

MASW Analysis Report

Author:
Site:
Date:

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1 - Experimental data

Traces file name.....
Number of sensors.....8
Number of time samples.....3.26787e-312
Acquisition timestep.....0.25ms
Number of sensors used for the analysis.....8
The interval considered for the analysis starts at.....0ms
The interval considered for the analysis ends at.....500ms
Sensors are not reverted (the last one in the file is the last one for the analysis)

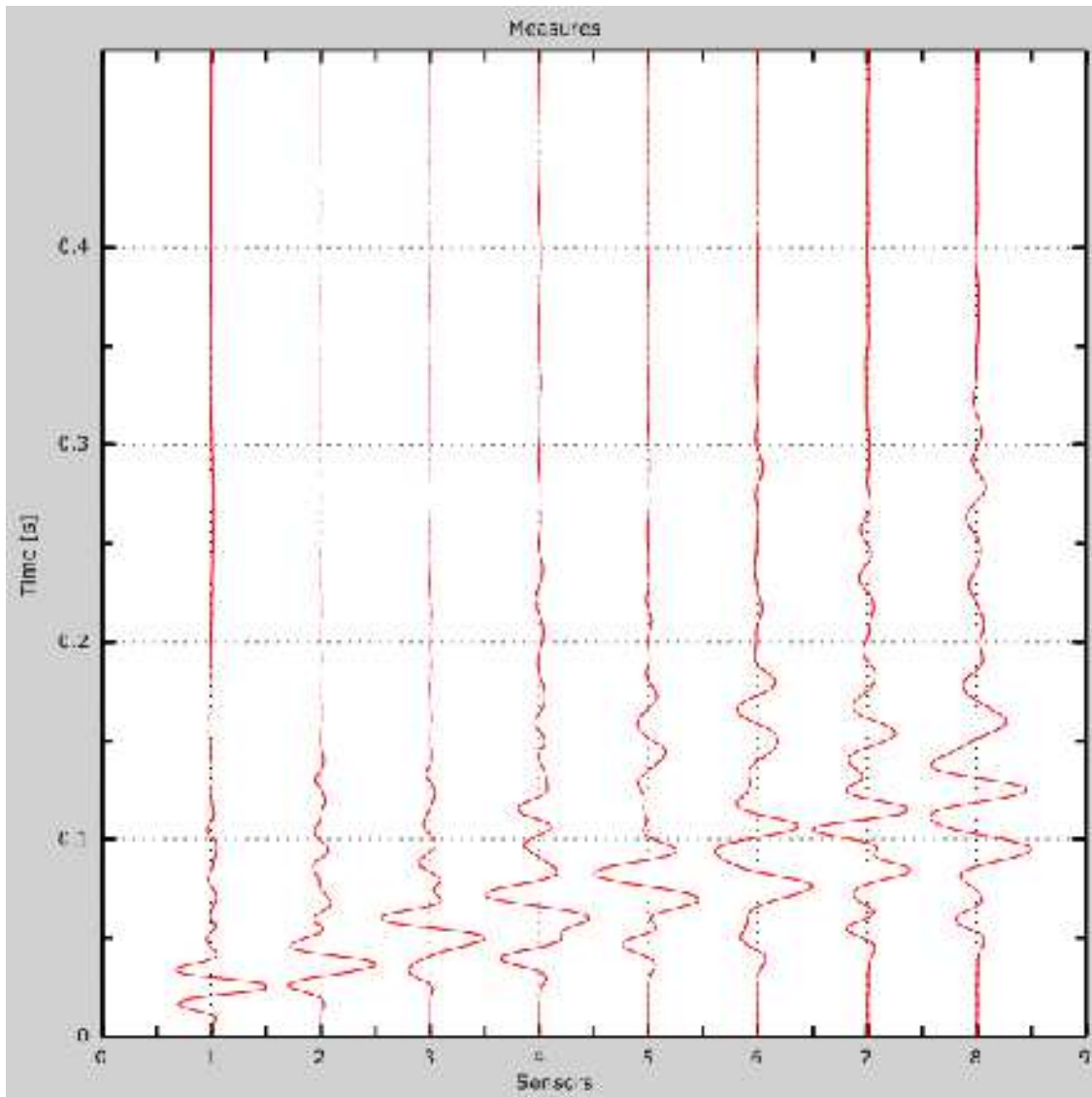


