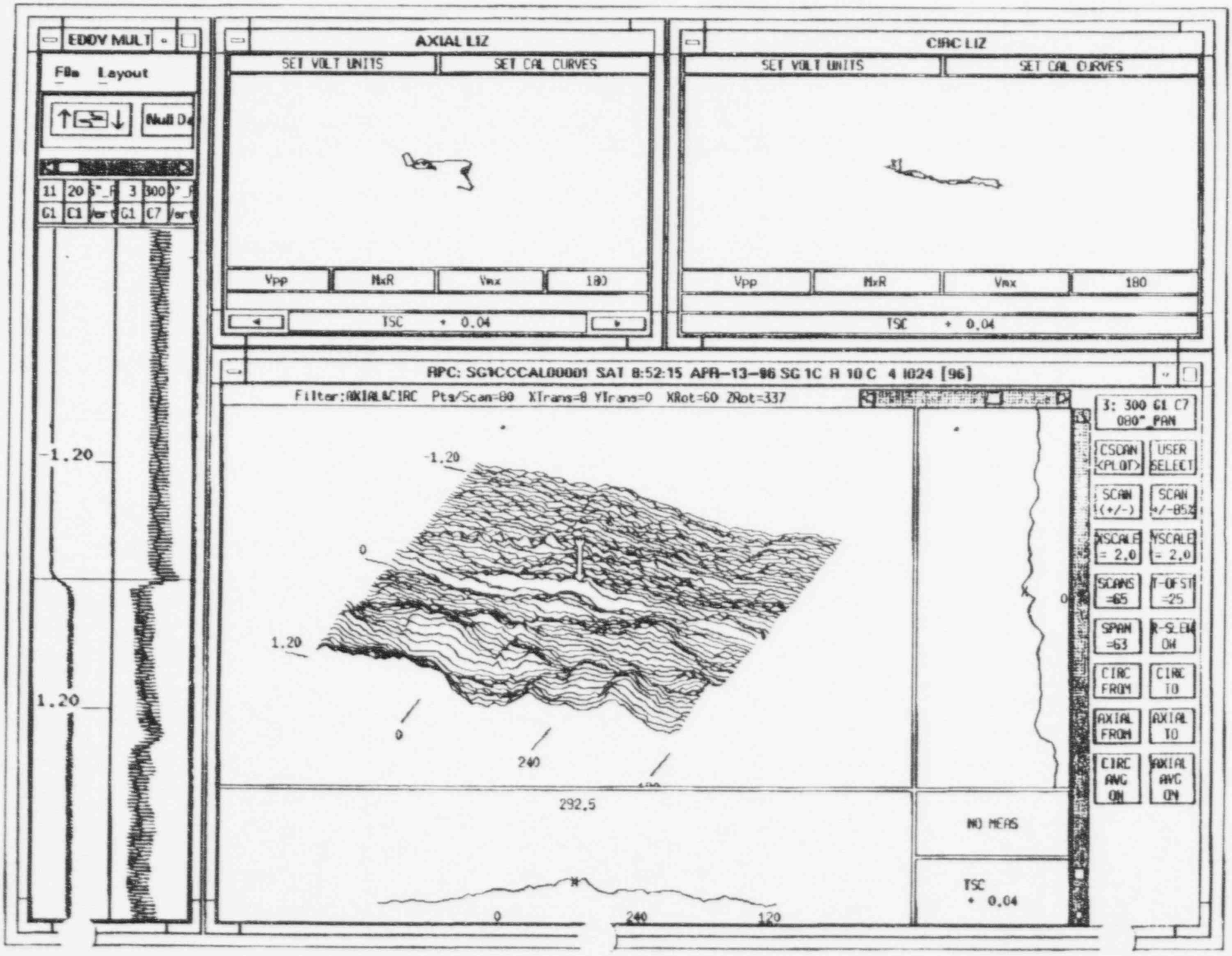
Based upon the size and number of Byron indications, the predicted number of Braidwood indications, ComEd guidelines and EPRI guidelines, the decision was made to inspect the Braidwood cold leg during the 1997 refuel outage if the number of indications exceeds C-3 during the midcycle outage.

