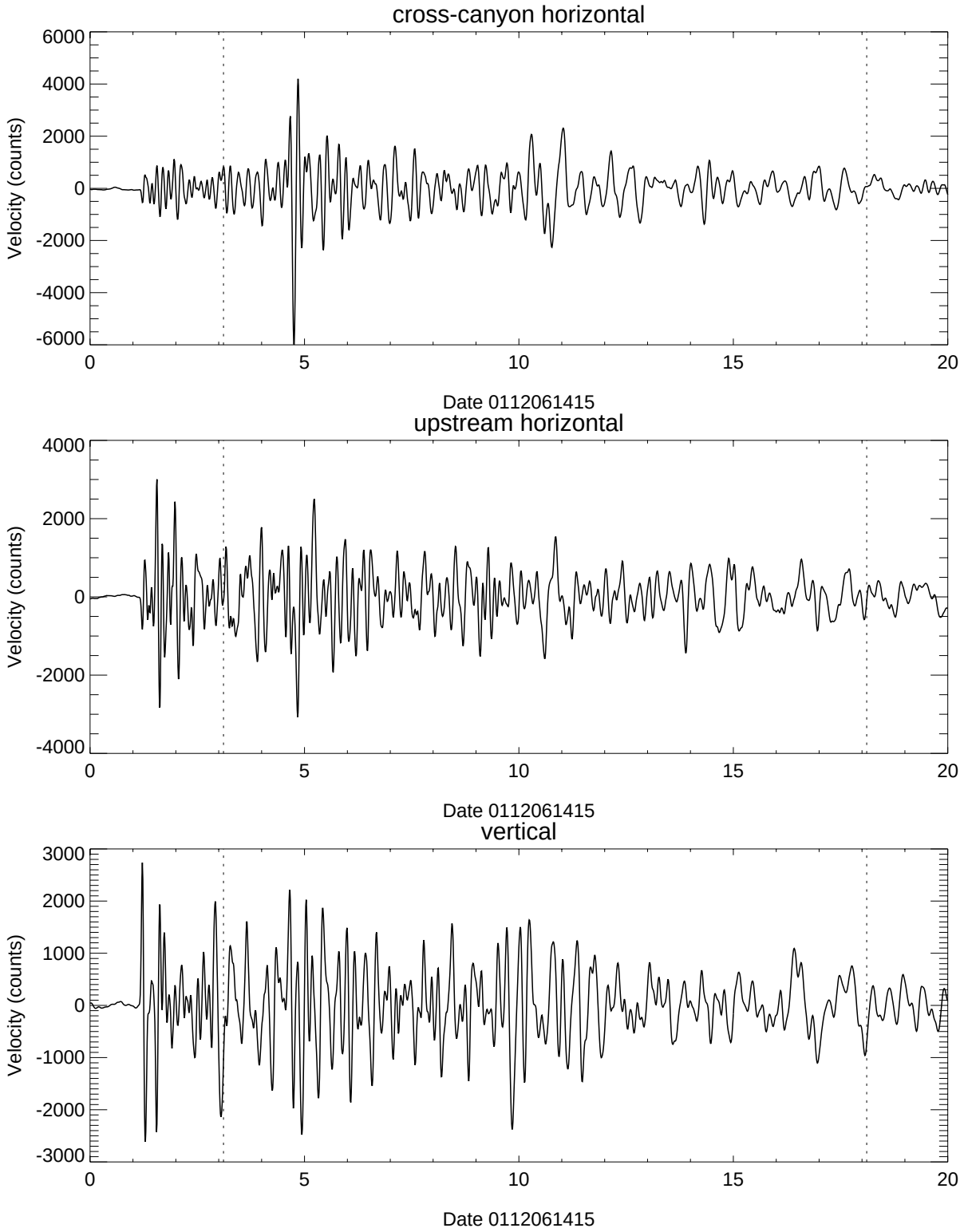
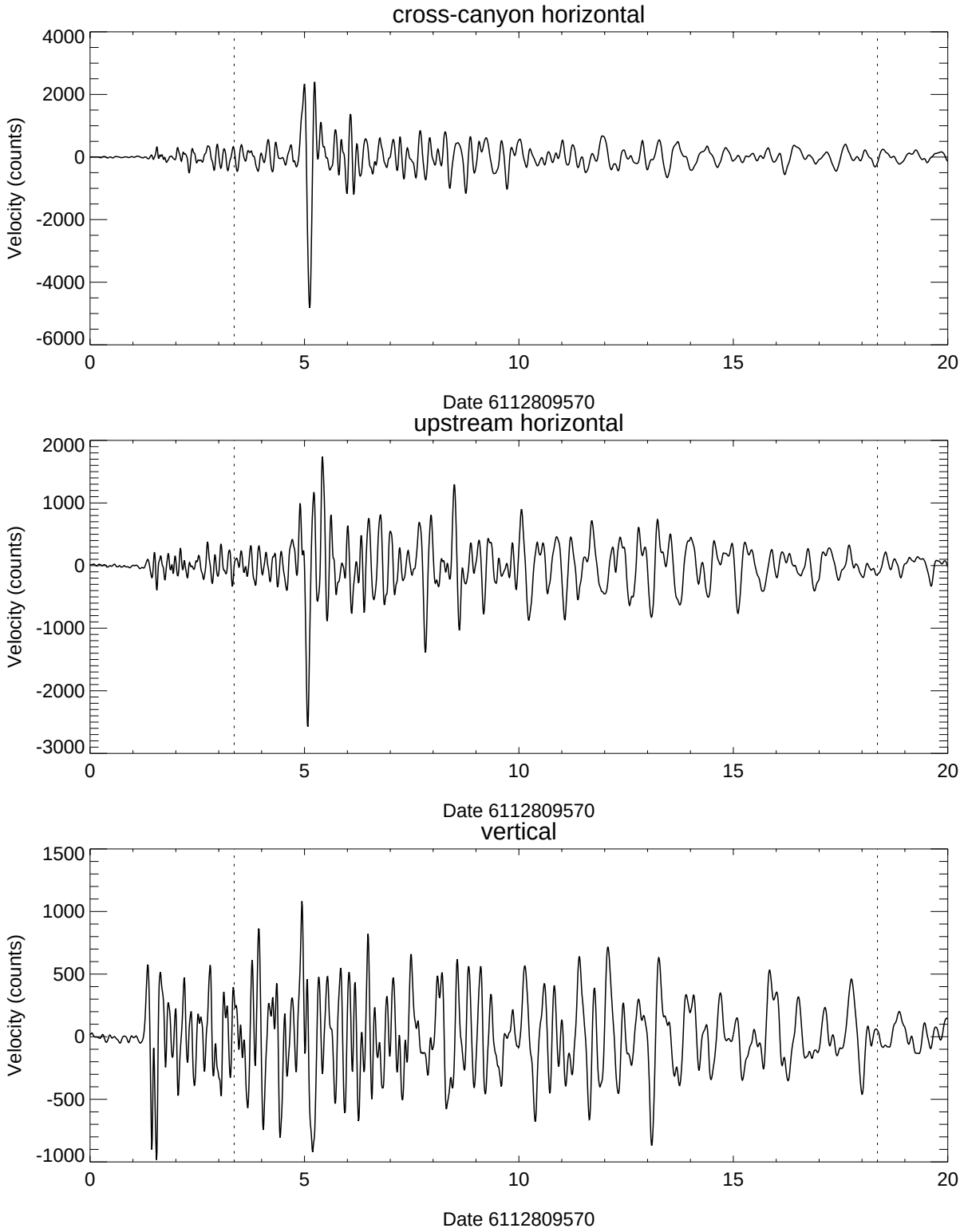
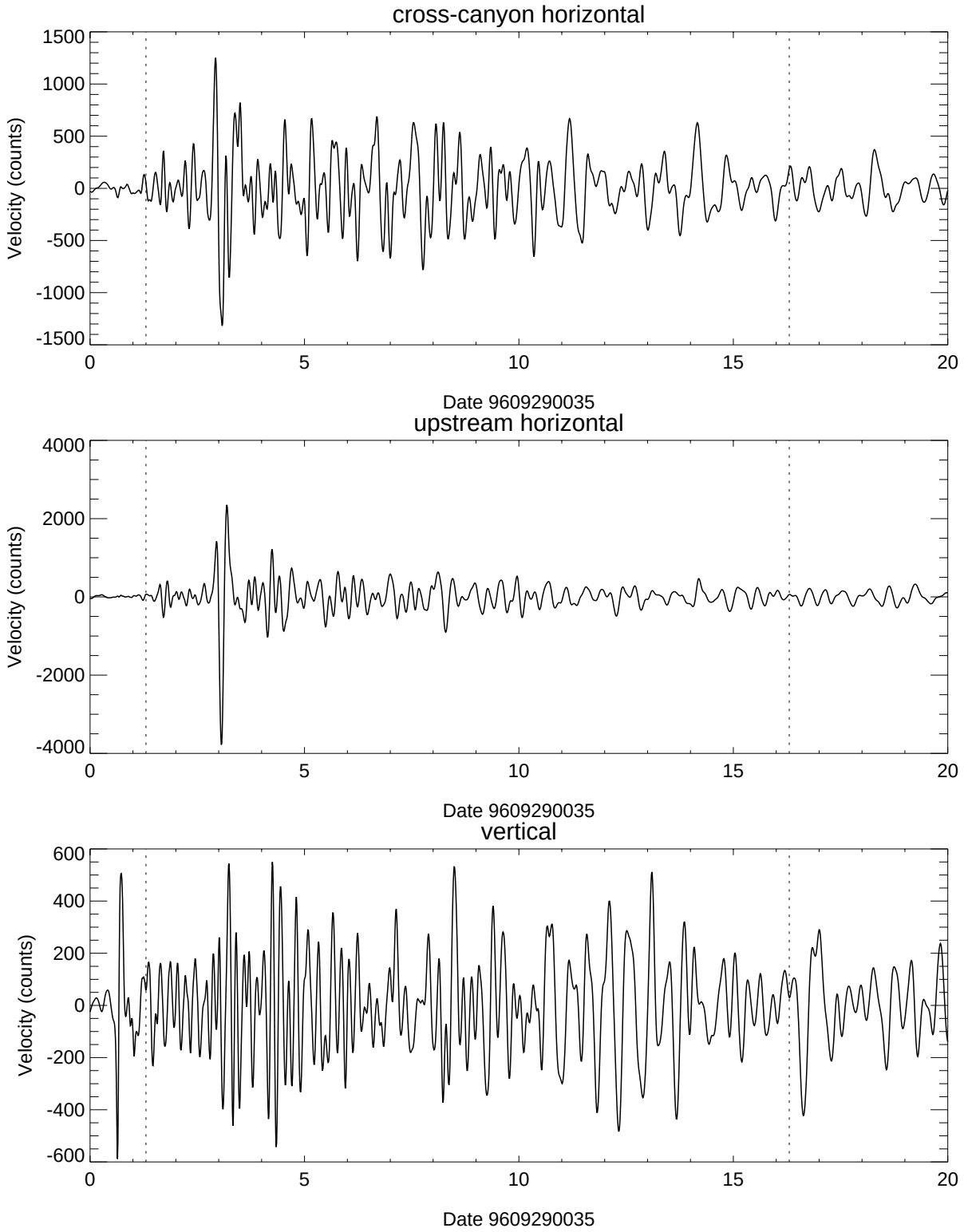
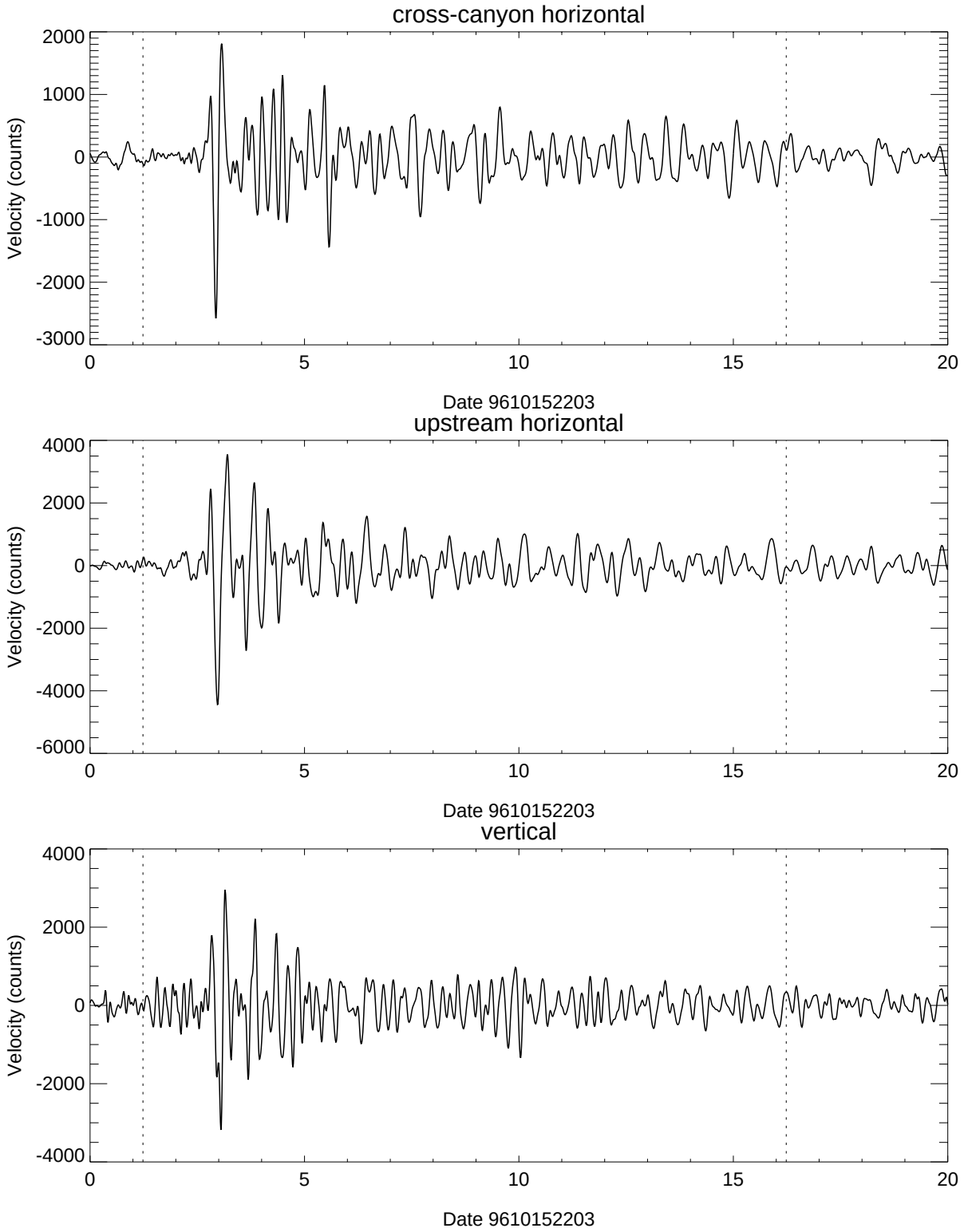
APPENDIX D: 3D EMPIRICAL GREEN'S FUNCTION PLOTS

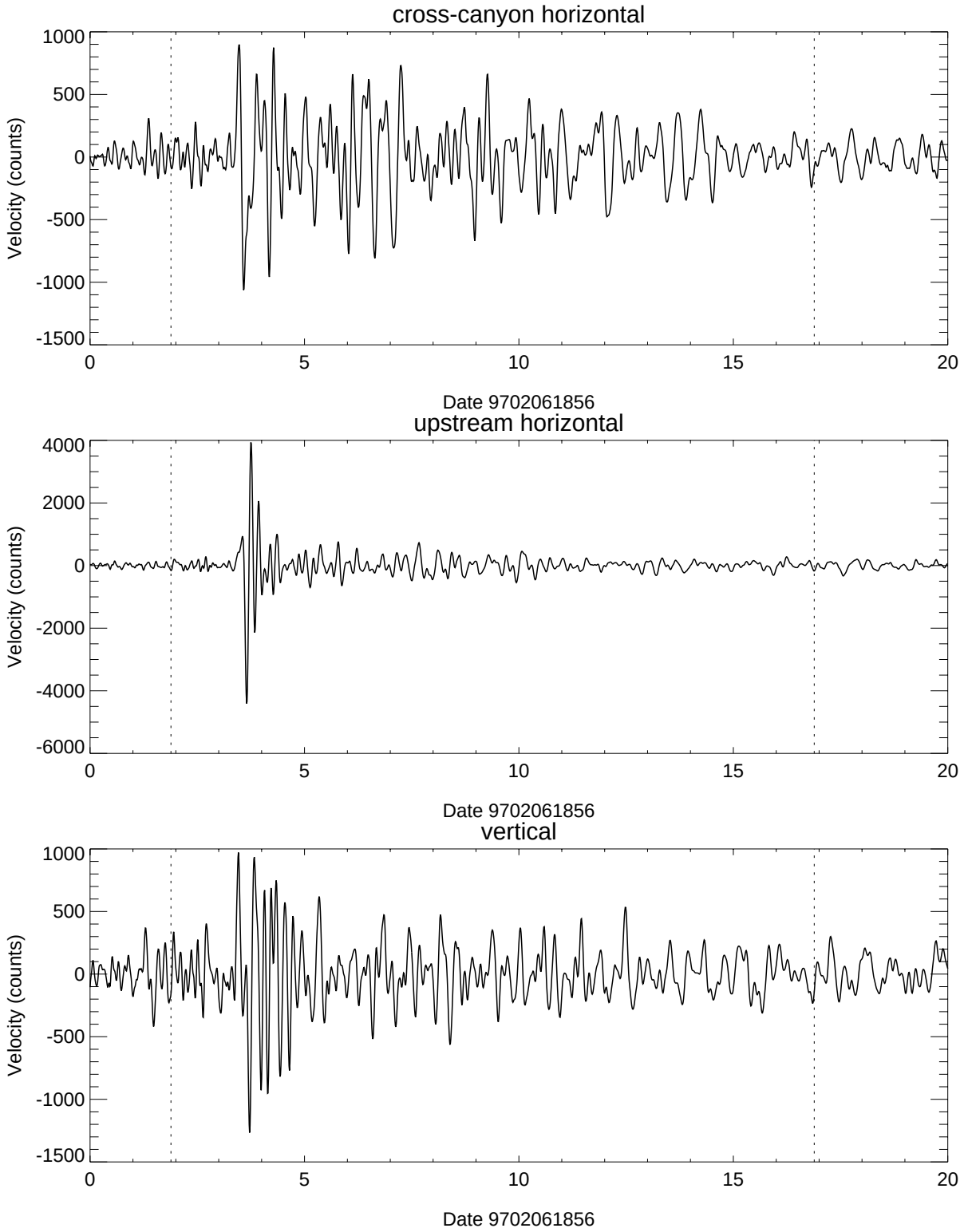
This appendix contains plots of the seismograms used to construct the empirical Green's functions for rock site JLDW and the resulting empirical Green's function time histories and velocity spectra. Pages D-2 to D-9 show the three-component velocity seismograms from the eight EGF's. The portions of the seismograms between the vertical dashed lines indicates the time windows used to construct the EGFs. Events dates are indicated as YYMMDDHHII, where Y is two-digit year, M is the month, D is the day, H is the hour, and I is the minute. Cross-canyon refers to the east horizontal component and upstream refers to the north horizontal component. Amplitudes are in uncorrected instrument counts. Pages D-10 to D-33 show the polarity and amplitude-normalized empirical Green's functions and their associated velocity spectra, one event ground motion component per page. The dashed line in the velocity spectra indicates the ideal low-frequency velocity decay produced by factor of frequency scaling at frequencies substantially less than the corner frequency.; the EGF amplitudes were filter to not substantially exceed this decay amplitude to reduce the influences of long-period noise.