Figure 1: Experimental traces

2 - Analysis results

Final frequency.....70Hz

Initial frequency.....2Hz

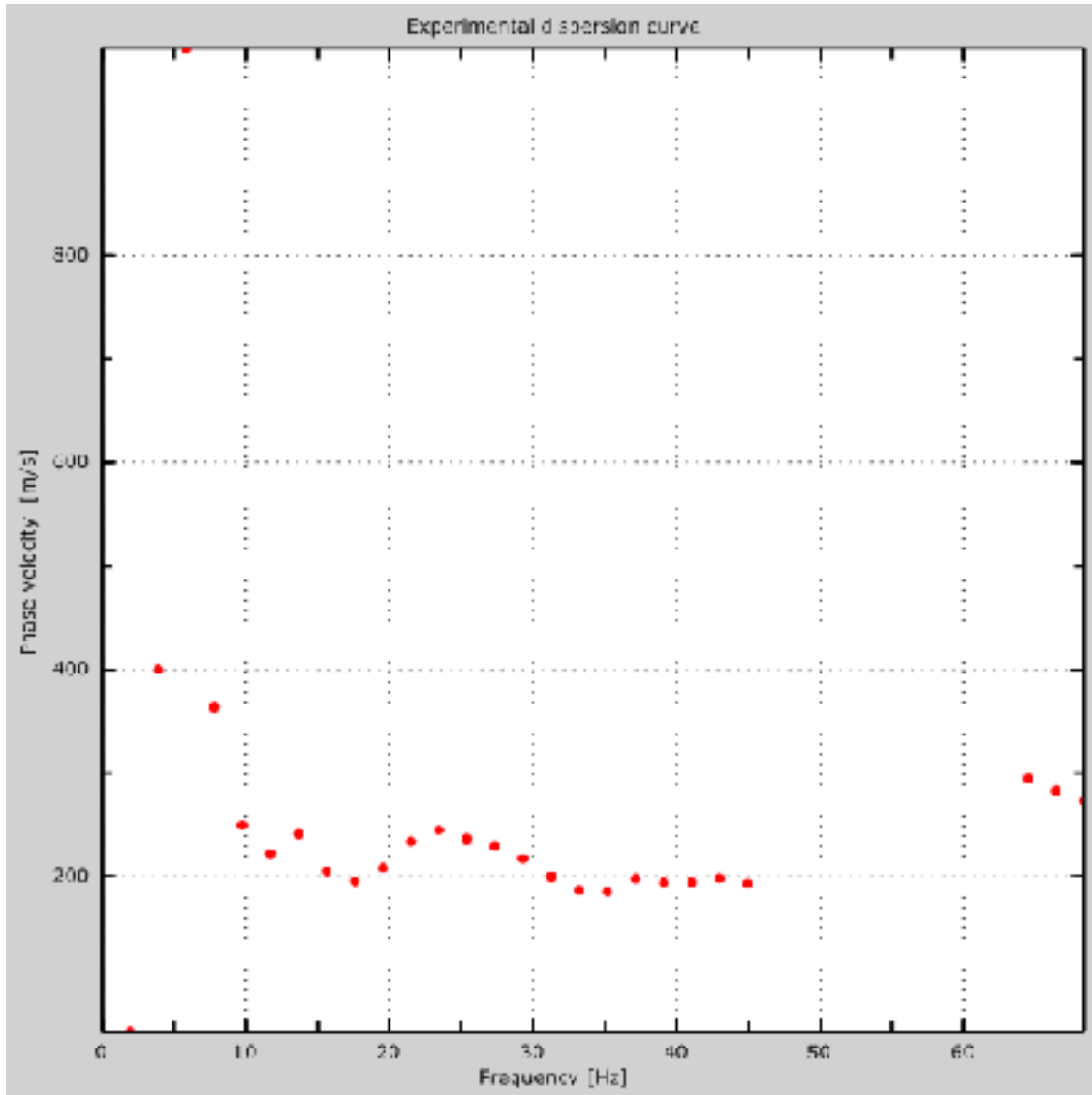


Figure 2: Experimental dispersion curve

3 - Dispersion curve

Table 1:Dispersion curve

Freq. [Hz]	V. fase [m/s]	V. fase min [m/s]	V. fase Max [m/s]
4.09014	405.227	403.918	406.537
7.69879	365.945	355.47	376.421
9.84448	257.265	246.79	267.741
12.3803	227.149	217.983	236.315
15.4038	208.818	200.961	216.674
17.5494	195.724	194.414	197.033
19.5976	207.508	204.889	210.127