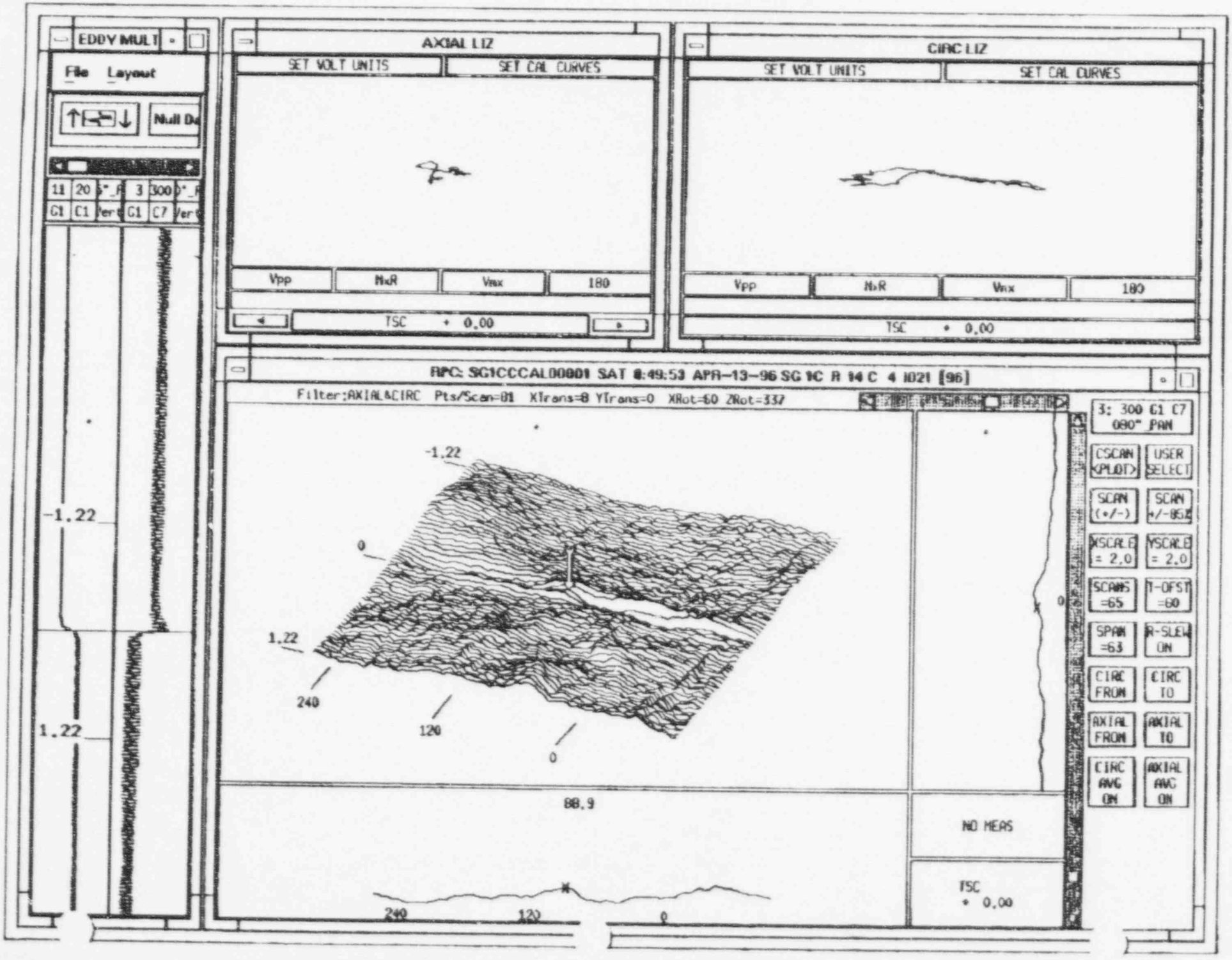
Byron Unit 1 1996 Cold Leg Inspection Indication Sizing

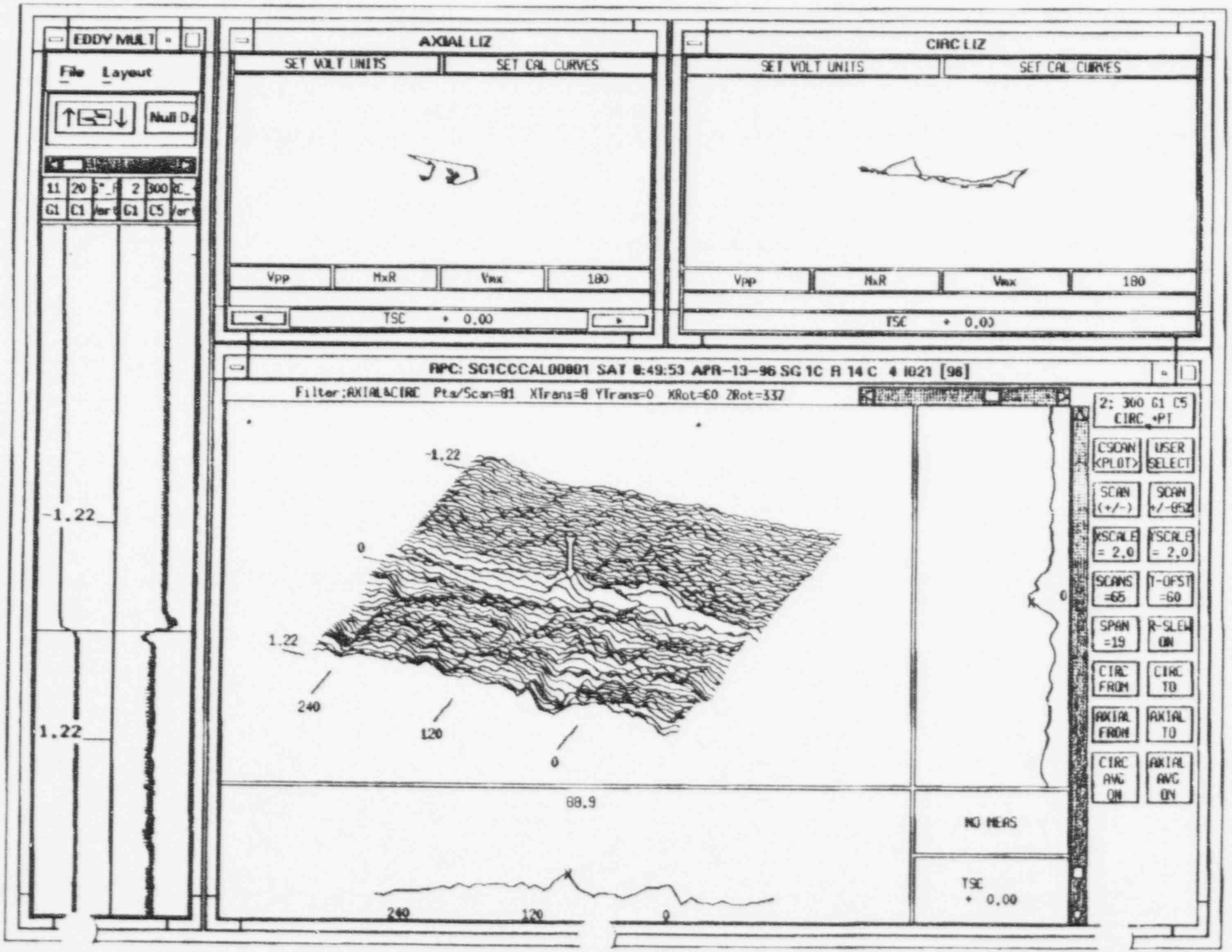
Row	Col	Ind	Plus Point			0.080" RPC	
			Max Volts	Avg Volts	Arc	Max Volts	Avg Volts
SG C							
10	4	MCI	0.39	0.19	23	0.45	0.22
14	4	MCI	0.96	0.68	36	NDD	NDD
23	10	SCI	1.04	0.22	40	0.71	0.13
14	5	SVI	0.5	0.1	36	0.41	0.19
14	5	SVI	0.43	0.12	32	0.54	0.26