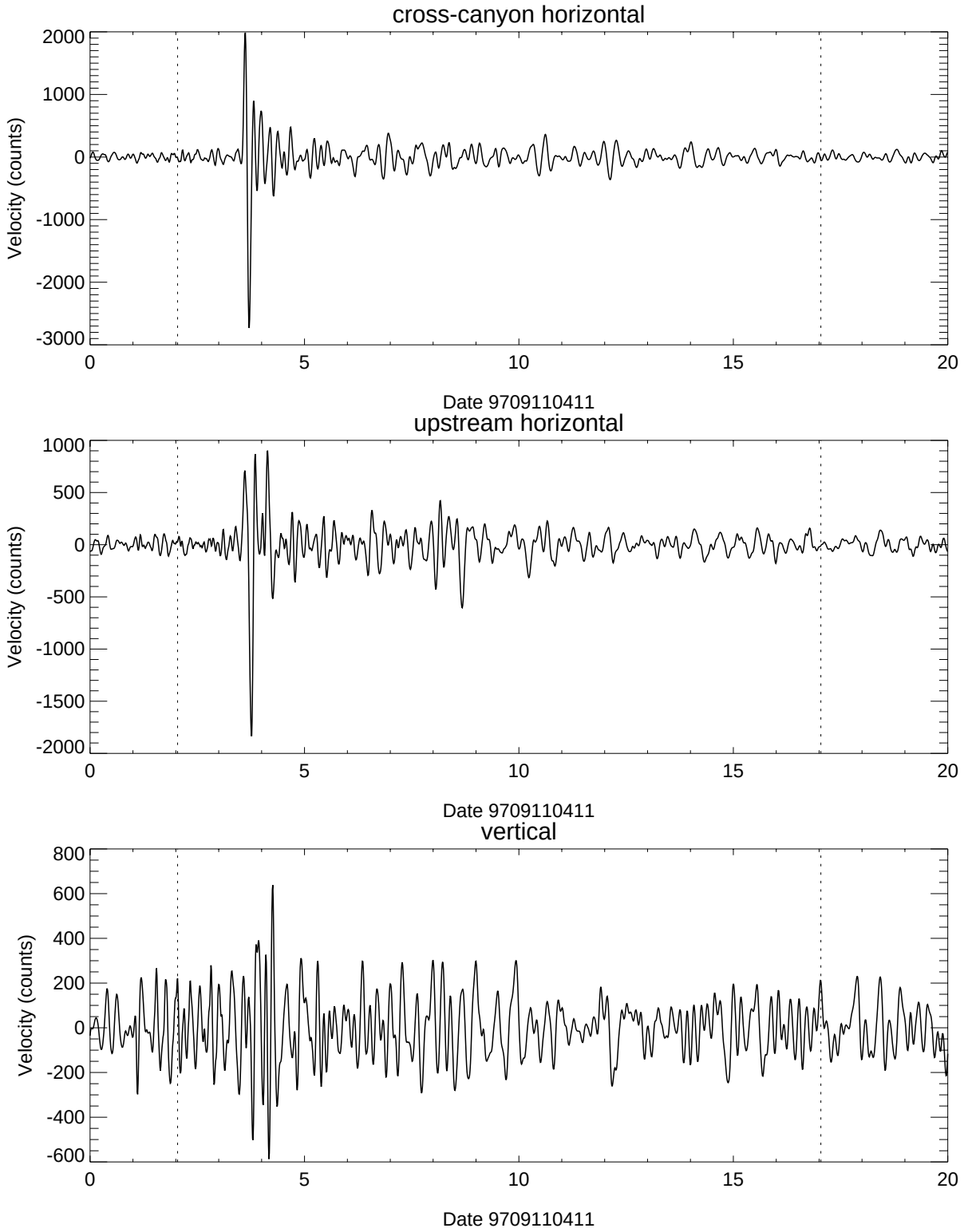

cross-canyon horizontal
Velocity (counts)
6000
4000
2000
0
-2000
-4000
-6000
0
5
10
15
20
Date 0112061415
upstream horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
0
5
10
15
20
Date 0112061415
vertical
Velocity (counts)
3000
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 0112061415

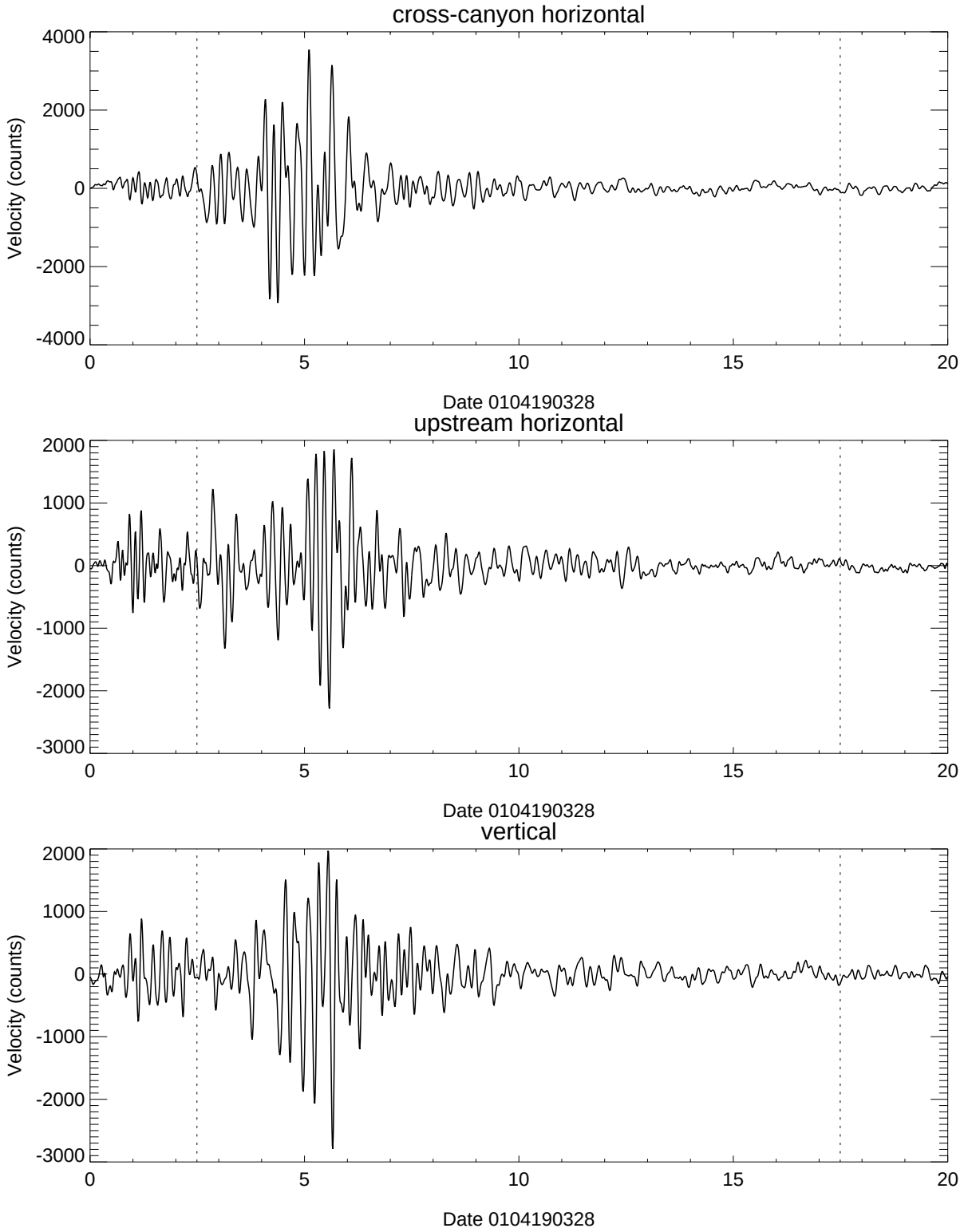

cross-canyon horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
-6000
0
5
10
15
20
Date 6112809570
upstream horizontal
Velocity (counts)
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 6112809570
vertical
Velocity (counts)
1500
1000
500
0
-500
-1000
0
5
10
15
20
Date 6112809570

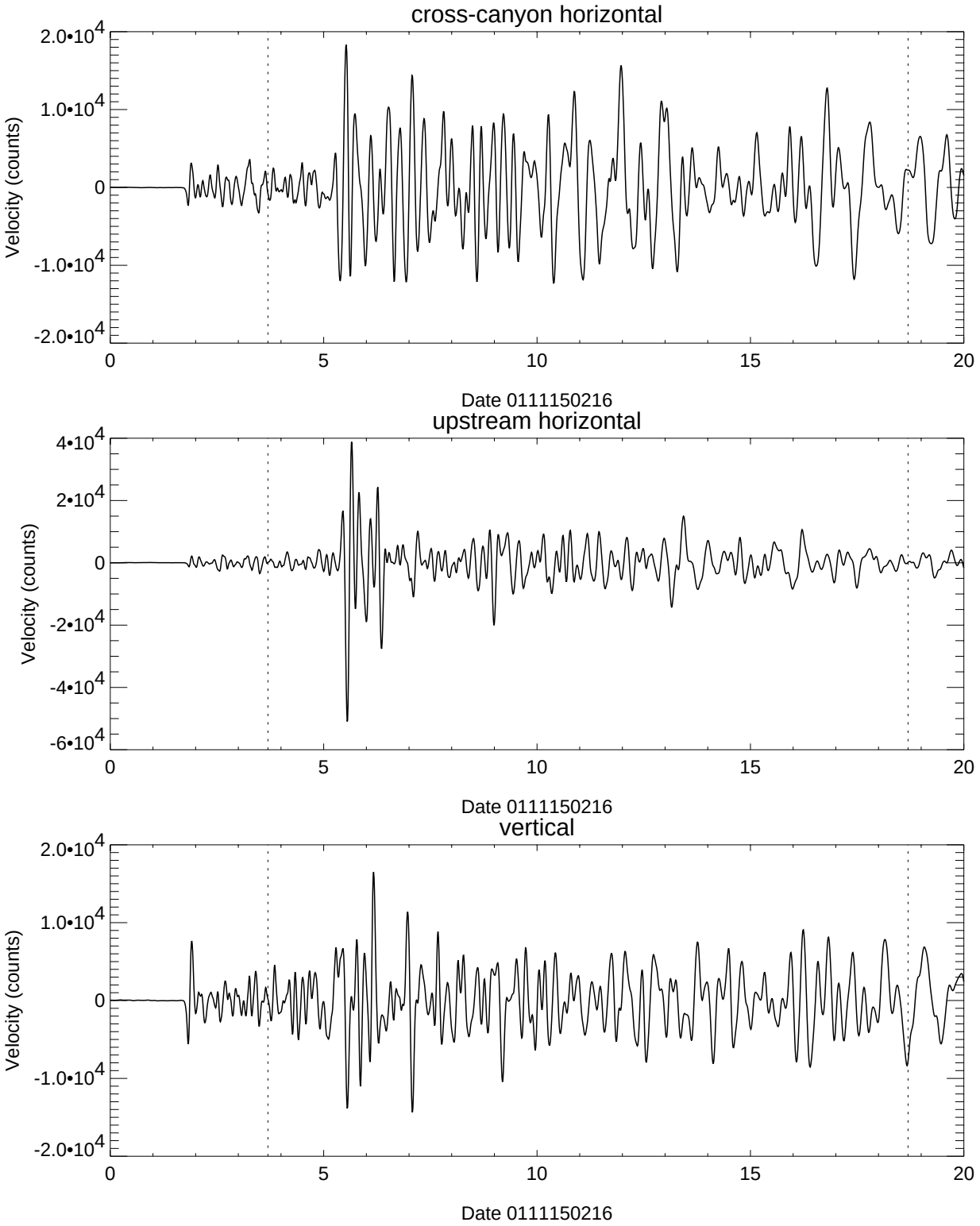

cross-canyon horizontal
Velocity (counts)
1500
1000
500
0
-500
-1000
-1500
0
5
10
15
20
Date 9609290035
upstream horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
0
5
10
15
20
Date 9609290035
vertical
Velocity (counts)
600
400
200
0
-200
-400
-600
0
5
10
15
20
Date 9609290035


cross-canyon horizontal
Velocity (counts)
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 9610152203
upstream horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
-6000
0
5
10
15
20
Date 9610152203
vertical
Velocity (counts)
4000
2000
0
-2000
-4000
0
5
10
15
20
Date 9610152203


cross-canyon horizontal
Velocity (counts)
1000
500
0
-500
-1000
-1500
0
5
10
15
20
Date 9702061856
upstream horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
-6000
0
5
10
15
20
Date 9702061856
vertical
Velocity (counts)
1000
500
0
-500
-1000
-1500
0
5
10
15
20
Date 9702061856


cross-canyon horizontal
Velocity (counts)
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 9709110411
upstream horizontal
Velocity (counts)
1000
500
0
-500
-1000
-1500
-2000
0
5
10
15
20
Date 9709110411
vertical
Velocity (counts)
800
600
400
200
0
-200
-400
-600
0
5
10
15
20
Date 9709110411


cross-canyon horizontal
Velocity (counts)
4000
2000
0
-2000
-4000
0
5
10
15
20
Date 0104190328
upstream horizontal
Velocity (counts)
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 0104190328
vertical
Velocity (counts)
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Date 0104190328


cross-canyon horizontal
Velocity (counts)
2.0•10^4
1.0•10^4
0
-1.0•10^4
-2.0•10^4
0
5
10
15
20
Date 0111150216
upstream horizontal
Velocity (counts)
4•10^4
2•10^4
0
-2•10^4
-4•10^4
-6•10^4
0
5
10
15
20
Date 0111150216
vertical
Velocity (counts)
2.0•10^4
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-2.0•10^4
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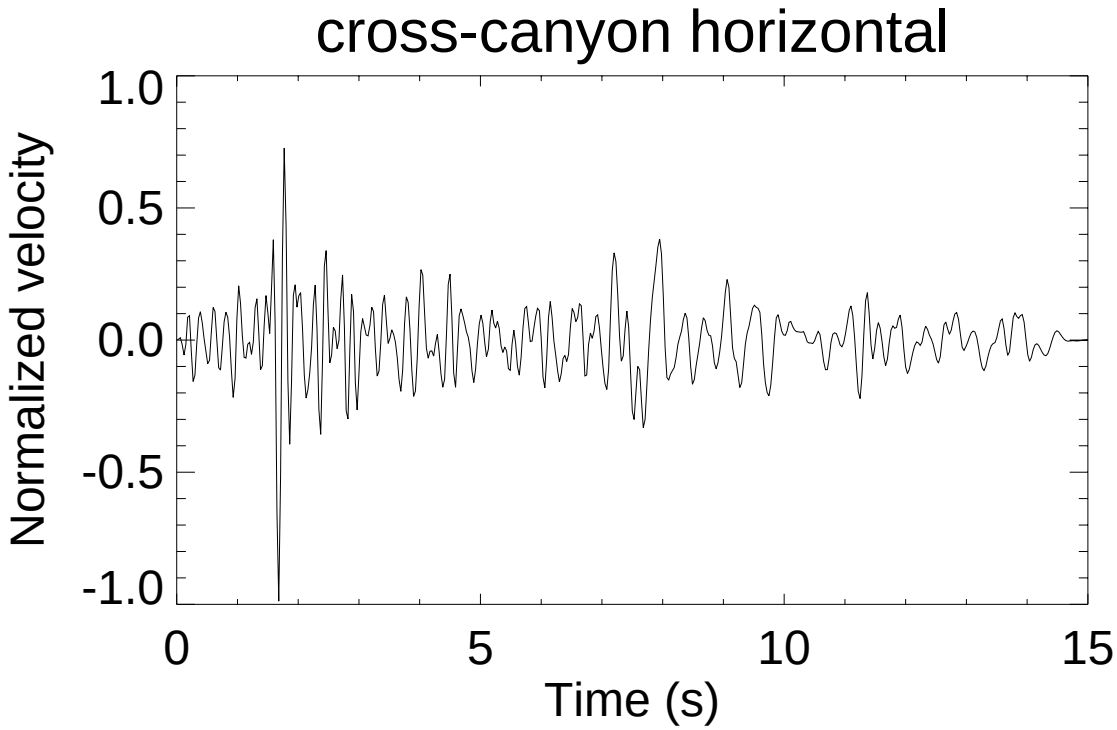
5
10
15
20
Date 0111150216



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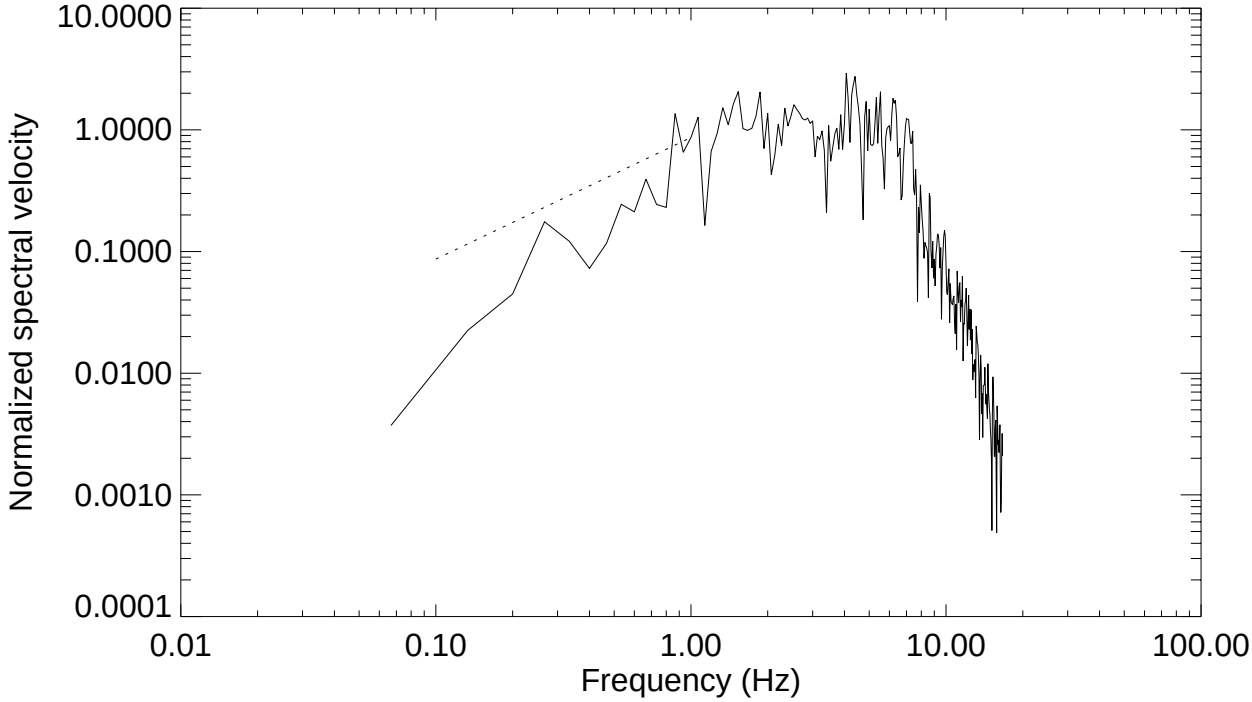