21.2556	233.696	231.077	236.315
23.4988	252.028	250.718	253.337
25.0593	238.934	237.624	240.243
27.4001	233.696	232.387	235.006
29.1556	221.912	219.293	224.53
31.3013	206.199	203.58	208.818
33.0569	191.795	190.486	193.105
35.3001	189.177	185.248	193.105
37.0557	200.961	199.652	202.271
38.9087	198.342	197.033	199.652
40.8594	198.342	193.105	203.58
42.7125	202.271	200.961	203.58

44.8581	195.724	191.795	199.652
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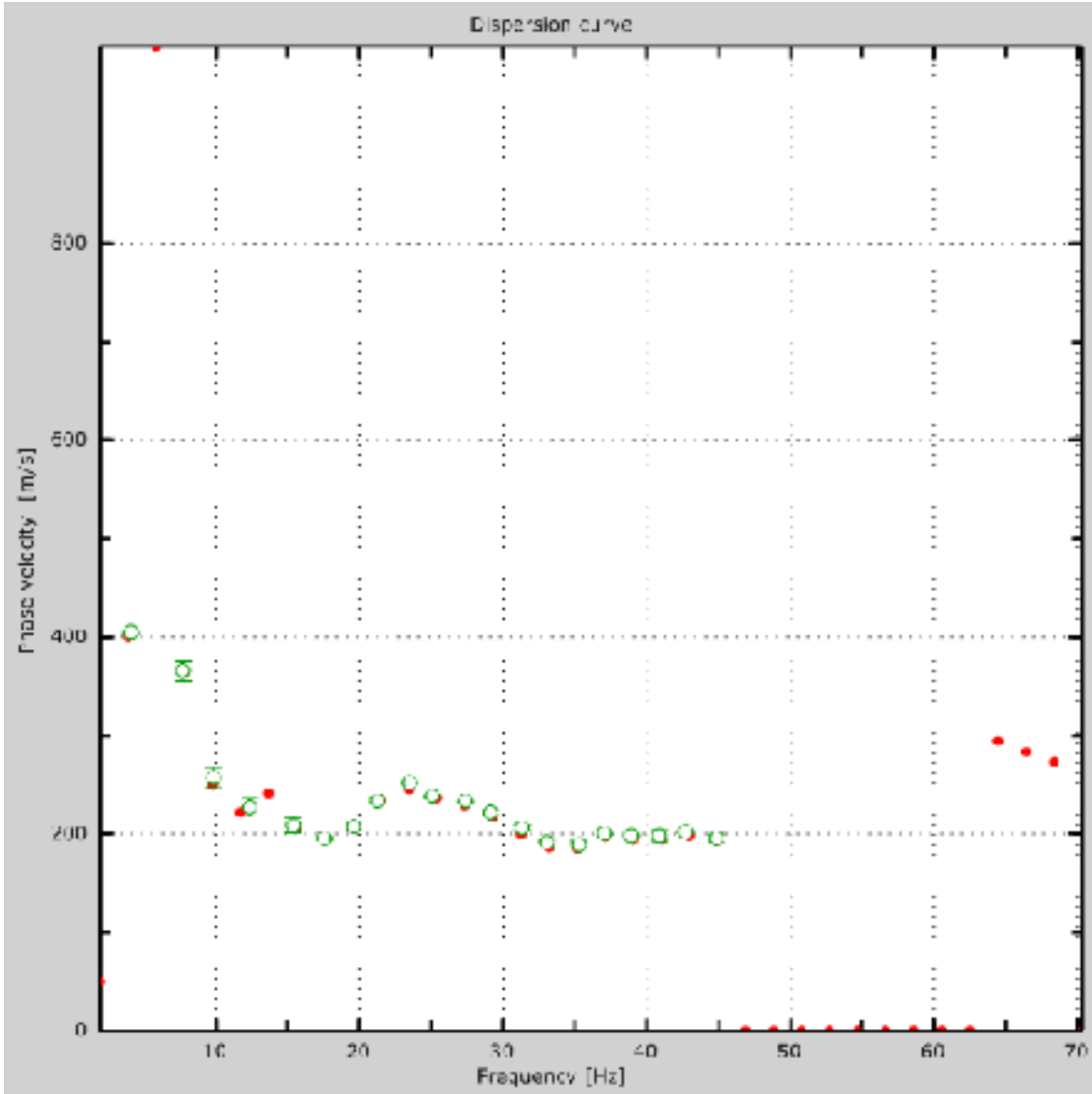