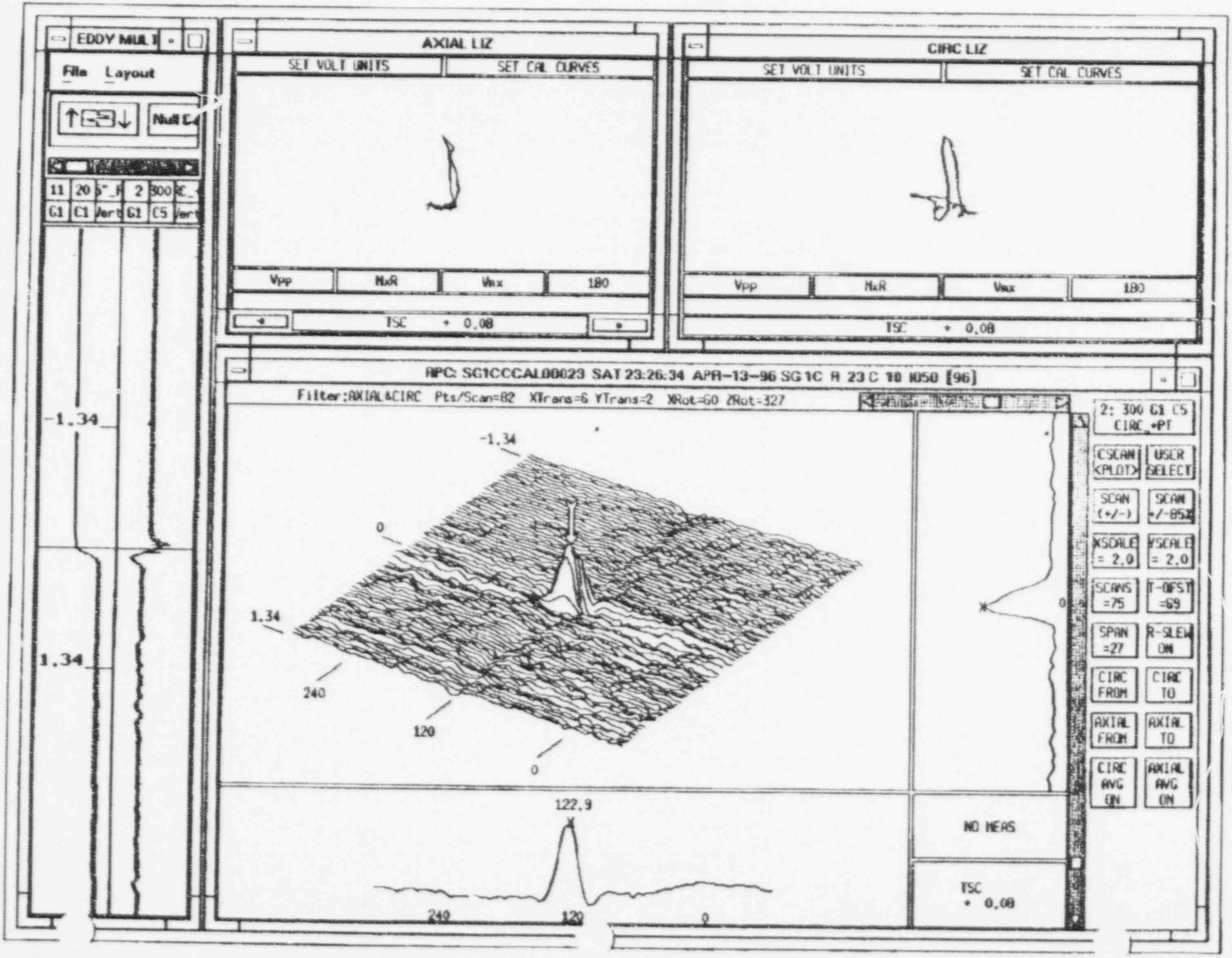
MCI = multiple circumferential indication
SCI = single circumferential indication
SVI = single volumetric indication