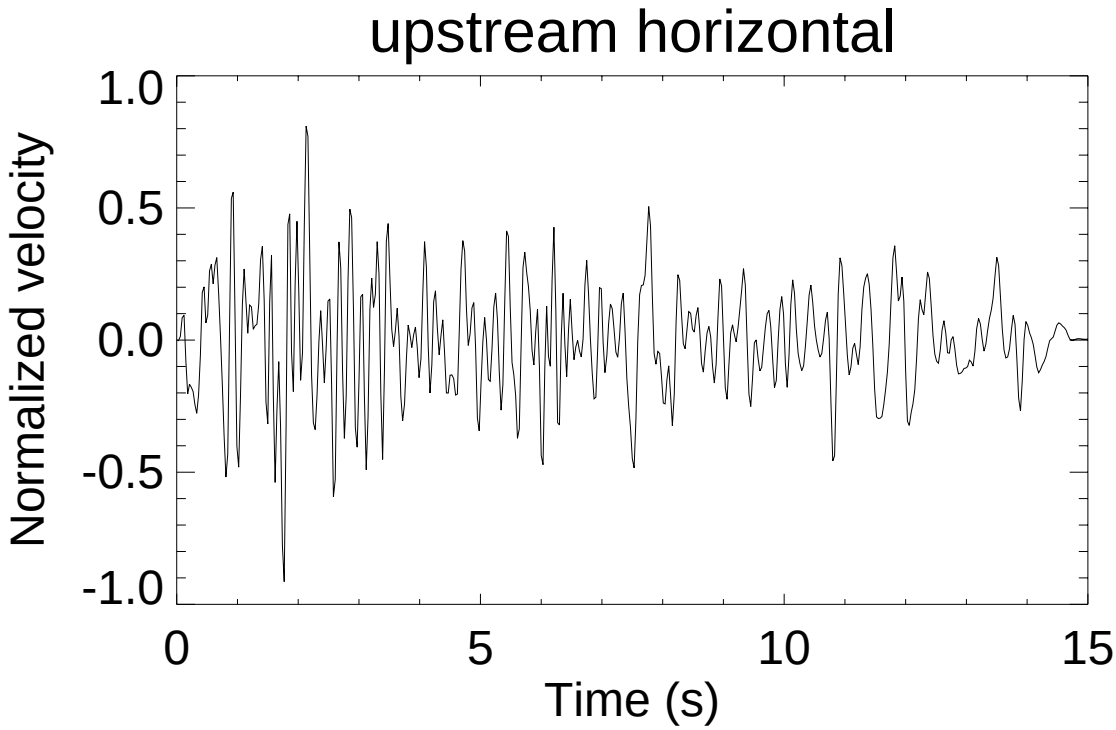

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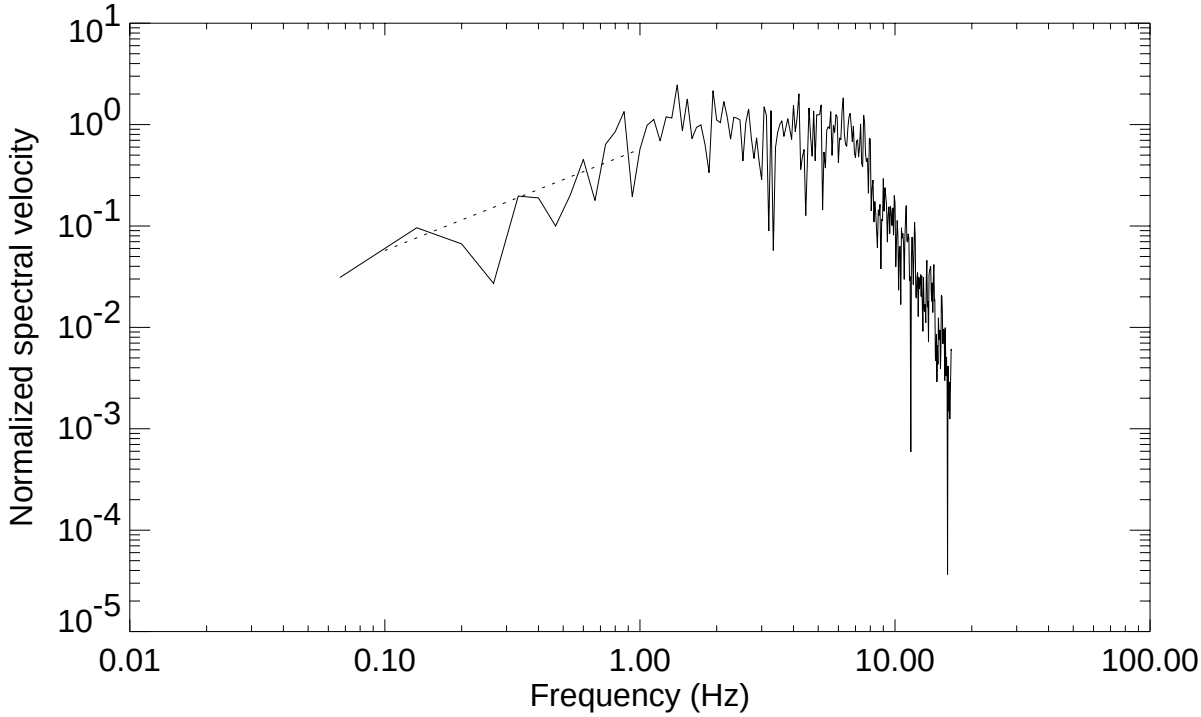

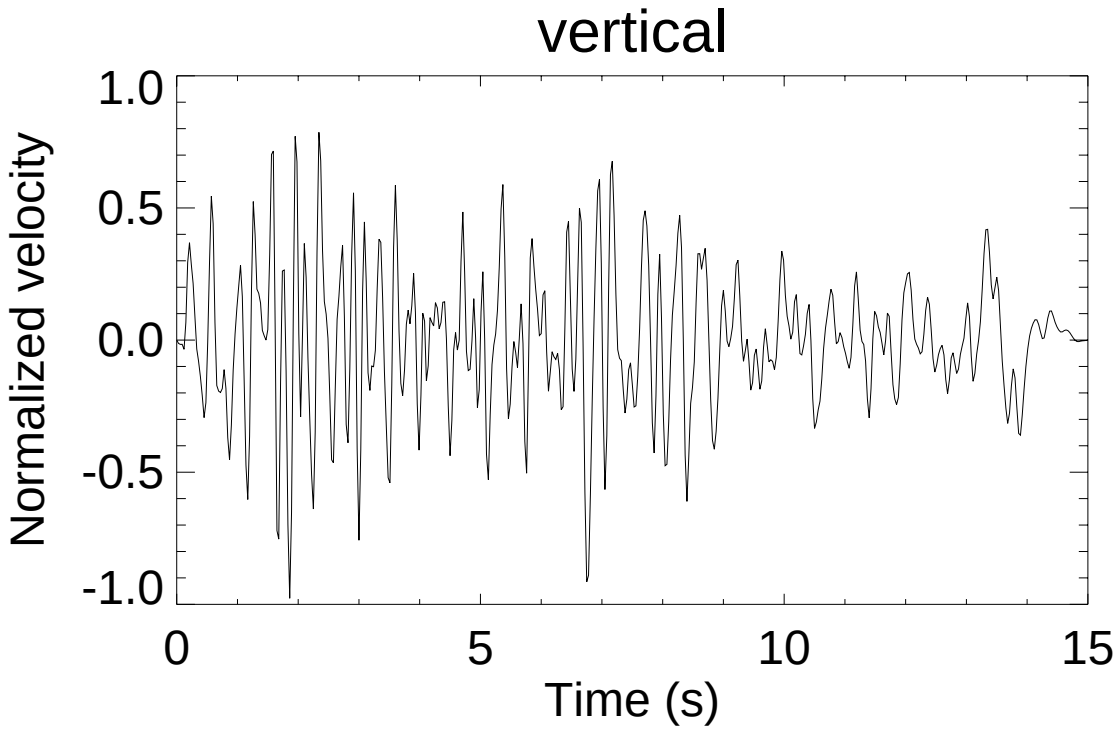

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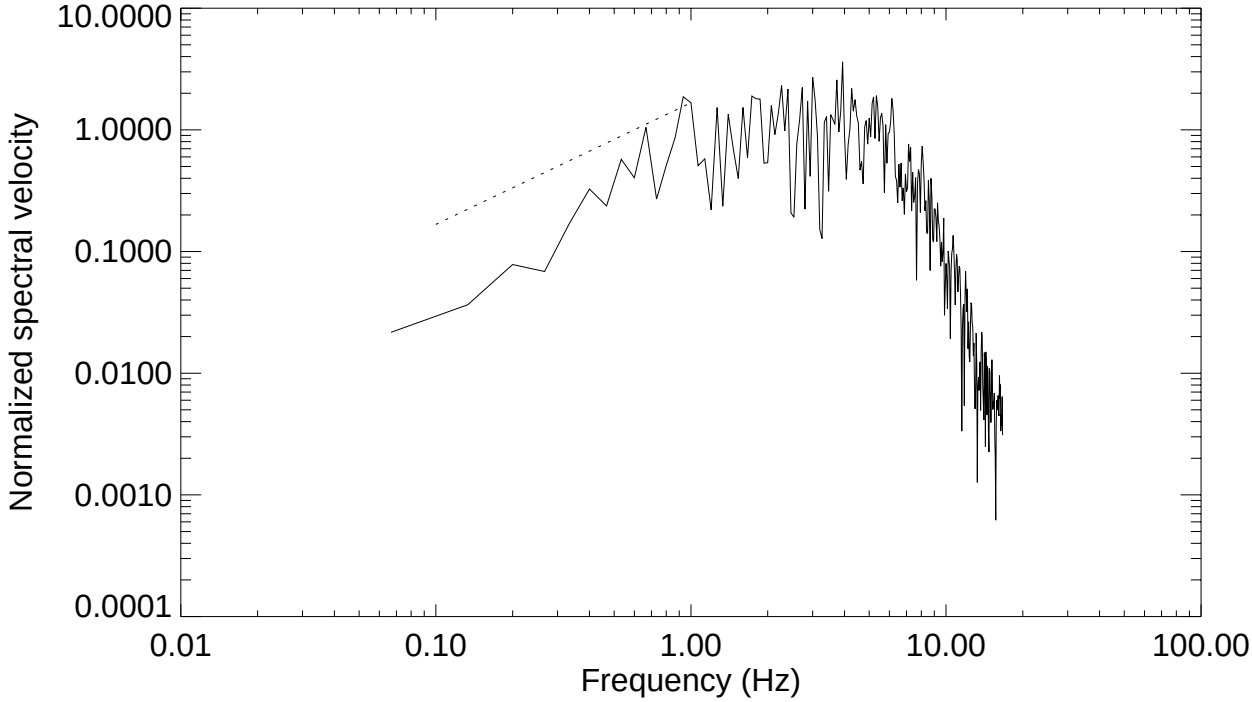

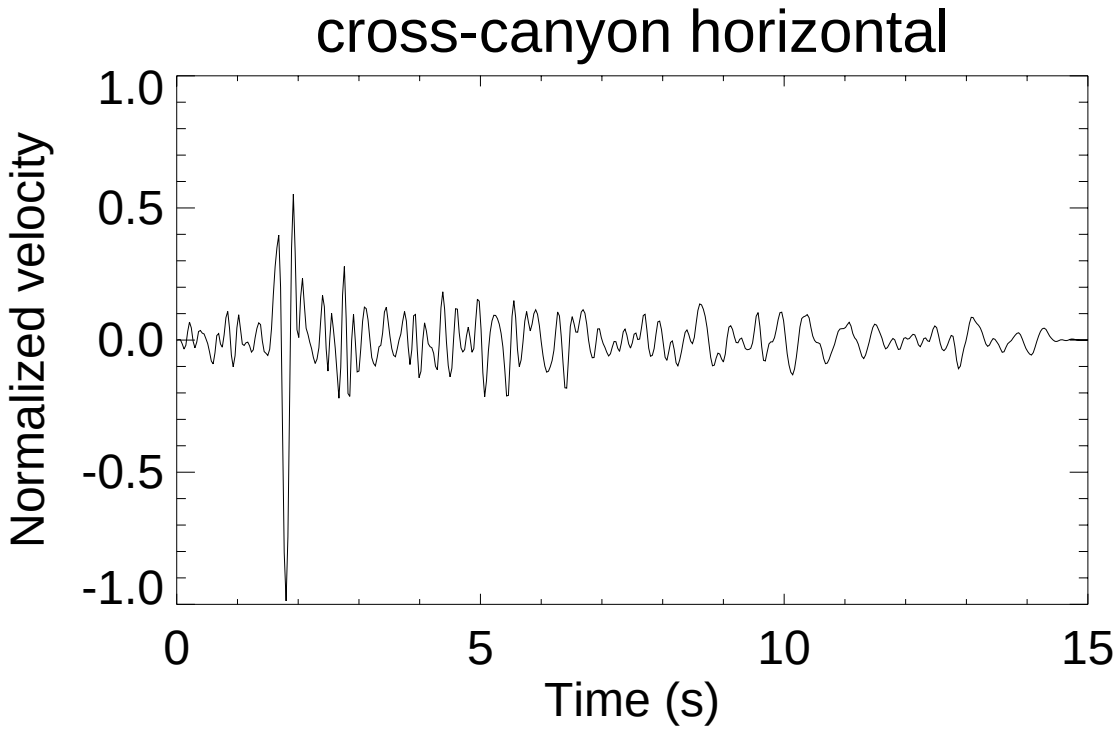

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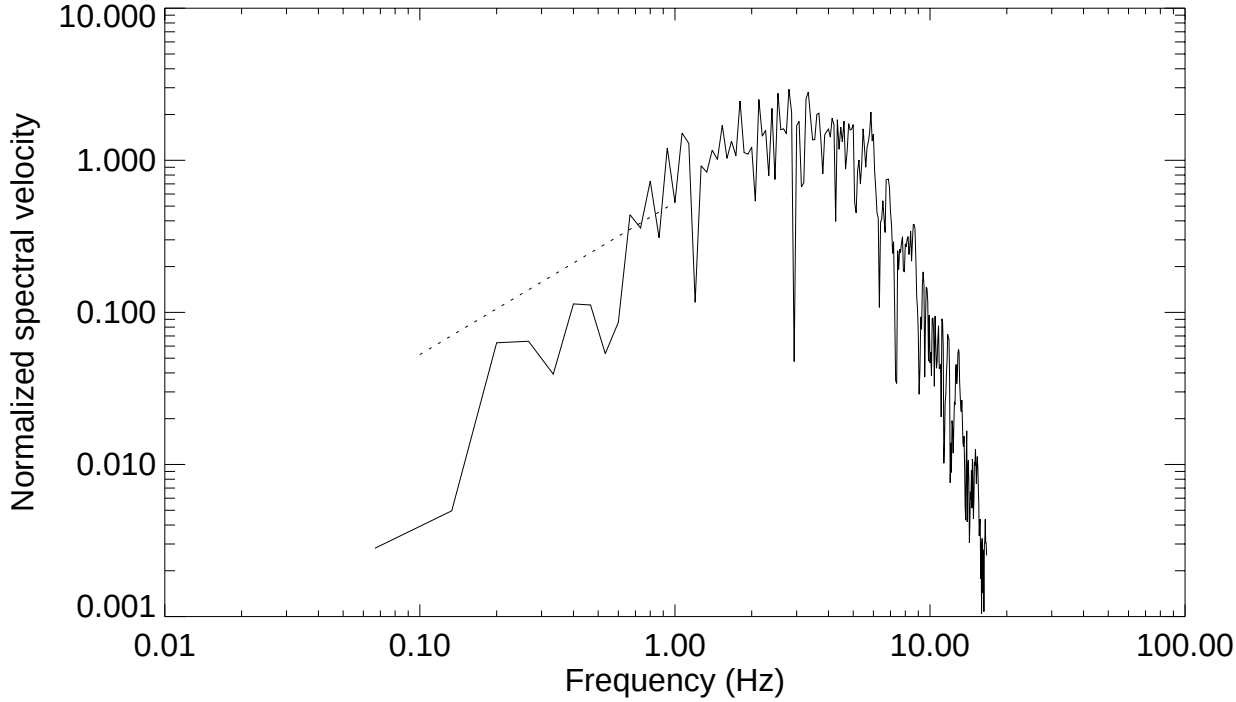

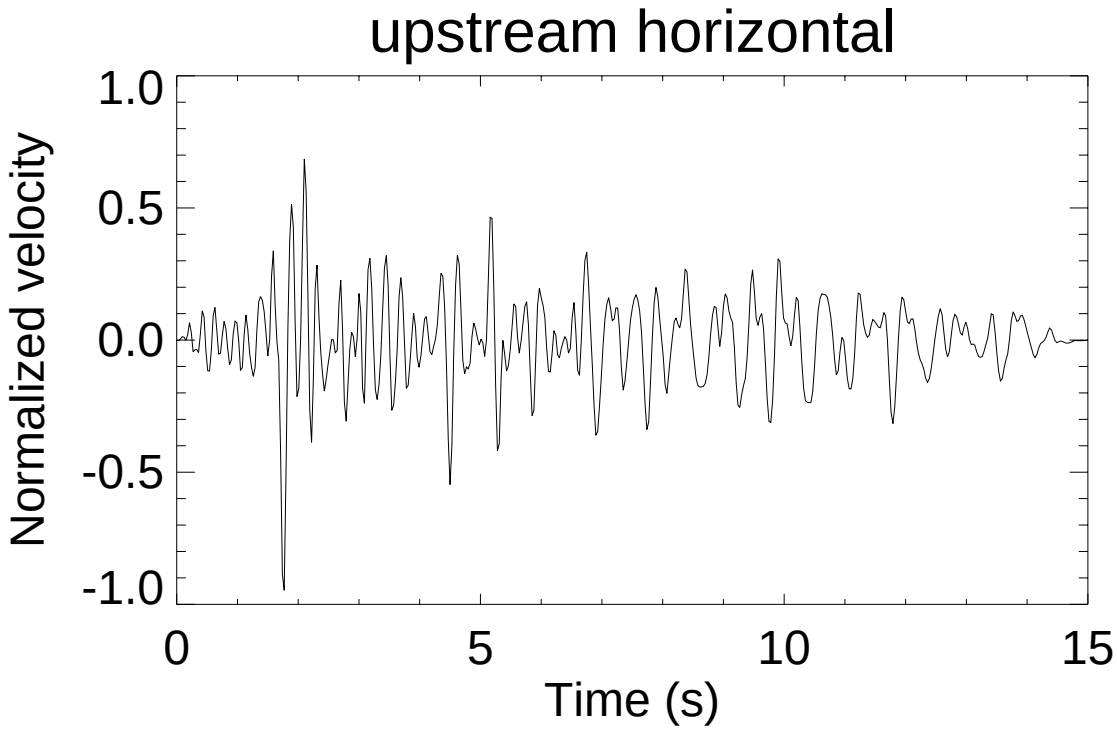

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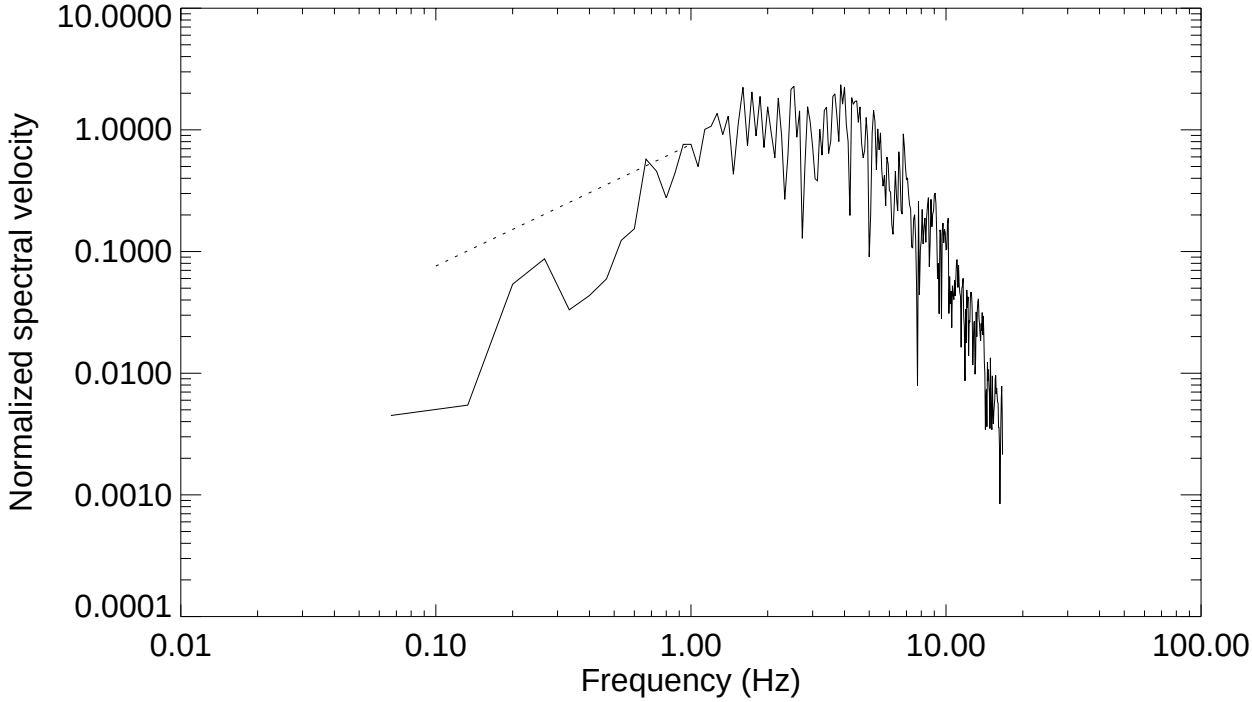

