3 - Receiver SASW Data Sheet

Project : Vogtle

Data Sheet # : SA4 #1

Location : A (SA4 #1)

Disk # : SA4 #1

Date/(Time) : Jan 1 24/2008 (9 AM :00 ~ :)

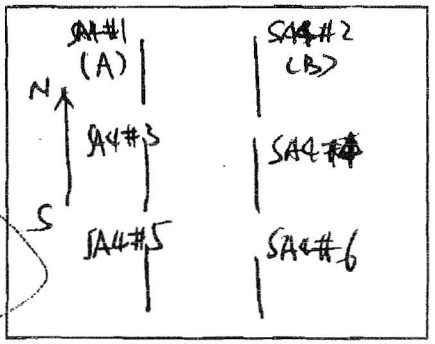
elev :

Personnel : Stokoe, Yuan, Munjae

Recorded by : Yuan

Checked by : Munjae

Sketch



R1 I.D. : UT07-4.5Hz-04, GEC 92003 Near
R2 I.D. : UT07-4.5Hz-02 GEC 92002 Mid
R3 I.D. : UT07-4.5Hz-03 GEC 92001 Far

Same for all sites

Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
1	1	2	For	Rev	small hammer	4A1	0 ~ 800	hammer on plate
1	1	2	For	Rev	"	4A2	0 ~ 800	"
1	1	2	For	Rev	"	4A3	0 ~ 800	hammer on hammer
1	1	2	For	Rev	"	4A4	0 ~ 800	"
3	3	6	For	Rev	med hammer	4A5	0 ~ 400	hammer on plate
3	3	6	For	Rev	"	4A6	0 ~ 400	"
9	9	18	For	Rev	sledge hammer	4A7	0 ~ 200	hammer on plate
9	9	18	For	Rev	"	4A8	0 ~ 100	" , last hit on soil
1	1	2	For	Rev	small hammer	4A9	0 ~ 800	, hammer on plate, very soft hit
1	1	2	For	Rev	"	A10	0 ~ 800	" "
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

University of Texas at Austin

3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #7

Location : G (SA4 #7)

Disk # : SA4 #7

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Yuan, Minjae

Recorded by : Yuan

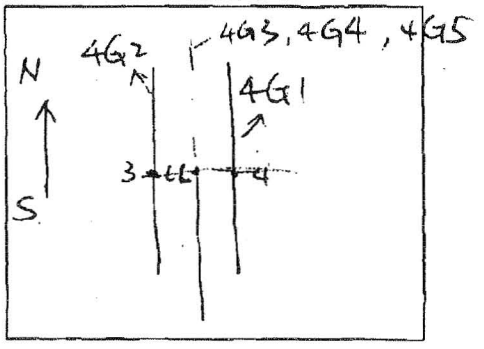
Checked by : Minjae

R1 I.D. : UT07-4.5Hz-04, GEC92003

R2 I.D. : UT07-4.5Hz-02, GEC92002

R3 I.D. : UT07-4.5Hz-03, GEC92001

Sketch



Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
15	15	30	For	Rev	bulldozer	4G1	0 ~ 100	
15	15	30	For	Rev	"	4G2	0 - 100	
25	25	25	For	Rev	"	4G3	0 ~ 100	
50	50	—	For	Rev	"	4G4	0 - 100	
100	100	—	For	Rev	"	4G5	0 - 50	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

° Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

University of Texas at Austin

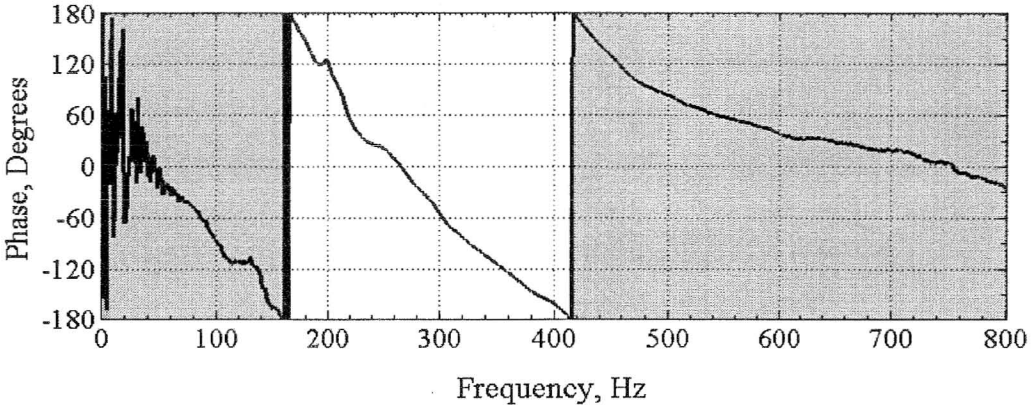


Figure T.1 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4A1_F_21.DAT)

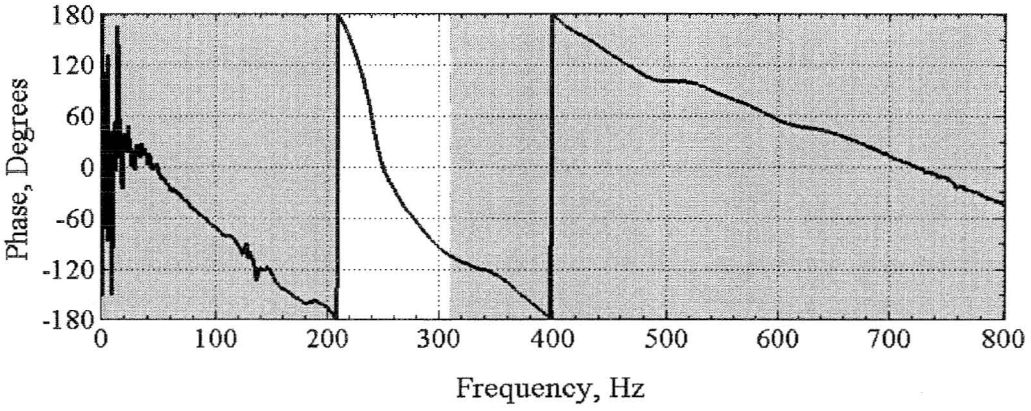


Figure T.2 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4A2_F_21.DAT)

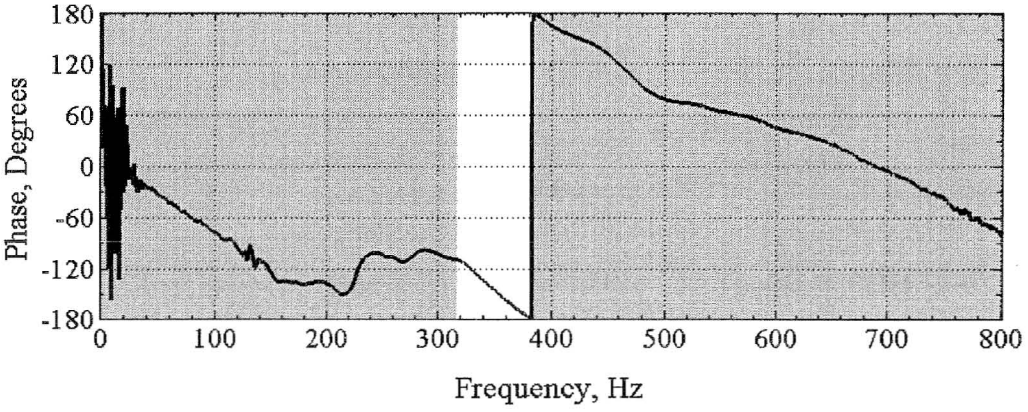


Figure T.3 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4A3_F_21.DAT)

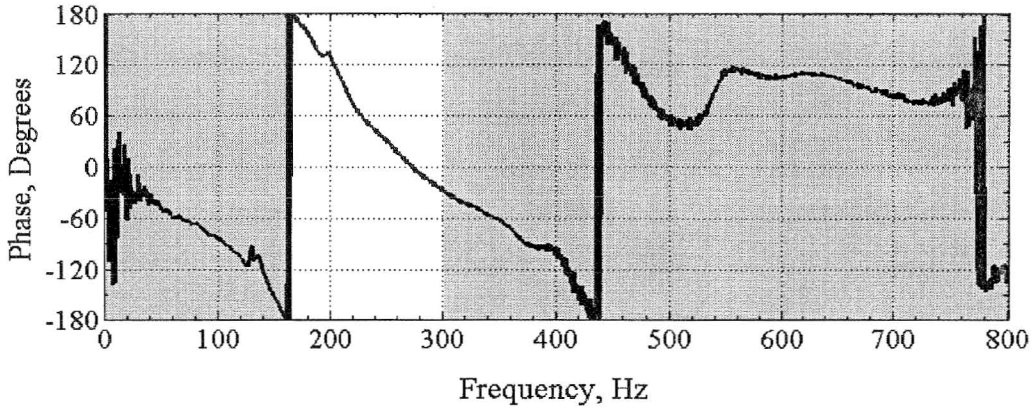


Figure T.4 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4A4_F_21.DAT)

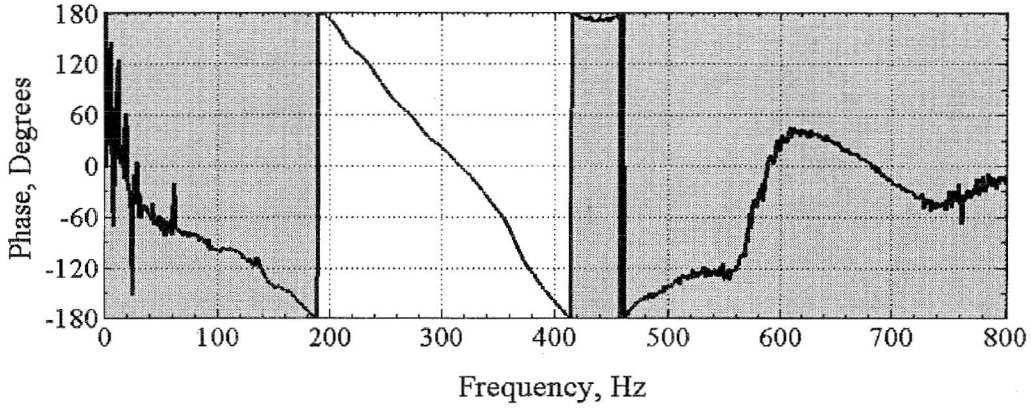


Figure T.5 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4A9_F_21.DAT)

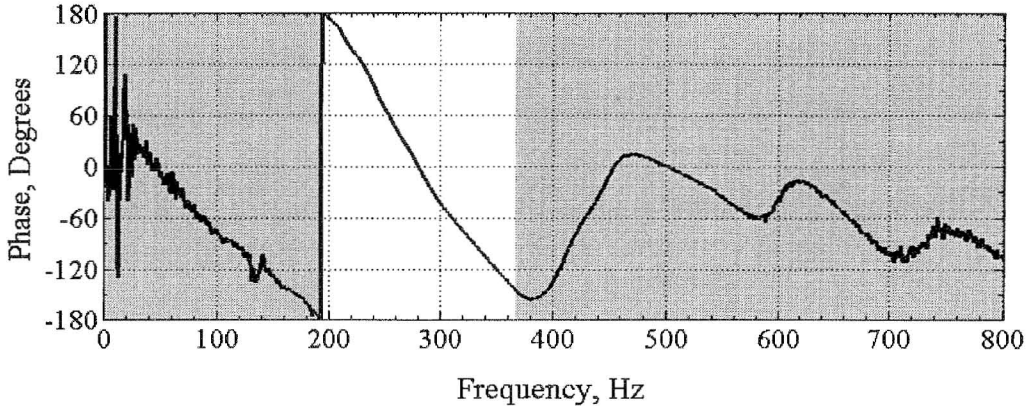


Figure T.6 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (A10_F_21.DAT)

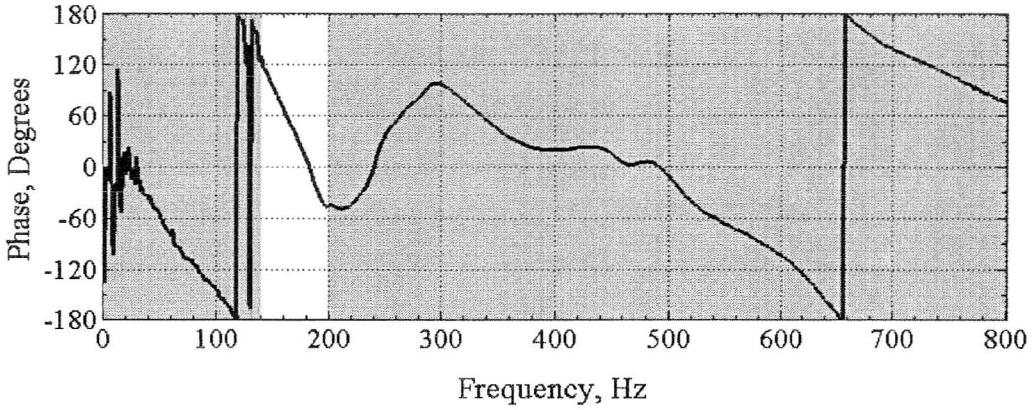


Figure T.7 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4A2_F_43.DAT)

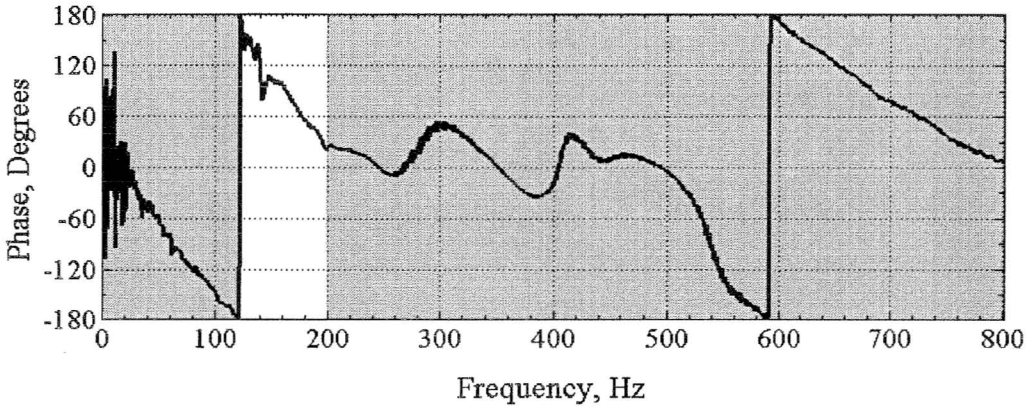


Figure T.8 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4A4_F_43.DAT)

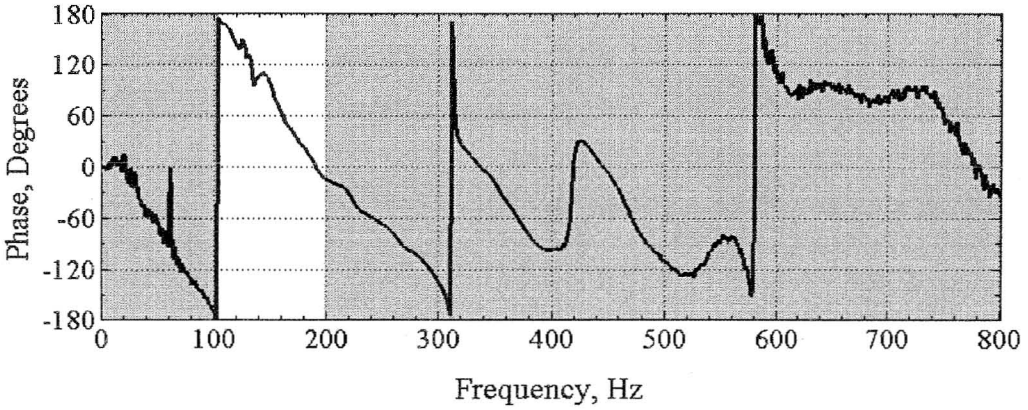


Figure T.9 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4A9_F_43.DAT)

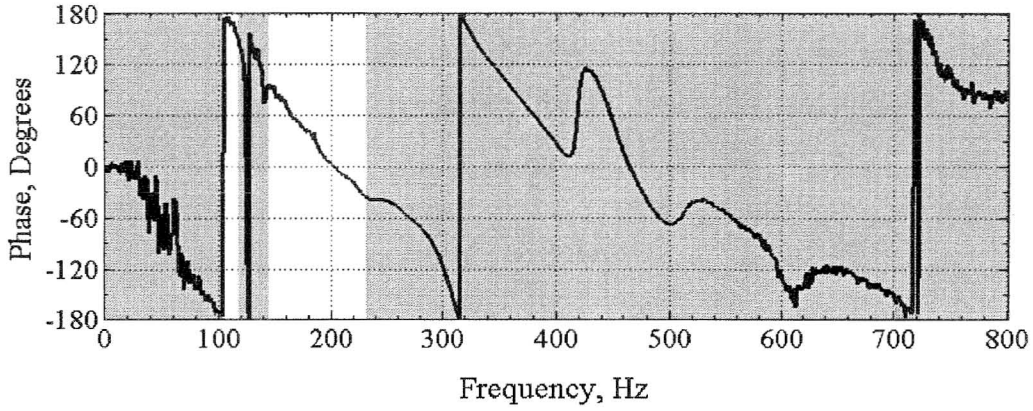


Figure T.10 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (A10_F_43.DAT)

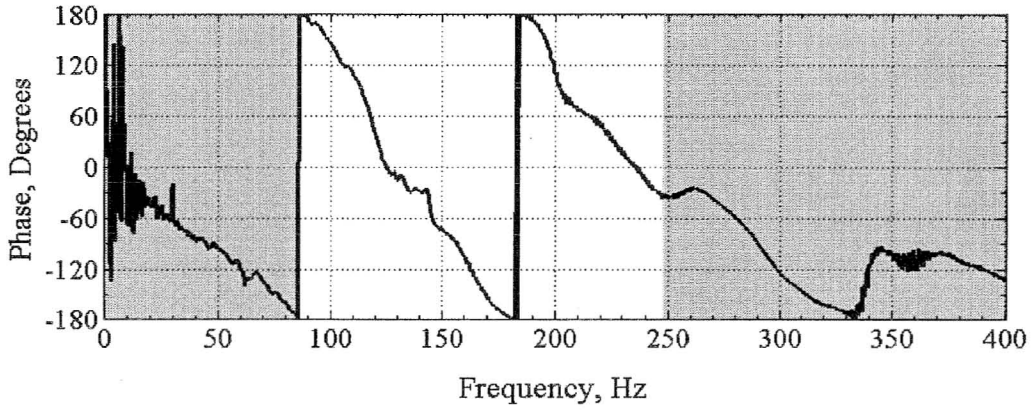


Figure T.11 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4A5_F_21.DAT)

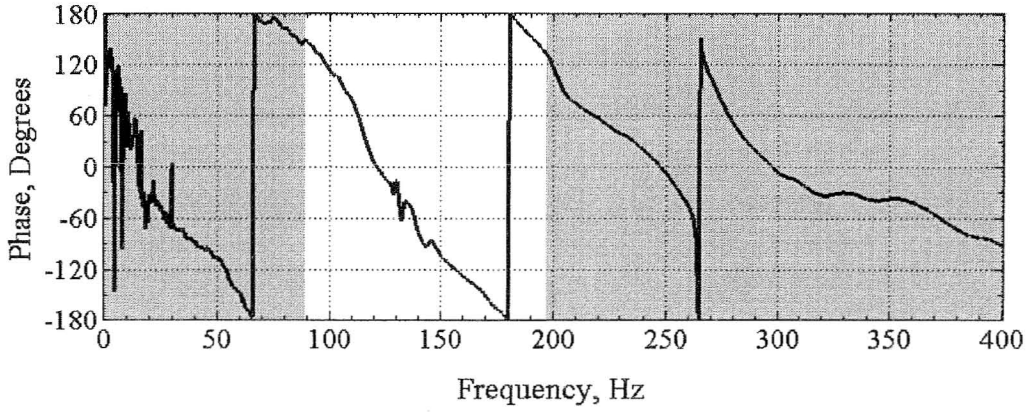


Figure T.12 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4A6_F_21.DAT)

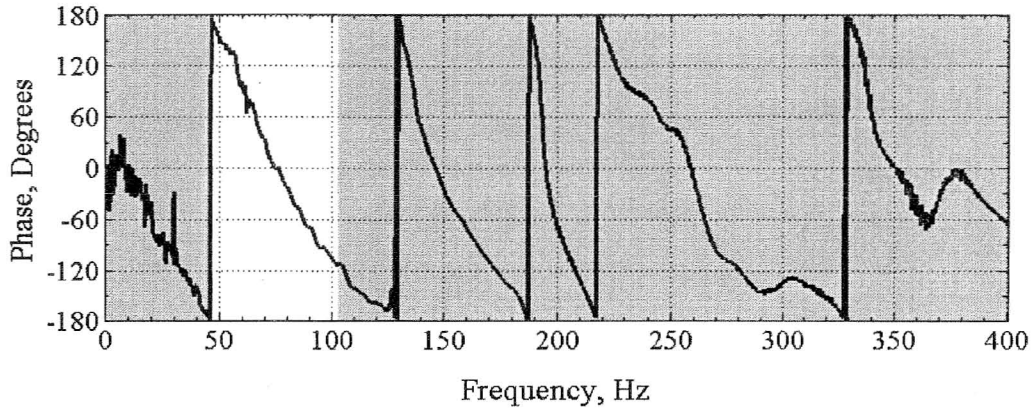


Figure T.13 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4A5_F_43.DAT)

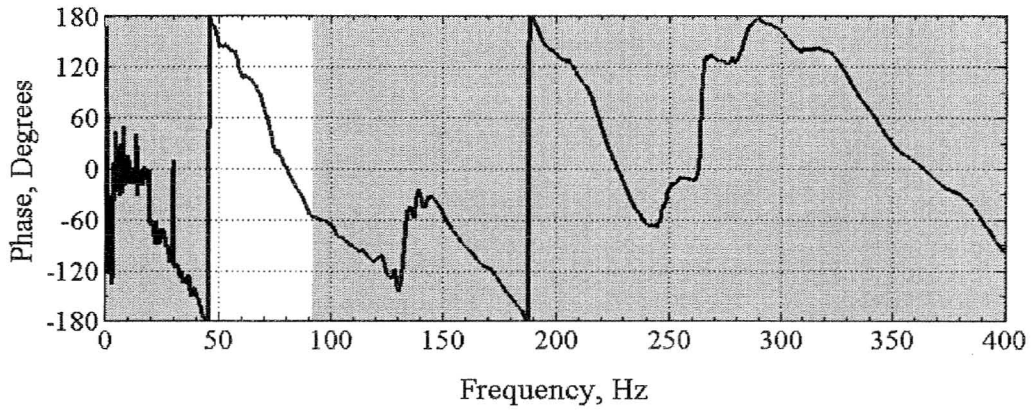


Figure T.14 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4A6_F_43.DAT)

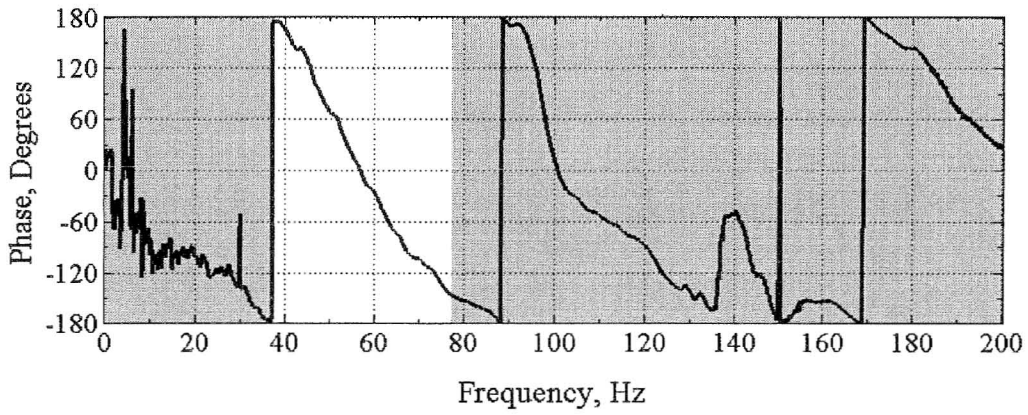


Figure T.15 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4A7_F_21.DAT)