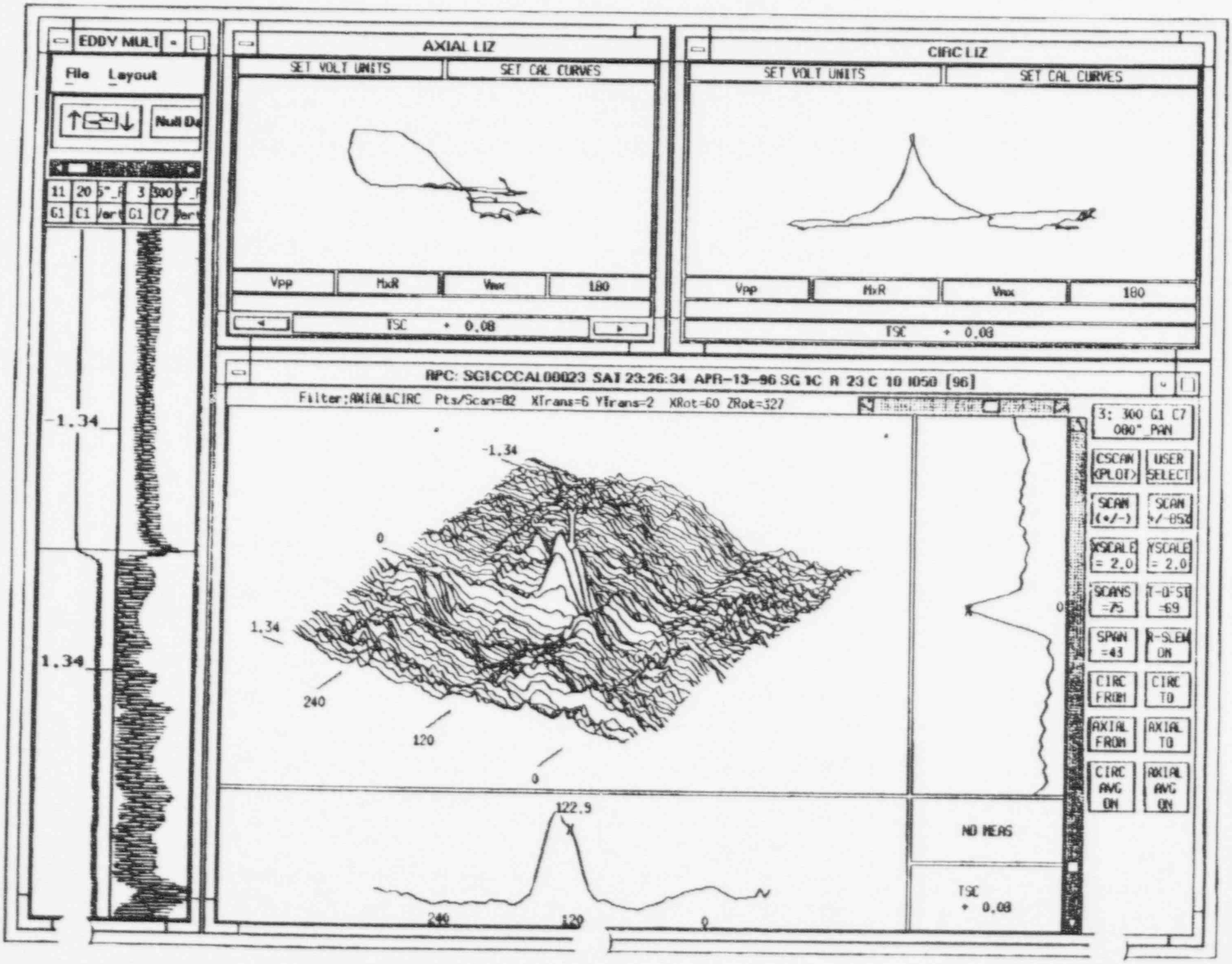

EDDY MULT
File Layout
Null Dg
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC • 0.04
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC • 0.04
RPC: SG1CCCAL00001 SAT 8:52:15 APR-13-96 SG 1C A 10 C 4 1024 [96]
Filter:AXIAL&CIRC Pts/Scan=80 XTrans=0 YTrans=0 XRot=60 ZRot=337
-1.20
1.20
0
240
292.5
2: 300 G1 C5
CIRC +PT
CSCAN <PLOT>
USER SELECT
SCAN (+/-)
SCAN +/-85
XSCALE = 2.0
YSCALE = 2.0
SCANS =65
X-OFST =25
SPAN =19
X-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
NO MEAS
TSC
• 0.04
120