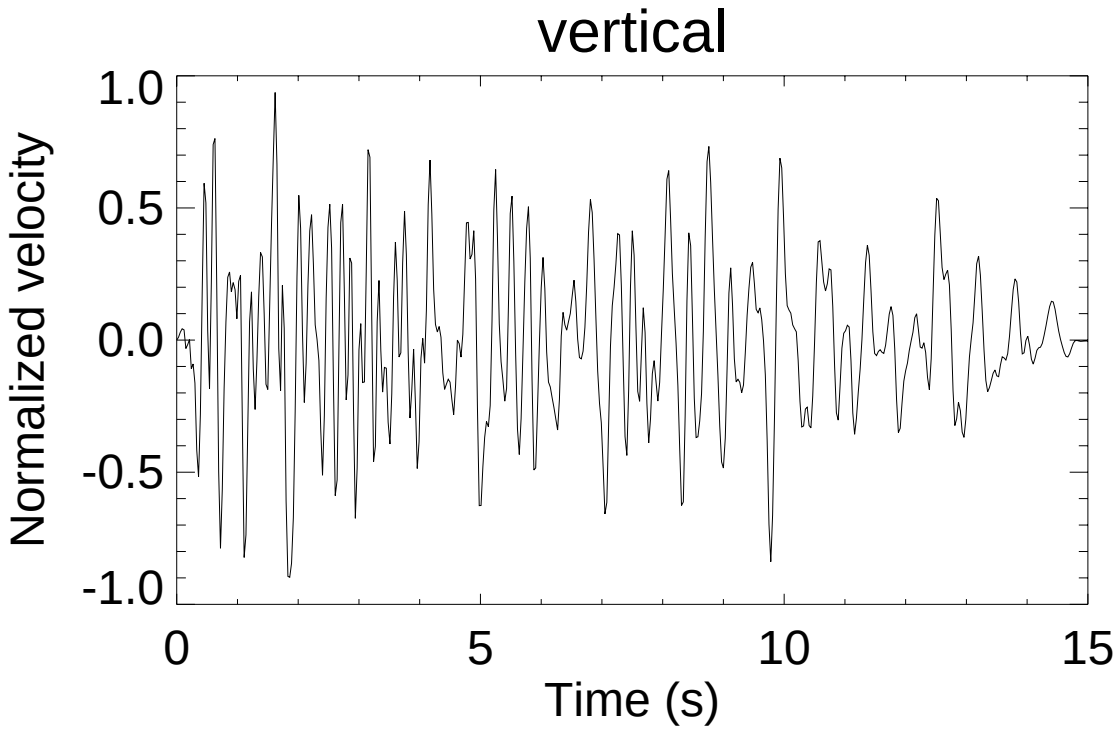

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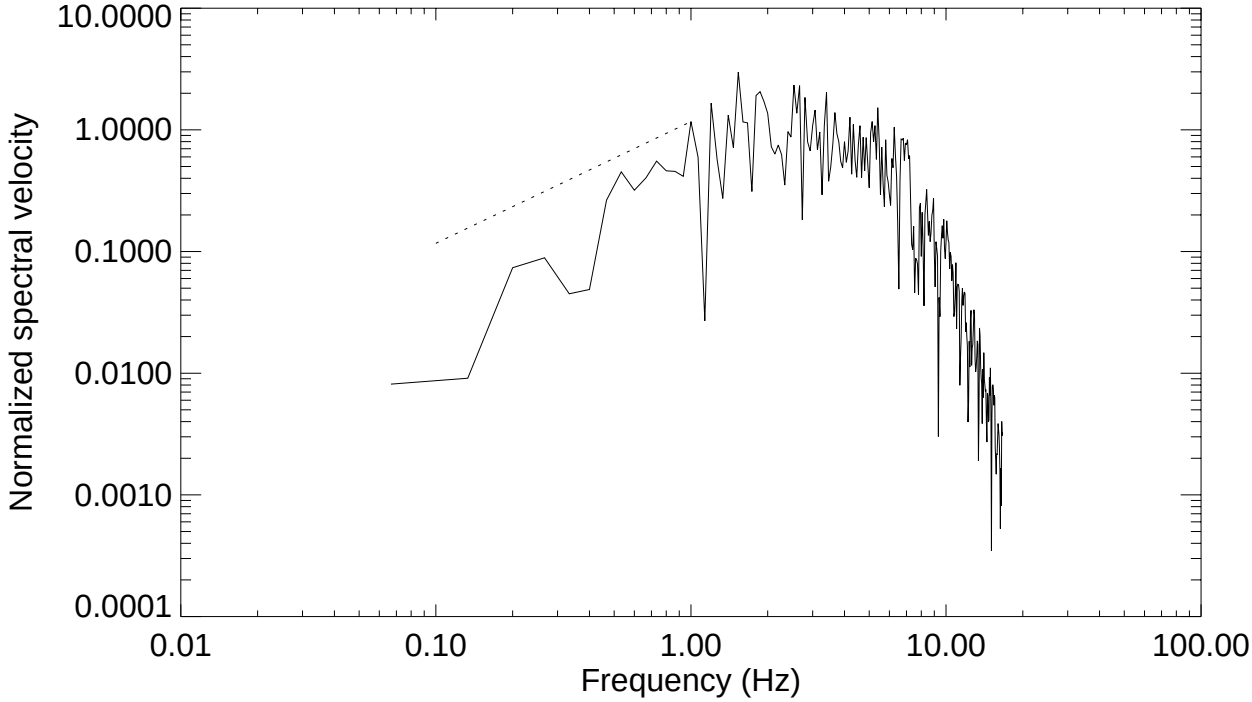

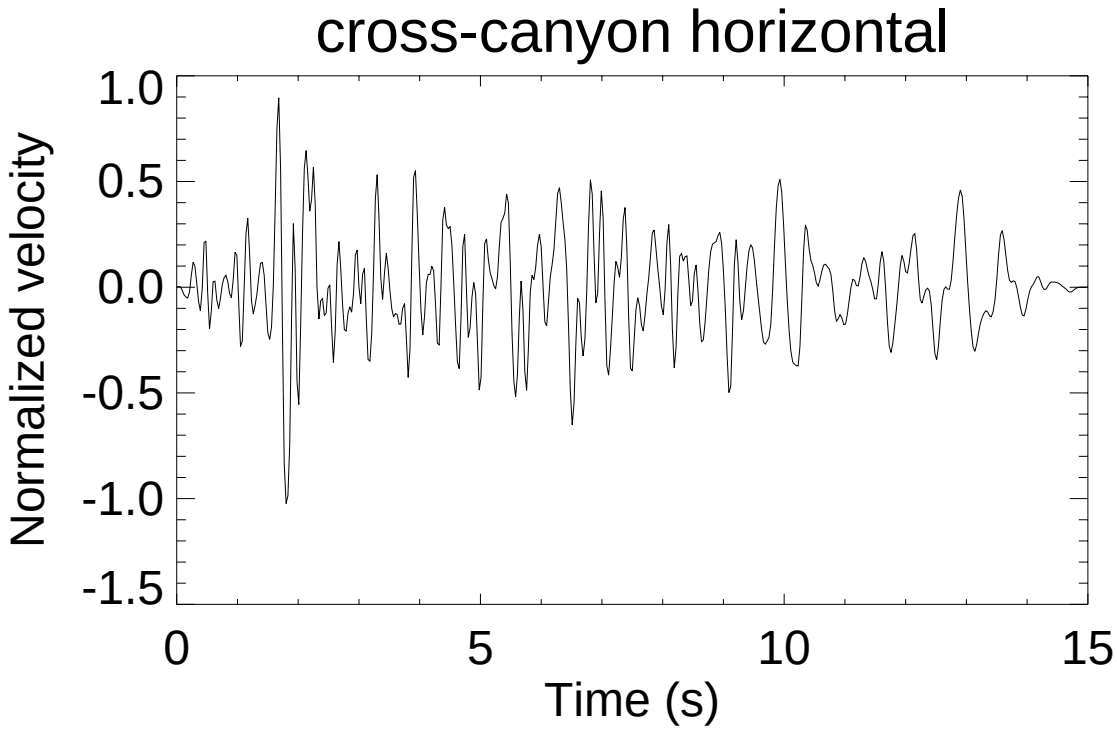

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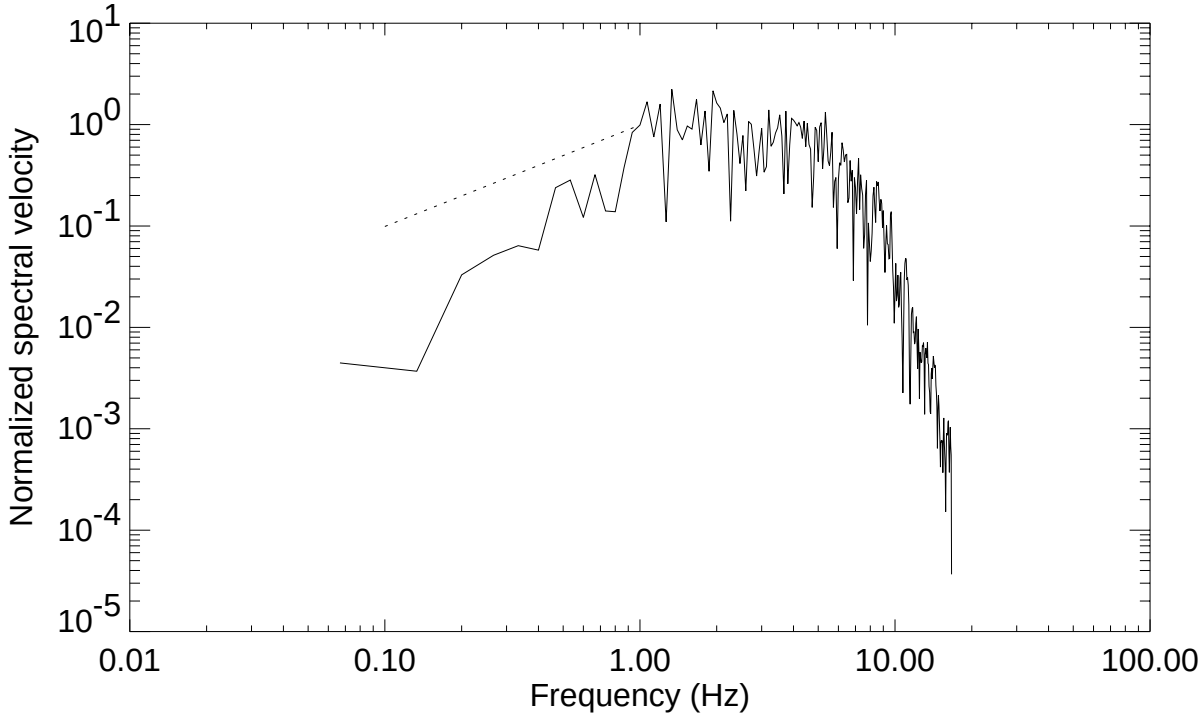

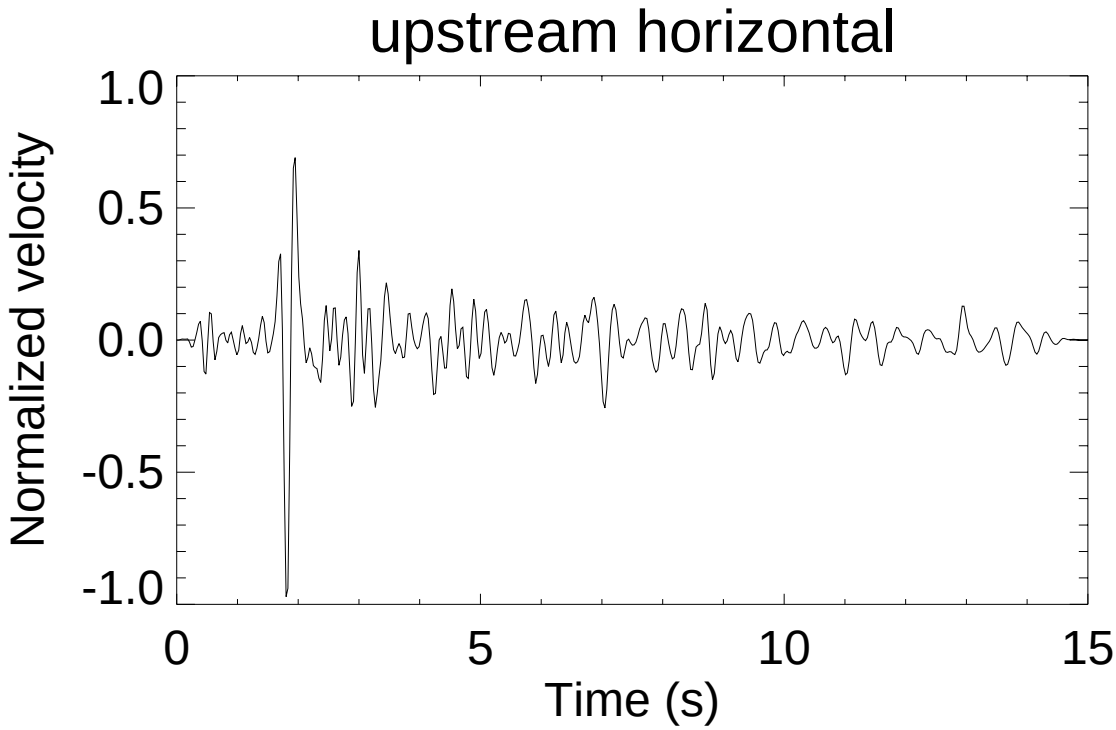

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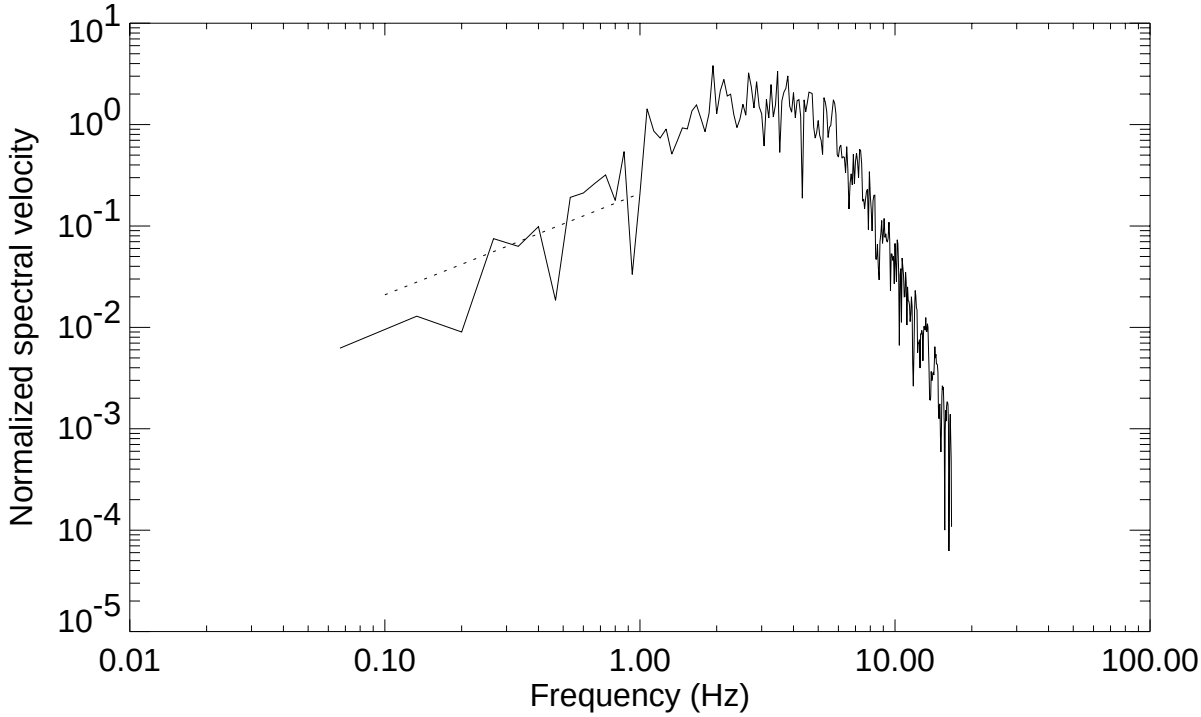

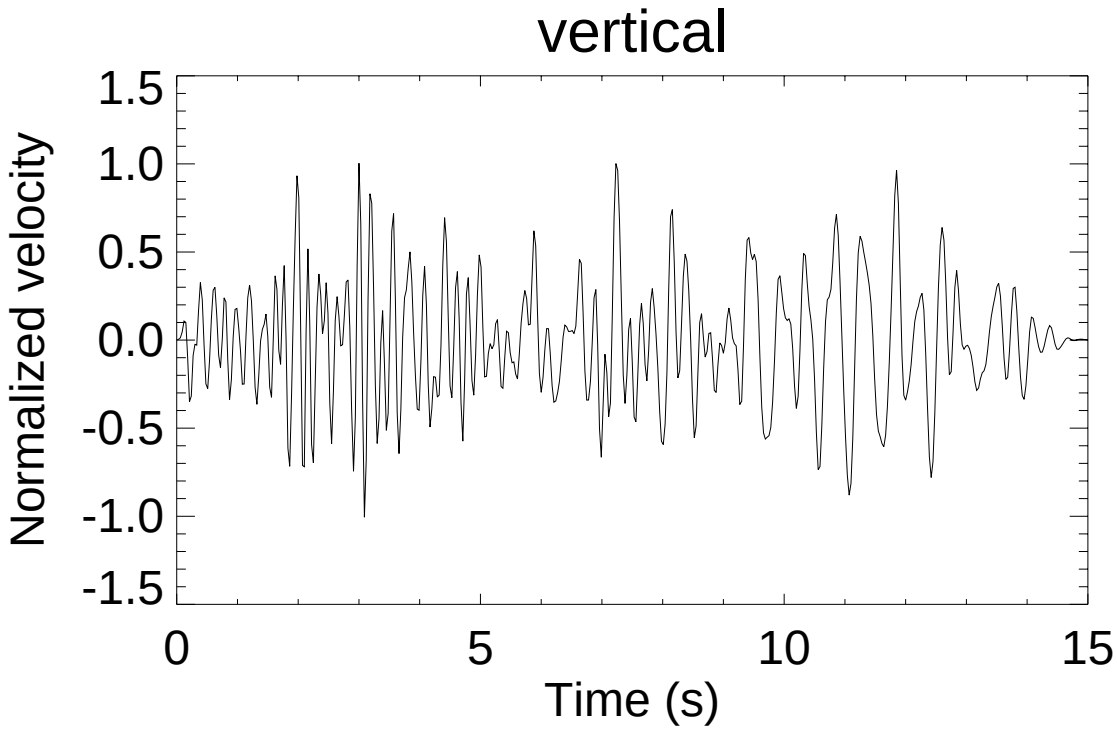

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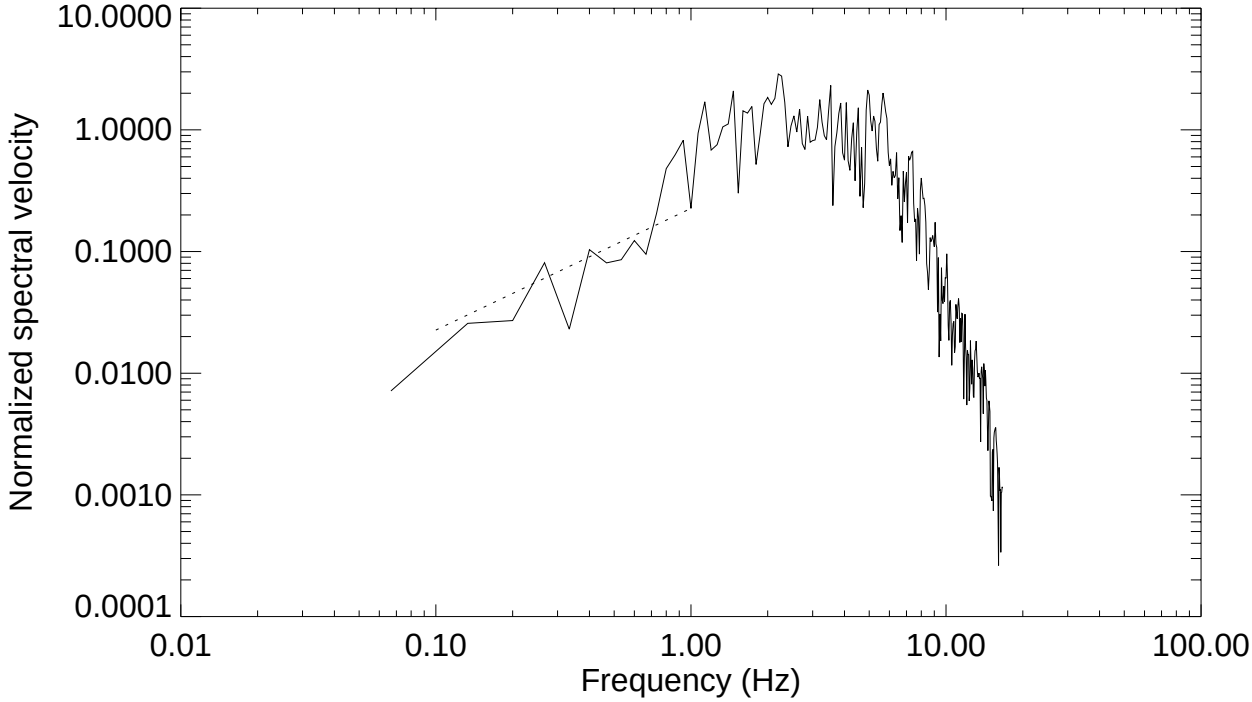