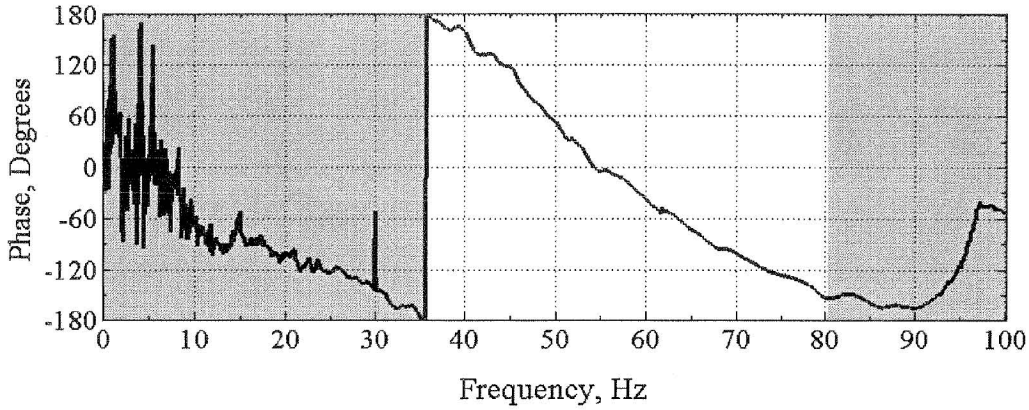


Figure T.16 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4A8_F_21.DAT)

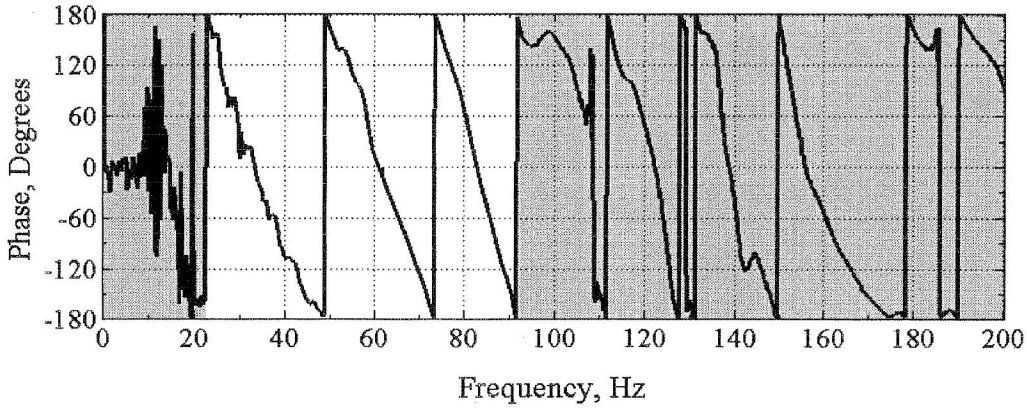


Figure T.17 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4A7_F_43.DAT)

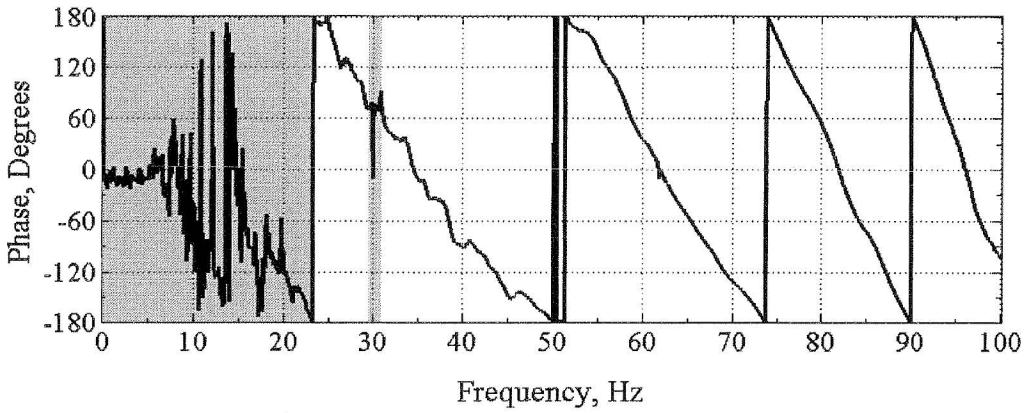


Figure T.18 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4A8_F_43.DAT)

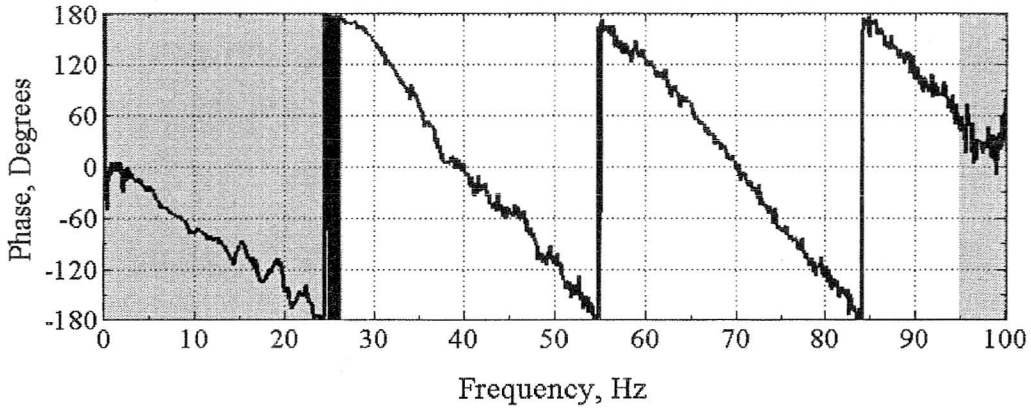


Figure T.19 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G1_F_21.DAT)

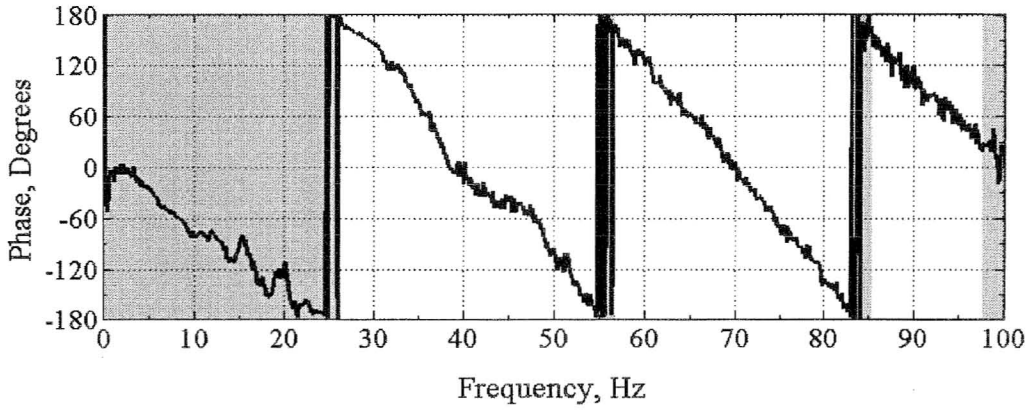


Figure T.20 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G2_F_21.DAT)

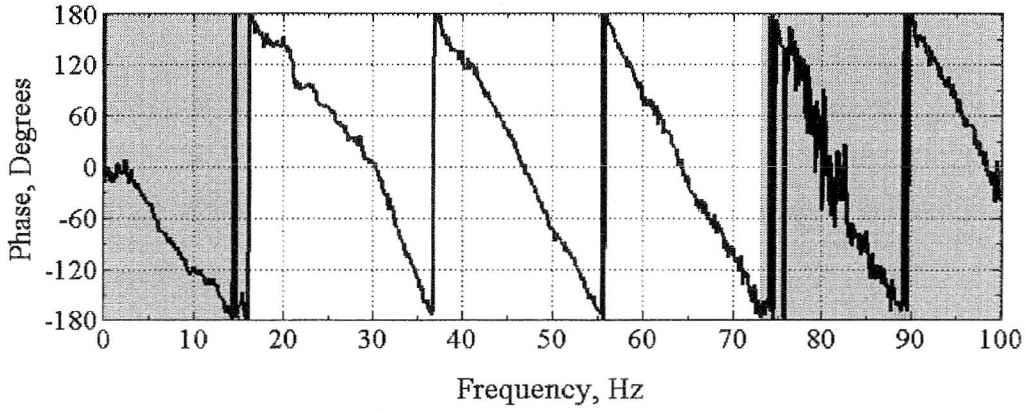


Figure T.21 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_21.DAT)

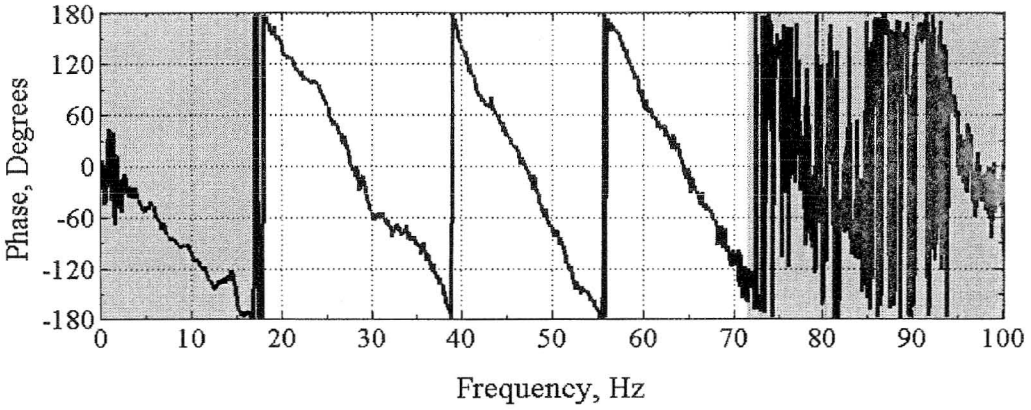


Figure T.22 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_43.DAT)

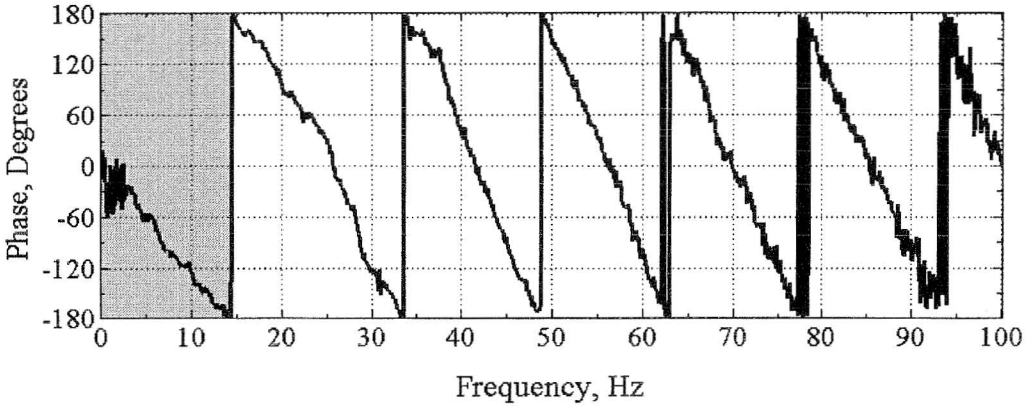


Figure T.23 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G1_F_43.DAT)

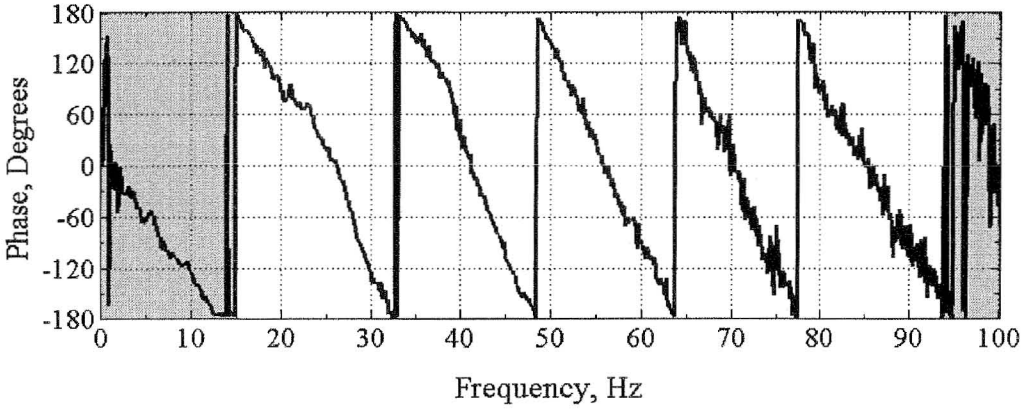


Figure T.24 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G2_F_43.DAT)

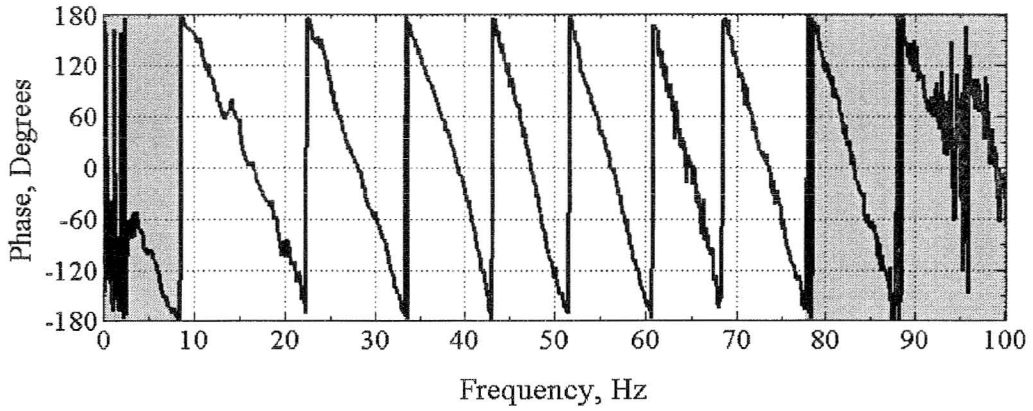


Figure T.25 Phase Plots Measured by SASW Testing with 50-ft Receiver Spacing (4G4_F_21.DAT)

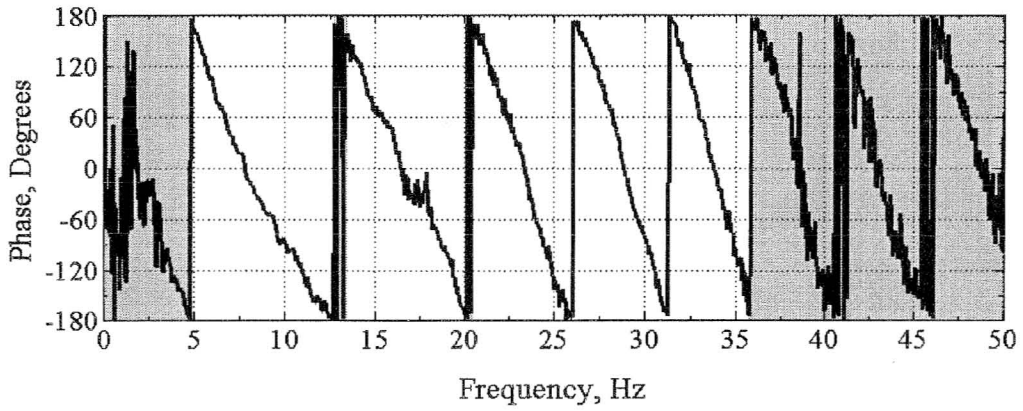


Figure T.26 Phase Plots Measured by SASW Testing with 100-ft Receiver Spacing (4G5_F_21.DAT)

Table T.1 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site A

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
1	1	0	166	1	4A1_F_21.DAT
	2	415	800	-	
1	1	0	210	1	4A2_F_21.DAT
	2	310	800	-	
1	1	0	317	1	4A3_F_21.DAT
	2	382	800	-	
1	1	0	166	1	4A4_F_21.DAT
	2	301	800	-	
1	1	0	190	1	4A9_F_21.DAT
	2	414	800	-	
1	1	0	194	1	A10_F_21.DAT
	2	366	800	-	
2	1	0	140	1	4A2_F_43.DAT
	2	198	800	-	
2	1	0	123	1	4A4_F_43.DAT
	2	199	800	-	
2	1	0	104	1	4A9_F_43.DAT
	2	199	800	-	
2	1	0	105	1	A10_F_43.DAT
	2	118	145	1	
	3	231	800	-	
3	1	0	86	1	4A5_F_21.DAT
	2	247	400	-	
3	1	0	89.5	1	4A6_F_21.DAT
	2	197	400	-	
6	1	0	46.5	1	4A5_F_43.DAT
	2	103	400	-	
6	1	0	46	1	4A6_F_43.DAT
	2	91.5	400	-	
9	1	0	37.25	1	4A7_F_21.DAT
	2	77.25	200	-	
9	1	0	35.75	1	4A8_F_21.DAT
	2	80	100	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

Table T.2 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site A (Continued)

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
18	1	0	22.75	1	4A7_F_43.DAT
	2	91.5	200	-	
18	1	0	23.38	1	4A8_F_43.DAT
	2	29.5	31	1	
15	1	0	26.38	1	4G1_F_21.DAT
	2	94.75	100	-	
15	1	0	26.25	1	4G2_F_21.DAT
	2	54.62	56.62	2	
	3	82.75	85.12	3	
	4	97.38	100	-	
25	1	0	16.25	1	4G3_F_21.DAT
	2	73	100	-	
25	1	0	18	1	4G3_F_43.DAT
	2	55.38	56	3	
	3	71.38	100	-	
30	1	0	14.62	1	4G1_F_43.DAT
30	1	0	15	1	4G2_F_43.DAT
	2	32.5	33.25	2	
	3	93.5	100	-	
50	1	0	8.62	1	4G4_F_21.DAT
	2	33.25	33.75	3	
	3	77.5	100	-	
100	1	0	4.88	1	4G5_F_21.DAT
	2	12.69	13.44	2	
	3	20.06	20.5	3	
	4	35.69	50	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

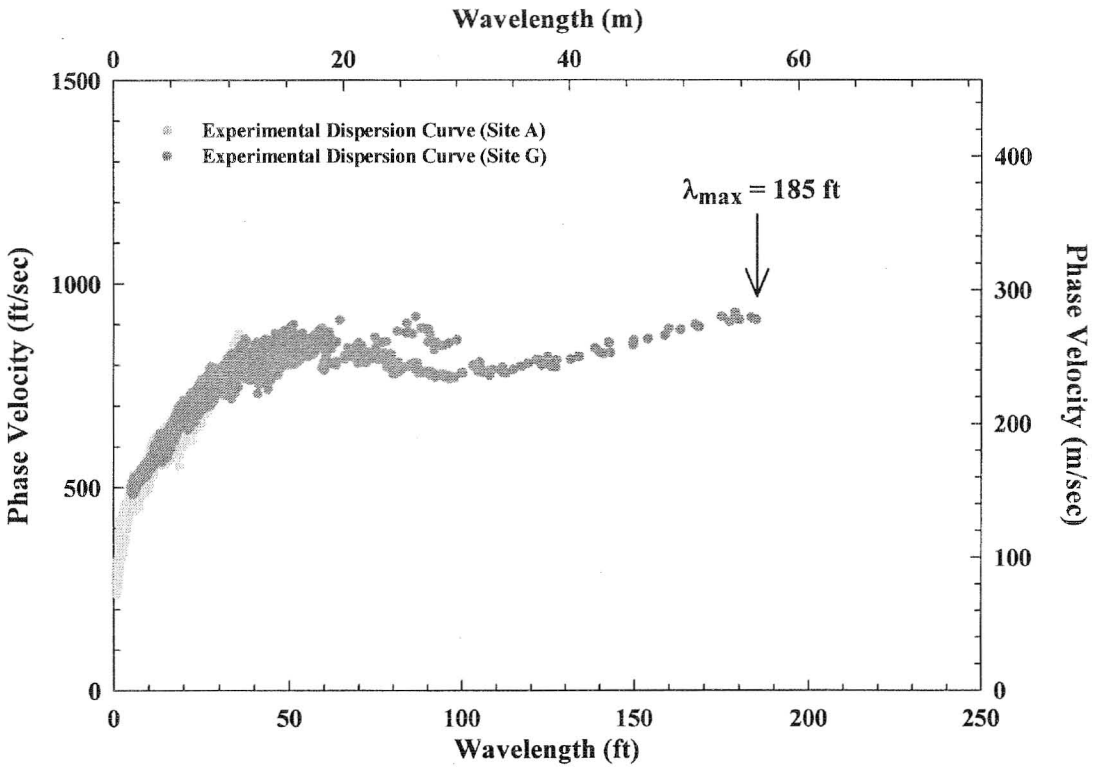


Figure T.27 Experimental Dispersion Curve Measured during Fourth Site Visit at Site A at Vogtle, GA; Linear Wavelength Axis

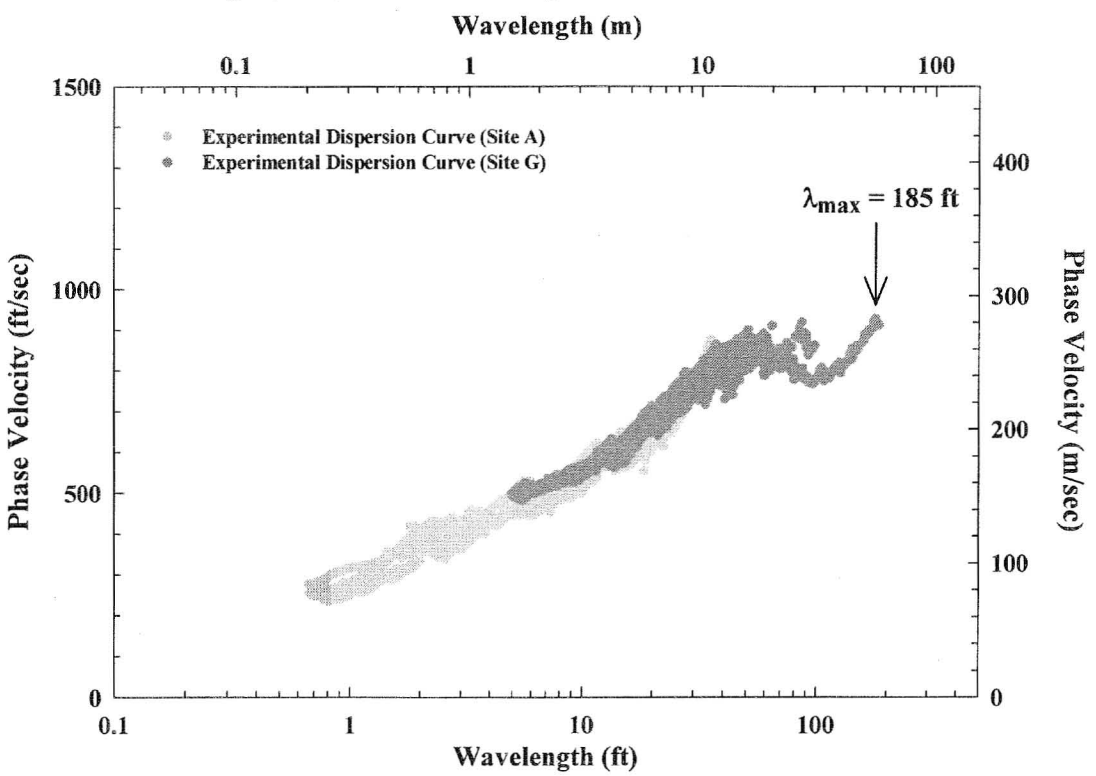


Figure T.28 Experimental Dispersion Curve Measured during Fourth Site Visit at Site A at Vogtle, GA; Logarithmic Wavelength Axis

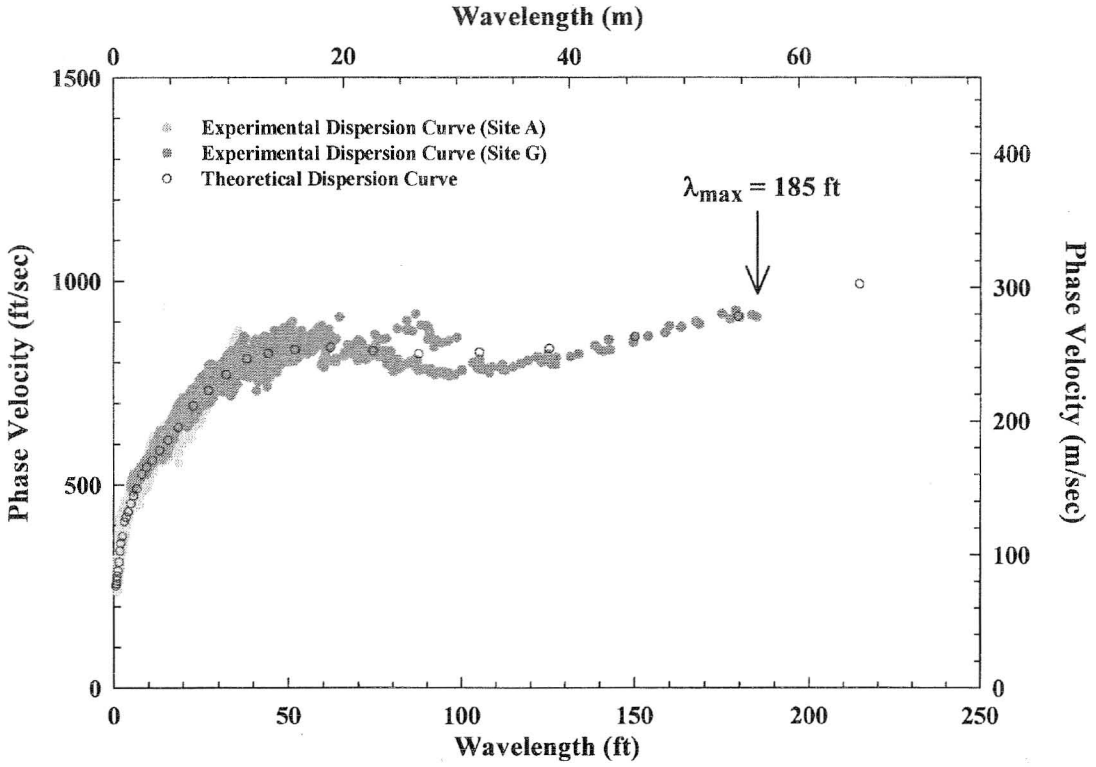


Figure T.29 Experimental and Theoretical Dispersion Curves from Site A in Fourth Site Visit at Vogtle, GA; Linear Wavelength Axis

