

Quelques réflexions sur l'usage des descripteurs audio dans l'analyse de la musique électroacoustique

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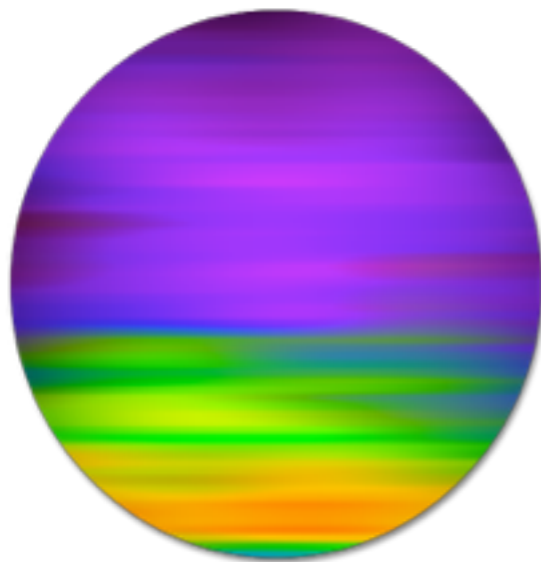
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EAnalysis

Sound-based music analysis



Développement en collaboration entre le
MTIRC (De Montfort University, Leicester)
et l'IReMus (Université Paris-Sorbonne)

Gratuit pour Macintosh 10.7+

<http://eanalysis.pierrecouprie.fr>

EAnalysis

Oiseau zen.eanalysis

Mode Events Add to library Add to chart Add marker Add Structure Tools Playlist Audio descriptors Filters

Browser Configurations Properties

Analytic Graphic Library

Q Search

All analytic events

- Figures d'espace
- Form-building
- Functions
- Images-de-sons
- Language grid
- Sound objects
- Sound objects (graphics)
- Spectromorphologies
- Temporal Semiotic Units (TSU)
- Di Santo Typomorphology

N N' N'' X X' X''

Help Credits

0:00 10:30 1-03 Trois Rêves d'oiseau _ ...zen.m4a 00:00:00

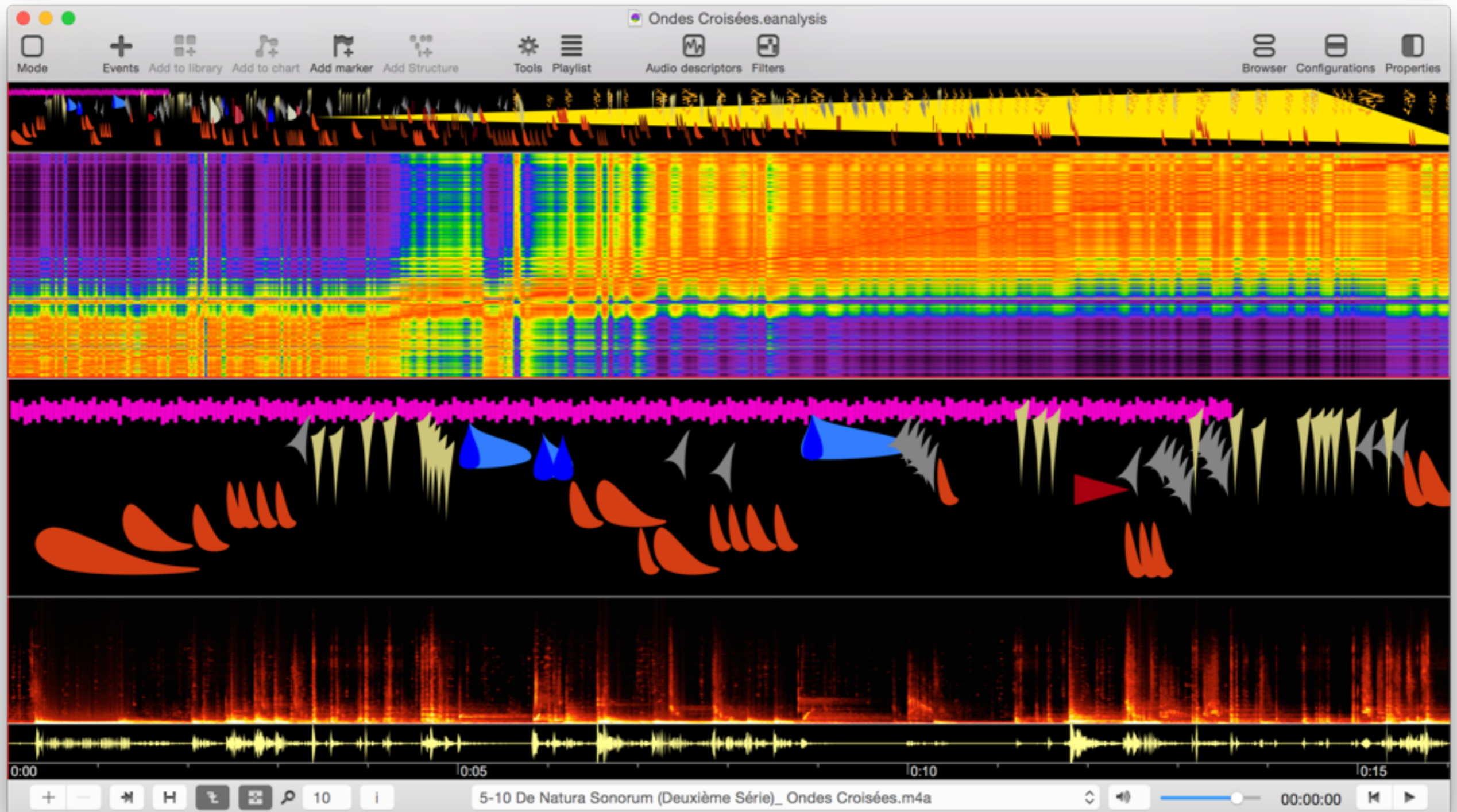
	Disproportionate duration (macro-objects) of no temporal unity		measured duration temporal unity reduced duration micro-objects			Disproportionate duration (macro-objects) of no temporal unity	
	unpredictable facture	non-existent facture	formed sustainment	impulse	formed iteration	non-existent facture	unpredictable facture
definite pitch	En	Hn	N	N'	N''	Zn	An
fixed mass	Ex	Hx	X	X'	X''	Zx	Ax
complex pitch		Ey	Tx Tn	Y	Y'	Y''	
not very variable mass							
unpredictable variation of mass	E	T	W	φ	K	P	A