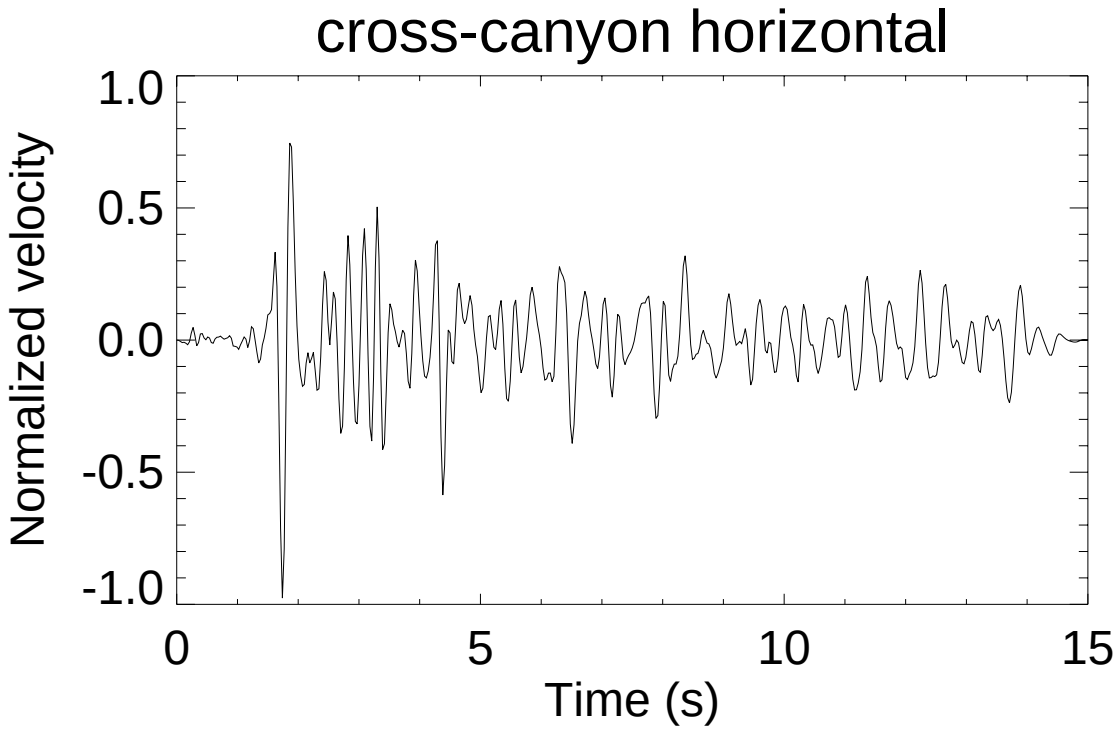

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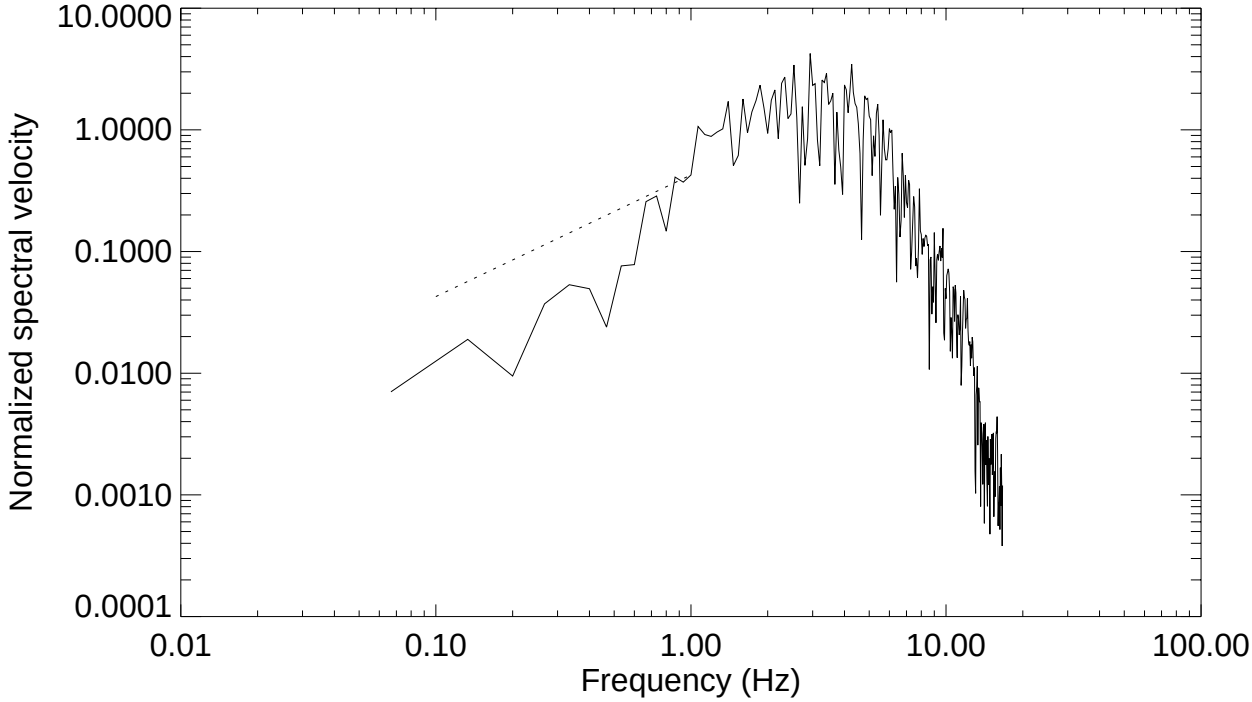

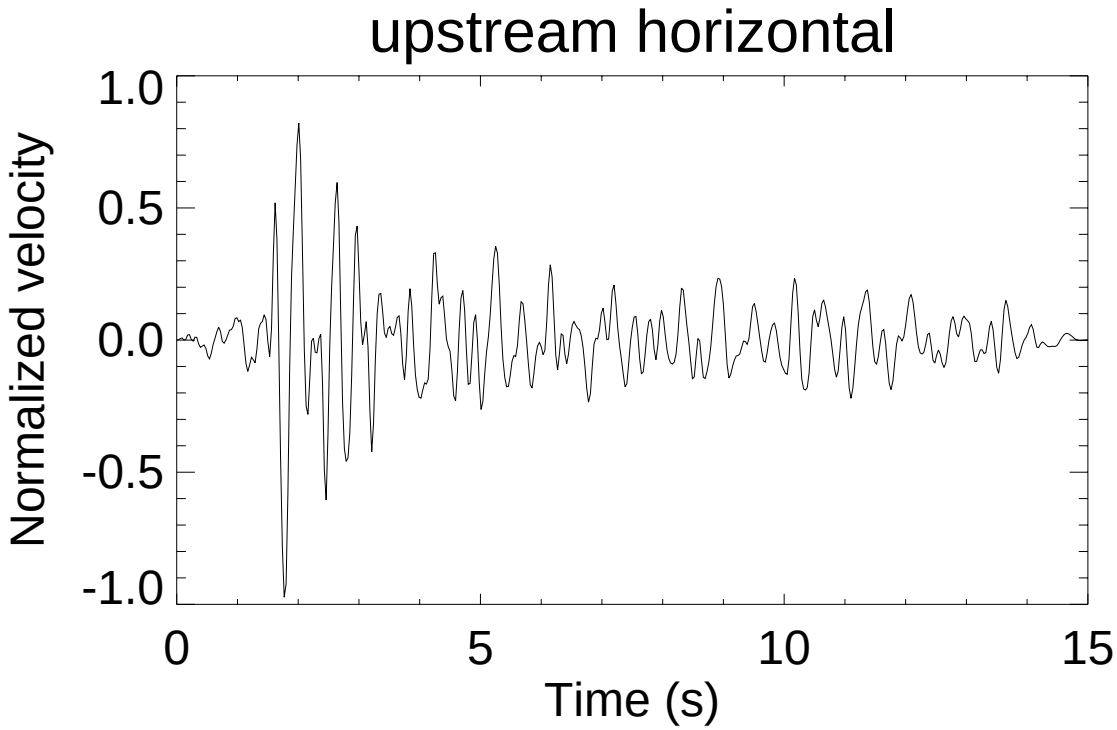

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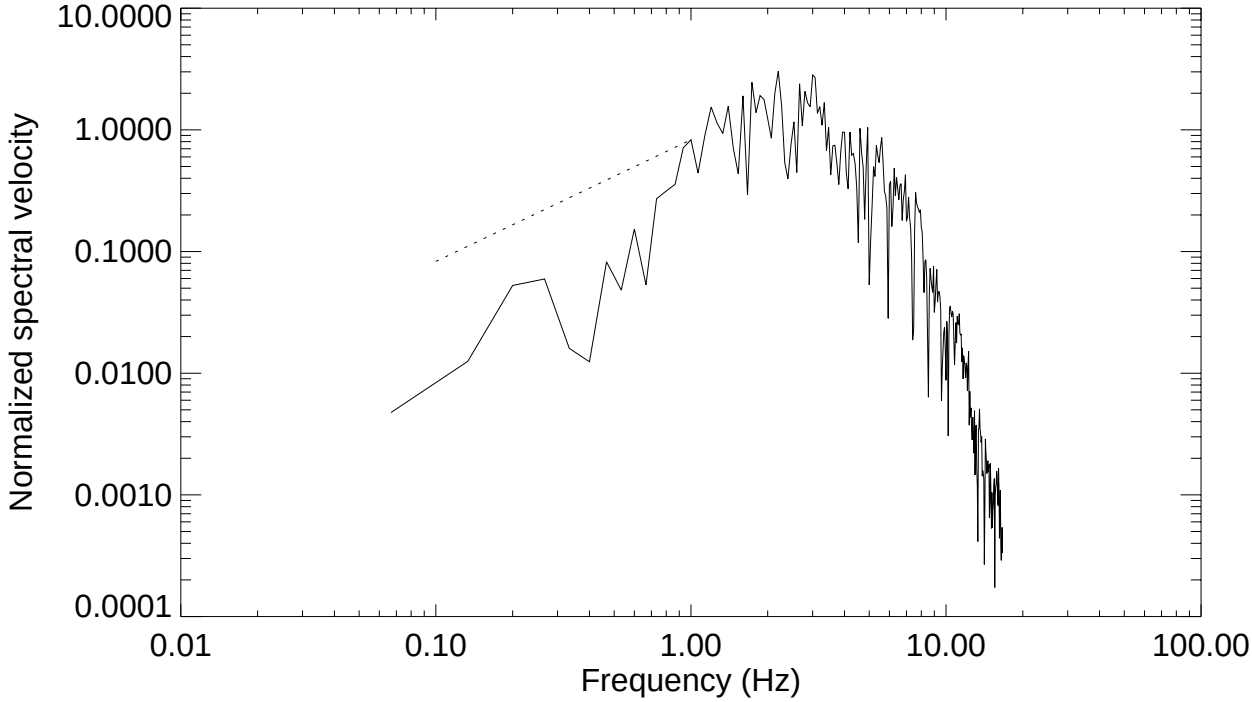

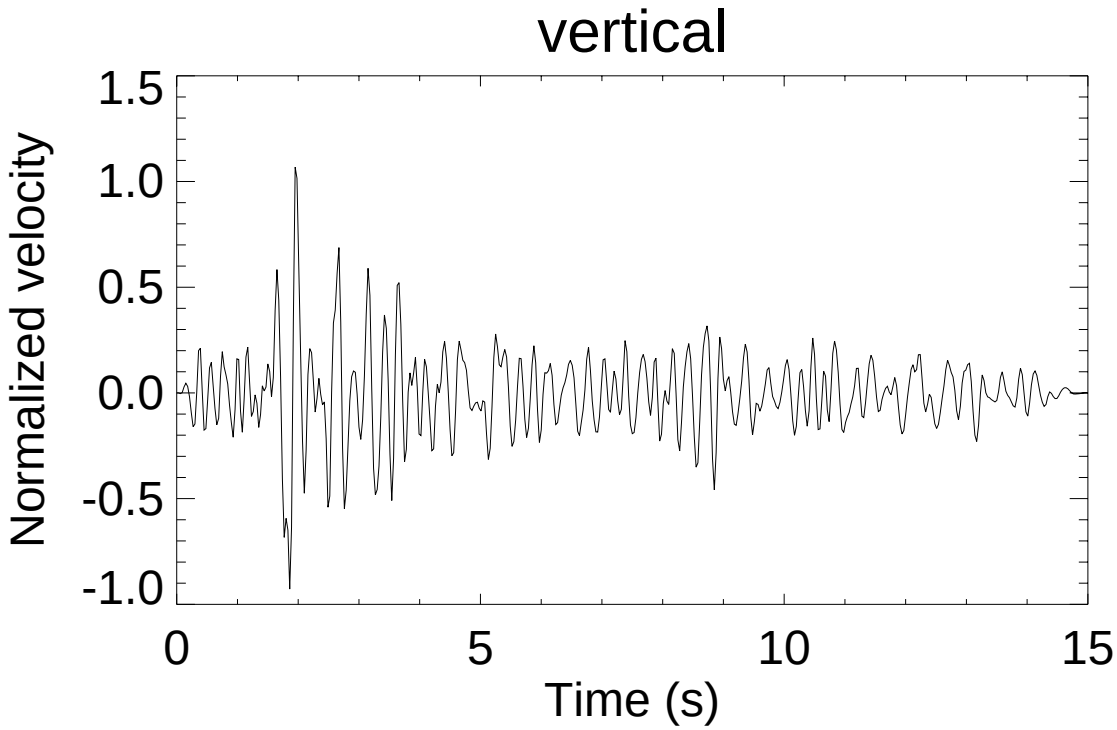

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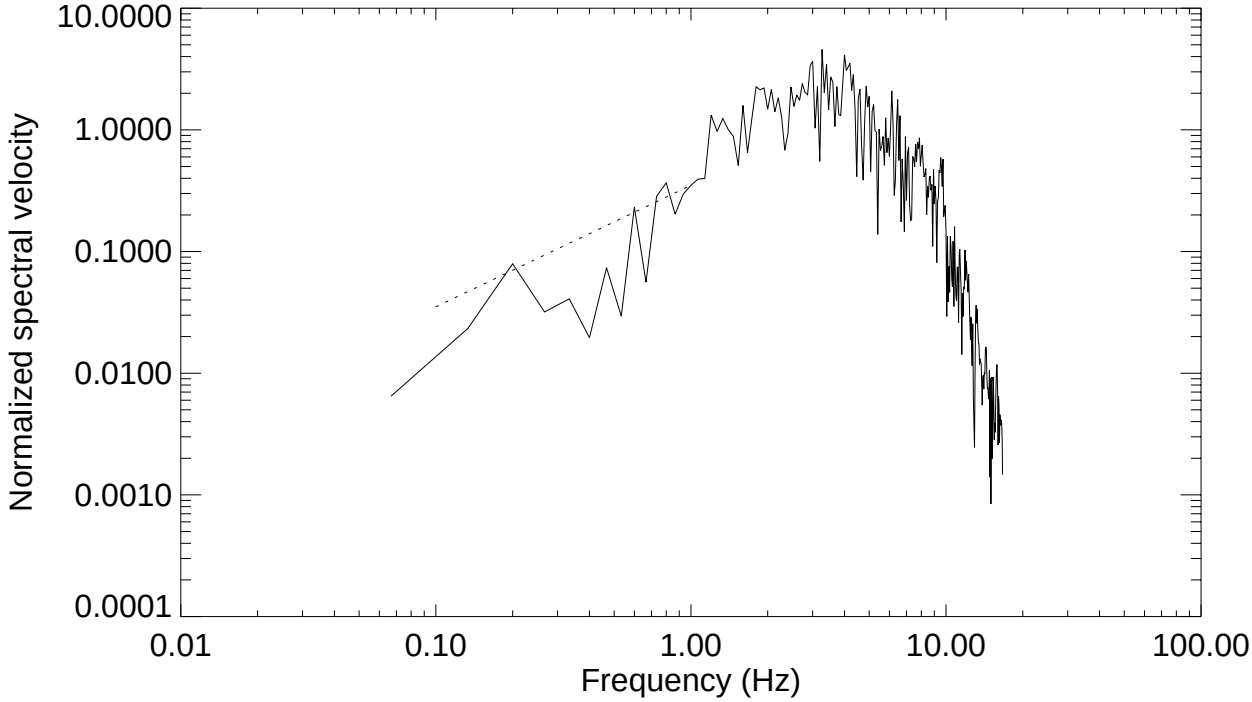

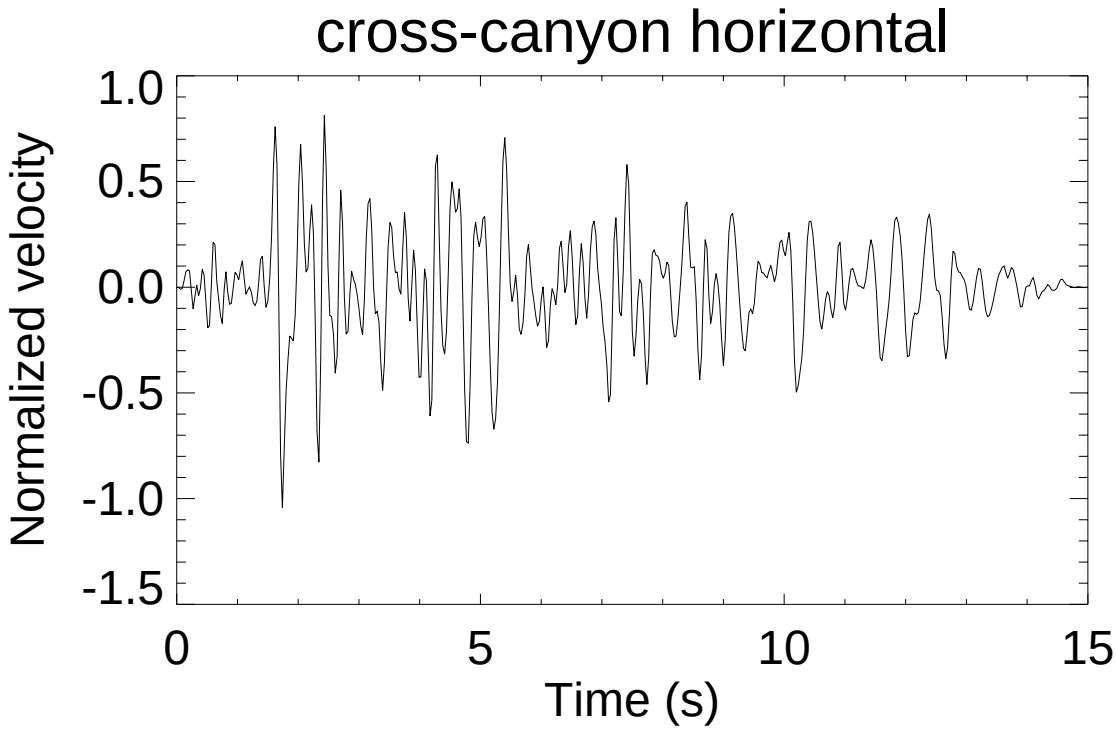

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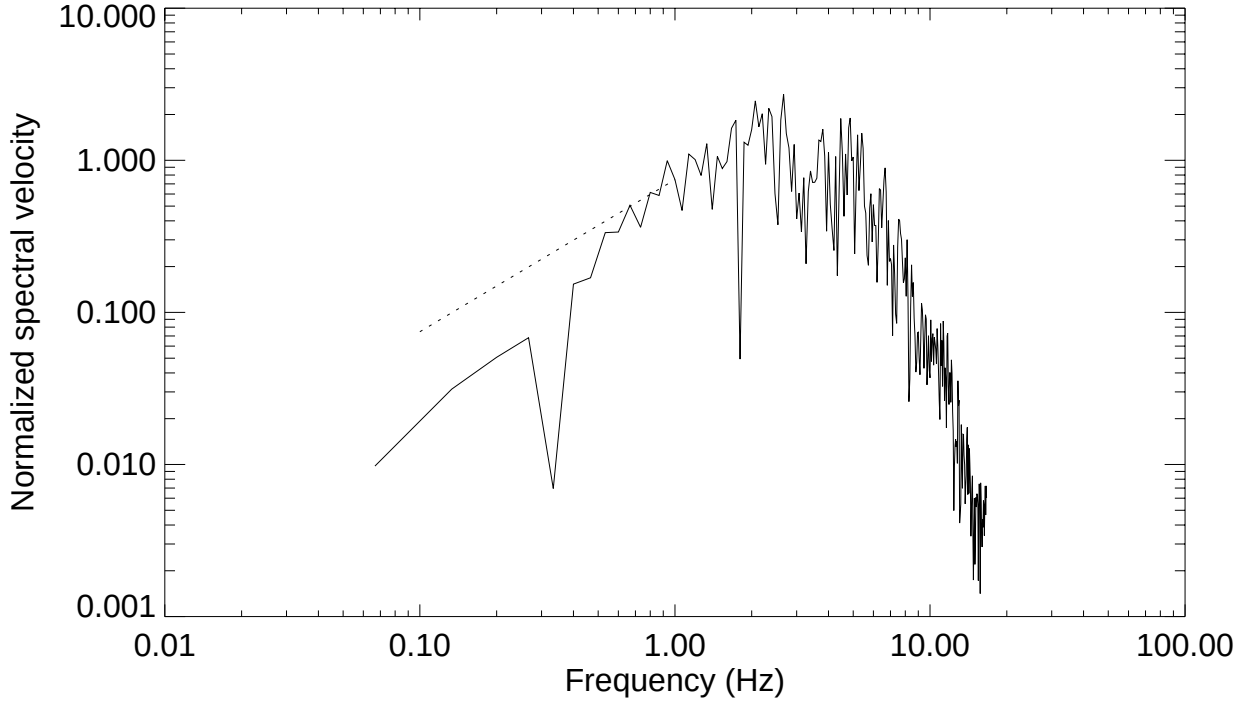