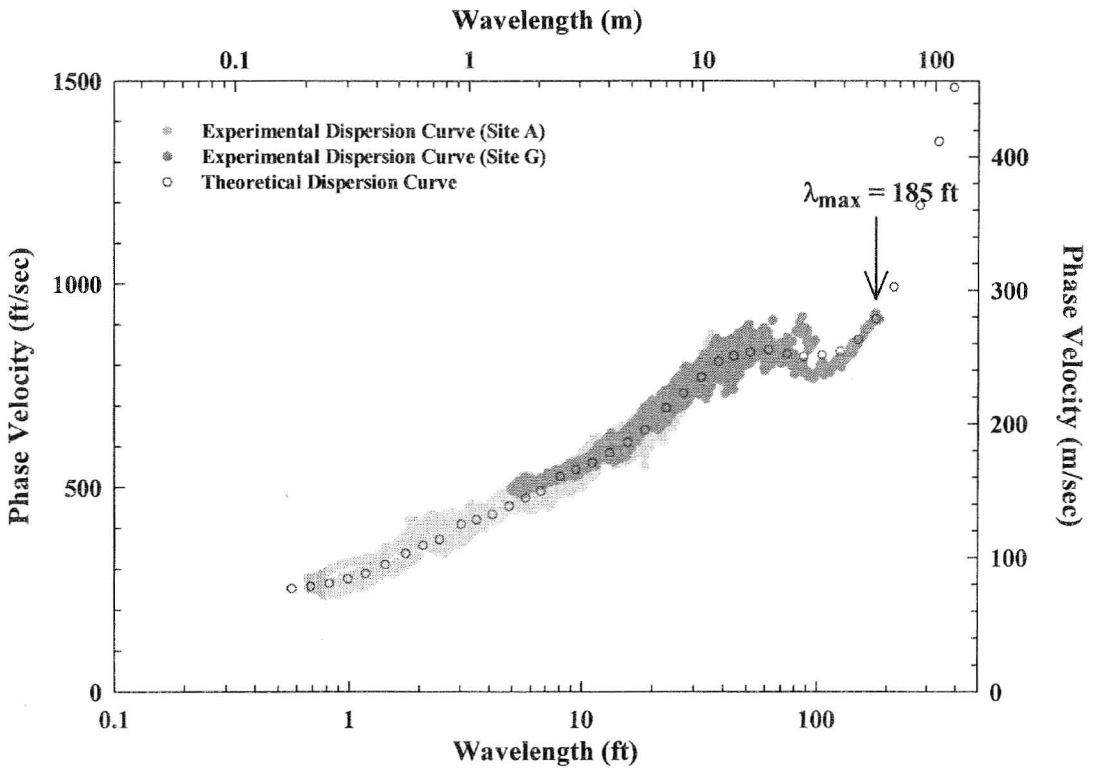


Figure T.30 Experimental and Theoretical Dispersion Curves from Site A in Fourth Site Visit at Vogtle, GA; Logarithmic Wavelength Axis

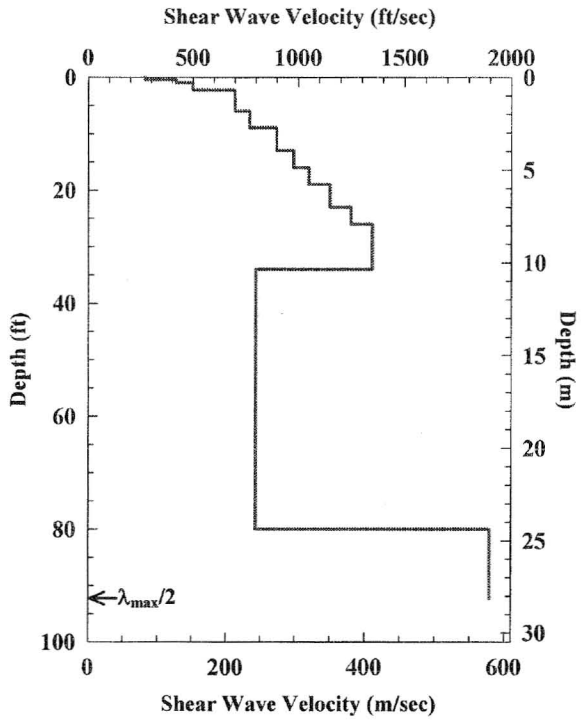


Figure T.31 Shear Wave Velocity Profile Determined at Site A during Fourth Site Visit at Vogtle, GA

Table T.3 Profile Parameters Used to Develop Preliminary Theoretical Dispersion Curve at Site A in the Fourth Site Visit at Vogtle, GA

Layer No.	Thickness, ft	Depth to Top of Layer, ft	S-Wave Velocity, ft/s	Assumed Poisson's Ratio	P-Wave Velocity, ft/s	Assumed Total Unit Weight, pcf
1	0.5	0.0	270	0.24	462	128
2	0.5	0.5	420	0.24	718	128
3	1.3	1.0	500	0.24	855	128
4	3.7	2.3	700	0.24	1197	128
5	3.0	6.0	770	0.24	1317	128
6	4.0	9.0	900	0.24	1539	128
7	3.0	13.0	980	0.24	1676	128
8	3.0	16.0	1050	0.24	1795	128
9	4.0	19.0	1150	0.24	1966	128
10	3.0	23.0	1250	0.24	2137	128
11	8.0	26.0	1350	0.24	2308	128
12	46.0	34.0	800	0.24	1368	128
13#	12.3	80.0	1900	0.42	5000	135
14*#	17.7	92.3	2200	0.38	5000	135
15*#	Half Space	110.0	2200	0.38	5000	135

* Layer below maximum depth of the V_S Profile.
\# Layer below water tatble.

Performed by Yin-Cheng Lin Checked by K. H. Stokoe
Yin-Cheng Lin Kenneth H. Stokoe, II

Appendix U

SASW Measurements of Fourth Site Visit at Vogtle, GA
Site Location: Site B

1. Data Sheet(s) U.2
2. Phase Plots from SASW Tests U.4
3. Table of Masking Parameters U.11
4. Experimental Dispersion Curves U.13
5. Matching the Experimental and Theoretical Dispersion Curves U.14
6. Shear Wave Velocity Profile U.15
7. Table of Profile Parameters U.15

3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #2

Location : B(SA4#2)

Disk # : SA4 #2

Date/(Time) : Jan, 24, 2008 (: ~ :)

Personnel : Stokoe, Yuan, Minjae,

Recorded by : Yuan

Checked by : Minjae

Sketch

R1 I.D. : UT07-4.5Hz-04, GEC 92003 Near

R2 I.D. : UT07-4.5Hz-02, GEC 92002 Center

R3 I.D. : UT07-4.5Hz-03, GEC 92001 Far

Same for all sites

Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
1	1	2	For	Rev	small hammer	4B1	0 ~ 800	hammer on hammer
1	1	2	For	Rev	"	4B2	0 ~ 800	hammer on plate
1	1	2	For	Rev	"	4B3	0 ~ 800	" , very soft hit
1	1	2	For	Rev	"	4B4	0 ~ 800	" , "
3	3	6	For	Rev	medi	4B5	0 ~ 400	hammer on plate, soft hit
3	3	6	For	Rev	"	4B6	0 ~ 400	hammer on plate
3	3	6	For	Rev	"	4B7	0 ~ 400	"
9	9	18	For	Rev	sledge	4B8	0 ~ 100	"
9	9	18	For	Rev	"	4B9	0 ~ 100	"
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #7

Location : G (SA4 #7)

Disk # : SA4 #7

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Yuan, Minjae

Recorded by : Yuan

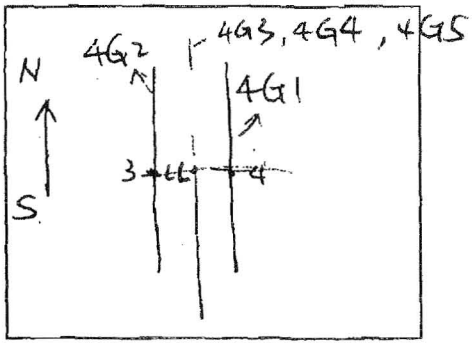
Checked by : Minjae

R1 I.D. : UT07-4.5Hz-04, GBC92003

R2 I.D. : UT07-4.5Hz-03, GBC92002

R3 I.D. : UT07-4.5Hz-03, GBC92001

Sketch



Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
15	15	30	For	Rev	bulldozer	4G1	0 ~ 100	
15	15	30	For	Rev	"	4G2	0 - 100	
25	25	25	For	Rev	"	4G3	0 ~ 100	
50	50	—	For	Rev	"	4G4	0 - 100	
100	100	—	For	Rev	"	4G5	0 ~ 50	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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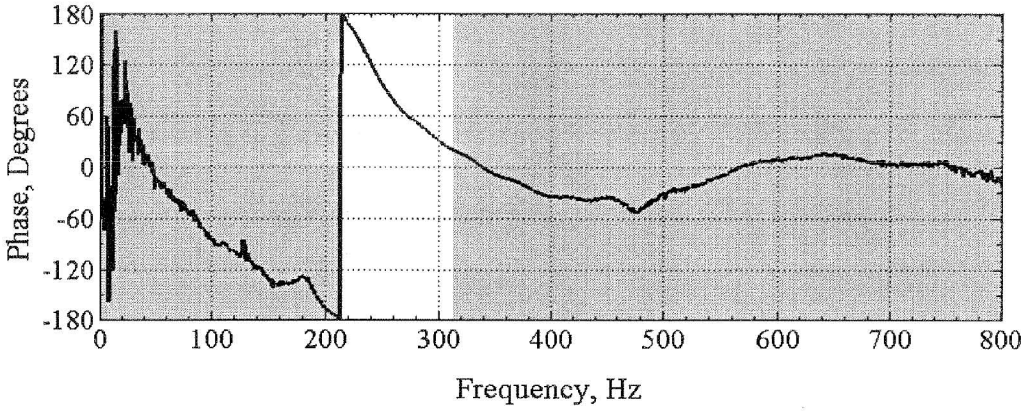

Figure U.1 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4B3_F_21.DAT)

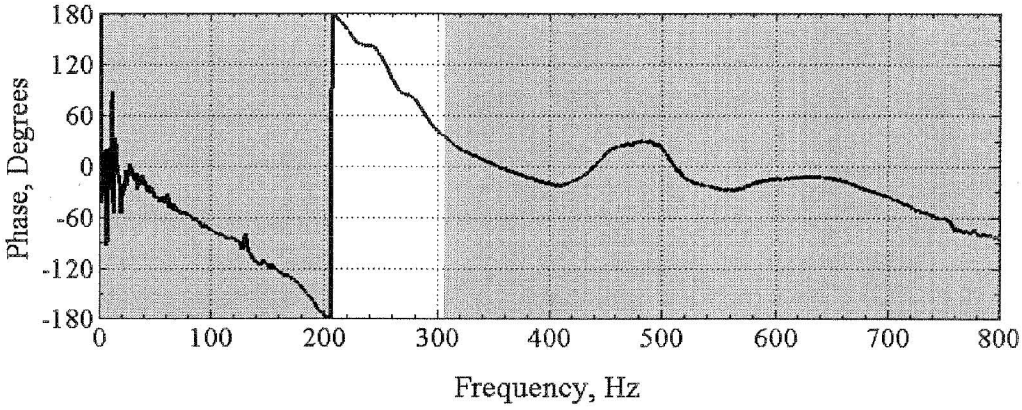

Figure U.2 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4B4_F_21.DAT)

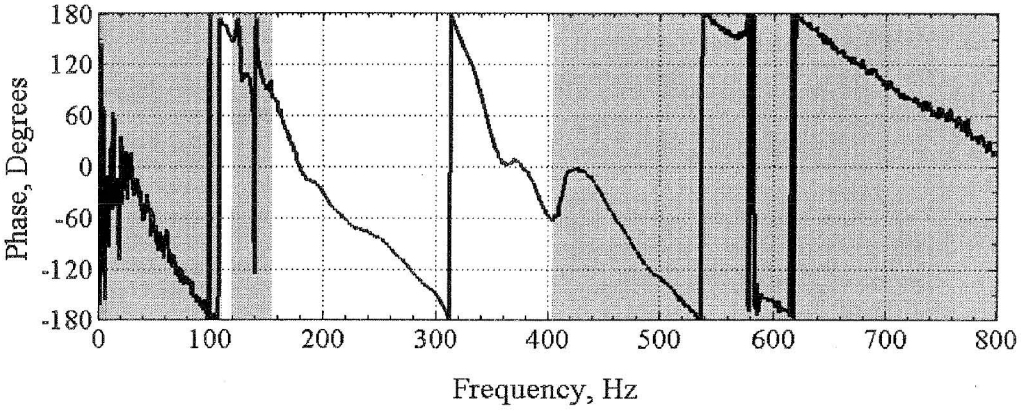

Figure U.3 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4B3_F_43.DAT)

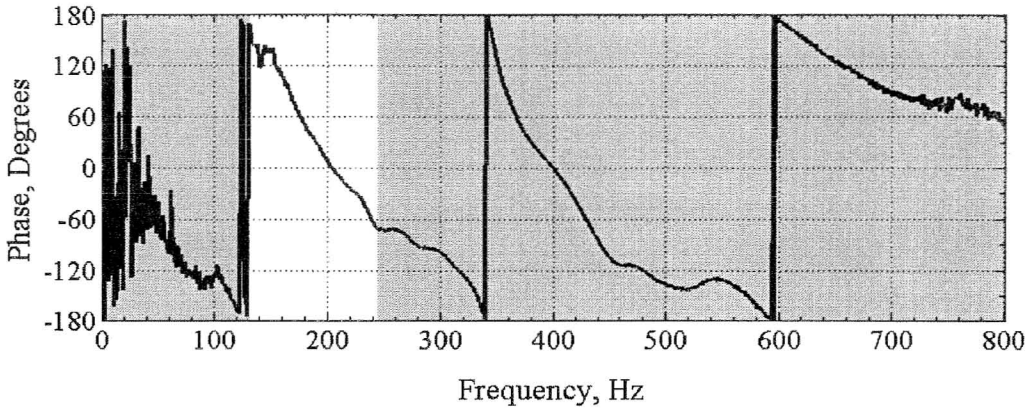

Figure U.4 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4B4_F_43.DAT)

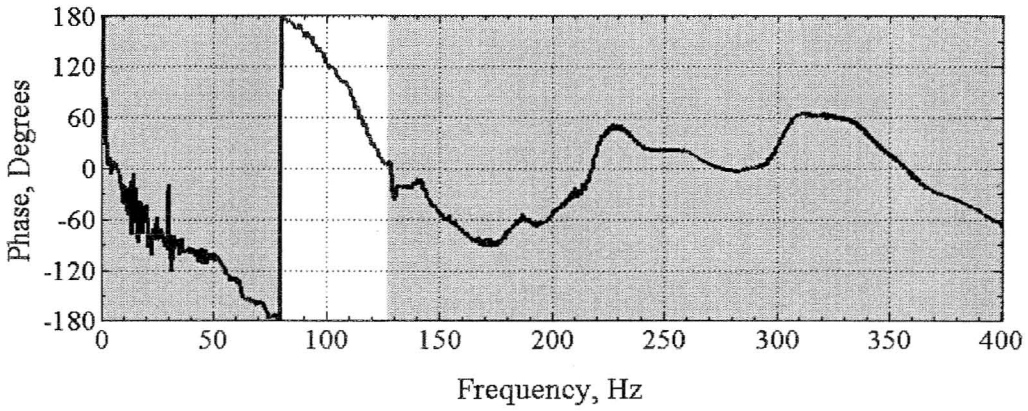

Figure U.5 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4B5_F_21.DAT)

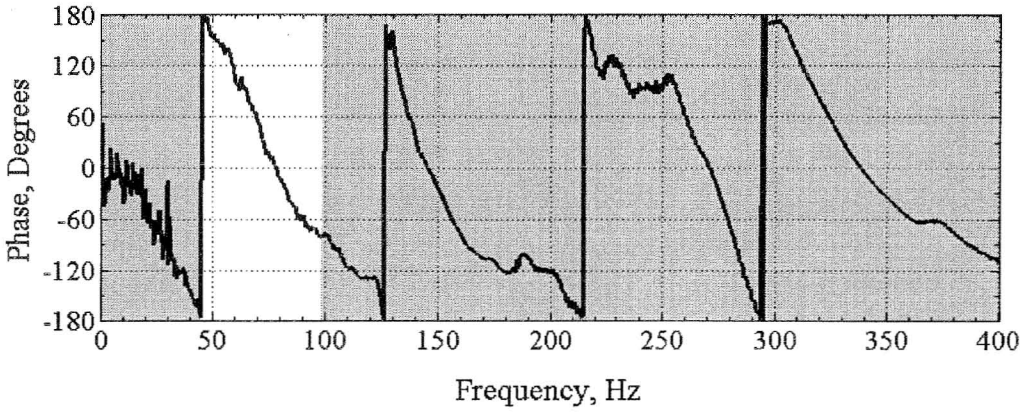

Figure U.6 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4B5_F_43.DAT)

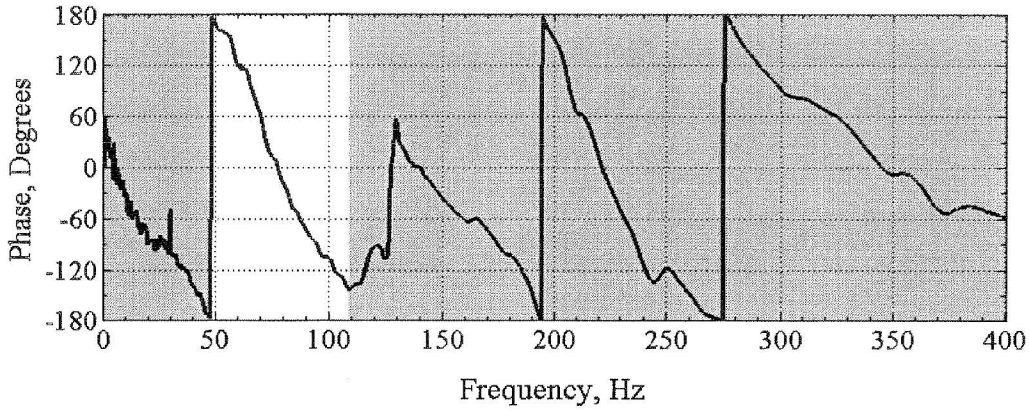

Figure U.7 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4B6_F_43.DAT)

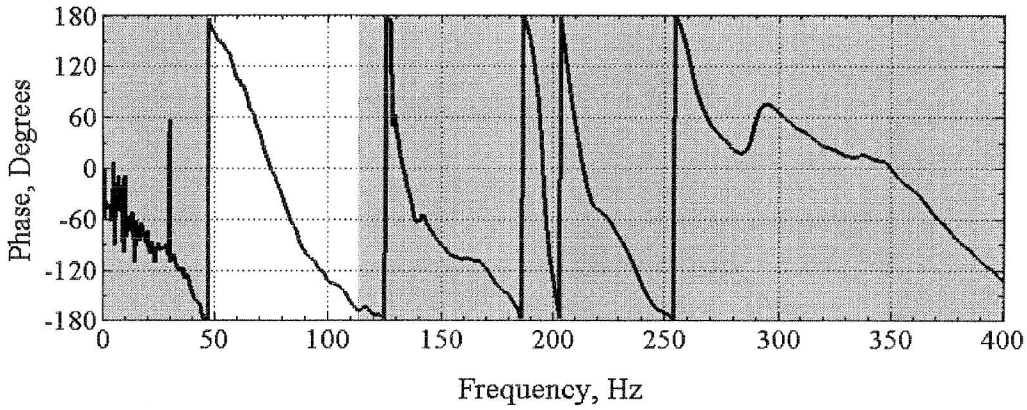

Figure U.8 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4B7_F_43.DAT)

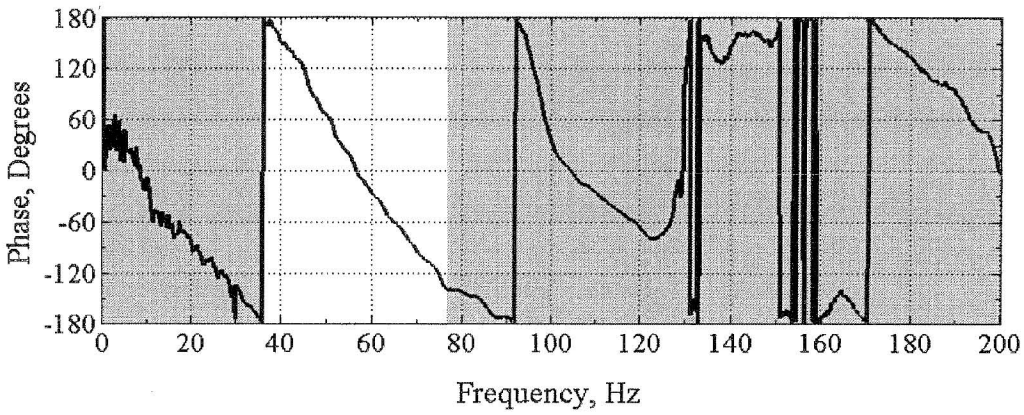

Figure U.9 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4B8_F_21.DAT)

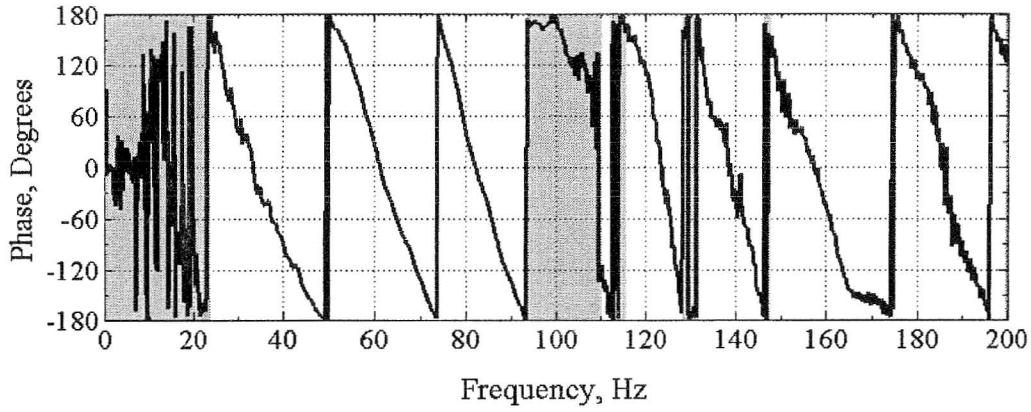

Figure U.10 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4B8_F_43.DAT)

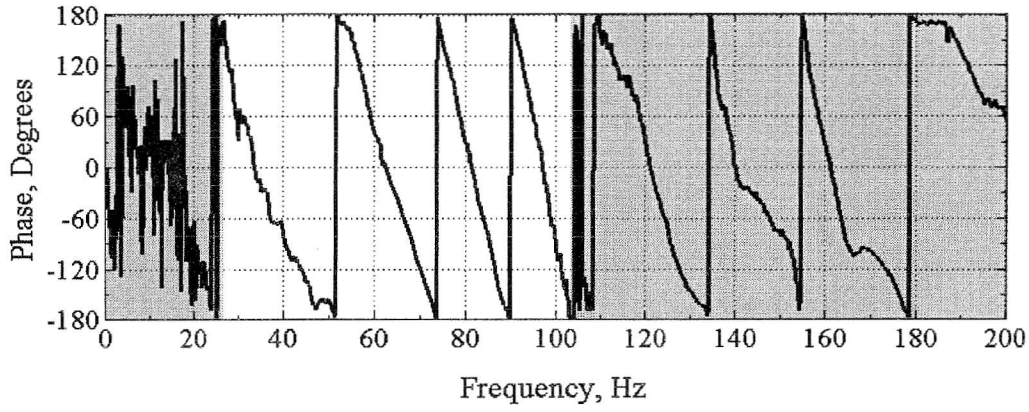

Figure U.11 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4B9_F_43.DAT)