Figure 3: Dispersion curve

4 - Field profile

Number of layers (half-space excluded).....	9
Receivers spacing [m].....	2m
Number of receivers.....	8
Number of modes.....	1
Number of iterations.....	15
Maximum error [%].....	-1717986918
Strong stiffness contrast between 2 consecutive layers forbidden	

Layer 1

h [m].....	2
z [m].....	-2
Density [kg/m ³].....	1800
Poisson.....	0.2
Vs [m/s].....	217.47
Vp [m/s].....	
Vs min [m/s].....	108.74
Vs max [m/s].....	434.94
This layer is not water table	
This layer is alluvional	
Vs fin.[m/s].....	210.846

Layer 2

h [m].....	3
z [m].....	-5
Density [kg/m ³].....	1800
Poisson.....	0.2
Vs [m/s].....	259.66
Vp [m/s].....	
Vs min [m/s].....	129.83
Vs max [m/s].....	519.32
This layer is not water table	
This layer is alluvional	
Vs fin.[m/s].....	234.566

Layer 3

h [m].....	3
z [m].....	-8
Density [kg/m ³].....	1800
Poisson.....	0.48

Vs [m/s].....	252.39
Vp [m/s].....	
Vs min [m/s].....	126.19
Vs max [m/s].....	504.78
This layer is water table	
This layer is alluvional	
Vs fin.[m/s].....	286.520

Layer 4

h [m].....	4
z [m].....	-12
Density [kg/m ³].....	1800
Poisson.....	0.48
Vs [m/s].....	285.85
Vp [m/s].....	
Vs min [m/s].....	142.93
Vs max [m/s].....	571.70
This layer is water table	
This layer is alluvional	
Vs fin.[m/s].....	364.472

Layer 5

h [m].....	4
z [m].....	-16
Density [kg/m ³].....	1800
Poisson.....	0.48
Vs [m/s].....	285.85
Vp [m/s].....	
Vs min [m/s].....	142.93
Vs max [m/s].....	571.70
This layer is water table	
This layer is alluvional	
Vs fin.[m/s].....	431.253

Layer 6

h [m].....	5
z [m].....	-21
Density [kg/m ³].....	1800
Poisson.....	0.3
Vs [m/s].....	406.61
Vp [m/s].....	
Vs min [m/s].....	203.30
Vs max [m/s].....	813.21

This layer is not water table

This layer is alluvional

Vs fin.[m/s].....469.719

Layer 7

h [m].....5

z [m].....-26

Density [kg/m³].....1800

Poisson.....0.3

Vs [m/s].....406.61

Vp [m/s].....

Vs min [m/s].....203.30

Vs max [m/s].....813.21

This layer is not water table

This layer is alluvional

Vs fin.[m/s].....492.345

Layer 8

h [m].....6

z [m].....-32

Density [kg/m³].....1800

Poisson.....0,3

Vs [m/s].....406.61

Vp [m/s].....

Vs min [m/s].....203.30

Vs max [m/s].....813.21

This layer is not water table

This layer is alluvional

Vs fin.[m/s].....506.734

Layer 9

h [m].....0

z [m].....-00

Density [kg/m³].....1800

Poisson.....0.3

Vs [m/s].....450.25

Vp [m/s].....