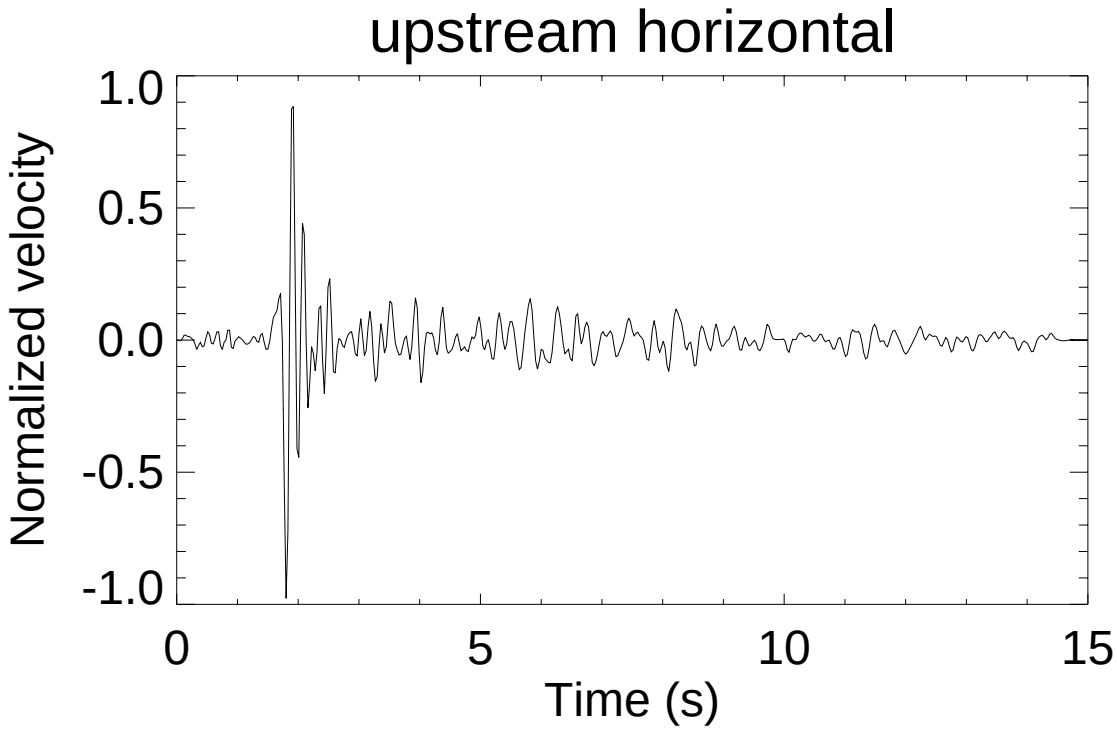

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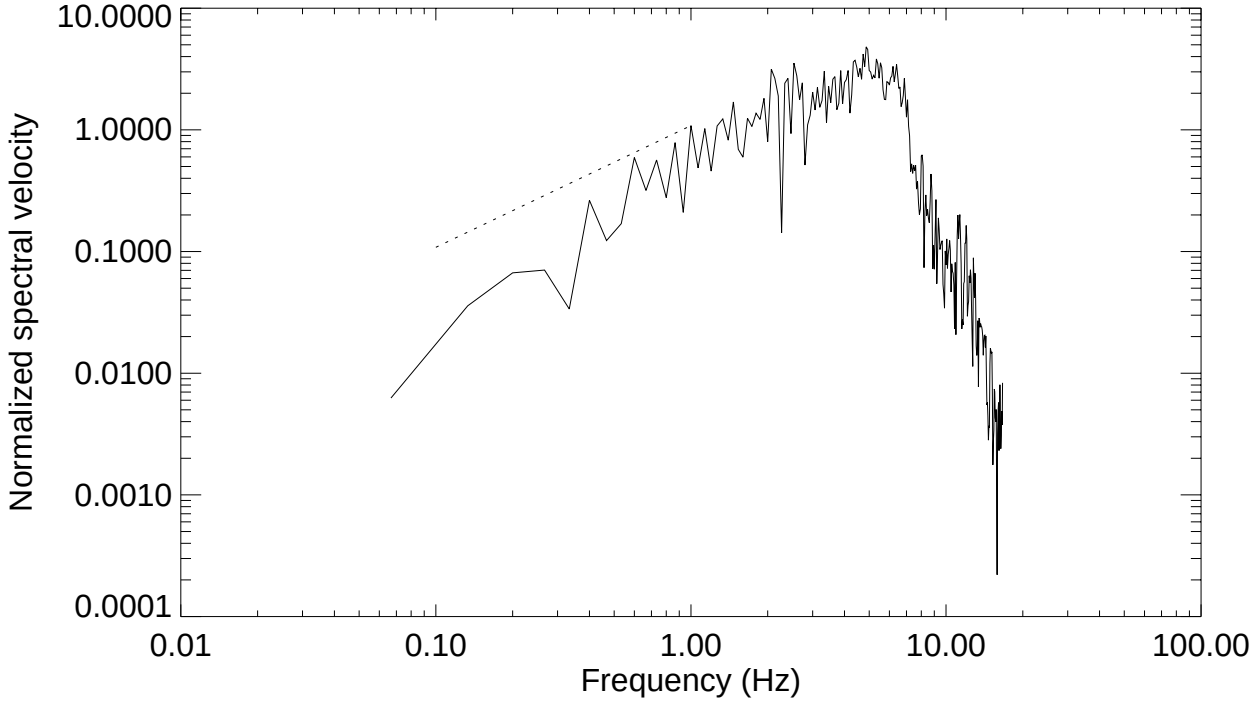

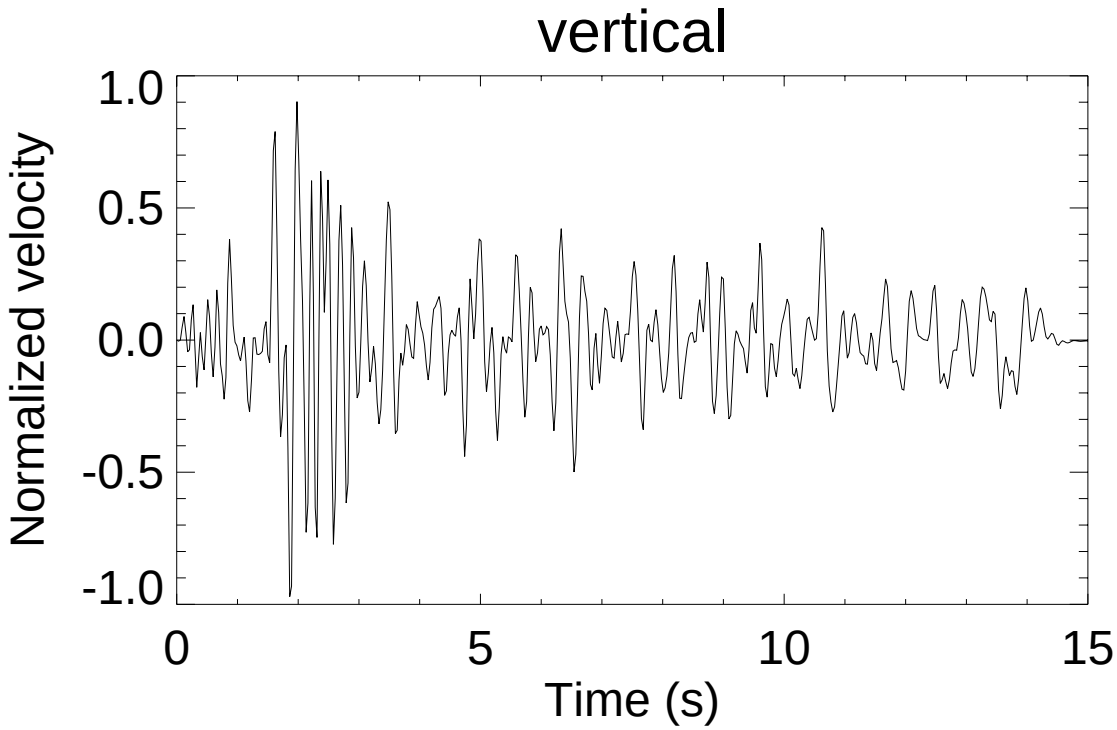

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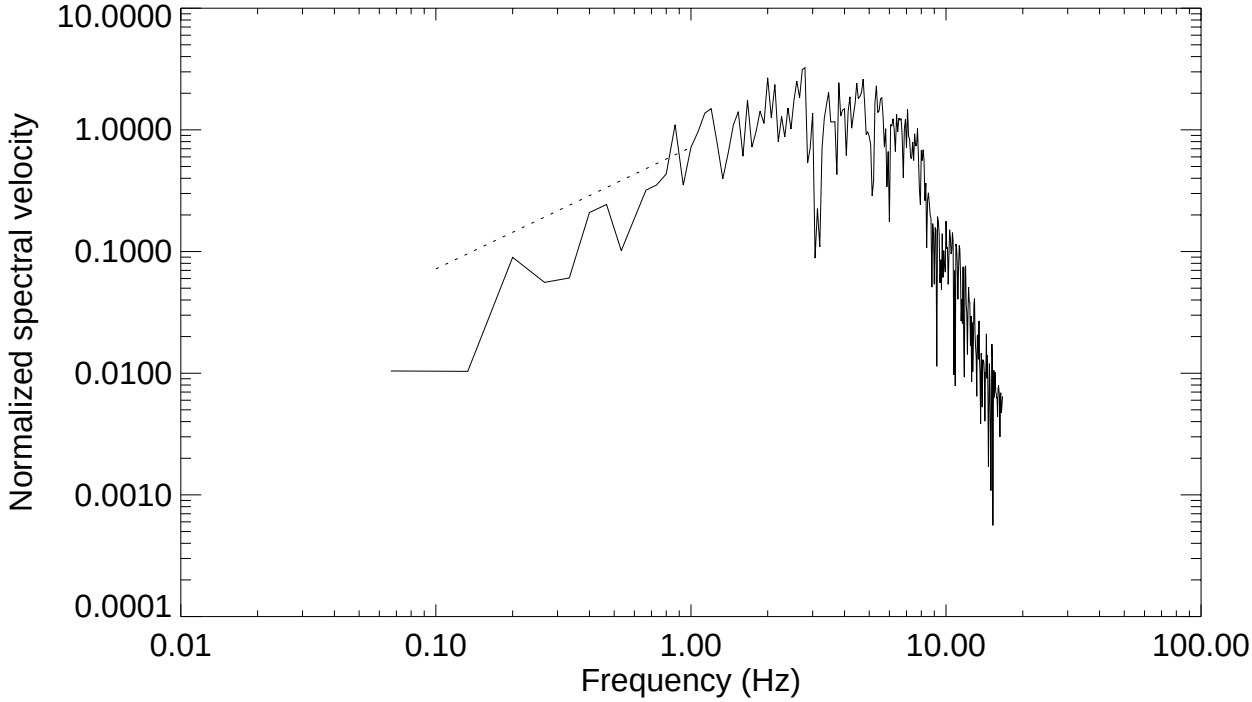

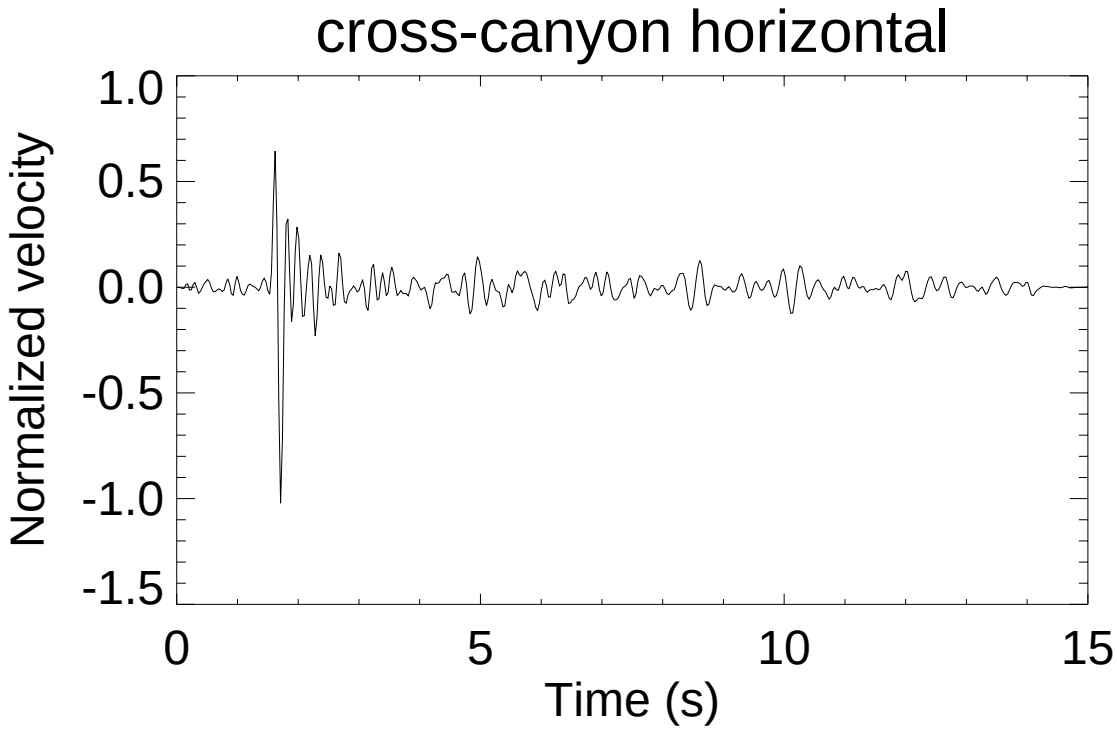

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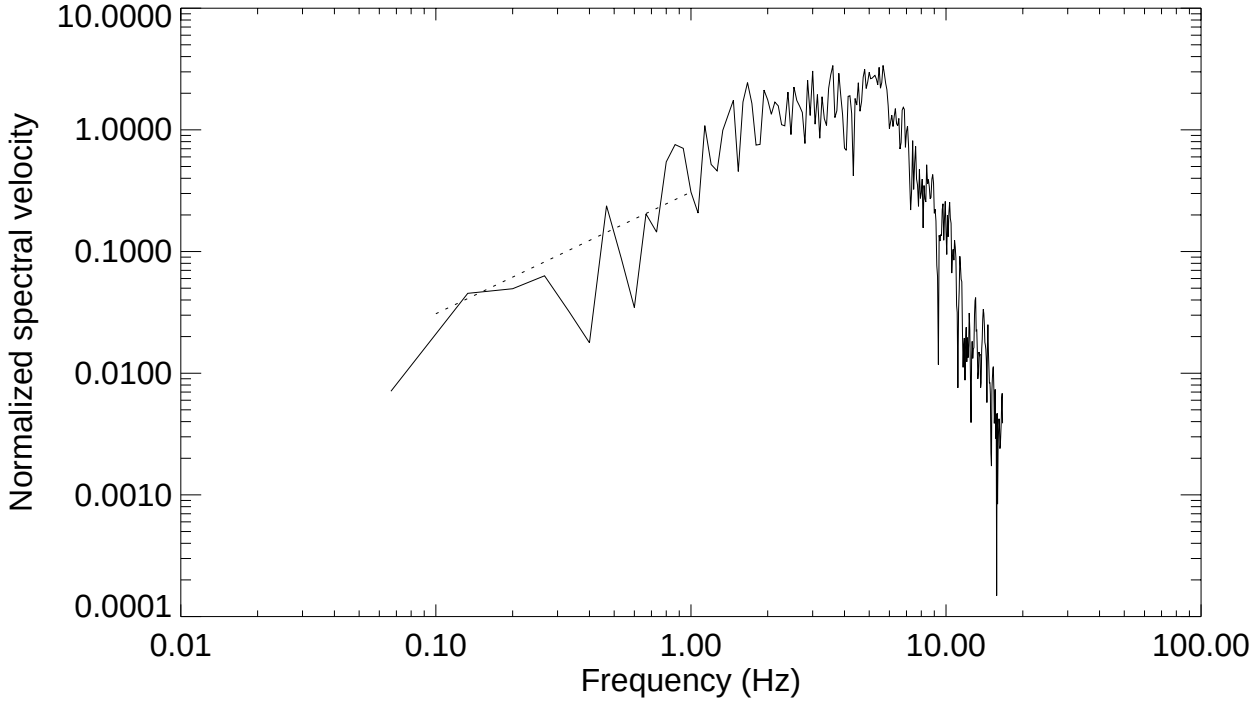