SAMPLES ACCUMULATIONS

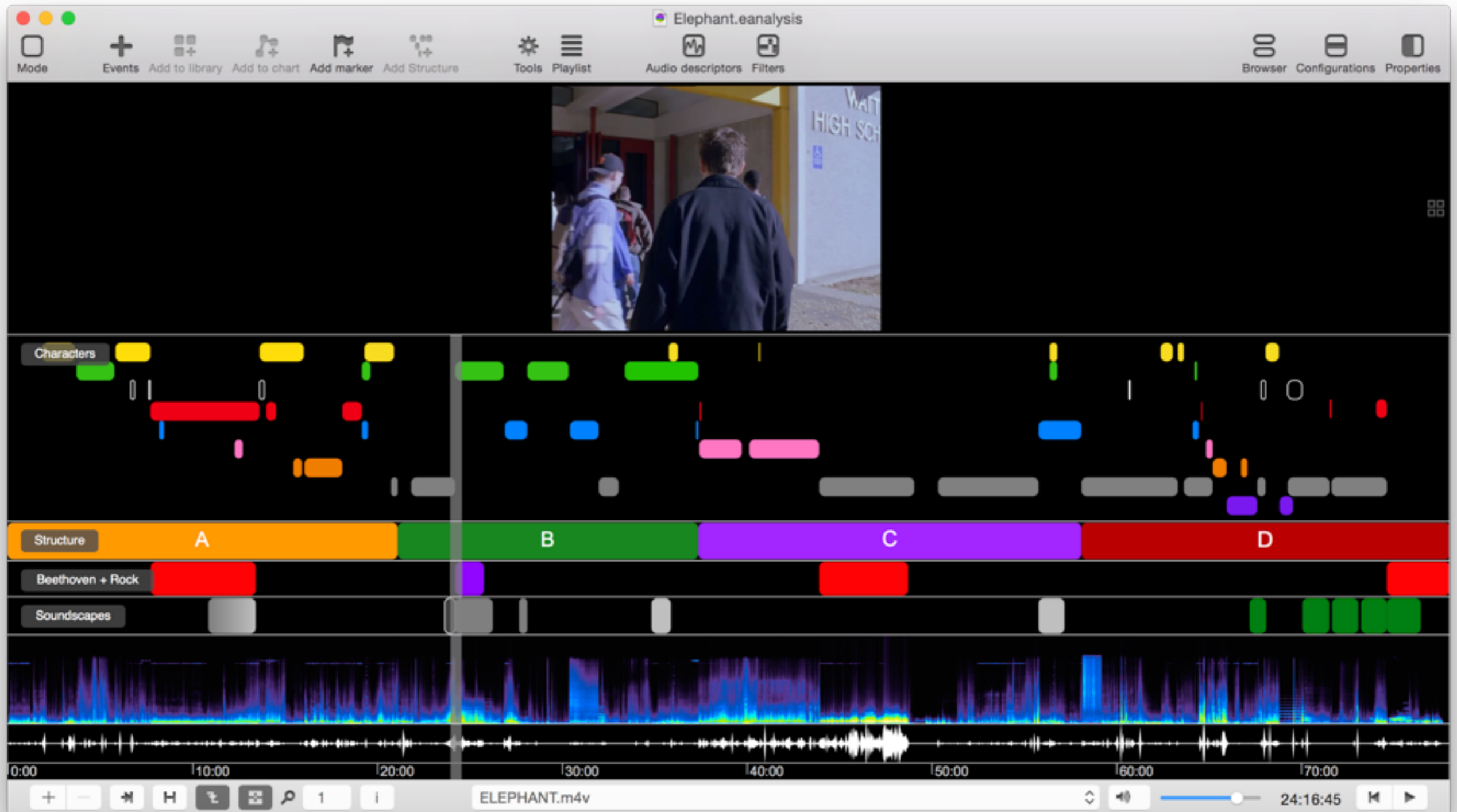
causal unity multiple but similar causes