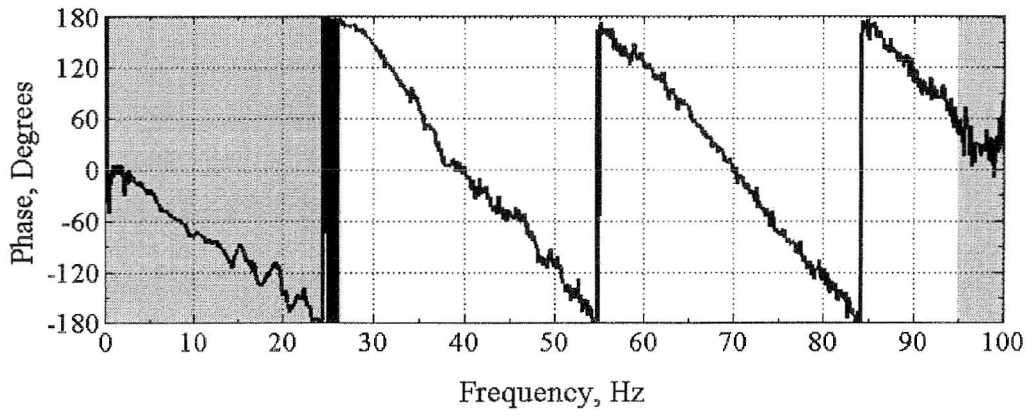

Figure U.12 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G1_F_21.DAT)

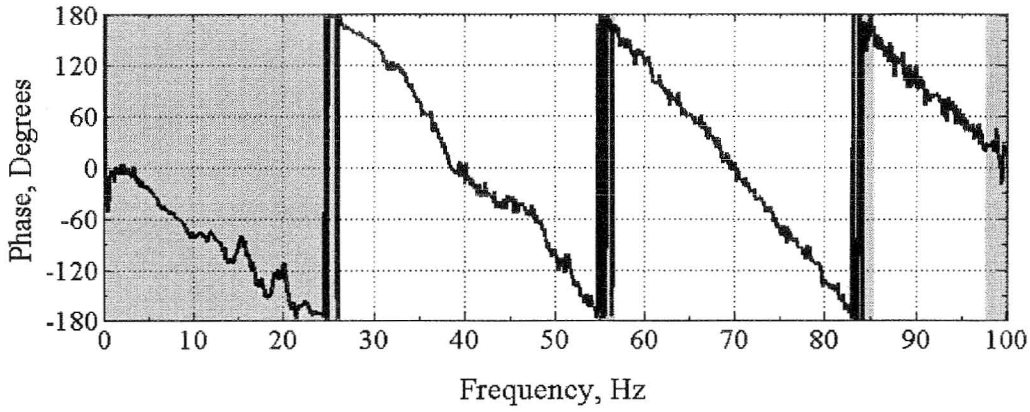

Figure U.13 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G2_F_21.DAT)

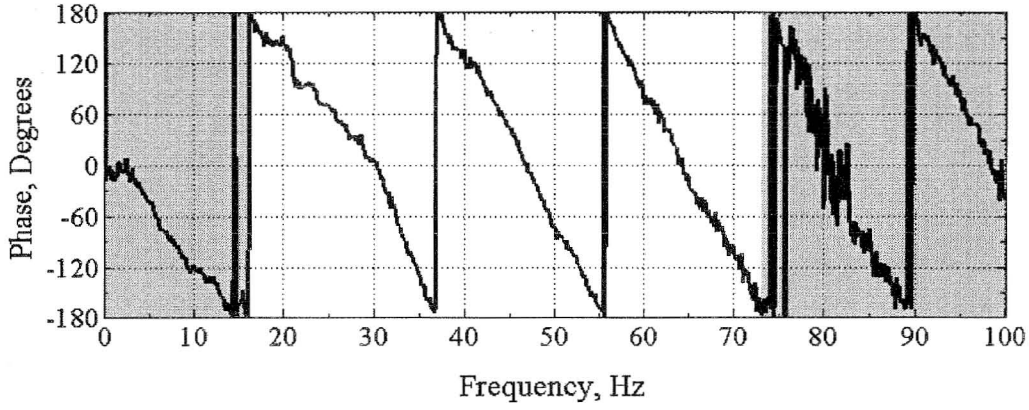

Figure U.14 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_21.DAT)

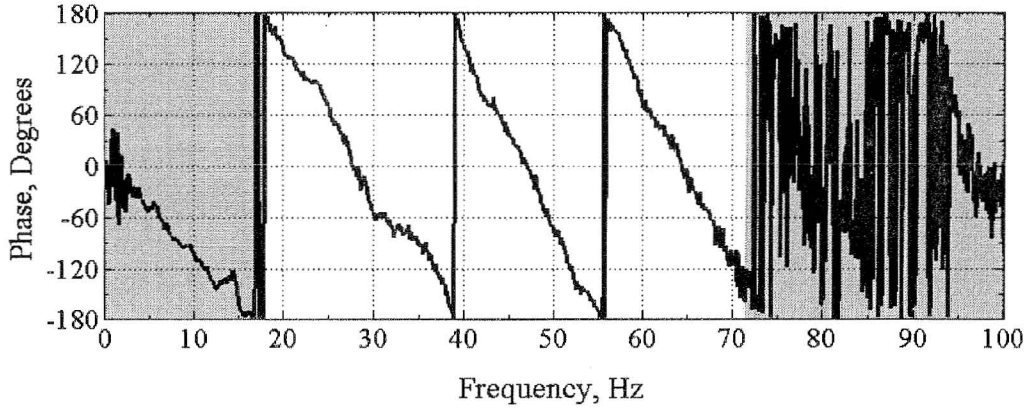

Figure U.15 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_43.DAT)

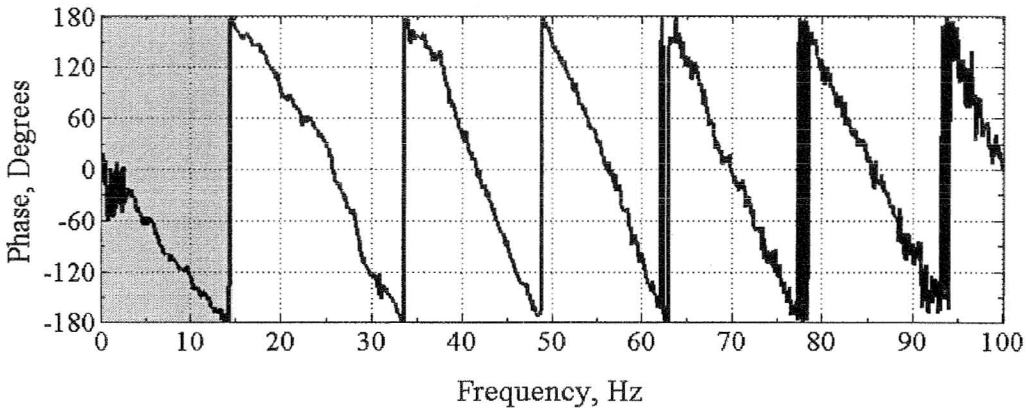

Figure U.16 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G1_F_43.DAT)

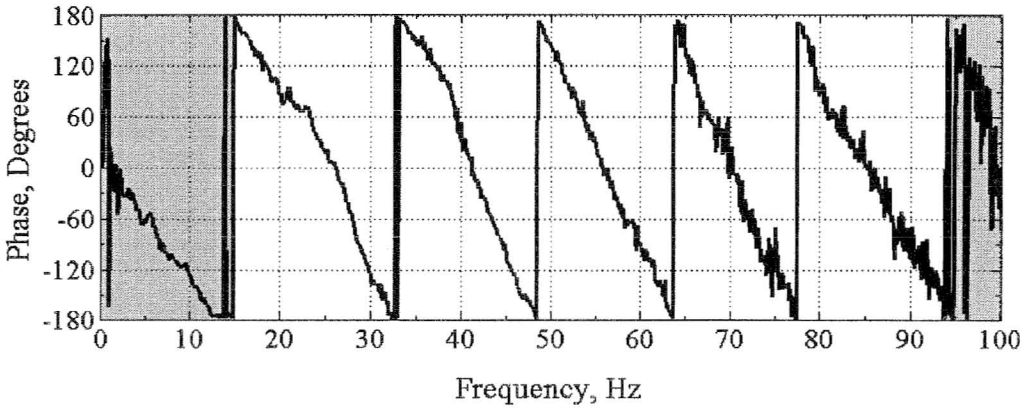

Figure U.17 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G2_F_43.DAT)

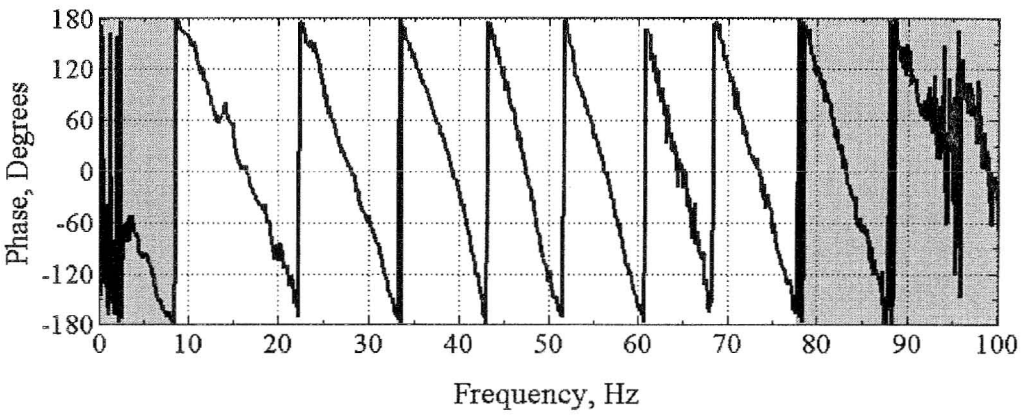

Figure U.18 Phase Plots Measured by SASW Testing with 50-ft Receiver Spacing (4G4_F_21.DAT)

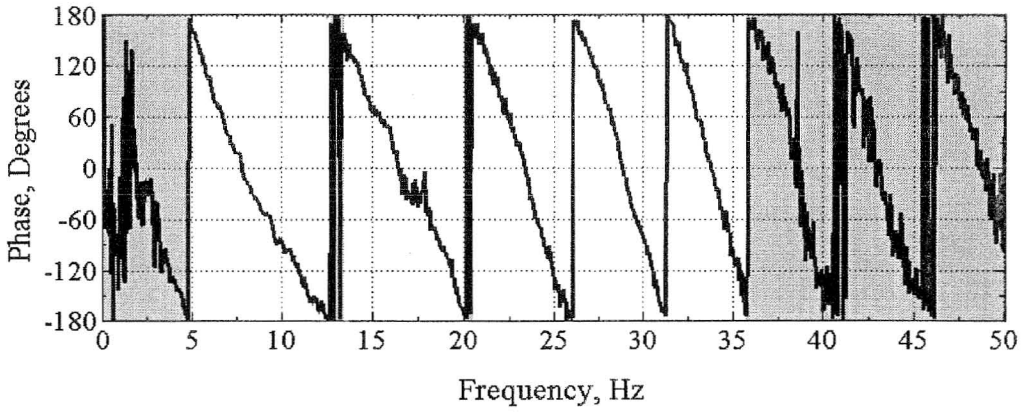

Figure U.19 Phase Plots Measured by SASW Testing with 100-ft Receiver Spacing (4G5_F_21.DAT)

Table U.1 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site B

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
1	1	0	214	1	4B3_F_21.DAT
	2	312	800	-	
1	1	0	207	1	4B4_F_21.DAT
	2	306	800	-	
2	1	0	110	1	4B3_F_43.DAT
	2	120	155	1	
	3	404	800	-	
2	1	0	131	1	4B4_F_43.DAT
	2	244	800	-	
3	1	0	80.5	1	4B5_F_21.DAT
	2	127	400	-	
6	1	0	45.5	1	4B5_F_43.DAT
	2	98.5	400	-	
6	1	0	48.5	1	4B6_F_43.DAT
	2	108.5	400	-	
6	1	0	47.5	1	4B7_F_43.DAT
	2	113.5	400	-	
9	1	0	36.25	1	4B8_F_21.DAT
	2	76.75	200	-	
18	1	0	23.75	1	4B8_F_43.DAT
	2	93.25	110	4	
	3	112	115.75	5	
	4	128	132	6	
	5	146	147.75	7	
	6	199.25	200	-	
25	1	0	16.25	1	4G3_F_21.DAT
	2	73	100	-	
25	1	0	18	1	4G3_F_43.DAT
	2	55.38	56	3	
	3	71.38	100	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

Table U.2 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site B (Continued)

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
30	1	0	14.62	1	4G1_F_43.DAT
30	1	0	15	1	4G2_F_43.DAT
	2	32.5	33.25	2	
	3	93.5	100	-	
50	1	0	8.62	1	4G4_F_21.DAT
	2	33.25	33.75	3	
	3	77.5	100	-	
100	1	0	4.88	1	4G5_F_21.DAT
	2	12.69	13.44	2	
	3	20.06	20.5	3	
	4	35.69	50	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

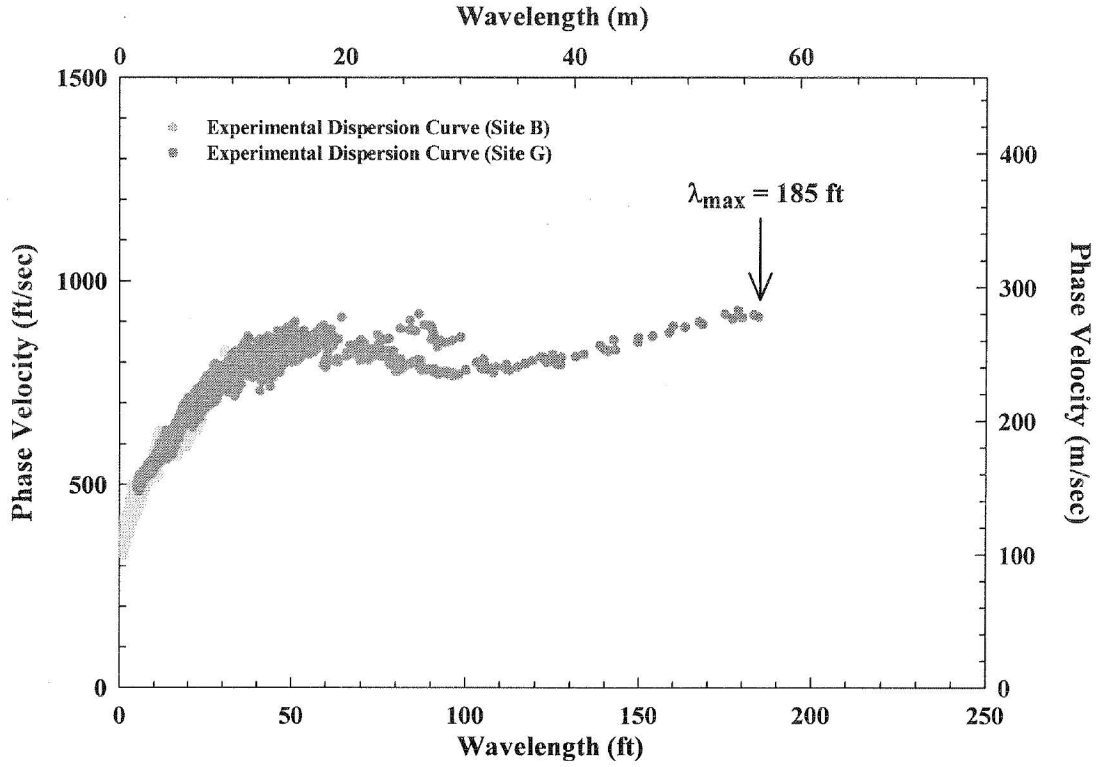

Figure U.20 Experimental Dispersion Curve Measured during Fourth Site Visit at Site B at Vogtle, GA; Linear Wavelength Axis

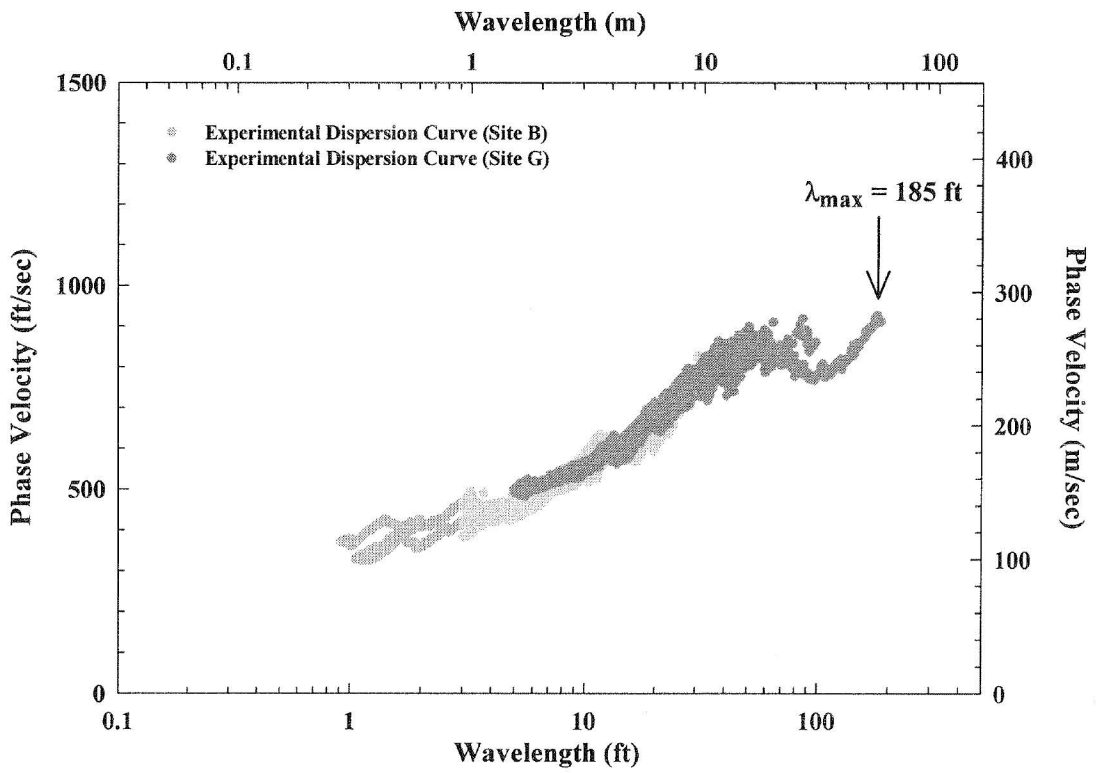

Figure U.21 Experimental Dispersion Curve Measured during Fourth Site Visit at Site B at Vogtle, GA; Logarithmic Wavelength Axis

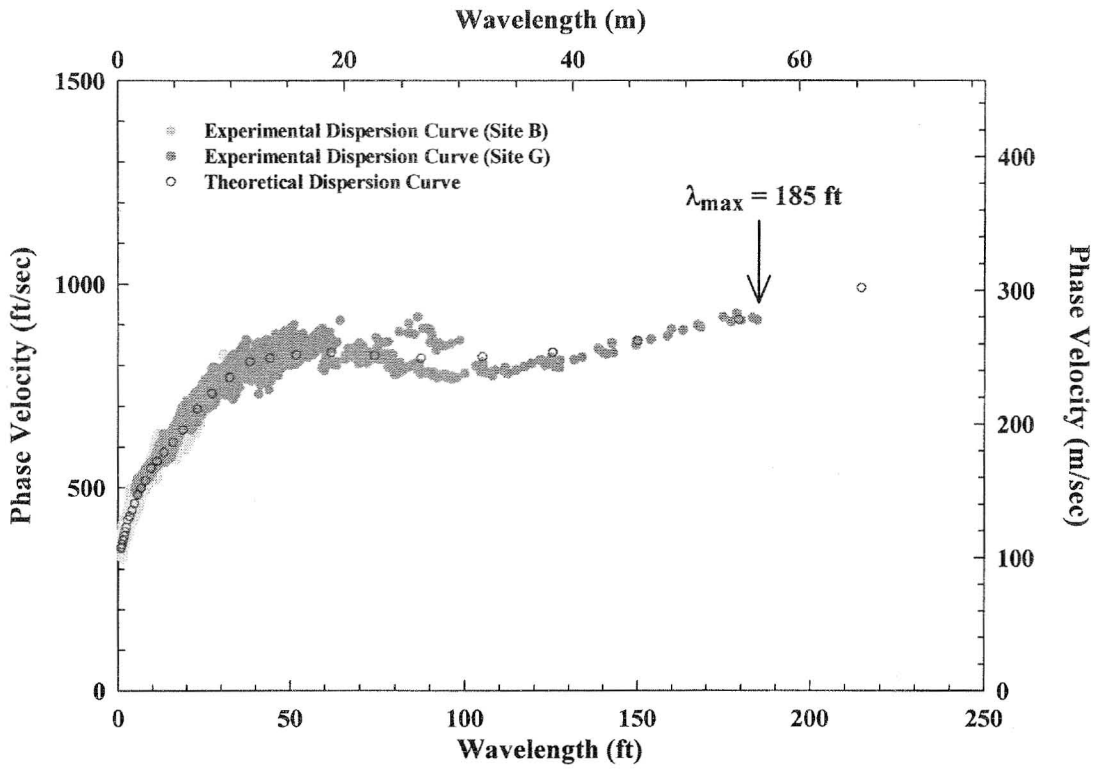

Figure U.22 Experimental and Theoretical Dispersion Curves from Site B in Fourth Site Visit at Vogtle, GA; Linear Wavelength Axis

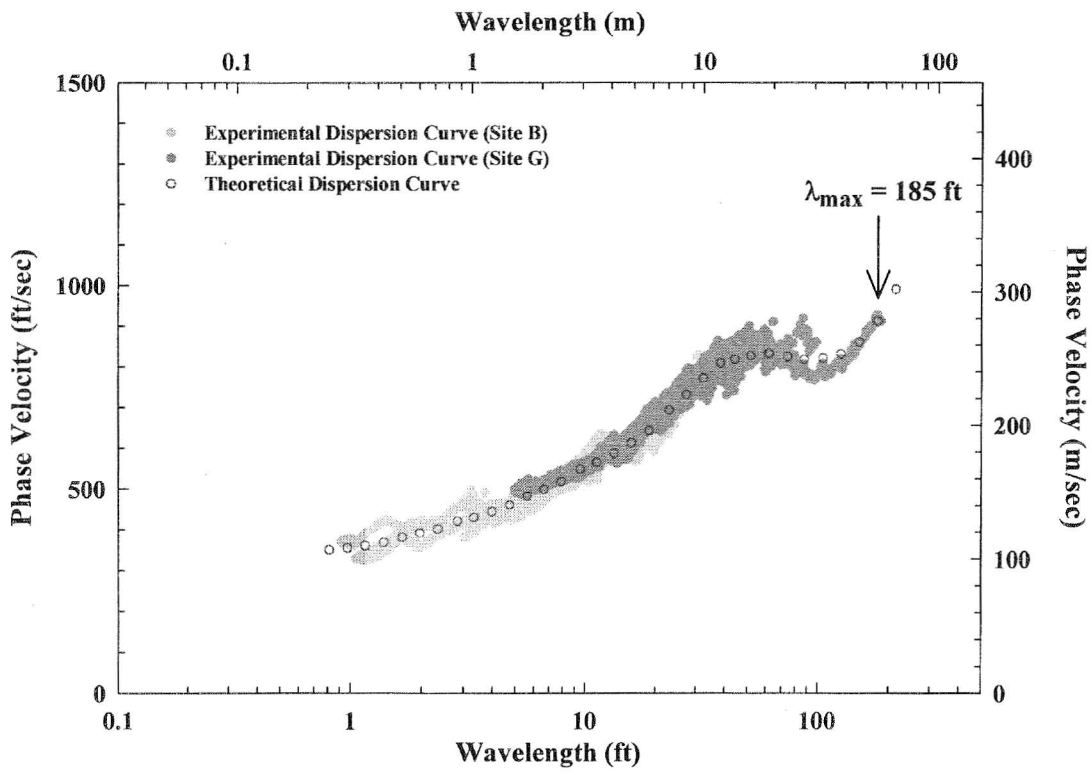

Figure U.23 Experimental and Theoretical Dispersion Curves from Site B in Fourth Site Visit at Vogtle, GA; Logarithmic Wavelength Axis

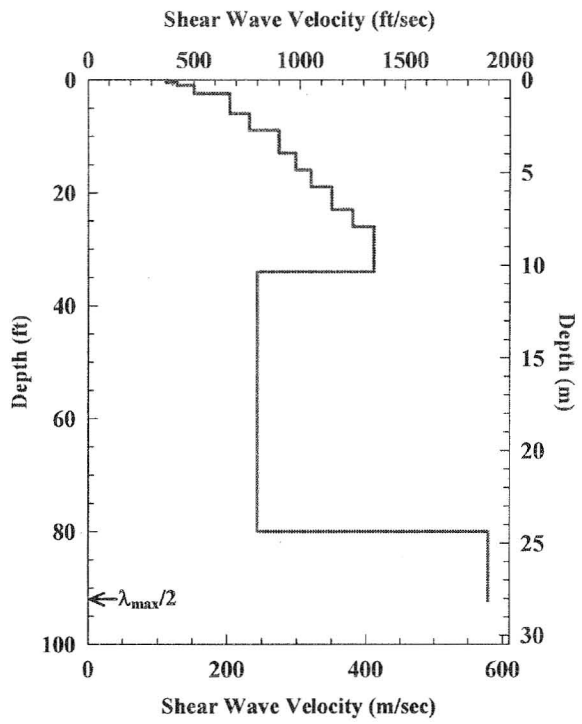

Figure U.24 Shear Wave Velocity Profile Determined at Site B during Fourth Site Visit at Vogtle, GA

Table U.3 Profile Parameters Used to Develop Preliminary Theoretical Dispersion Curve at Site B in the Fourth Site Visit at Vogtle, GA

Layer No.	Thickness, ft	Depth to Top of Layer, ft	S-Wave Velocity, ft/s	Assumed Poisson's Ratio	P-Wave Velocity, ft/s	Assumed Total Unit Weight, pcf
1	0.5	0.0	370	0.24	633	128
2	0.5	0.5	420	0.24	718	128
3	1.5	1.0	500	0.24	855	128
4	3.5	2.5	670	0.24	1146	128
5	3.0	6.0	760	0.24	1299	128
6	4.0	9.0	900	0.24	1539	128
7	3.0	13.0	980	0.24	1676	128
8	3.0	16.0	1050	0.24	1795	128
9	4.0	19.0	1150	0.24	1966	128
10	3.0	23.0	1250	0.24	2137	128
11	8.0	26.0	1350	0.24	2308	128
12	46.0	34.0	800	0.24	1368	128
13#	12.3	80.0	1900	0.42	5000	135
14*#	17.7	92.3	2200	0.38	5000	135
15*#	Half Space	110.0	2200	0.38	5000	135

* Layer below maximum depth of the V_S Profile.