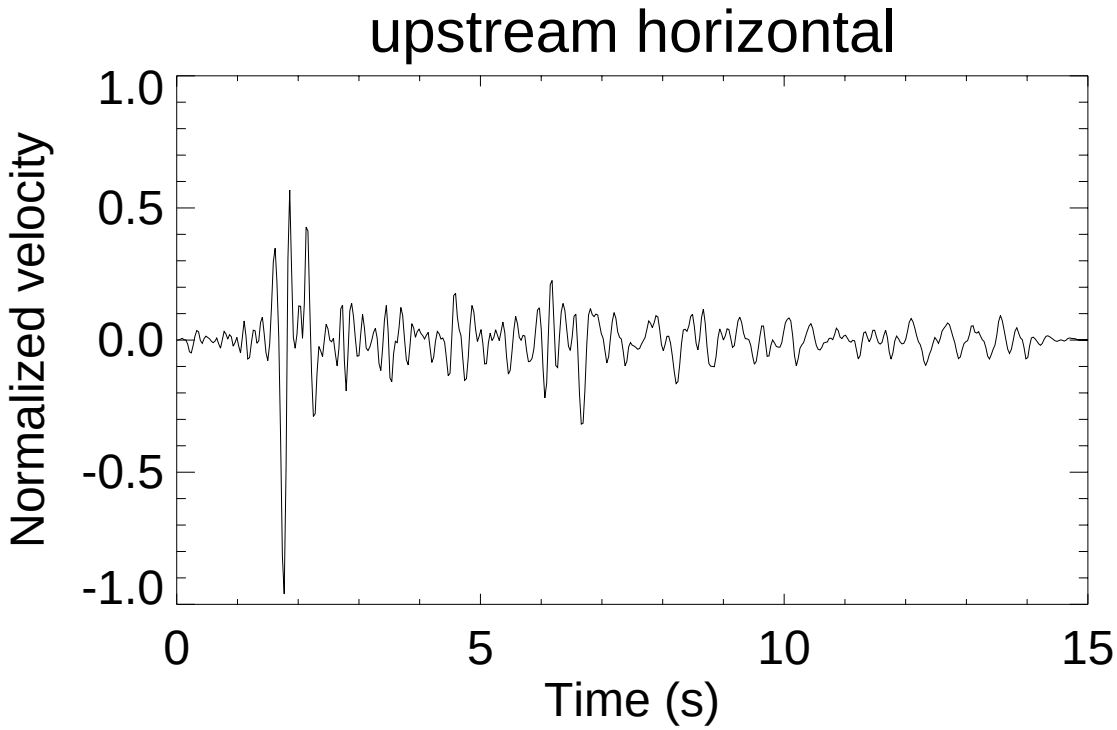

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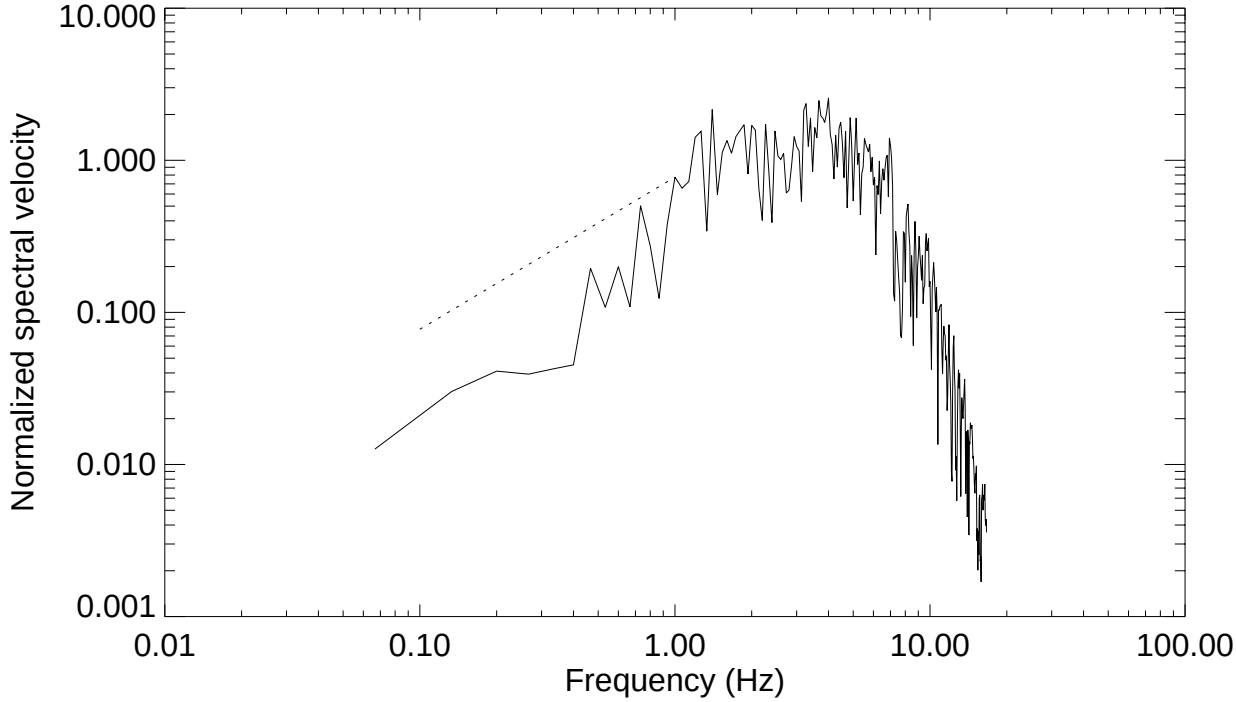

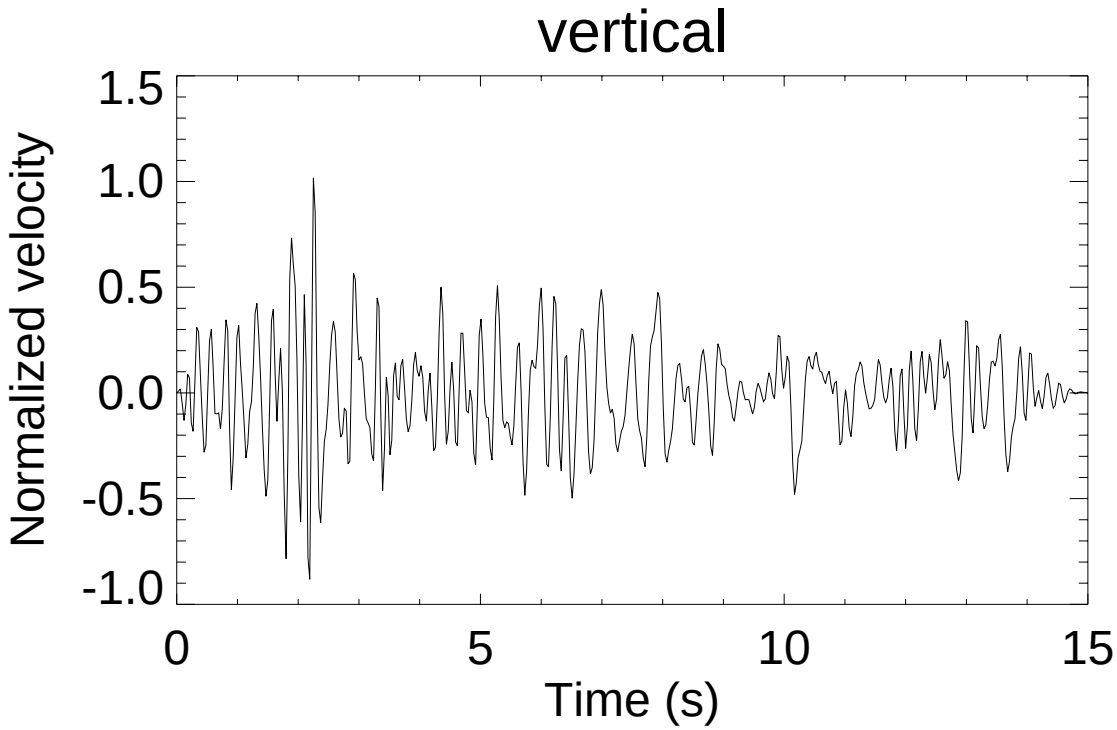

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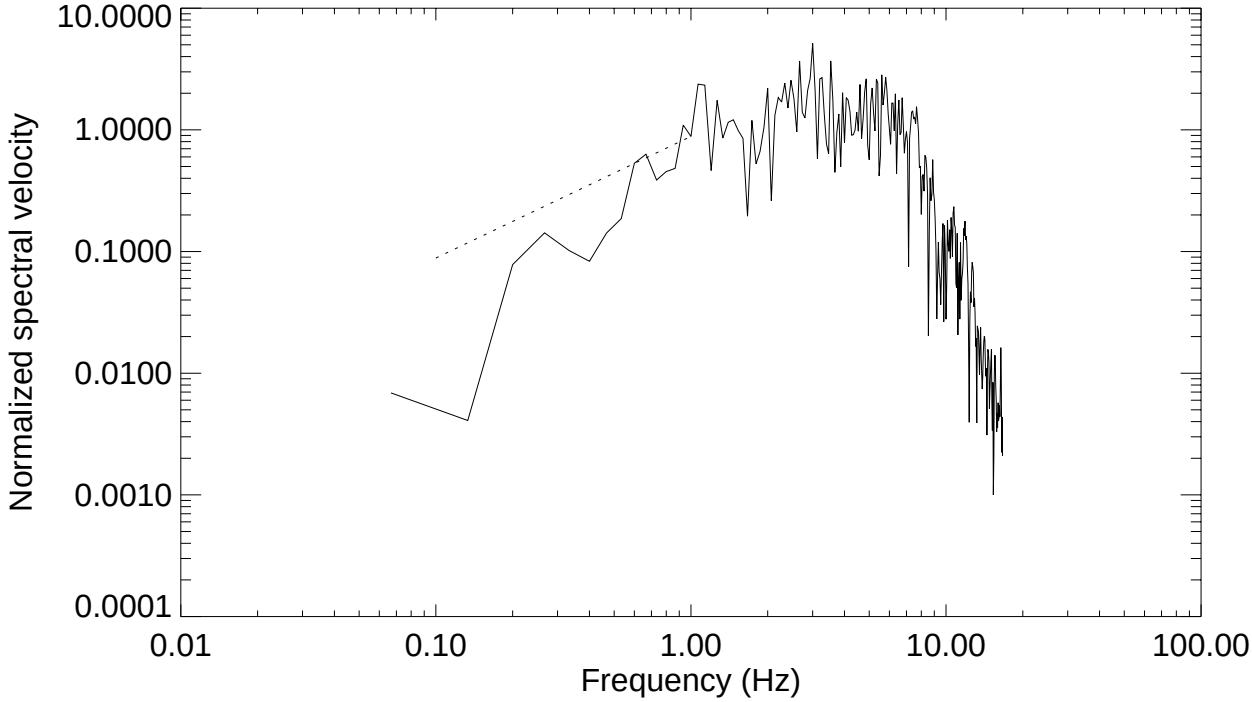

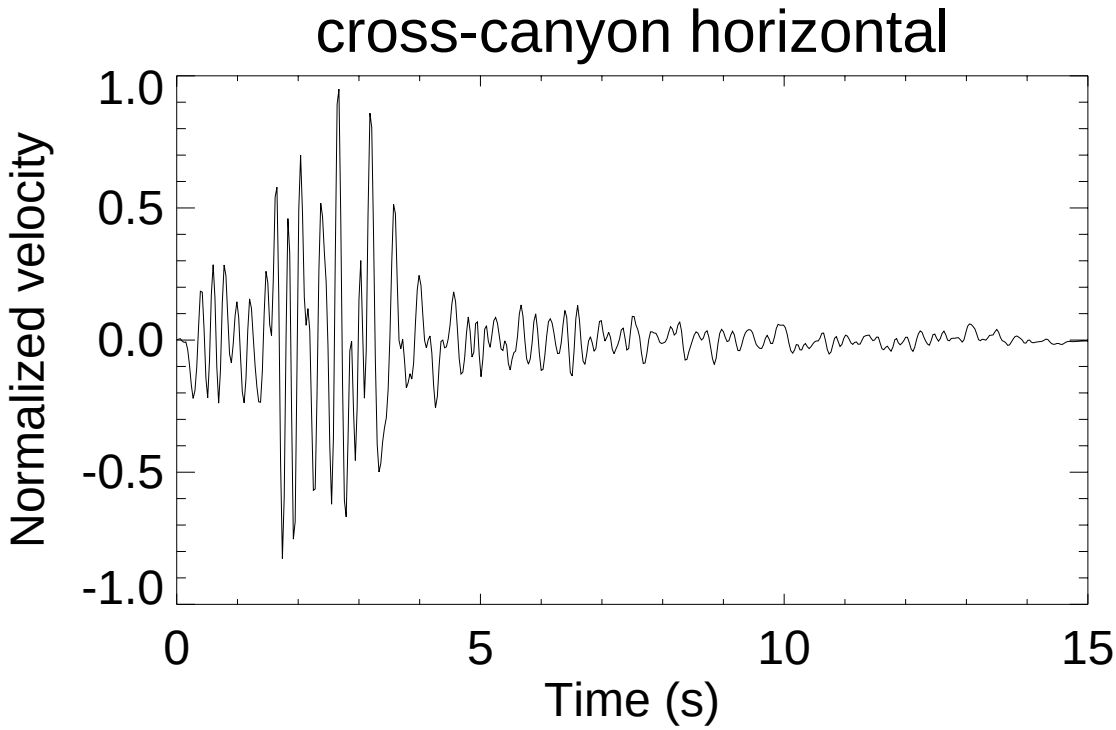

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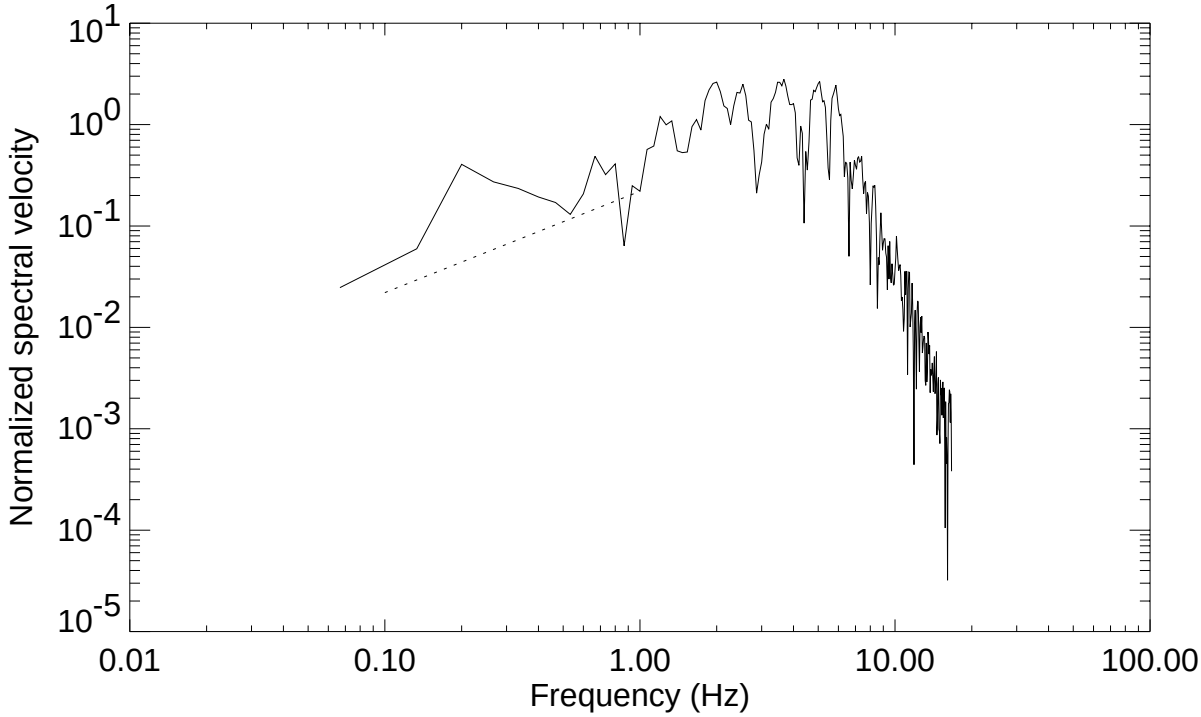

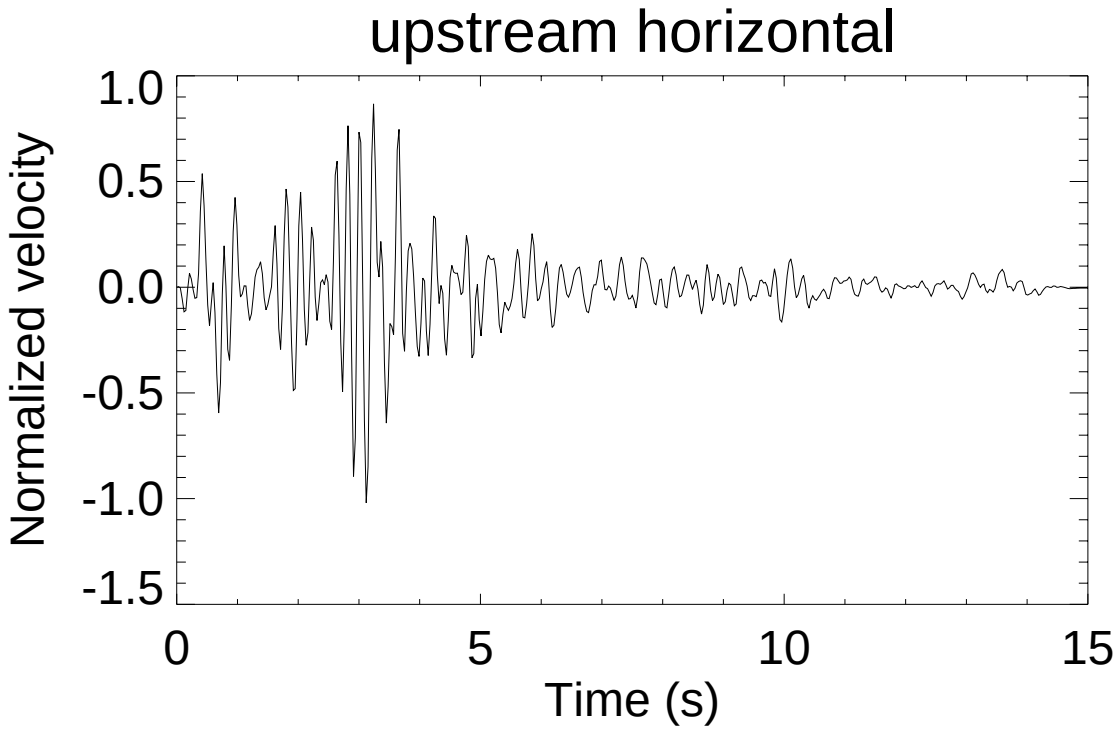

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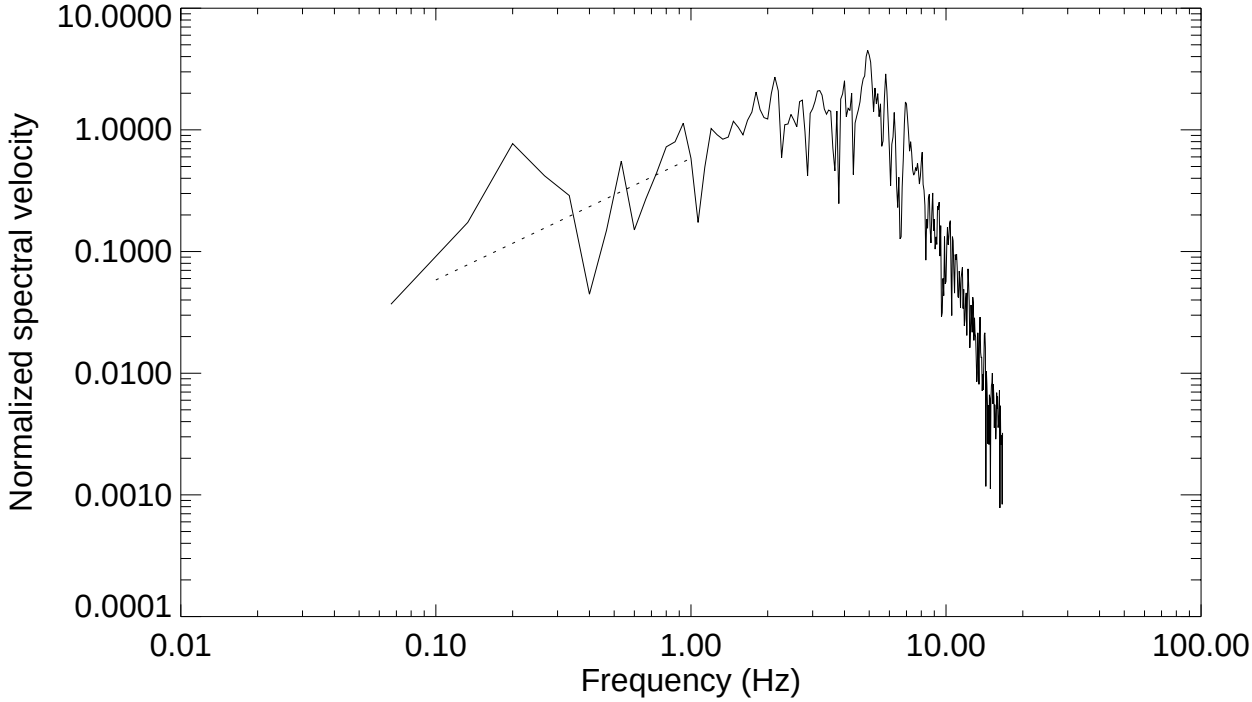