held sounds iterative sounds

EAnalysis



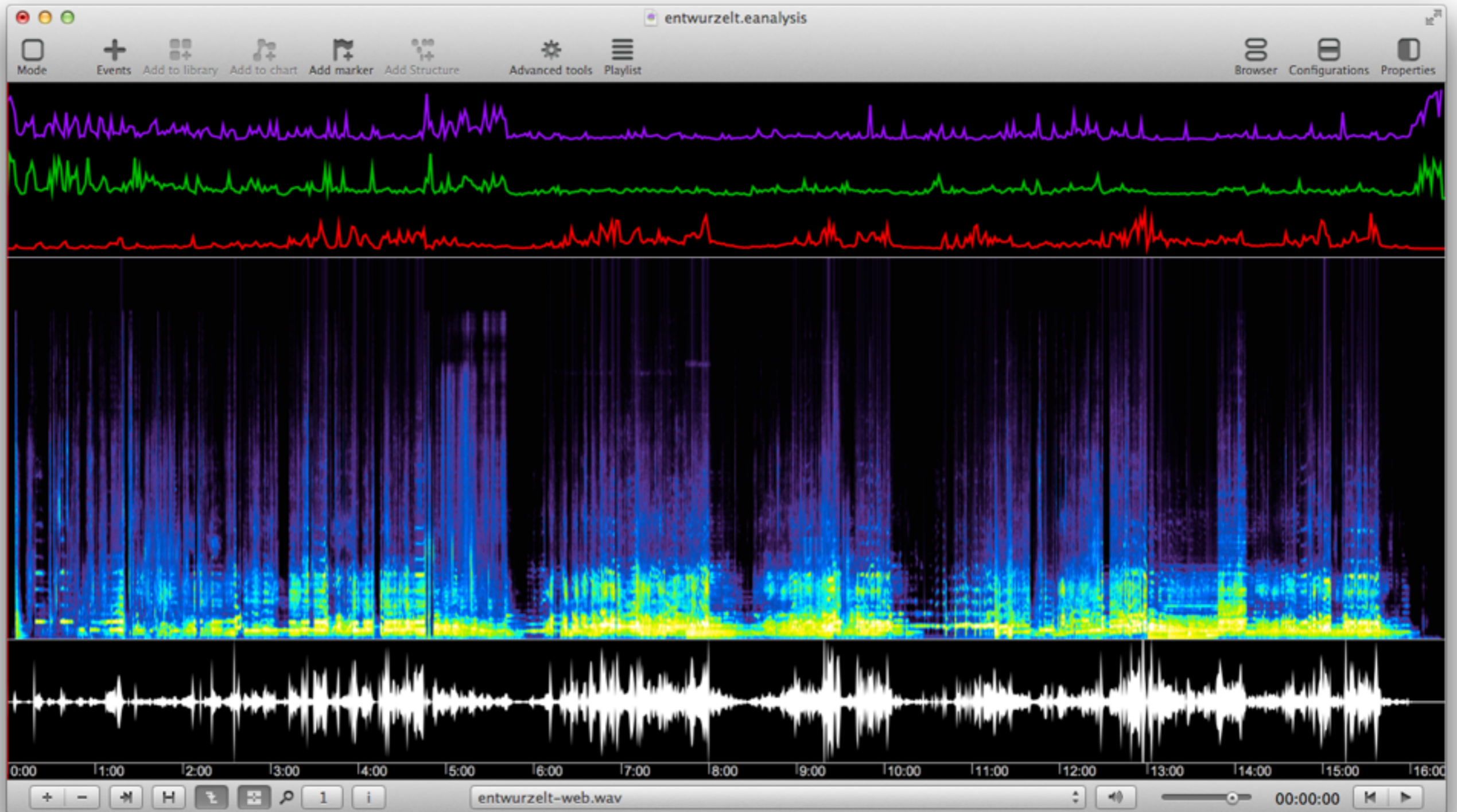
EAnalysis



Données et descripteurs audio

- amplitude RMS et *loudness*
- barycentre spectral (*centroid spectral*) et *spectral rolloff*
- MFCCs (*mel-frequency cepstral coefficients*)
- variance spectrale
- déviation spectrale (*standard spectral deviation*)
- inharmonicité, *spectral flatness*