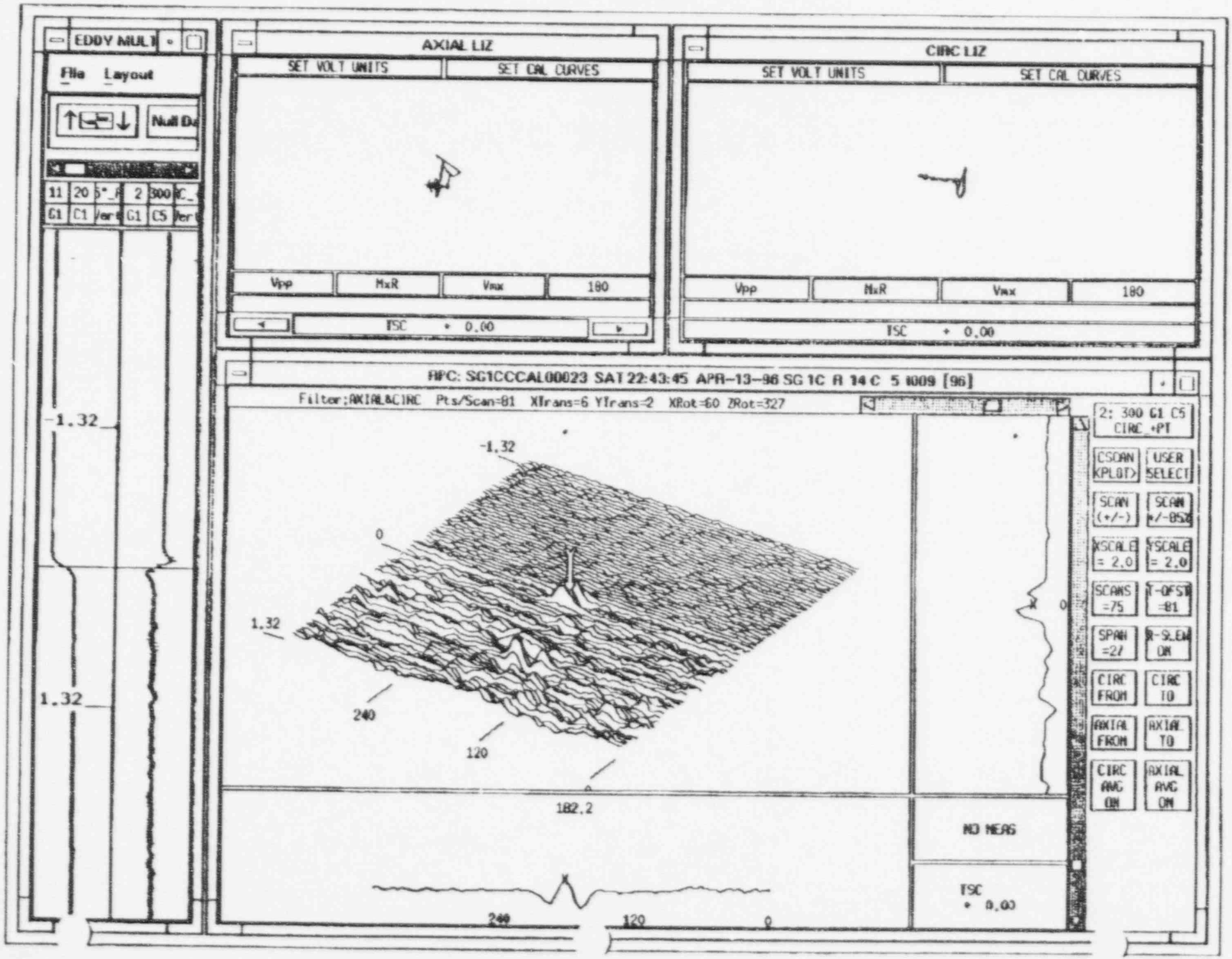

EDDY MULT
File Layout
Null D
11 20 3 300
G1 C1 G1 C7
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.04
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.04
RPC: SG1CCCAL00001 SAT 8:52:15 APR-13-96 SG 1C R 10 C 4 1024 [96]
Filter:AXIAL&CIRC Pts/Scan=80 XTrans=8 YTrans=0 XRot=60 ZRot=337
-1.20
1.20
0
240
292.5
3: 300 G1 C7
080" PAN
CSCAN <PLOT>
USER SELECT
SCAN (+/-)
SCAN +/-85
XSCALE = 2.0
YSCALE = 2.0
SCANS =65
T-OFST =25
SPAN =63
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
NO MEAS
TSC + 0.04