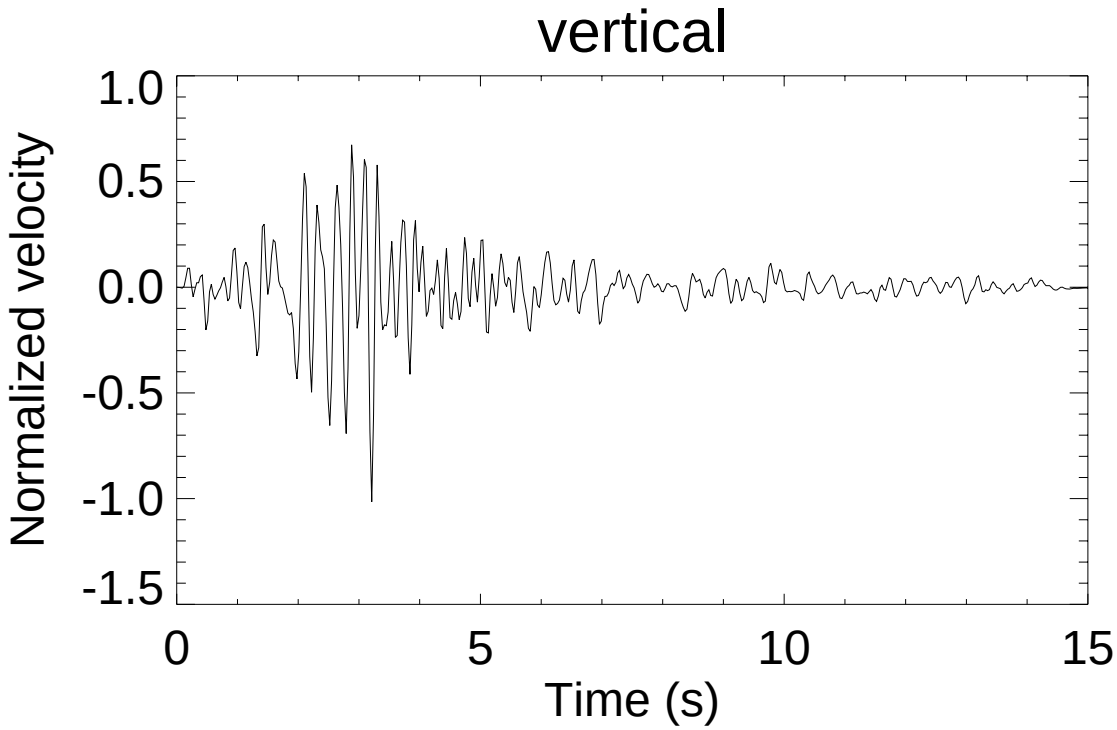

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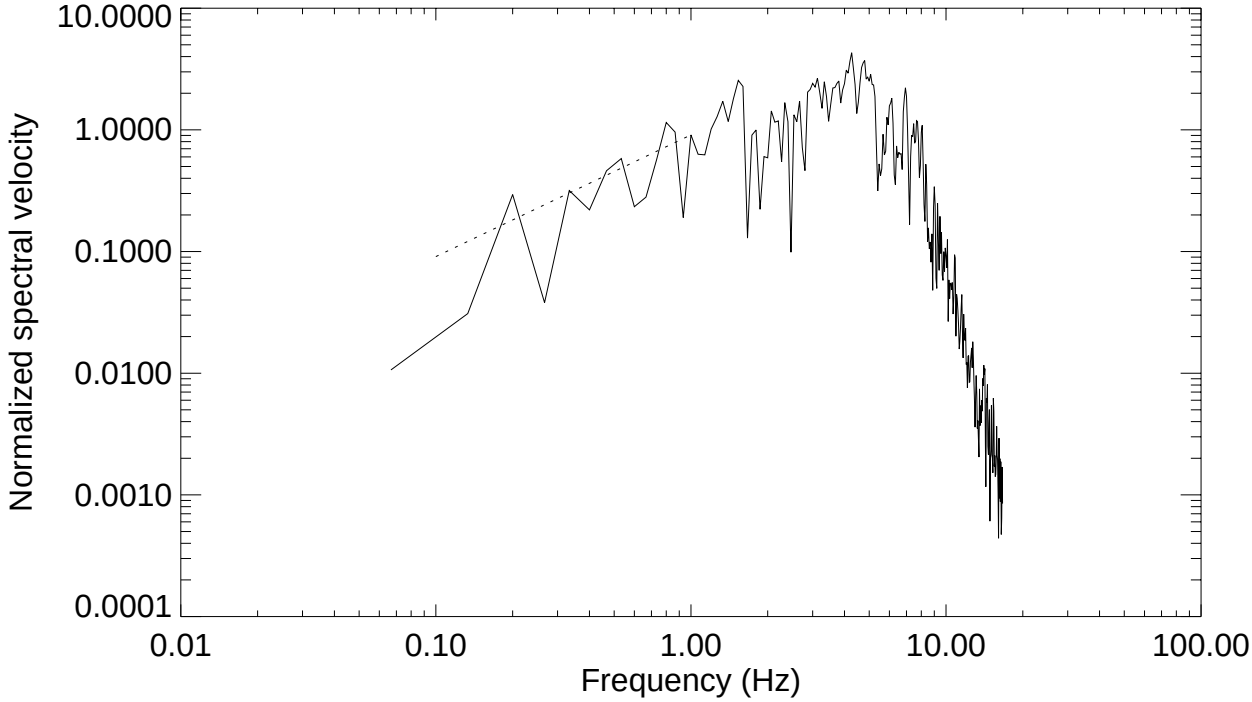

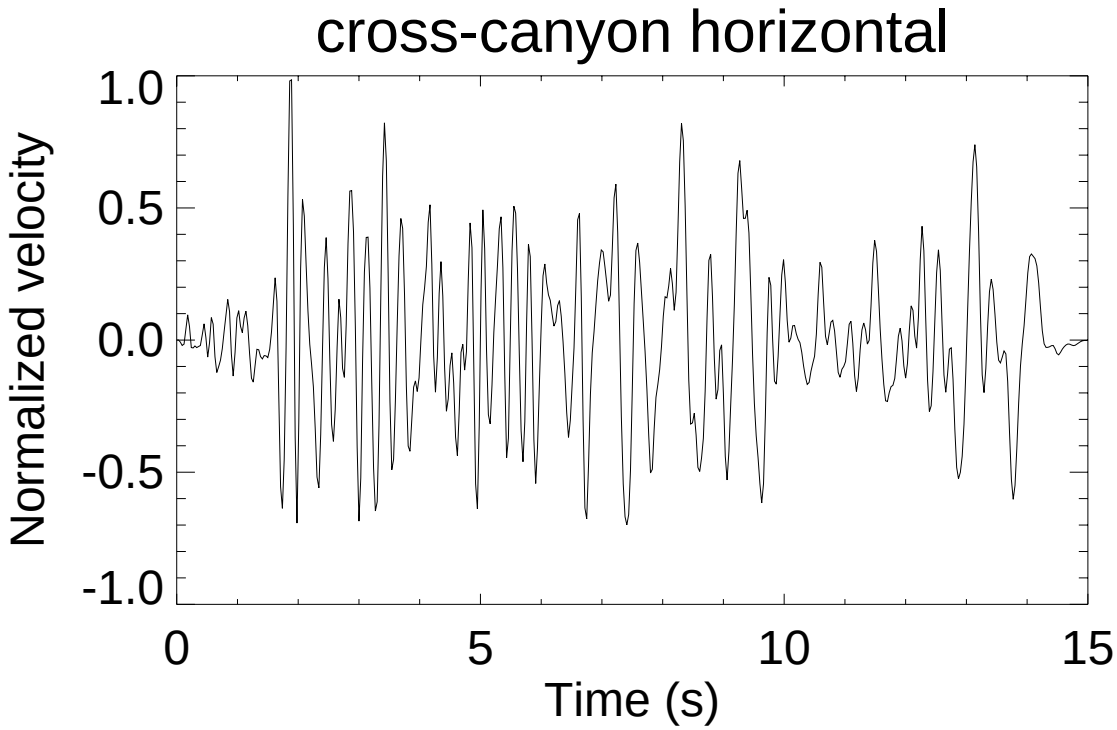

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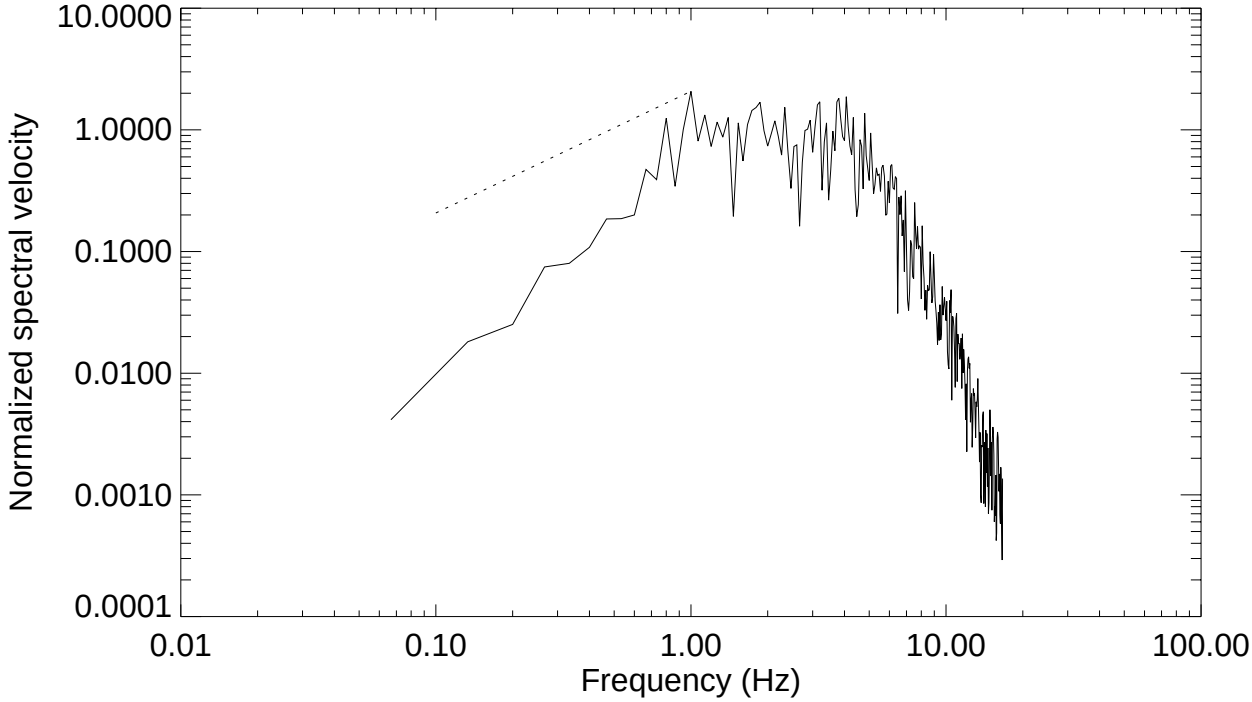

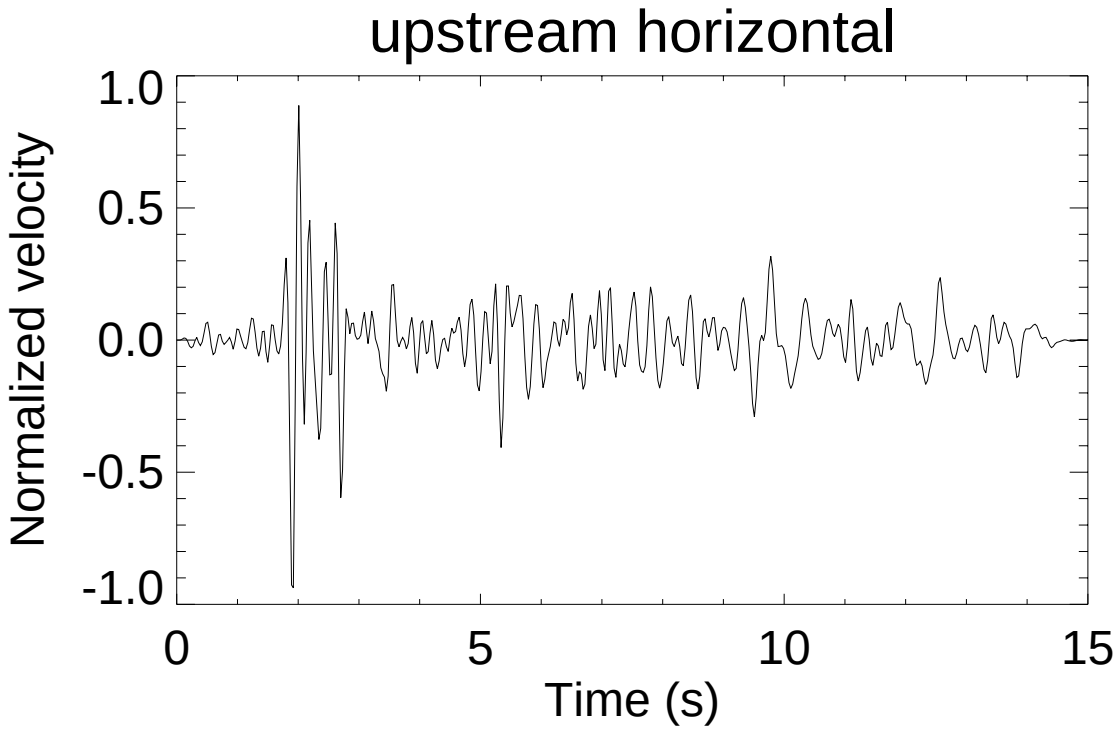

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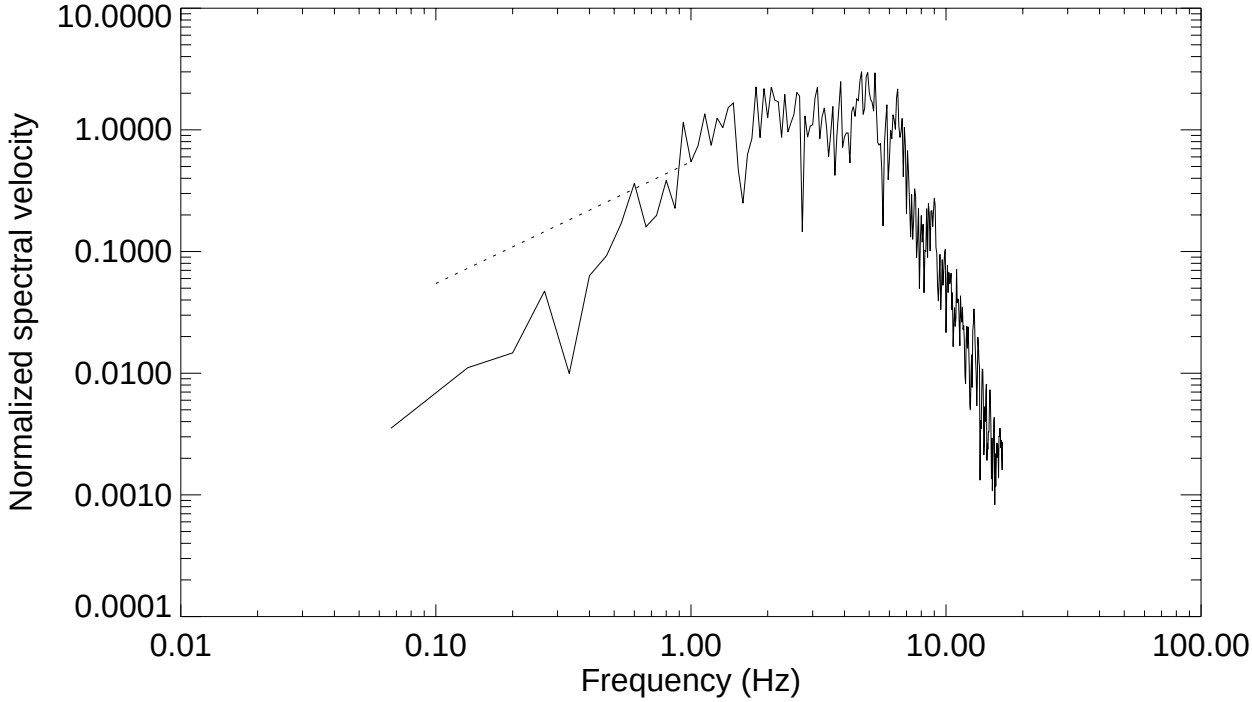

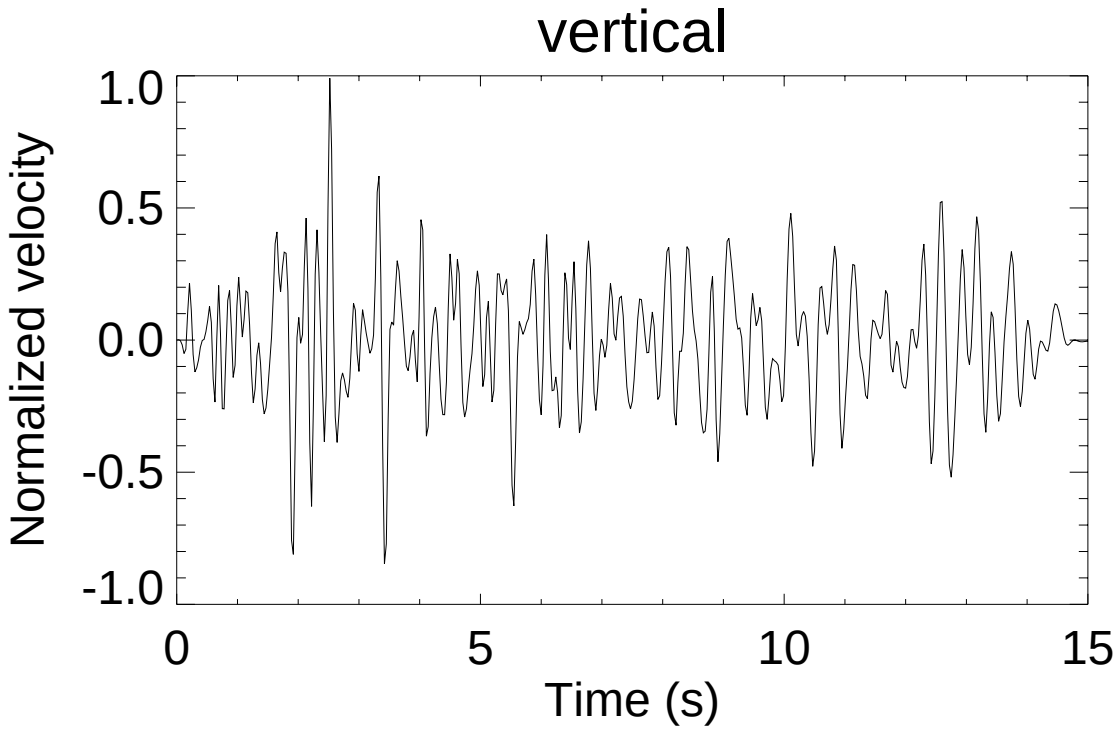
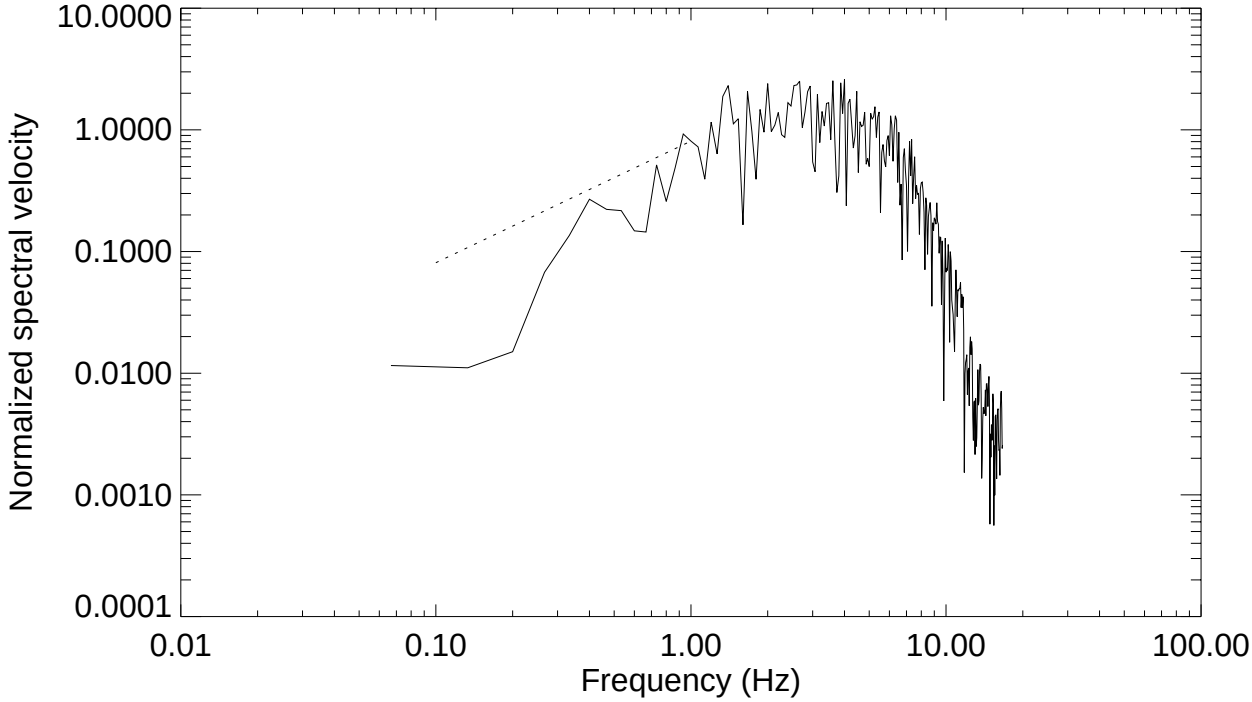
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