\# Layer below water tatble.

Performed by Yin-Cheng Lin Checked by K. H. Stokoe

Yin-Cheng Lin Kenneth H. Stokoe, II

Appendix V

SASW Measurements of Fourth Site Visit at Vogtle, GA
Site Location: Site C

1. Data Sheet(s) V.2
2. Phase Plots from SASW Tests V.4
3. Table of Masking Parameters V.10
4. Experimental Dispersion Curves V.12
5. Matching the Experimental and Theoretical Dispersion Curves V.13
6. Shear Wave Velocity Profile V.14
7. Table of Profile Parameters V.14

3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4#3

Location : C (SA4#3)

Disk # : SA4#3

Date/(Time) : Jan / 24 / 2008 (11:10 AM : ~ :)

Personnel : Stokoe, Yuan, Minjae

Recorded by : Yuan

Checked by : Minjae

Sketch

R1 I.D. : UT07-4.5Hz-04, GEC 92003 Near

R2 I.D. : UT07-4.5Hz-02, GEC 92002 Center

R3 I.D. : UT07-4.5Hz-03, GEC 92001 Far

Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
1	1	2	For	Rev	small hammer	401	0 - 800	small hammer on plate, soft soil
1	1	2	For	Rev	"	402	0 - 800	" "
3	3	6	For	Rev	med "	403	0 - 400	" "
3	3	6	For	Rev	"	404	0 - 400	" "
9	9	18	For	Rev	large "	405	0 - 100	hammer on plate
9	9	18	For	Rev	"	406	0 - 100	"
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #7

Location : G (SA4 #7)

Disk # : SA4 #7

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Tuan, Minjae

Recorded by : Tuan

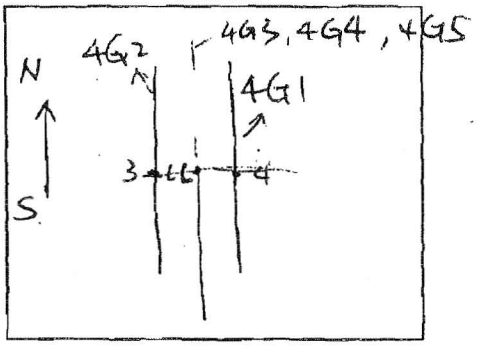
Checked by : Minjae

R1 I.D. : UT07-4.5Hz-04, GEC92003

R2 I.D. : UT07-4.5Hz-03, GEC92002

R3 I.D. : UT07-4.5Hz-03, GEC92001

Sketch



Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
15	15	30	For	Rev	bulldozer	4G1	0 ~ 100	
15	15	30	For	Rev	"	4G2	0 ~ 100	
25	25	25	For	Rev	"	4G3	0 ~ 100	
50	50	—	For	Rev	"	4G4	0 ~ 100	
100	100	—	For	Rev	"	4G5	0 ~ 50	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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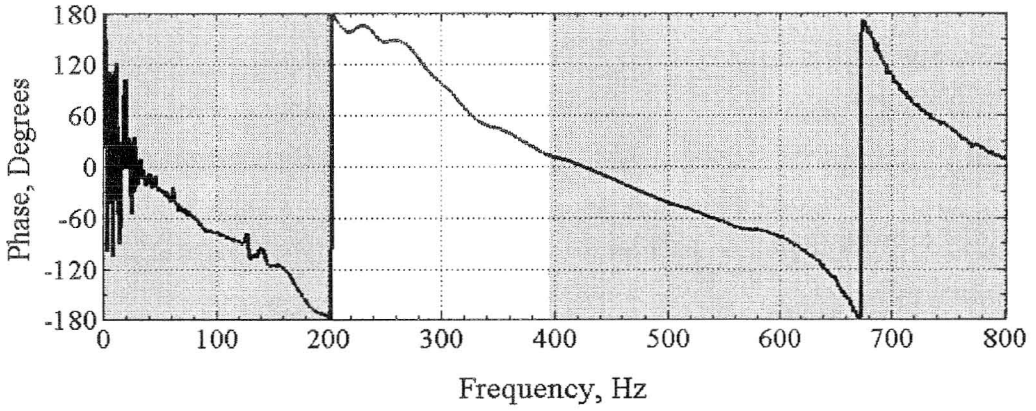

Figure V.1 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4C1_F_21.DAT)

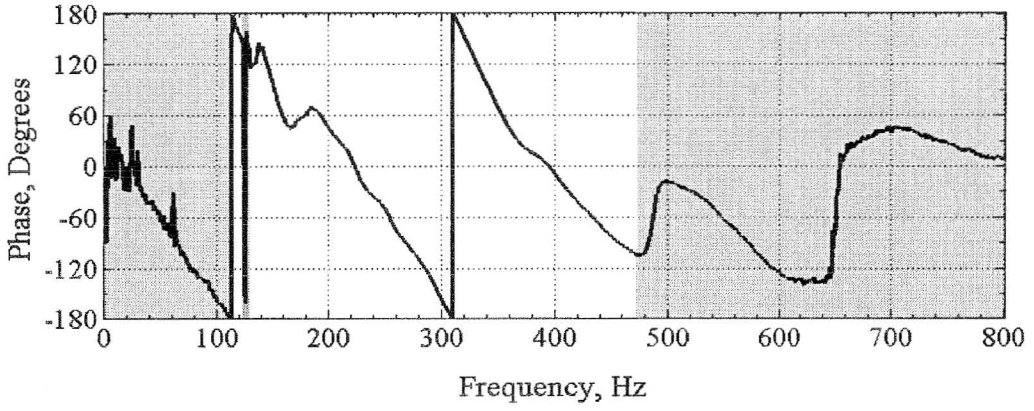

Figure V.2 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4C1_F_43.DAT)

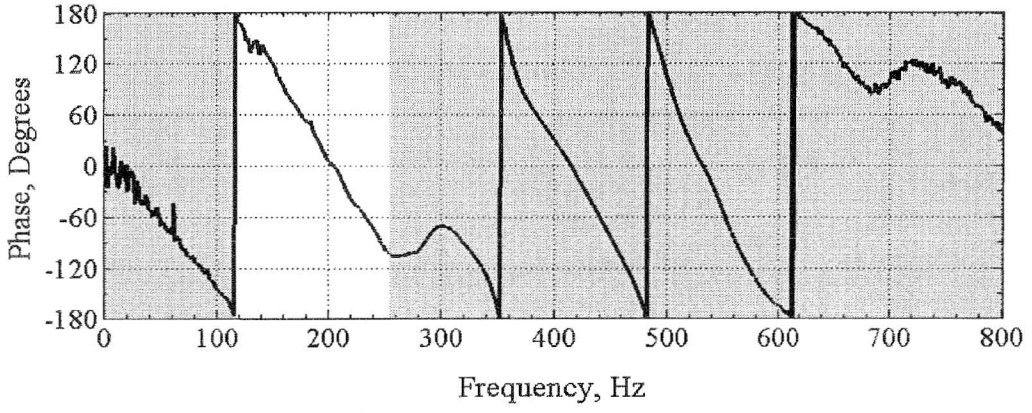

Figure V.3 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4C2_F_43.DAT)

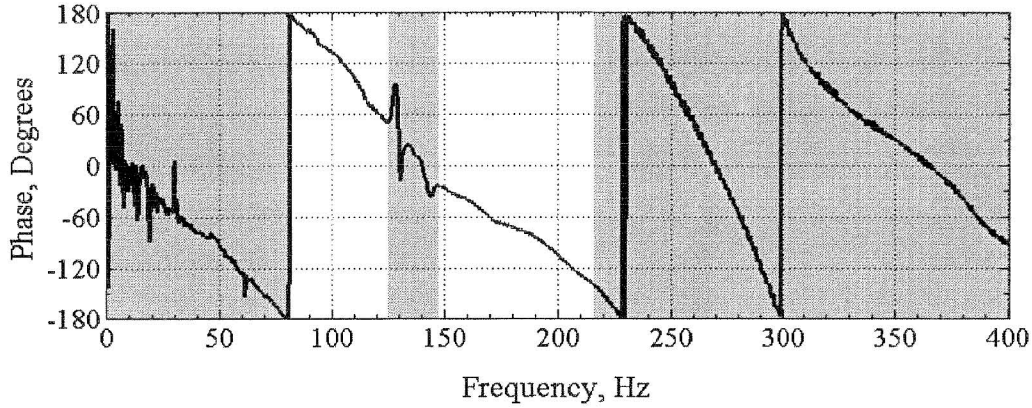

Figure V.4 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4C4_F_21.DAT)

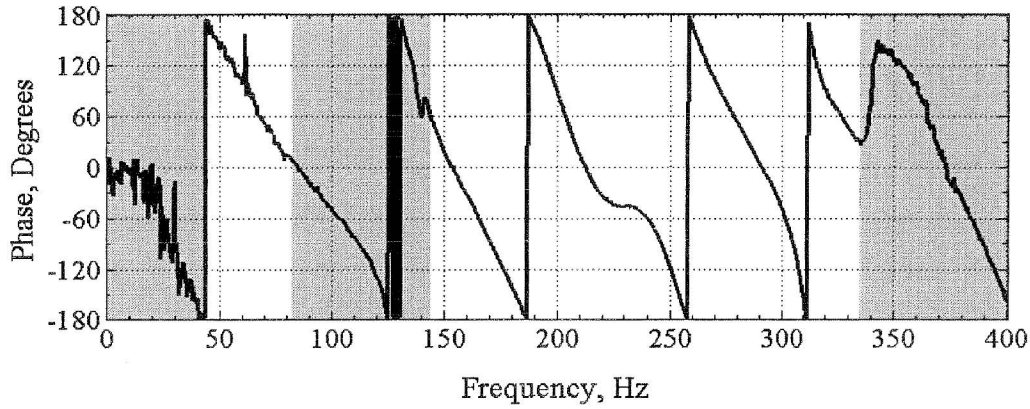

Figure V.5 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4C3_F_43.DAT)

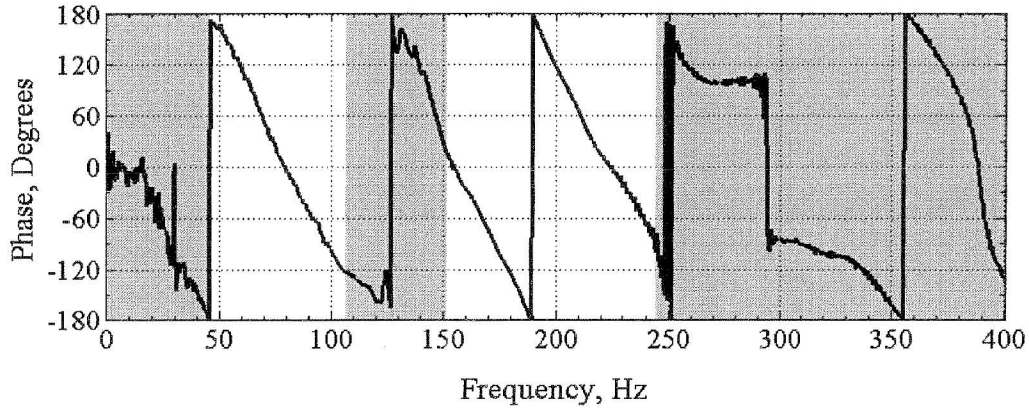

Figure V.6 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4C4_F_43.DAT)

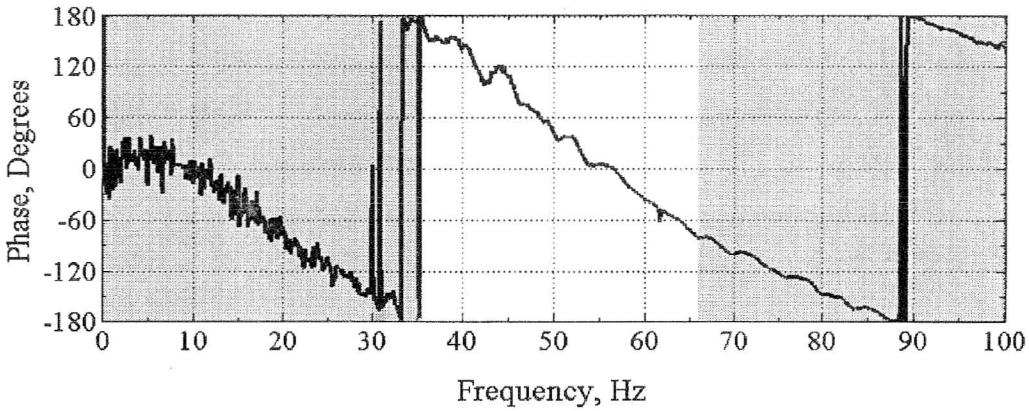

Figure V.7 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4C5_F_21.DAT)

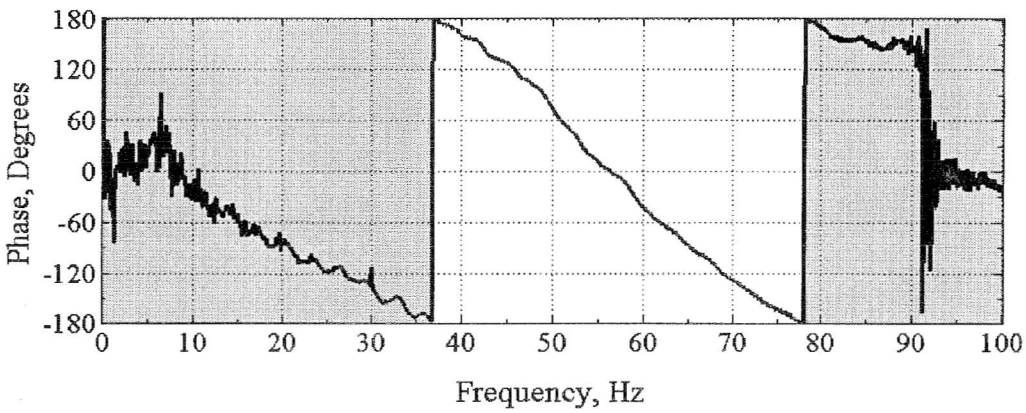

Figure V.8 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4C6_F_21.DAT)

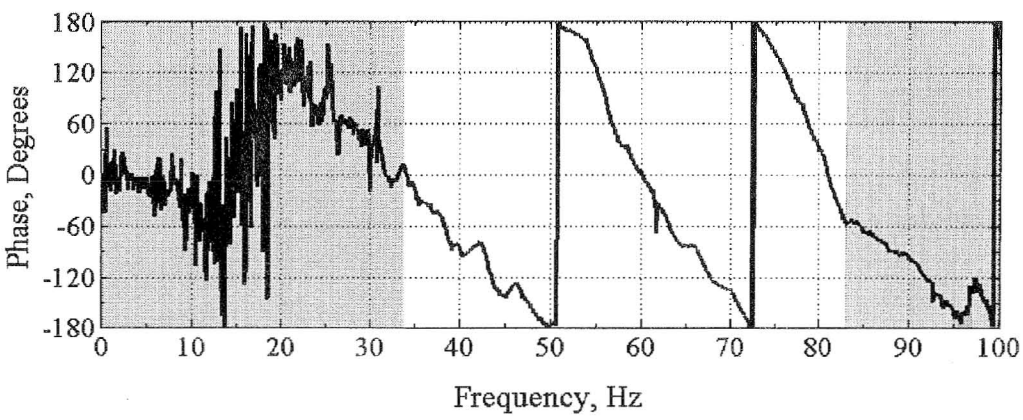

Figure V.9 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4C5_F_43.DAT)

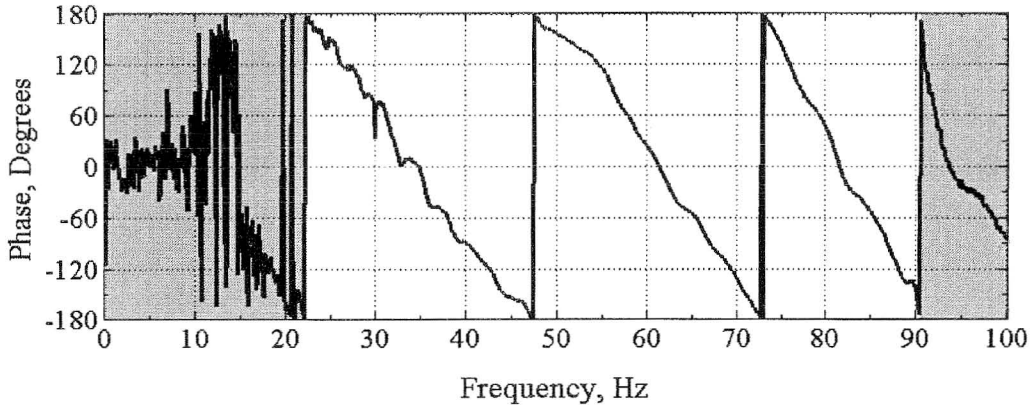

Figure V.10 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4C6_F_43.DAT)

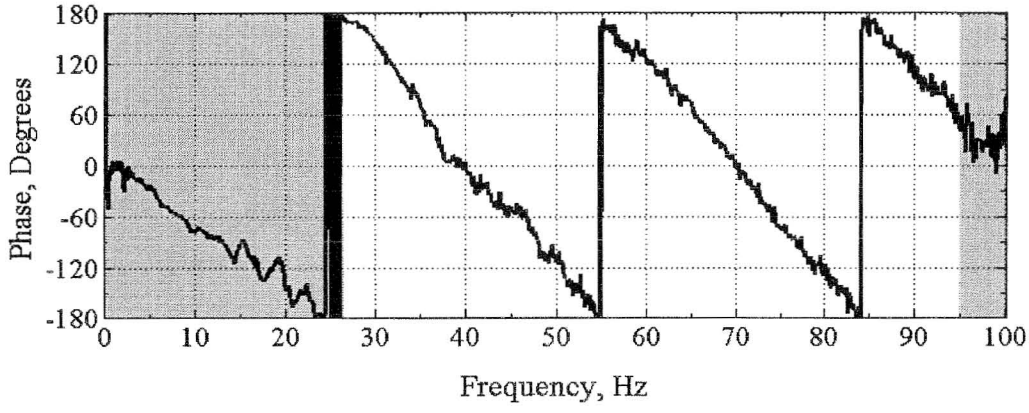

Figure V.11 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G1_F_21.DAT)

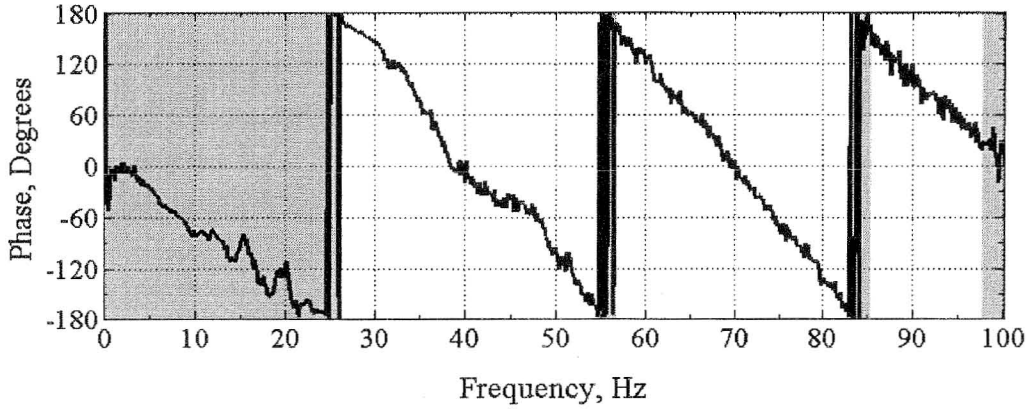

Figure V.12 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G2_F_21.DAT)

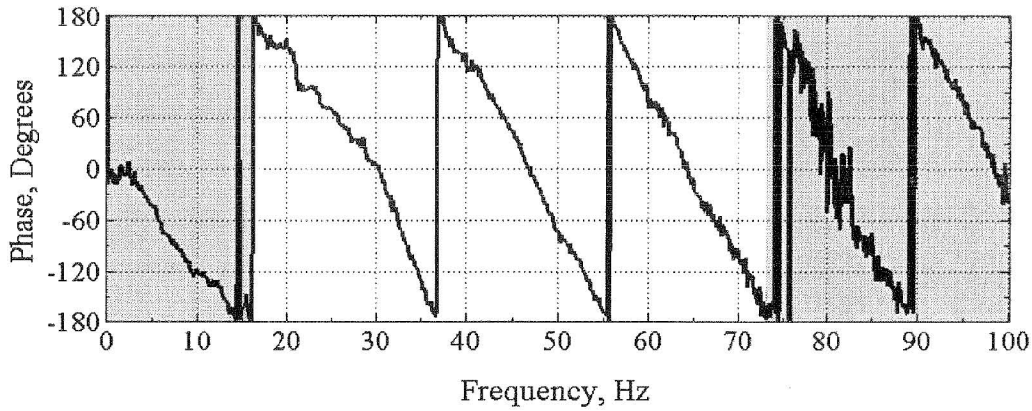

Figure V.13 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_21.DAT)

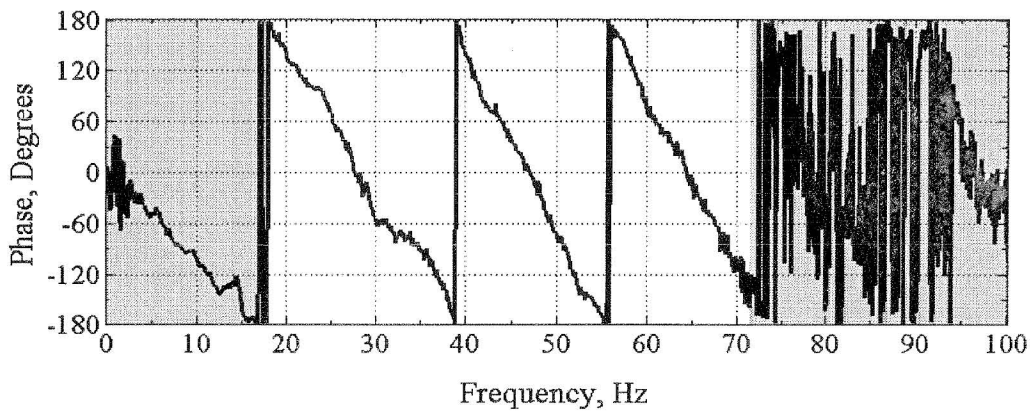

Figure V.14 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_43.DAT)