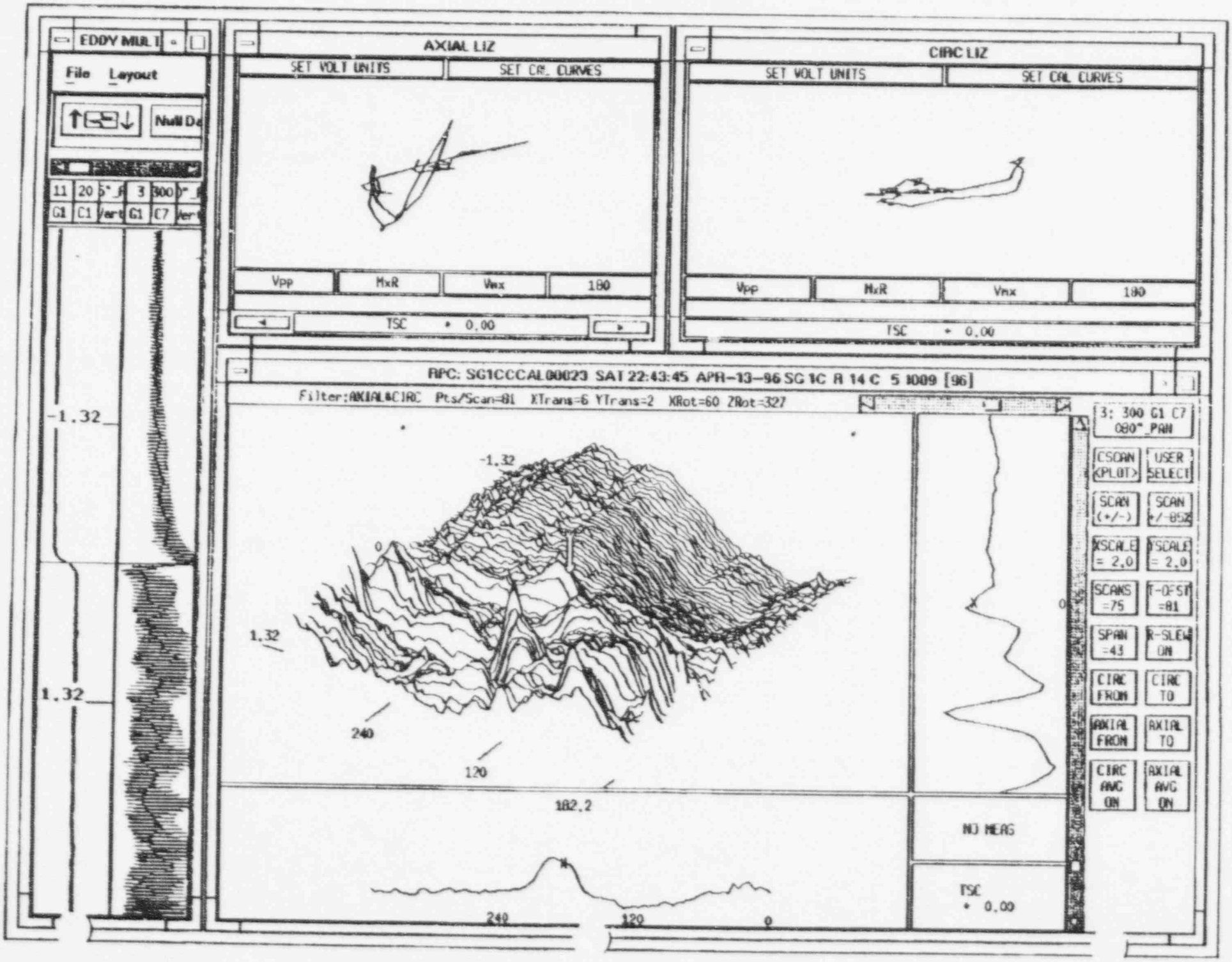


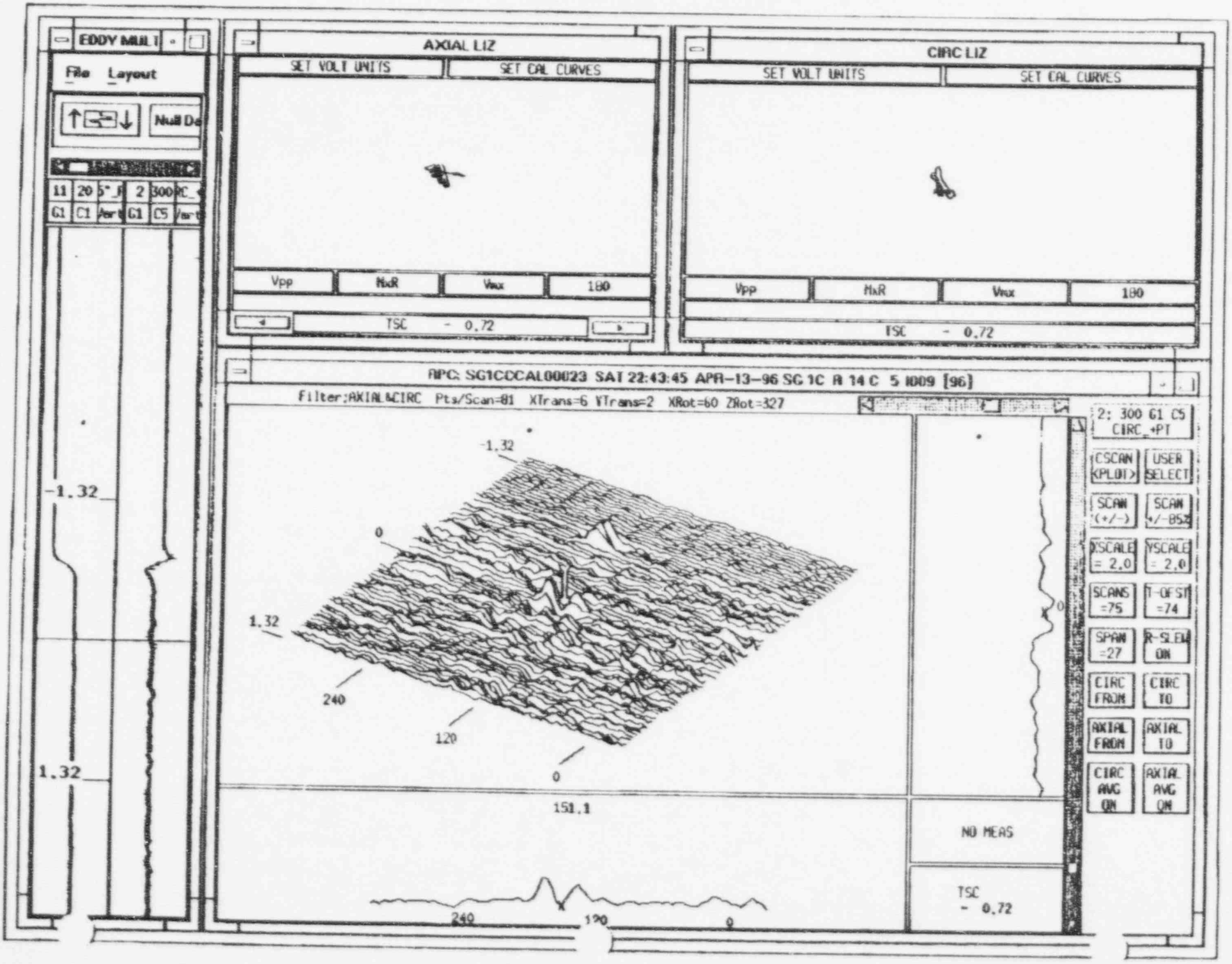


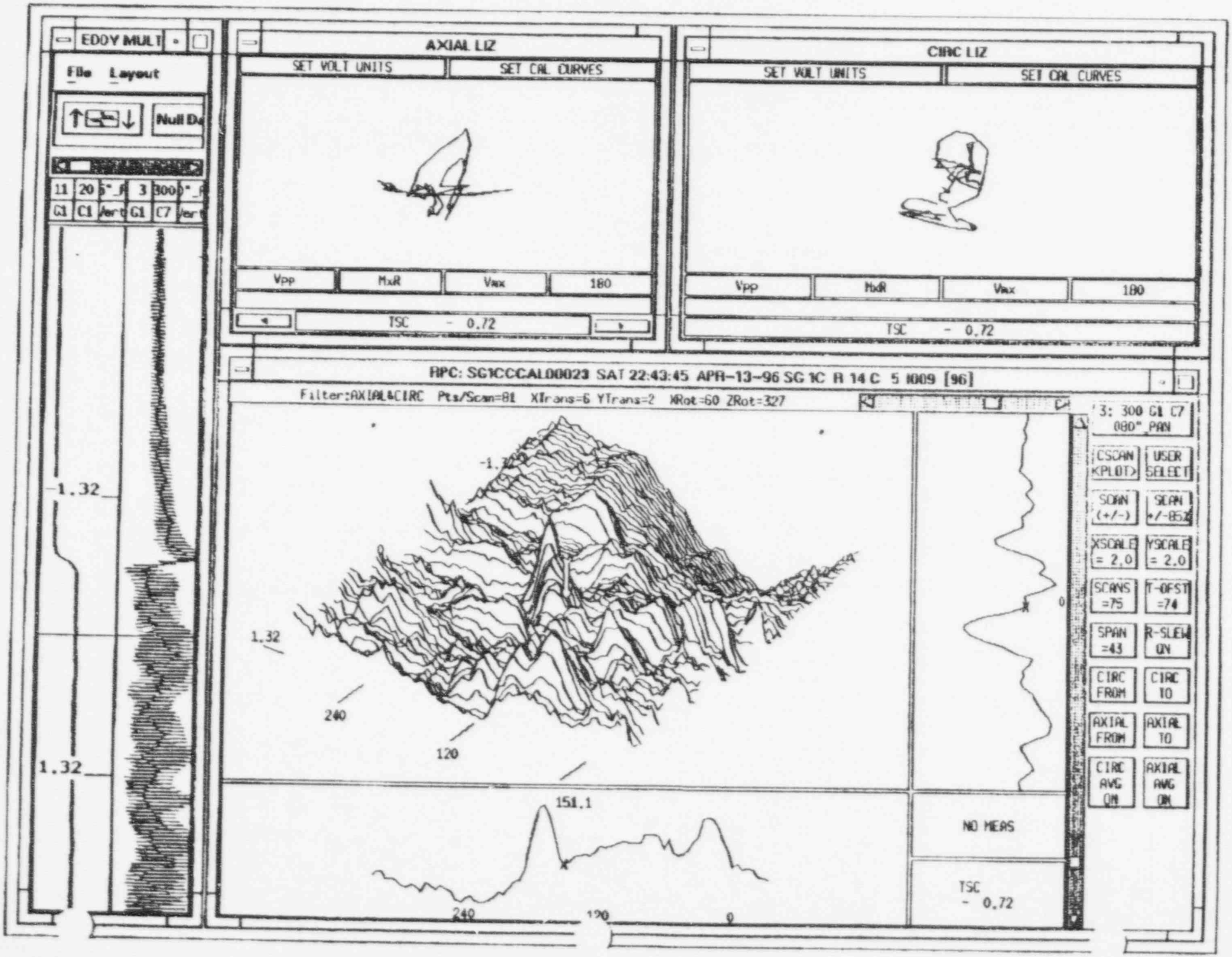

EDDY MUL T
File Layout
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.08
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.08
APC: SG1CCCAL00023 SAT 23:26:34 APR-13-96 SG 1C A 23 C 18 1050 [96]
Filter:AXIAL&CIRC Pts/Scan=82 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.34
1.34
0
240
120
0
122.9
240
120
0
2: 300 G1 C5
CIRC *PT
CSCAN <PLOT>
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =75
T-OFST =69
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
NO MEAS
TSC
+ 0.08


EDDY MULT
File Layout
Null De
11 20 5"_A 3 300 5"_A
G1 C1 Vert G1 C7 Vert
-1.34
1.34
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.08
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.08
RPC: SG1CCCAL00023 SAT 23:26:34 APR-13-96 SG 1C R 23 C 10 1050 [96]
Filter:AXIAL&CIRC Pts/Scan=82 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.34
0
1.34
240
120
0
122.9
240
120
0
3: 300 G1 C7
080°_PAN
CSCAN (PLOT)
USER SELECT
SCAN (+/-)
SCAN +/-852
XSCALE = 2.0
YSCALE = 2.0
SCANS =75
T-OFST =69
SPAN =43
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