Vs min [m/s].....225.13

Vs max [m/s].....900.50

This layer is not water table

This layer is alluvional

Vs fin.[m/s].....516.540

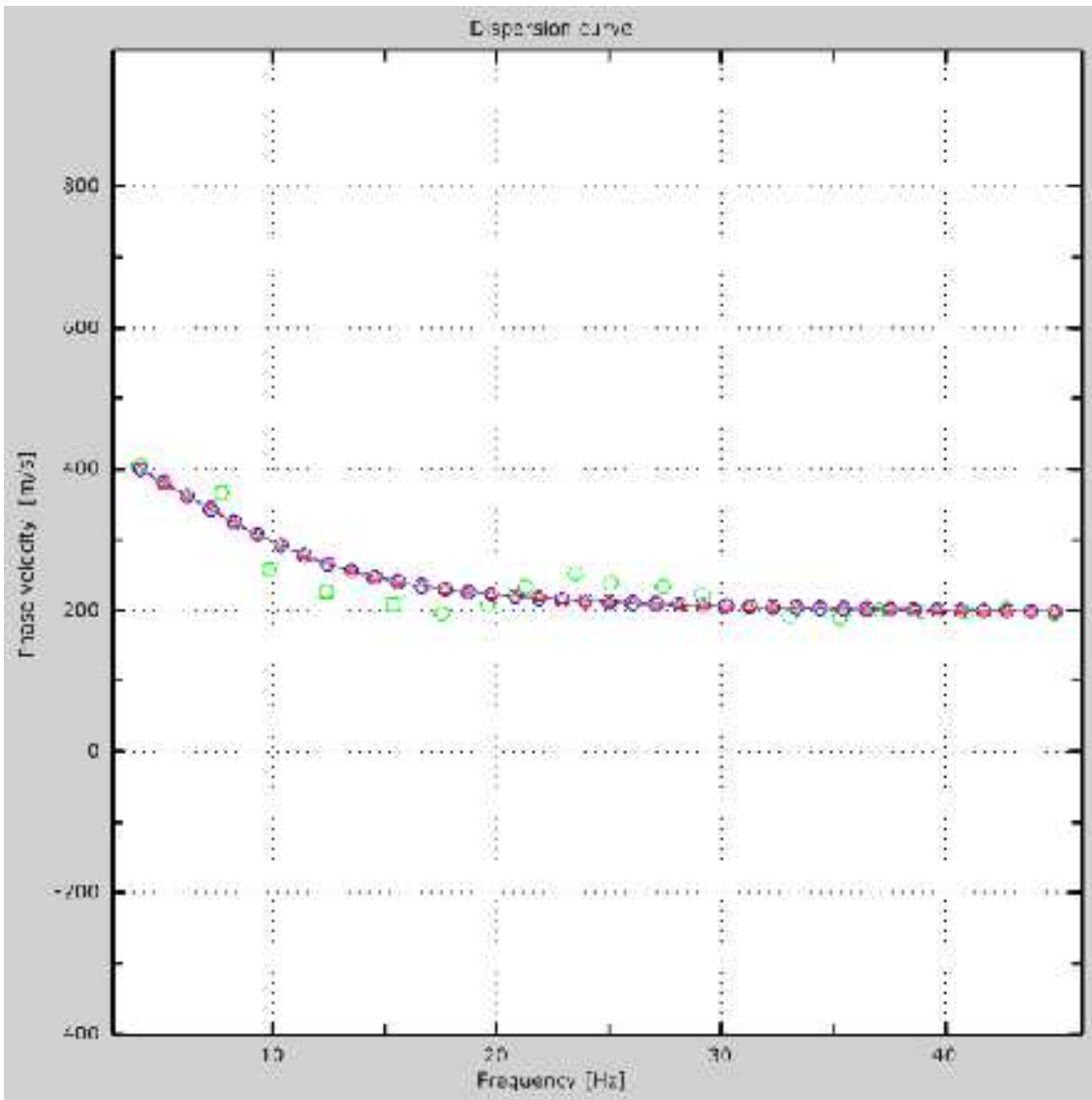


Figure 4: Numerical velocities - experimental points (green), Rayleigh modes (blue), Apparent curve (---), numerical curve (—)