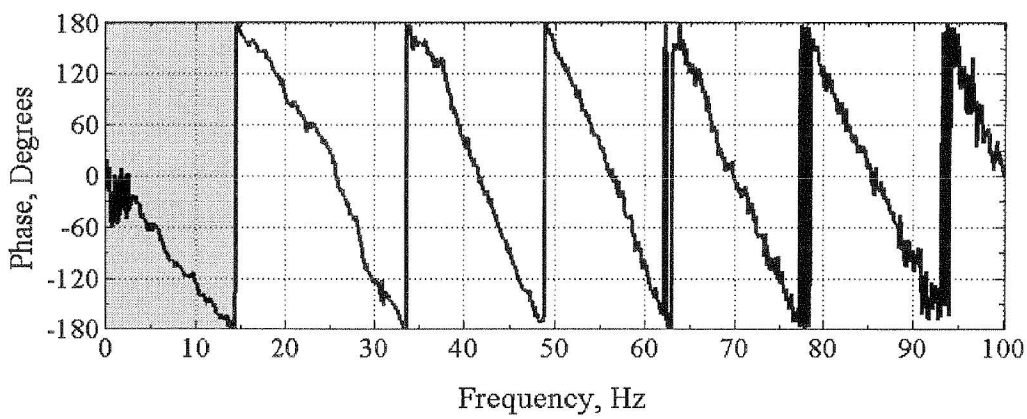

Figure V.15 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G1_F_43.DAT)

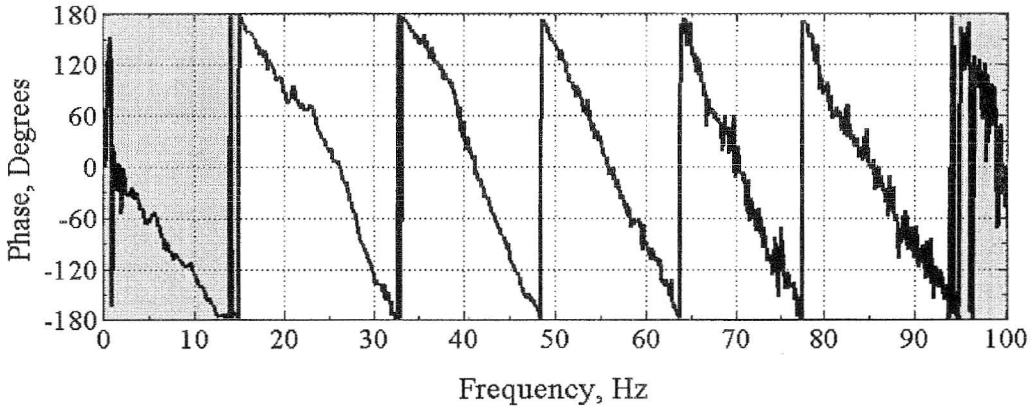

Figure V.16 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G2_F_43.DAT)

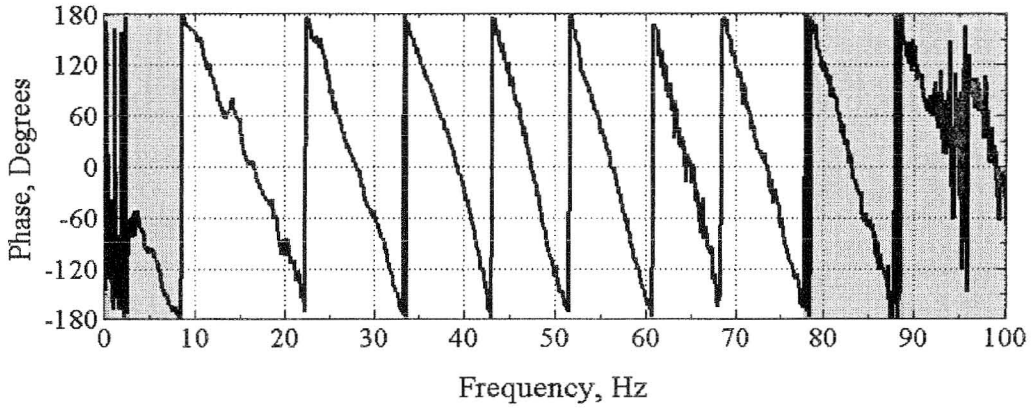

Figure V.17 Phase Plots Measured by SASW Testing with 50-ft Receiver Spacing (4G4_F_21.DAT)

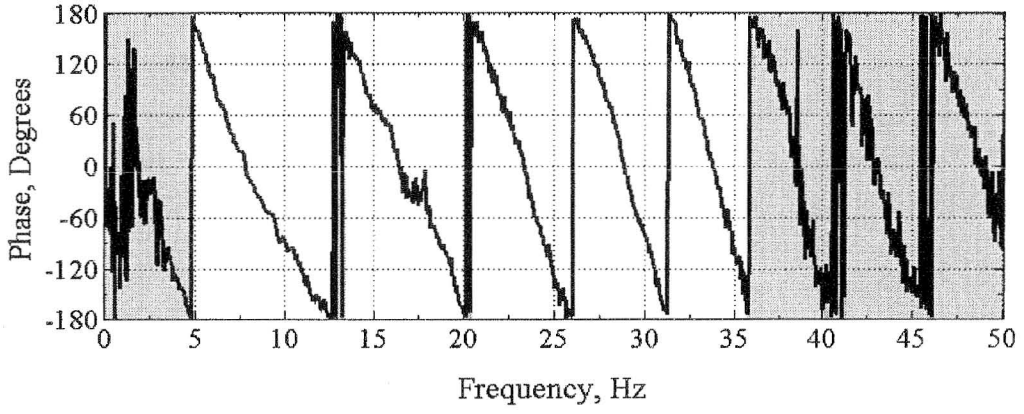

Figure V.18 Phase Plots Measured by SASW Testing with 100-ft Receiver Spacing (4G5_F_21.DAT)

Table V.1 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site C

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
1	1	0	204	1	4C1_F_21.DAT
	2	395	800	-	
2	1	0	114	1	4C1_F_43.DAT
	2	123	129	1	
	3	472	800	-	
2	1	0	117	1	4C2_F_43.DAT
	2	255	800	-	
3	1	0	81.5	1	4C4_F_21.DAT
	2	125	147.5	1	
	3	215.5	400	-	
6	1	0	44	1	4C3_F_43.DAT
	2	82	144	2	
	3	334.5	400	-	
6	1	0	46	1	4C4_F_43.DAT
	2	106.5	151.5	2	
	3	243.5	400	-	
9	1	0	35.5	1	4C5_F_21.DAT
	2	65.88	100	-	
9	1	0	36.88	1	4C6_F_21.DAT
	2	77.88	100	-	
18	1	0	33.75	1	4C5_F_43.DAT
	2	82.88	100	-	
18	1	0	22.5	1	4C6_F_43.DAT
	2	90.25	100	-	
15	1	0	26.38	1	4G1_F_21.DAT
	2	94.75	100	-	
15	1	0	26.25	1	4G2_F_21.DAT
	2	54.62	56.62	2	
	3	82.75	85.12	3	
	4	97.38	100	-	
25	1	0	16.25	1	4G3_F_21.DAT
	2	73	100	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

Table V.2 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site C (Continued)

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
25	1	0	18	1	4G3_F_43.DAT
	2	55.38	56	3	
	3	71.38	100	-	
30	1	0	14.62	1	4G1_F_43.DAT
30	1	0	15	1	4G2_F_43.DAT
	2	32.5	33.25	2	
	3	93.5	100	-	
50	1	0	8.62	1	4G4_F_21.DAT
	2	33.25	33.75	3	
	3	77.5	100	-	
100	1	0	4.88	1	4G5_F_21.DAT
	2	12.69	13.44	2	
	3	20.06	20.5	3	
	4	35.69	50	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

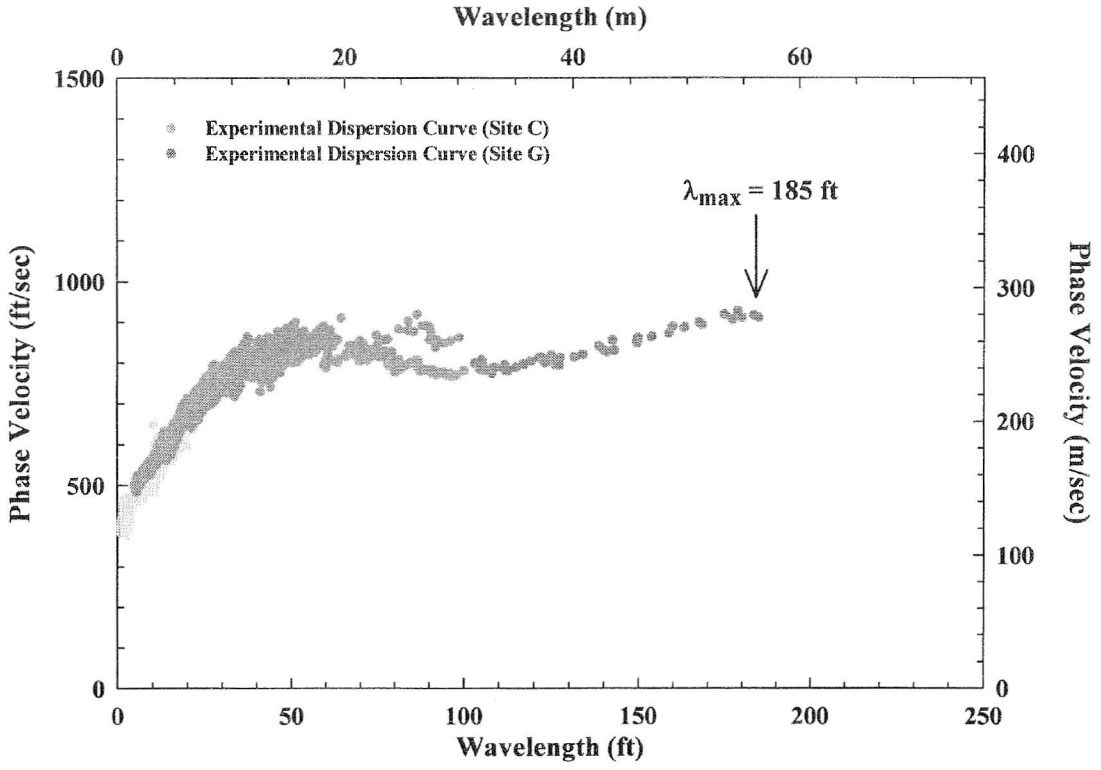

Figure V.19 Experimental Dispersion Curve Measured during Fourth Site Visit at Site C at Vogtle, GA; Linear Wavelength Axis

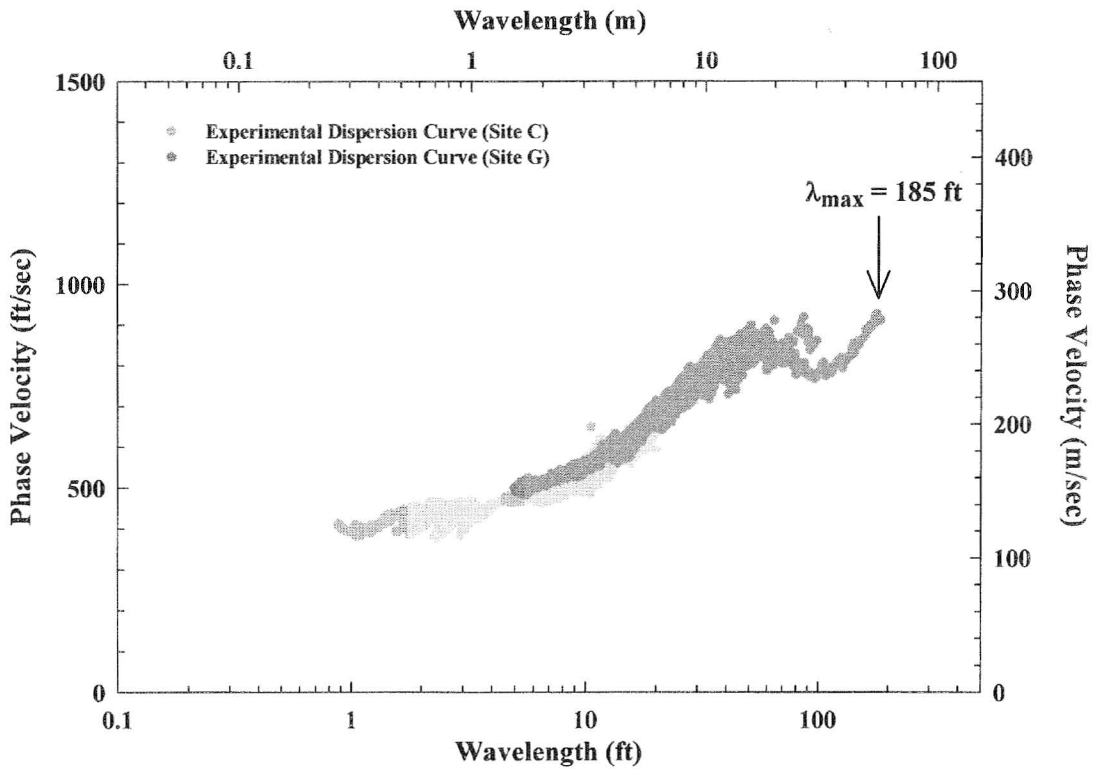

Figure V.20 Experimental Dispersion Curve Measured during Fourth Site Visit at Site C at Vogtle, GA; Logarithmic Wavelength Axis

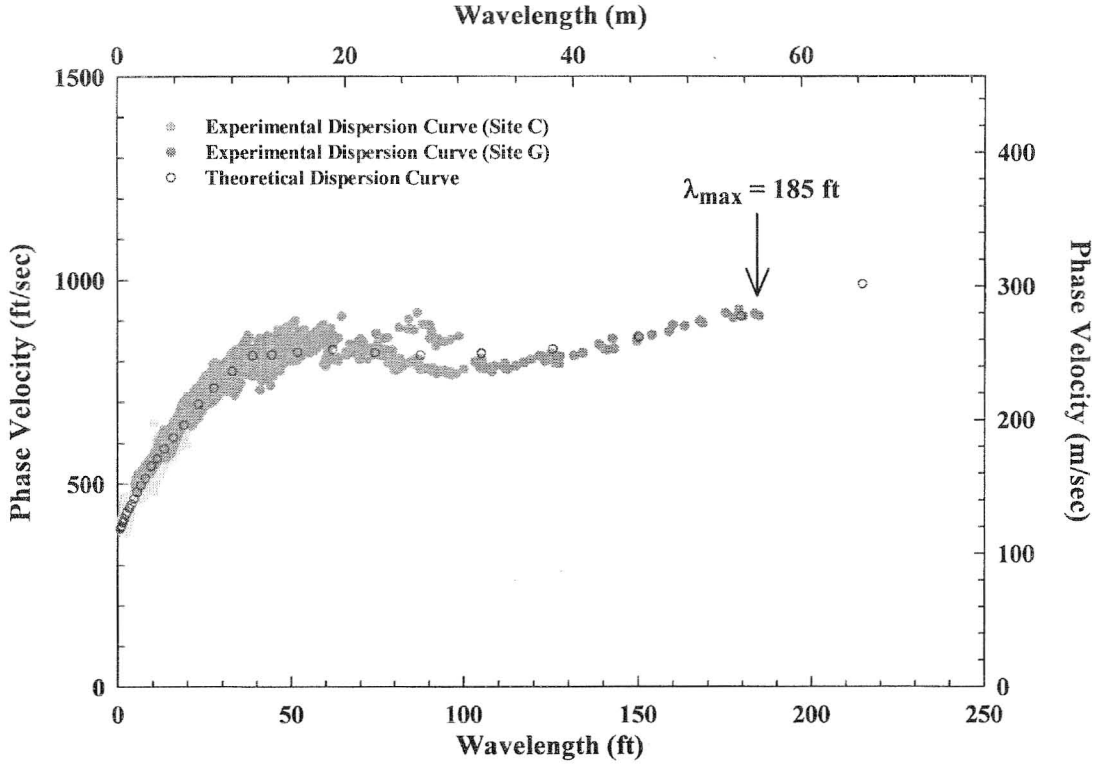

Figure V.21 Experimental and Theoretical Dispersion Curves from Site C in Fourth Site Visit at Vogtle, GA; Linear Wavelength Axis

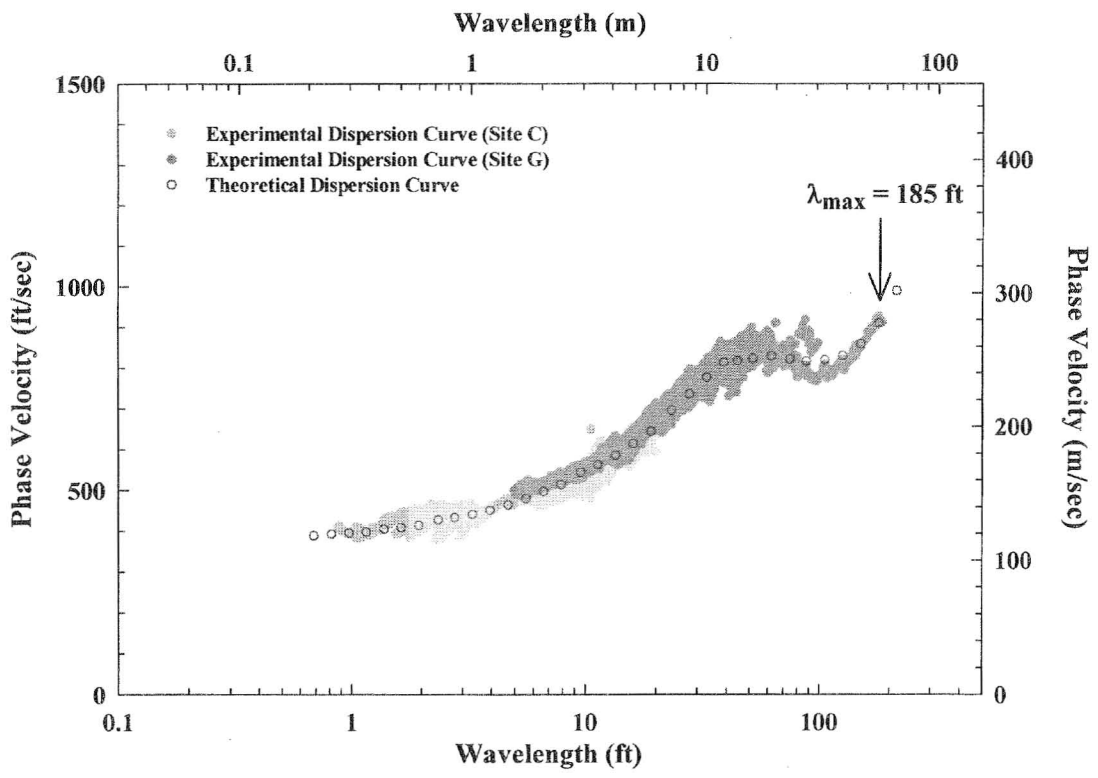

Figure V.22 Experimental and Theoretical Dispersion Curves from Site C in Fourth Site Visit at Vogtle, GA; Logarithmic Wavelength Axis

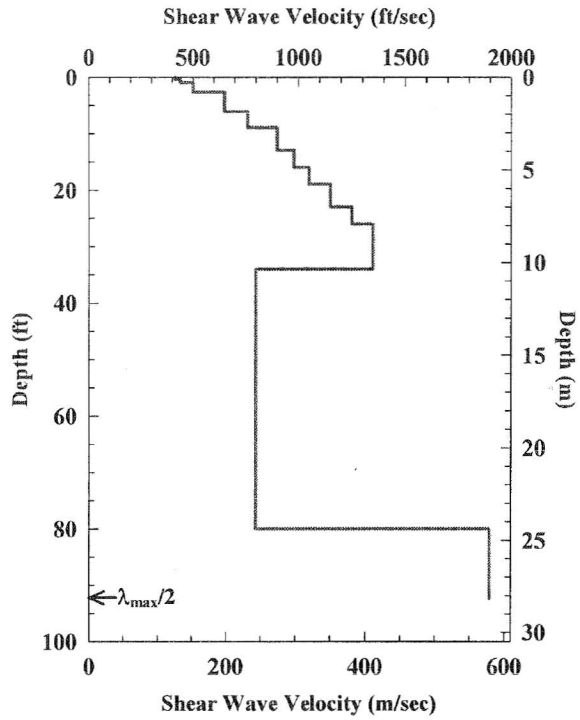

Figure V.23 Shear Wave Velocity Profile Determined at Site C during Fourth Site Visit at Vogtle, GA

Table V.3 Profile Parameters Used to Develop Preliminary Theoretical Dispersion Curve at Site C in the Fourth Site Visit at Vogtle, GA

Layer No.	Thickness, ft	Depth to Top of Layer, ft	S-Wave Velocity, ft/s	Assumed Poisson's Ratio	P-Wave Velocity, ft/s	Assumed Total Unit Weight, pcf
1	0.4	0.0	415	0.24	710	128
2	0.6	0.4	440	0.24	752	128
3	1.7	1.0	500	0.24	855	128
4	3.5	2.7	650	0.24	1111	128
5	2.8	6.2	760	0.24	1299	128
6	4.0	9.0	900	0.24	1539	128
7	3.0	13.0	980	0.24	1676	128
8	3.0	16.0	1050	0.24	1795	128
9	4.0	19.0	1150	0.24	1966	128
10	3.0	23.0	1250	0.24	2137	128
11	8.0	26.0	1350	0.24	2308	128
12	46.0	34.0	800	0.24	1368	128
13#	12.3	80.0	1900	0.42	5000	135
14*#	17.7	92.3	2200	0.38	5000	135
15*#	Half Space	110.0	2200	0.38	5000	135

* Layer below maximum depth of the V_S Profile.

\# Layer below water tatble.

Performed by Yin-Cheng Lin Checked by K. H. Stokoe

Yin-Cheng Lin Kenneth H. Stokoe, II

Appendix W

SASW Measurements of Fourth Site Visit at Vogtle, GA
Site Location: Site D

1. Data Sheet(s) W.2
2. Phase Plots from SASW Tests W.4
3. Table of Masking Parameters W.11
4. Experimental Dispersion Curves W.13
5. Matching the Experimental and Theoretical Dispersion Curves W.14
6. Shear Wave Velocity Profile W.15
7. Table of Profile Parameters W.15

3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Voythe

Data Sheet # : SA4#4

Location : D (SA4#4)

Disk # : SA4#4

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Yuan, Minjae

Recorded by : Yuan

Checked by : Minjae

Sketch

R1 I.D. : UT07-4.5HZ-04, GTC92003

R2 I.D. : UT07-4.5HZ-02, GTC92002

R3 I.D. : UT07-4.5HZ-03, GTC92001

Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
9	9	18	For	Rev	sledge	4D1	0 - 200	hammer on plate
9	9	18	For	Rev	"	4D2	0 - 200	"
3	3	6	For	Rev	mall "	4D3	0 - 200	"
3	3	6	For	Rev	"	4D4	0 - 200	" soft hit
1	1	2	For	Rev	small "	4D5	0 - 800	" "
1	1	2	For	Rev	"	4D6	0 - 800	" "
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #7

Location : G (SA4 #7)

Disk # : SA4 #7

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Tuan, Minjae

Recorded by : Tuan

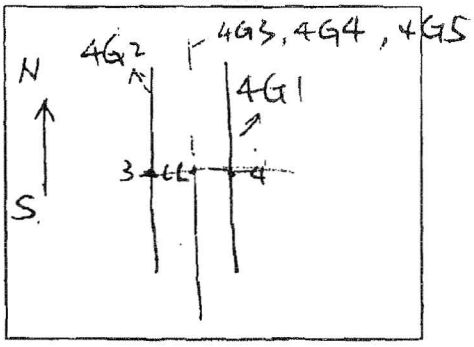
Checked by : Minjae

R1 I.D. : UT07-4.5Hz-04, GEC92003

R2 I.D. : UT07-4.5Hz-02, GEC92002

R3 I.D. : UT07-4.5Hz-03, GEC92001

Sketch



Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
15	15	30	For	Rev	bulldozer	4G1	0 - 100	
15	15	30	For	Rev	"	4G2	0 - 100	
25	25	25	For	Rev	"	4G3	0 - 100	
50	50	—	For	Rev	"	4G4	0 - 100	
100	100	—	For	Rev	"	4G5	0 - 50	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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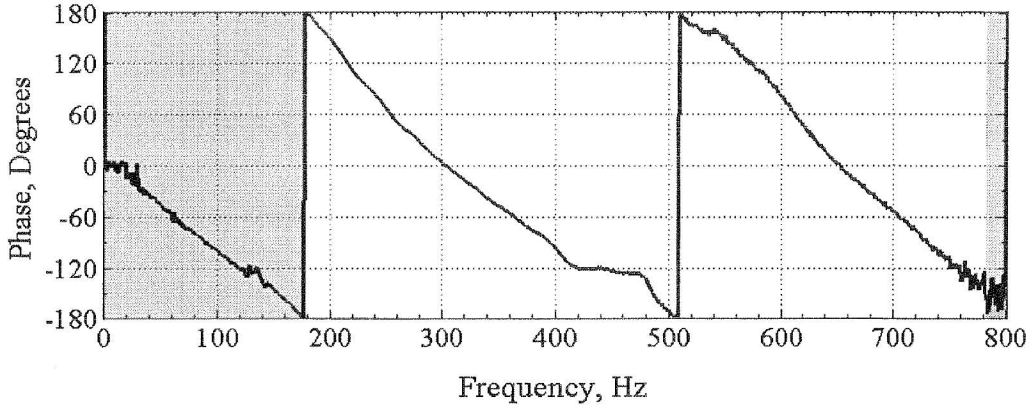