NO MEAS
TSC + 0.08


EDDY MULTI
File Layout
Null Da
11 20 5" 2 300 RC
G1 C1 Ver G1 C5 Ver
1.32
1.32
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.00
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.00
RPC: SG1CCCAL00023 SAT 22:43:45 APR-13-96 SG 1C R 14 C 5 0009 [96]
Filter;AXIAL&CIRC Pts/Scan=81 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.32
0
1.32
240
120
182.2
240
120
0
2: 300 G1 C5
CIRC +PT
CSCAN
KPLOT
USER
SELECT
SCAN
(+/-)
SCAN
+/-85
XSCALE
= 2.0
YSCALE
= 2.0
SCANS
=75
Y-OFST
=81
SPAN
=27
X-SLEW
ON
CIRC
FROM
CIRC
TO
AXIAL
FROM
AXIAL
TO
CIRC
AVG
ON
AXIAL
AVG
ON
NO MEAS
TSC
+ 0.00


EDDY MULTI
File Layout
Null De
11 20 5" 3 300 0"
G1 C1 Vert G1 C7 Ver
-1.32
1.32
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.00
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC + 0.00
RPC: SG1CCCAL00023 SAT 22:43:45 APR-13-96 SG 1C A 14 C 5 1009 [96]
Filter:AXIAL&CIRC Pts/Scan=81 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.32
0
1.32
240
120
182.2
240
120
0
3: 300 G1 C7
080° PAN
CSCAN <PLOT>
USER SELECT
SCAN (+/-)
SCAN +/-852
XSCALE = 2.0
YSCALE = 2.0
SCANS =75
T-OFST =81
SPAN =43
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