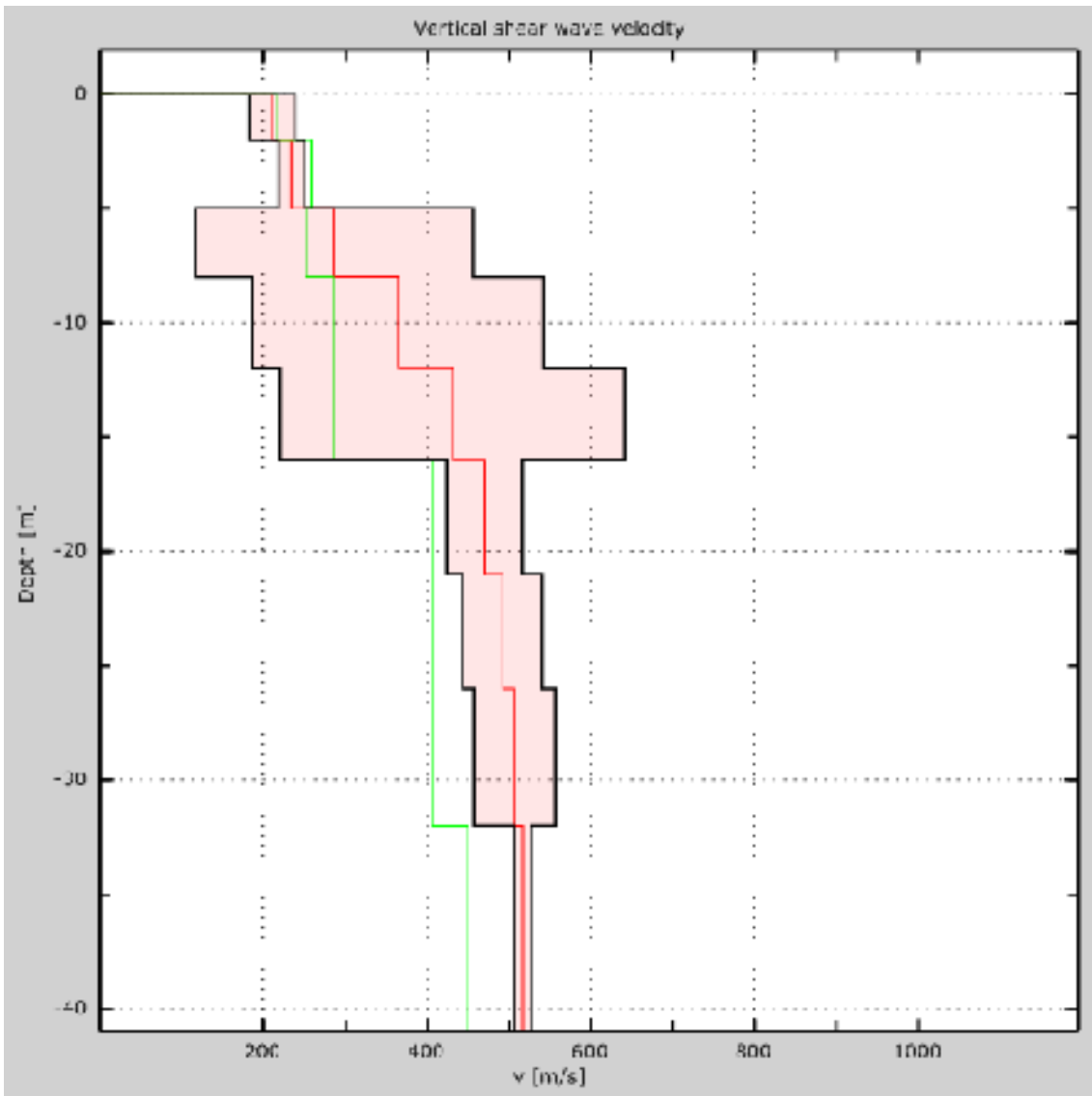


Figure 5: Velocity

5 - Final results

Vs30 [m/s].....367

The site does belongs to classes A, B, C, D, E or S1 (alluvional soil, gravel, sand, silt, clay, rock).

The site is not susceptible to liquefaction or there is not sensitive clay.

Soil typeB

Appendix

Type of ground

Type A: A rock or other rock-like geological formation, including at most 5m of weaker material at the surface

Type B: Deposits of very dense sand, gravel, or very stiff clay, at least several tens of meters in thickness, characterised by a gradual increase of mechanical properties with depth

Type C: Deep deposits of dense or mediumdense sand, gravel or stiff clay with thickness from several tens to many hundreds of metres

Type D: Deposits of loose-to-medium cohesionless soil (with or without some soft cohesive layers), or of predominantly soft-to-firm cohesive soil

Type E: A soil profile consisting of a surface alluvium layer with v_s values of type C or D and thickness varying between about 5m and 20m, underlain by stiff materials with $V_s > 800\text{m/s}$

Type S1: Deposits consisting, or containing a layer at least 10m thick, of soft clays/silts with a high plasticity index ($PI > 40$) and high water content

Type S2: Deposits of liquefiable soils, of sensitive clays, or any other soil profile not included in types A-E or S1