Figure W.1 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4D6_F_21.DAT)

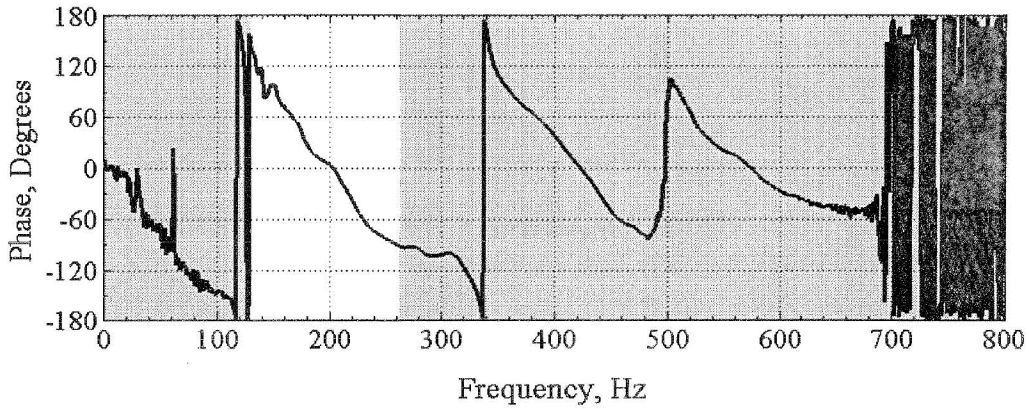

Figure W.2 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4D5_F_43.DAT)

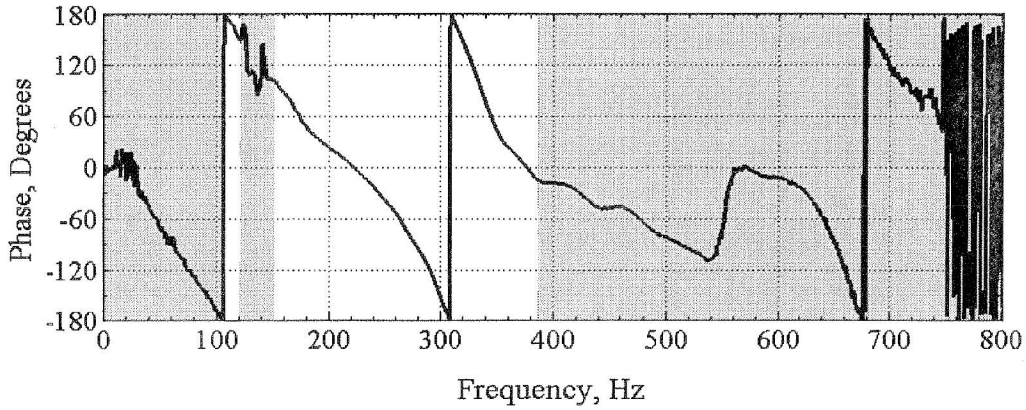

Figure W.3 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4D6_F_43.DAT)

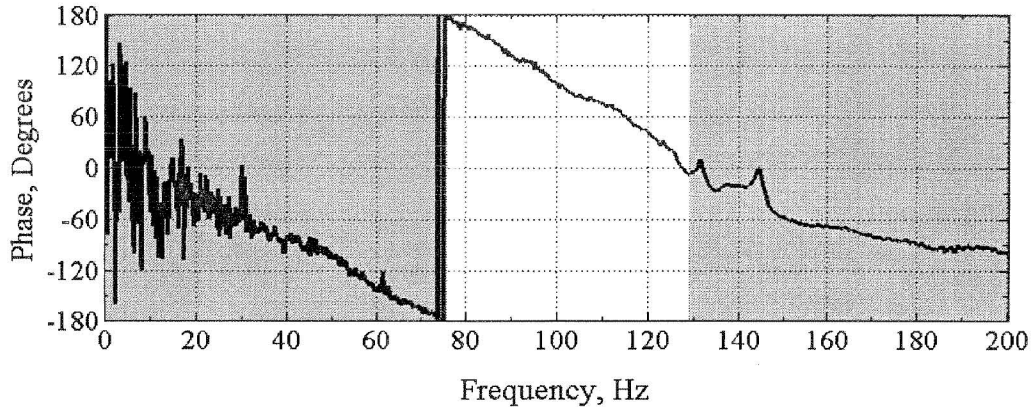

Figure W.4 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4D3_F_21.DAT)

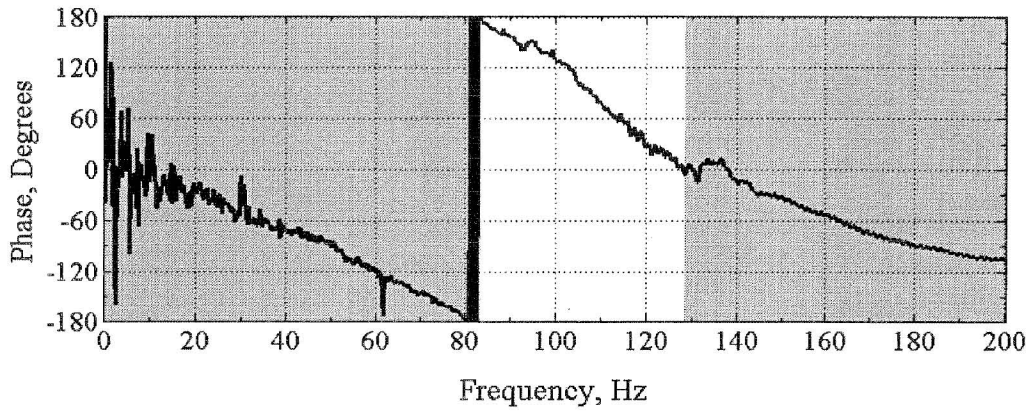

Figure W.5 Phase Plots Measured by SASW Testing with 3-ft Receiver Spacing (4D4_F_21.DAT)

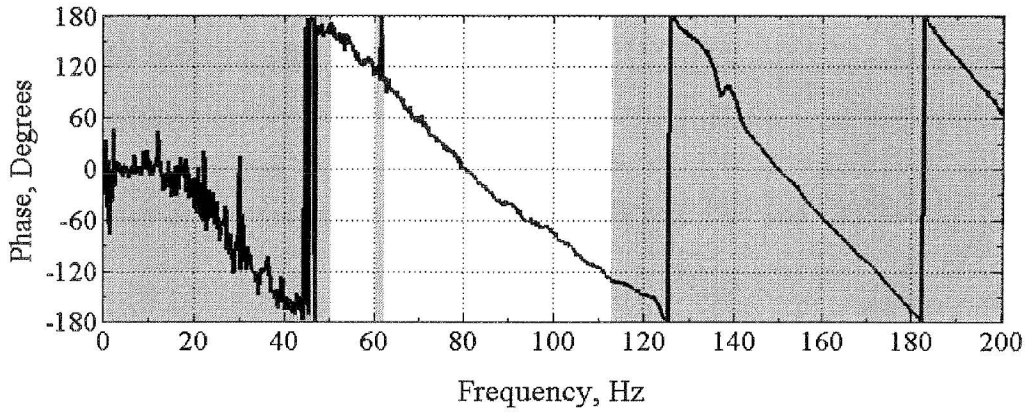

Figure W.6 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4D3_F_43.DAT)

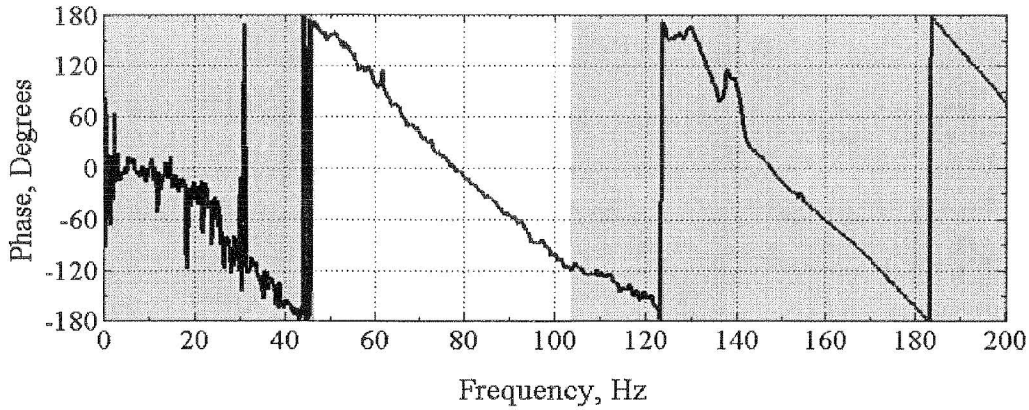

Figure W.7 Phase Plots Measured by SASW Testing with 6-ft Receiver Spacing (4D4_F_43.DAT)

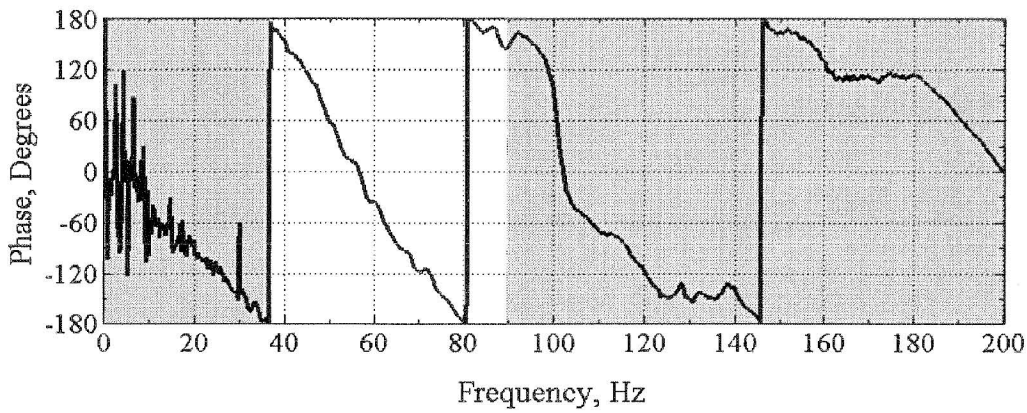

Figure W.8 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4D1_F_21.DAT)

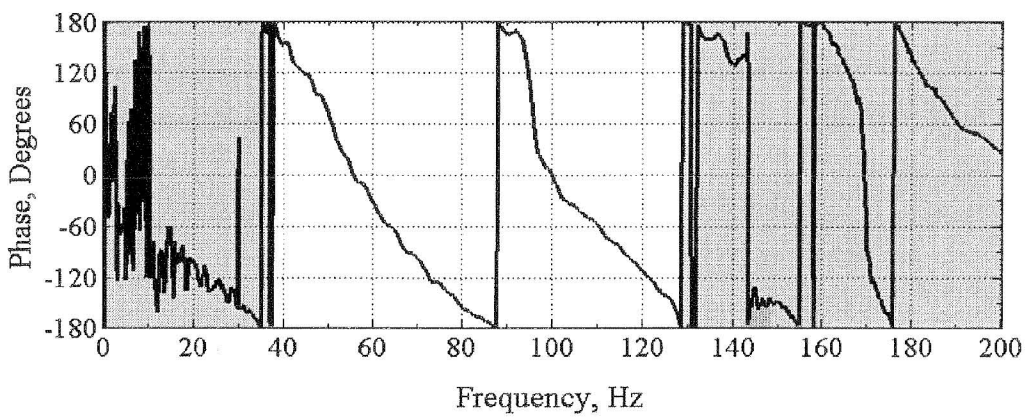

Figure W.9 Phase Plots Measured by SASW Testing with 9-ft Receiver Spacing (4D2_F_21.DAT)

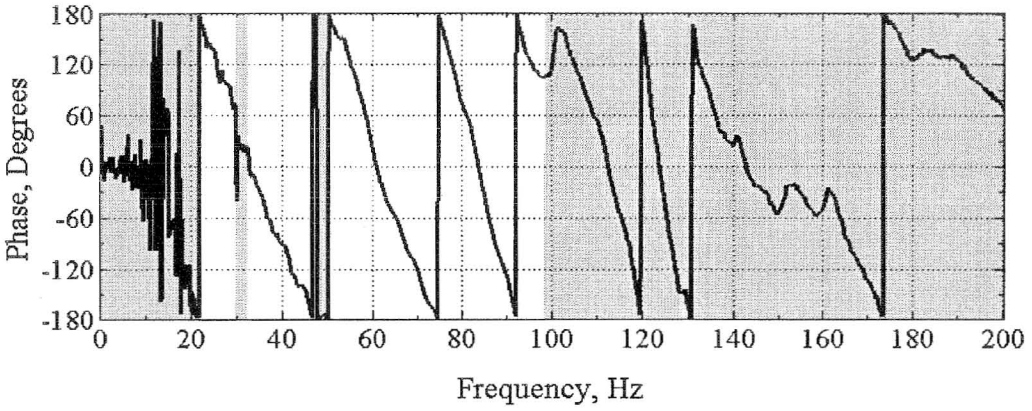

Figure W.10 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4D1_F_43.DAT)

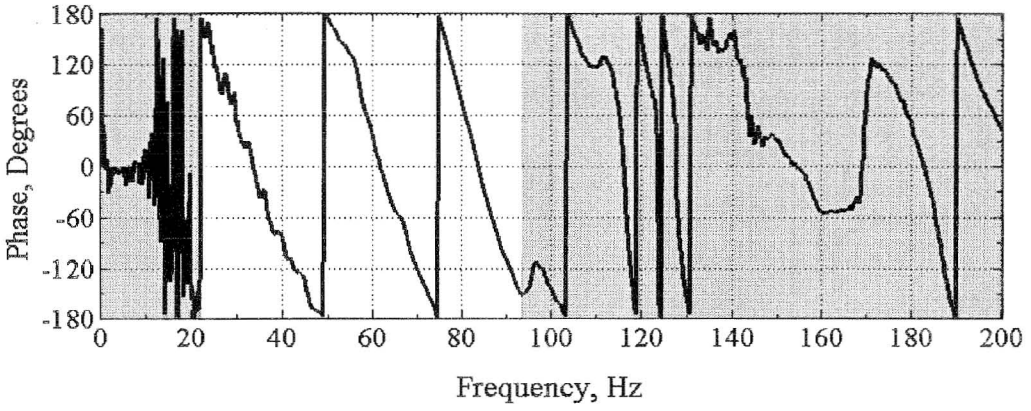

Figure W.11 Phase Plots Measured by SASW Testing with 18-ft Receiver Spacing (4D2_F_43.DAT)

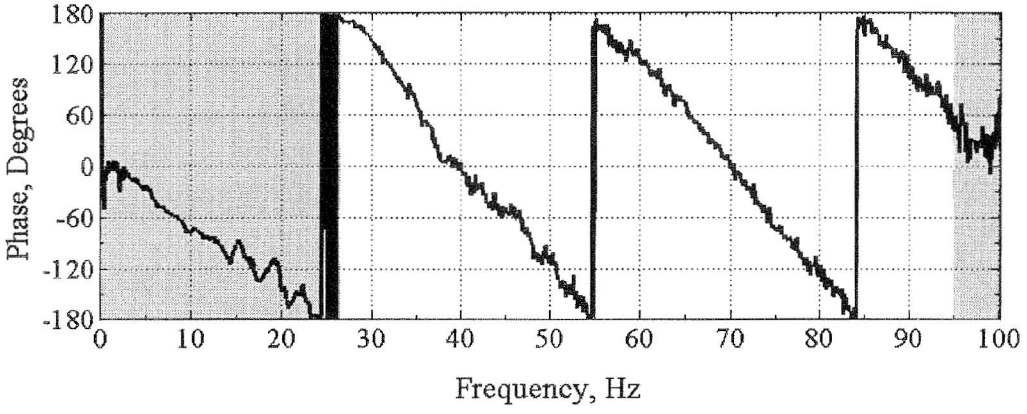

Figure W.12 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G1_F_21.DAT)

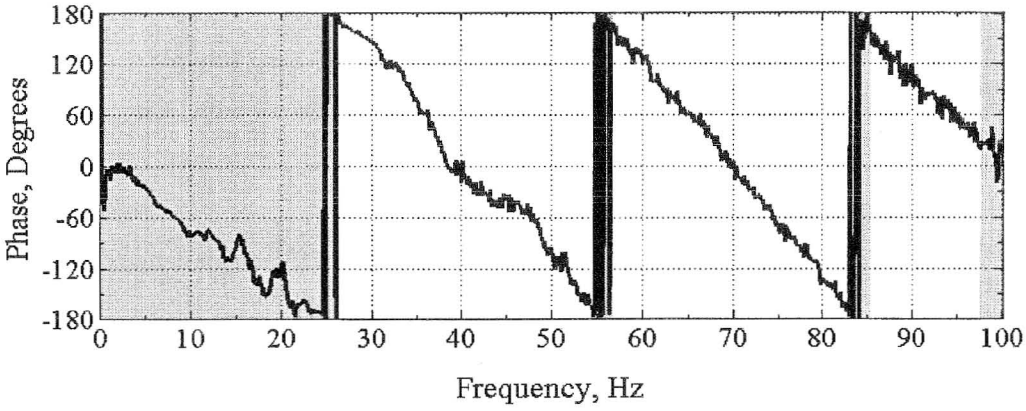

Figure W.13 Phase Plots Measured by SASW Testing with 15-ft Receiver Spacing (4G2_F_21.DAT)

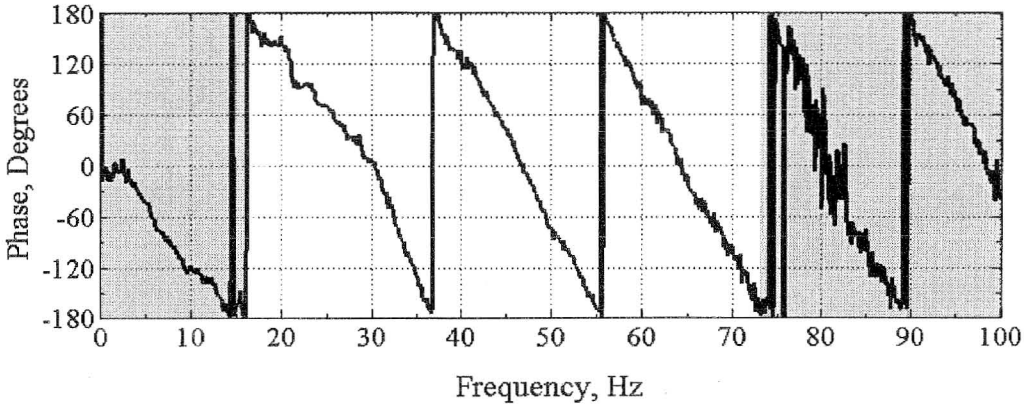

Figure W.14 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_21.DAT)

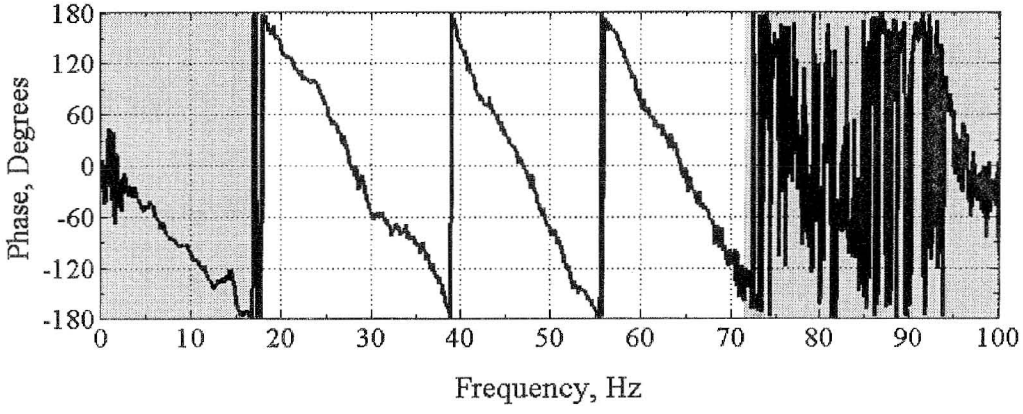

Figure W.15 Phase Plots Measured by SASW Testing with 25-ft Receiver Spacing (4G3_F_43.DAT)

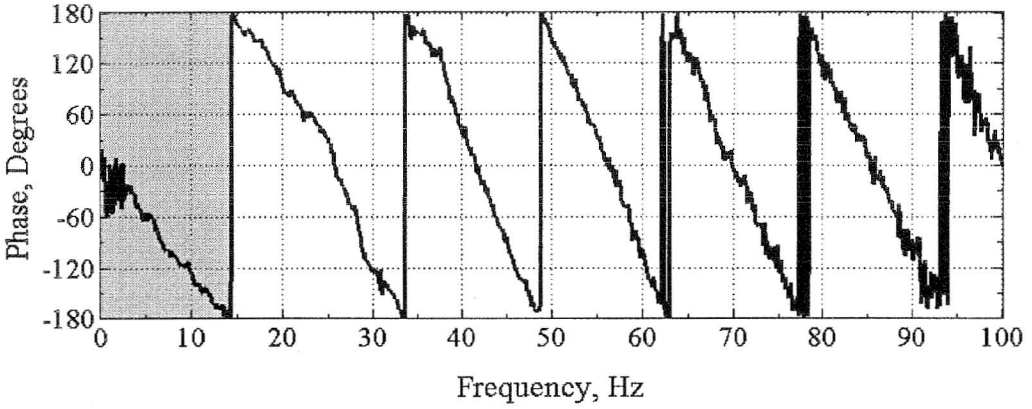

Figure W.16 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G1_F_43.DAT)

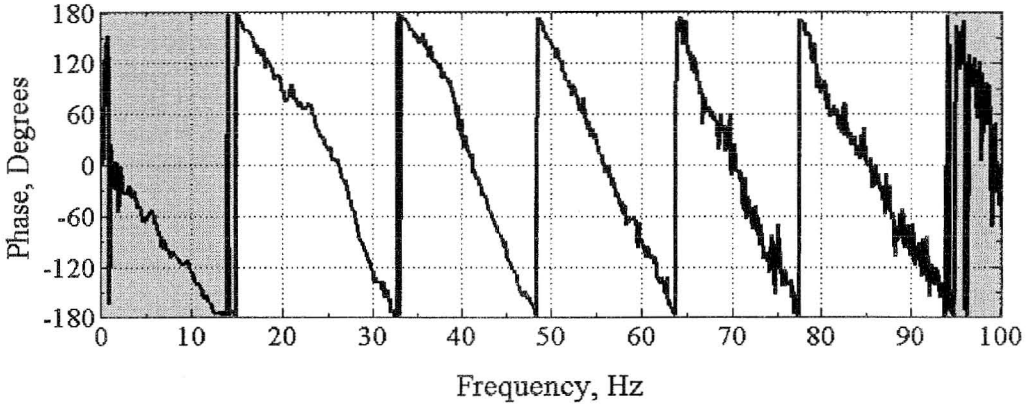

Figure W.17 Phase Plots Measured by SASW Testing with 30-ft Receiver Spacing (4G2_F_43.DAT)

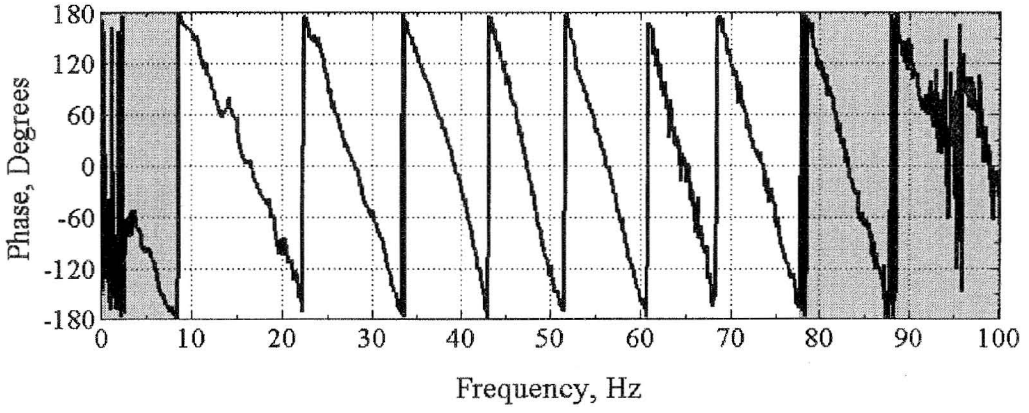

Figure W.18 Phase Plots Measured by SASW Testing with 50-ft Receiver Spacing (4G4_F_21.DAT)