NO MEAS
TSC + 0.00


EDDY MULT
File Layout
Null De
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC - 0.72
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vmx
180
TSC - 0.72
APC: SG1CDCAL00023 SAT 22:43:45 APR-13-96 SG 1C R 14 C 5 1009 [96]
Filter:AXIAL&CIRC Pts/Scan=81 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.32
0
1.32
240
120
0
2: 300 G1 C5
CIRC +PT
CSCAN <PLOT>
USER SELECT
SCAN (+/-)
SCAN +/-852
XSCALE = 2.0
YSCALE = 2.0
SCANS =75
T-OFST =74
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON
151.1
NO MEAS
TSC - 0.72
240
120
0
-1.32
1.32


EDDY MULT
File Layout
Null Da
11 20 5" 3 300 5"
C1 C1 Vert C1 C7 Ver
-1.32
1.32
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vax
180
TSC - 0.72
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp
MxR
Vax
180
TSC - 0.72
RPC: SG1CCCAL00023 SAT 22:43:45 APR-13-96 SG 1C R 14 C 5 1009 [96]
Filter:AXIAL&CIRC Pts/Scan=81 XTrans=6 YTrans=2 XRot=60 ZRot=327
-1.32
1.32
240
120
0
151.1
240
120
0
NO MEAS
TSC
- 0.72
3: 300 C1 C7
080" PAN
CSCAN KPLOT>
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =75
T-OFST =74
SPAN =43
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO
CIRC AVG ON
AXIAL AVG ON