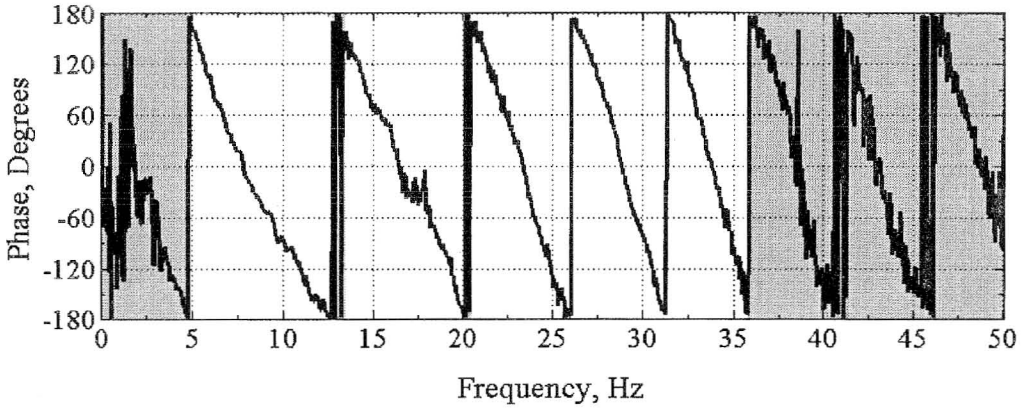

Figure W.19 Phase Plots Measured by SASW Testing with 100-ft Receiver Spacing (4G5_F_21.DAT)

Table W.1 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site D

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
1	1	0	178	1	4D6_F_21.DAT
	2	780	800	-	
2	1	0	129	1	4D5_F_43.DAT
	2	263	800	-	
2	1	0	107	1	4D6_F_43.DAT
	2	121	151	1	
	3	387	800	-	
3	1	0	75.75	1	4D3_F_21.DAT
	2	129	200	-	
3	1	0	83.5	1	4D4_F_21.DAT
	2	128.25	200	-	
6	1	0	50.25	1	4D3_F_43.DAT
	2	60.25	62.25	1	
	3	112.75	200	-	
6	1	0	46.5	1	4D4_F_43.DAT
	2	103.5	200	-	
9	1	0	36.75	1	4D1_F_21.DAT
	2	89.5	200	-	
9	1	0	37.75	1	4D2_F_21.DAT
	2	128.5	200	-	
18	1	0	22	1	4D1_F_43.DAT
	2	29.75	32.25	1	
	3	46.5	50.25	2	
	4	98.25	200	-	
18	1	0	22.25	1	4D2_F_43.DAT
	2	93.5	200	-	
15	1	0	26.38	1	4G1_F_21.DAT
	2	94.75	100	-	
15	1	0	26.25	1	4G2_F_21.DAT
	2	54.62	56.62	2	
	3	82.75	85.12	3	
	4	97.38	100	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

Table W.2 Tables of Masking Parameters Used on Data Collected during Fourth Site Visit at Site D (Continued)

Receiver Spacing (ft)	Masking Interval	Masking Start Frequency, Hz	Masking Stop Frequency, Hz	Number of Jumps	Filename
25	1	0	16.25	1	4G3_F_21.DAT
	2	73	100	-	
25	1	0	18	1	4G3_F_43.DAT
	2	55.38	56	3	
	3	71.38	100	-	
30	1	0	14.62	1	4G1_F_43.DAT
30	1	0	15	1	4G2_F_43.DAT
	2	32.5	33.25	2	
	3	93.5	100	-	
50	1	0	8.62	1	4G4_F_21.DAT
	2	33.25	33.75	3	
	3	77.5	100	-	
100	1	0	4.88	1	4G5_F_21.DAT
	2	12.69	13.44	2	
	3	20.06	20.5	3	
	4	35.69	50	-	

Performed by Jiabei Yuan Checked by Yin-Cheng Lin

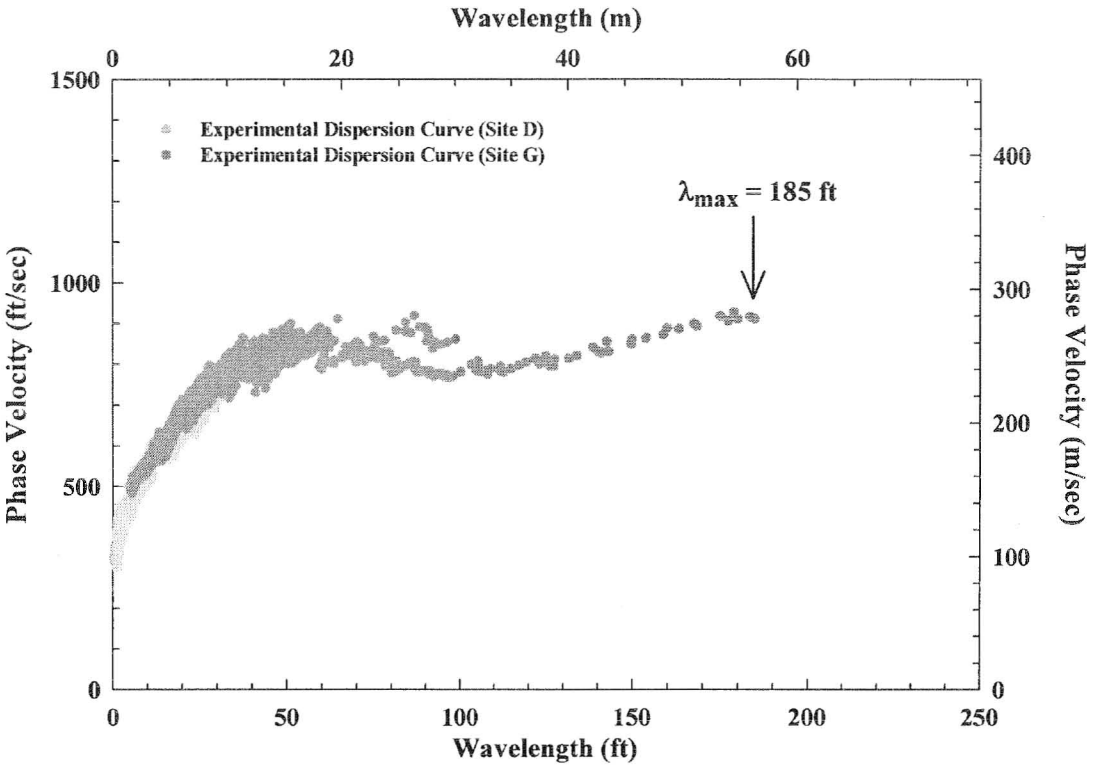

Figure W.20 Experimental Dispersion Curve Measured during Fourth Site Visit at Site D at Vogtle, GA; Linear Wavelength Axis

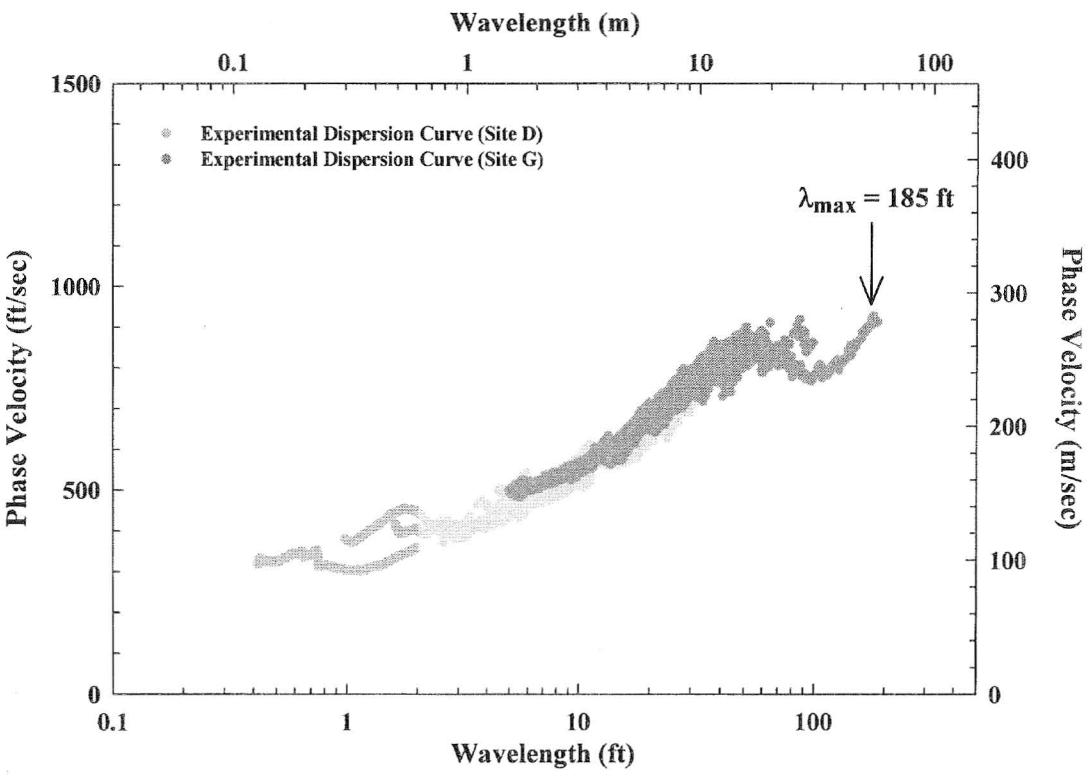

Figure W.21 Experimental Dispersion Curve Measured during Fourth Site Visit at Site D at Vogtle, GA; Logarithmic Wavelength Axis

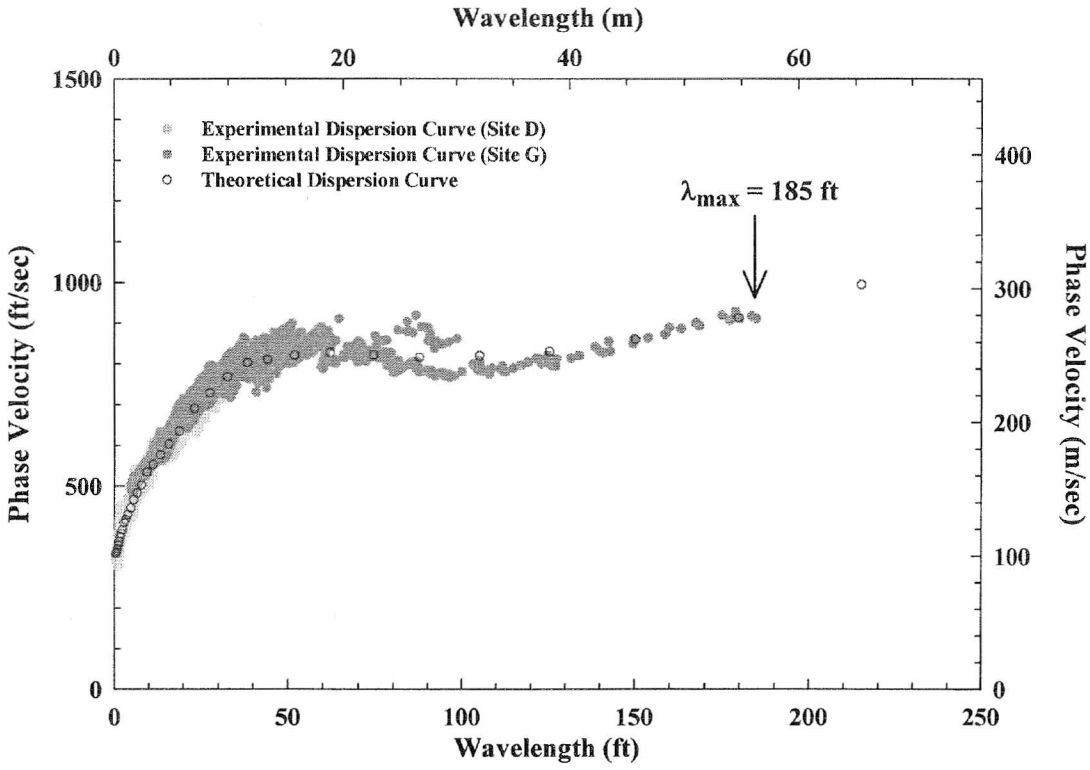

Figure W.22 Experimental and Theoretical Dispersion Curves from Site D in Fourth Site Visit at Vogtle, GA; Linear Wavelength Axis

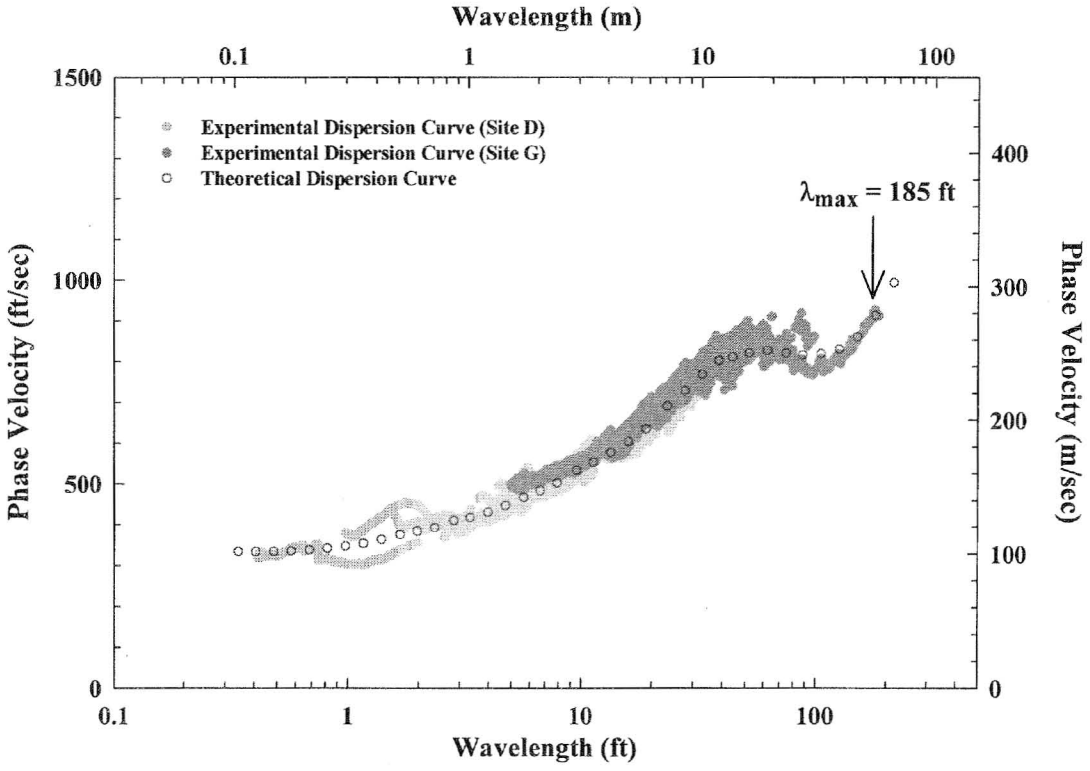

Figure W.23 Experimental and Theoretical Dispersion Curves from Site D in Fourth Site Visit at Vogtle, GA; Logarithmic Wavelength Axis

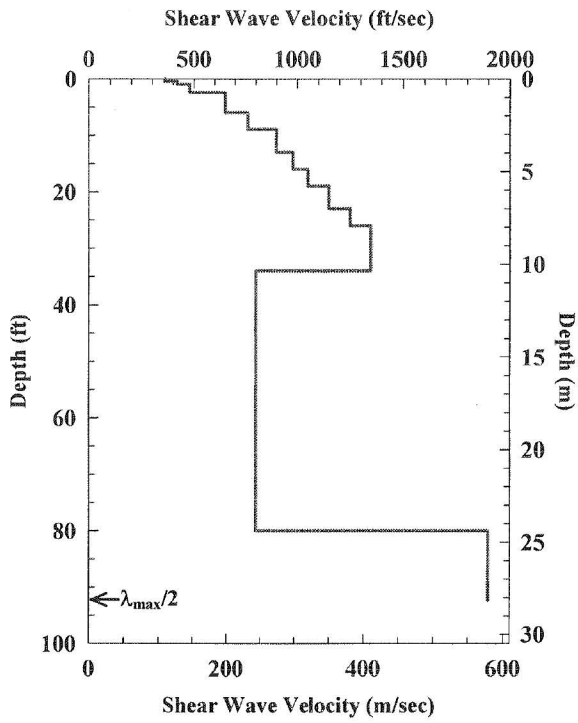

Figure W.24 Shear Wave Velocity Profile Determined at Site D during Fourth Site Visit at Vogtle, GA

Table W.3 Profile Parameters Used to Develop Preliminary Theoretical Dispersion Curve at Site D in the Fourth Site Visit at Vogtle, GA

Layer No.	Thickness, ft	Depth to Top of Layer, ft	S-Wave Velocity, ft/s	Assumed Poisson's Ratio	P-Wave Velocity, ft/s	Assumed Total Unit Weight, pcf
1	0.5	0.0	360	0.24	616	128
2	0.5	0.5	420	0.24	718	128
3	1.5	1.0	480	0.24	821	128
4	3.5	2.5	650	0.24	1111	128
5	3.0	6.0	760	0.24	1299	128
6	4.0	9.0	900	0.24	1539	128
7	3.0	13.0	980	0.24	1676	128
8	3.0	16.0	1050	0.24	1795	128
9	4.0	19.0	1150	0.24	1966	128
10	3.0	23.0	1250	0.24	2137	128
11	8.0	26.0	1350	0.25	2338	128
12	46.0	34.0	800	0.25	1386	128
13#	12.3	80.0	1900	0.42	5000	135
14*#	17.7	92.3	2200	0.38	5000	135
15*#	Half Space	110.0	2200	0.38	5000	135

* Layer below maximum depth of the V_S Profile.

\# Layer below water tatble.

Performed by Yin-Cheng Lin Checked by K. H. Stokoe

Yin-Cheng Lin Kenneth H. Stokoe, II

Appendix X

SASW Measurements of Fourth Site Visit at Vogtle, GA
Site Location: Site E

1. Data Sheet(s) X.2
2. Phase Plots from SASW Tests X.4
3. Table of Masking Parameters X.11
4. Experimental Dispersion Curves X.13
5. Matching the Experimental and Theoretical Dispersion Curves X.14
6. Shear Wave Velocity Profile X.15
7. Table of Profile Parameters X.15

3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #5

Location : E (SA4#5)

Disk # : SA4 #5

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : stokoe, Tuan, Minjae

Recorded by : Tuan

Checked by : Minjae

Sketch

R1 I.D. : UT07-4.5HZ-04, GBC92003

R2 I.D. : UT07-4.5HZ-02, GBC92002

R3 I.D. : UT07-4.5HZ-03, GBC92001

Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
9	9	18	For	(Rev)	sledge	4E1	0 ~ 100	hammer on plate.
9	9	18	(For)	Rev	"	4E2	0 ~ 100	"
3	3	6	(For)	Rev	med	4E3	0 ~ 200	"
3	3	6	For	(Rev)	"	4E4	0 ~ 200	"
1	1	2	For	(Rev)	small	4E5	0 ~ 800	
1	1	2	(For)	Rev	"	4E6	0 ~ 800	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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3 - Receiver SASW Data Sheet

Page ___ of ___

Project : Vogtle

Data Sheet # : SA4 #7

Location : G (SA4 #7)

Disk # : SA4 #7

Date/(Time) : Jan / 24 / 2008 (: ~ :)

Personnel : Stokoe, Tuan, Minjae

Recorded by : Tuan

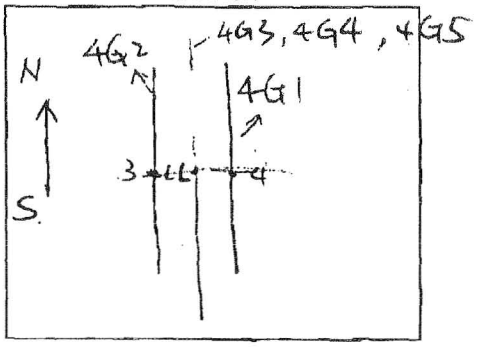
Checked by : Minjae

R1 I.D. : UT07-4.5Hz-04, GEC92003

R2 I.D. : UT07-4.5Hz-02, GEC92002

R3 I.D. : UT07-4.5Hz-03, GEC92001

Sketch



Distance (ft)			Impact Direction		Impact Source	Record #	Freq. Range (Hz)	Notes
S - R1	R1 - R2	R2 - R3						
15	15	30	For	Rev	bulldozer	4G1	0 ~ 100	
15	15	30	For	Rev	"	4G2	0 ~ 100	
25	25	25	For	Rev	"	4G3	0 ~ 100	
50	50	—	For	Rev	"	4G4	0 ~ 100	
100	100	—	For	Rev	"	4G5	0 ~ 50	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	
			For	Rev			~	

* Autosequence 3R_SASW saves F_2/1, C_2/1, F_4/3, C_4/3, Lin_1, Lin_2, Lin_4

* Autosequence 3R_SEWPSIN saves F_2/1, Var_2, F_4/3, Var_4, Lin_1, Lin_2, Lin_4

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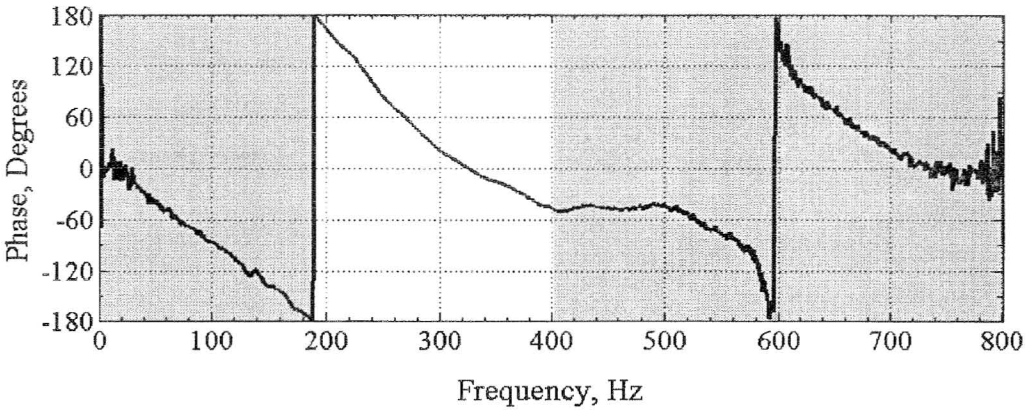

Figure X.1 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4E5_F_21.DAT)

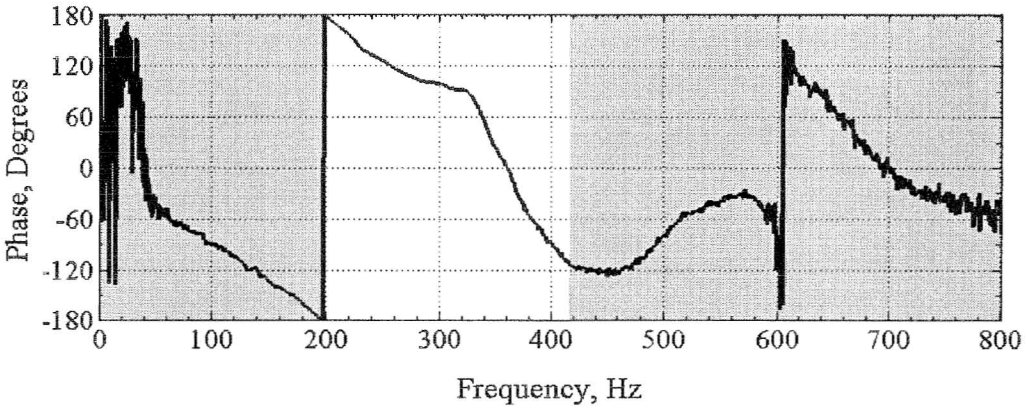

Figure X.2 Phase Plots Measured by SASW Testing with 1-ft Receiver Spacing (4E6_F_21.DAT)

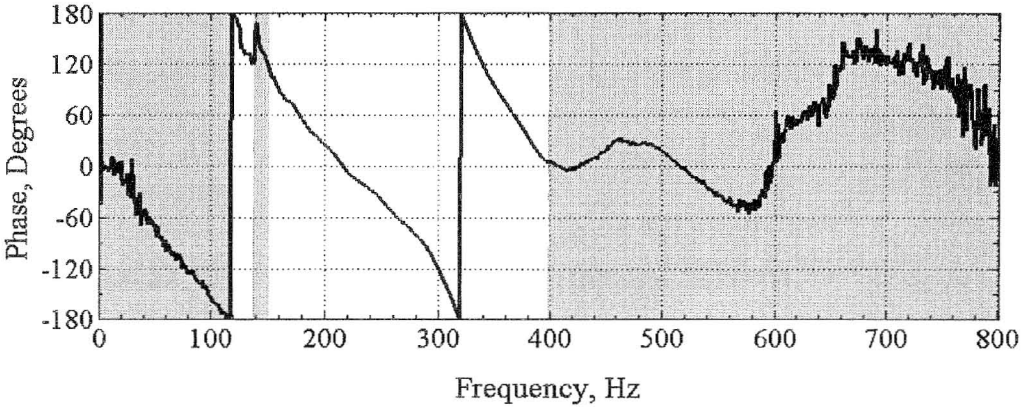

Figure X.3 Phase Plots Measured by SASW Testing with 2-ft Receiver Spacing (4E5_F_43.DAT)