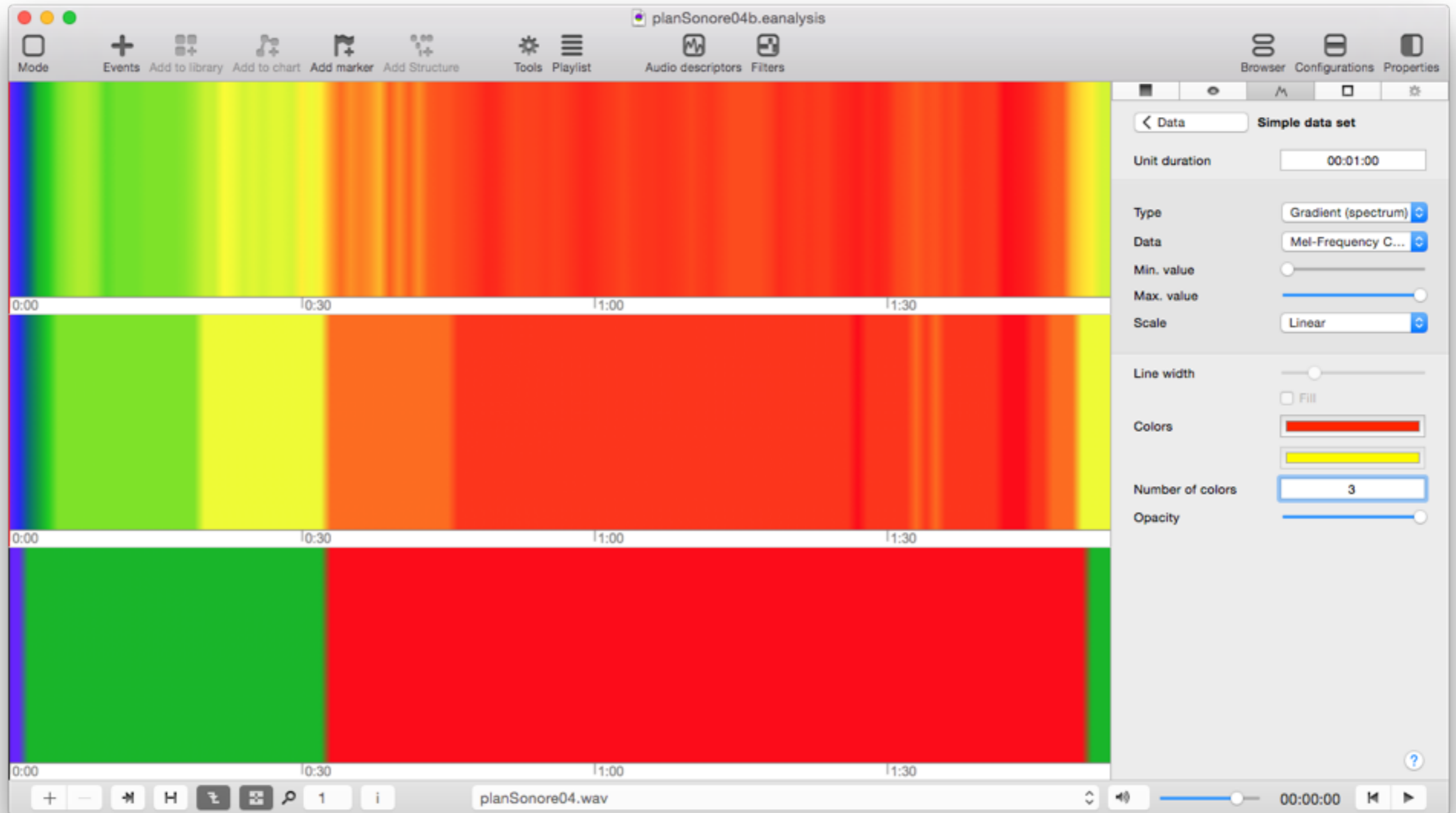
Représentations



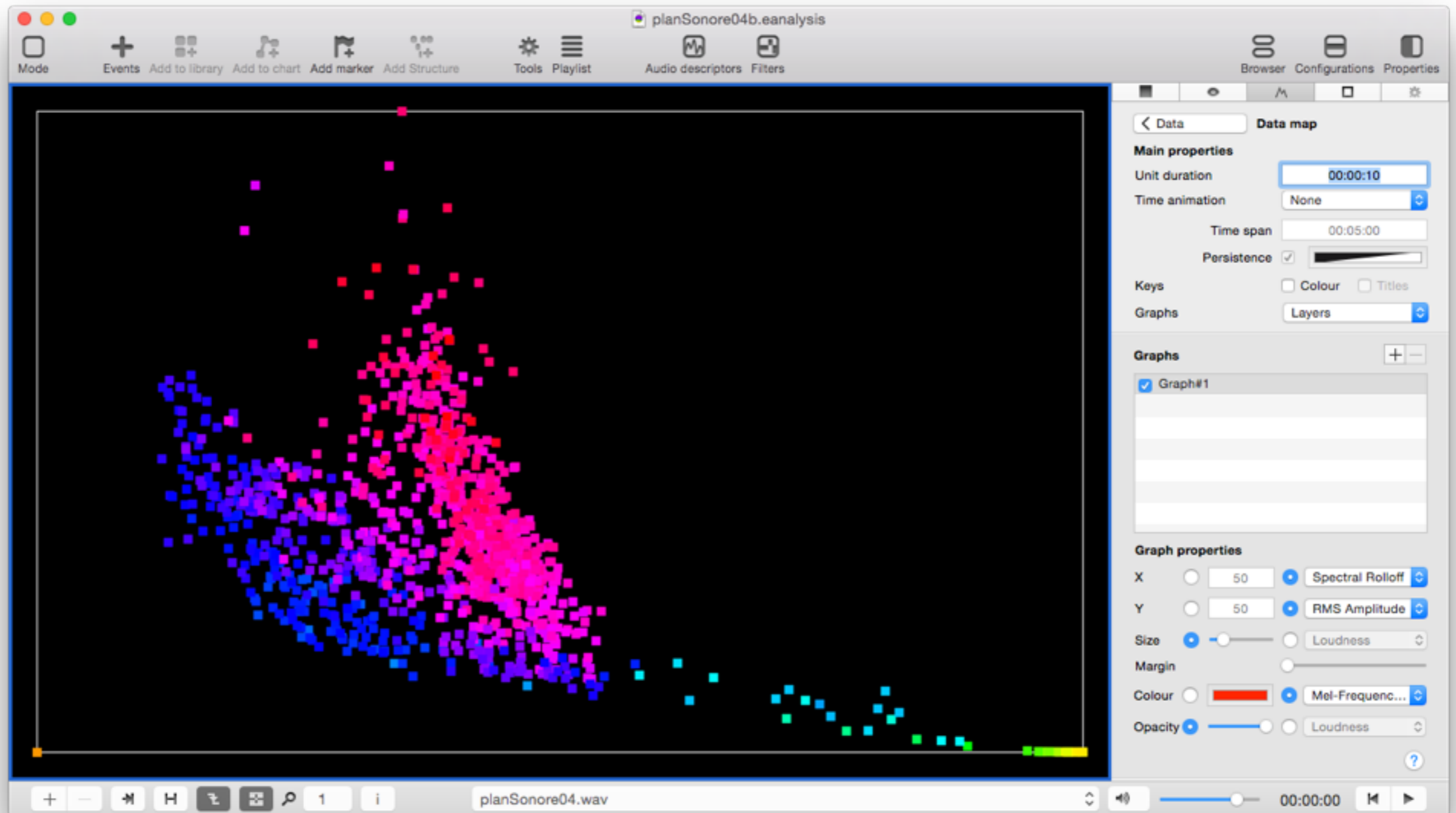
Entwurzelt d'Hans Tutschku (2012)
barycentre, amplitude, inharmonicité

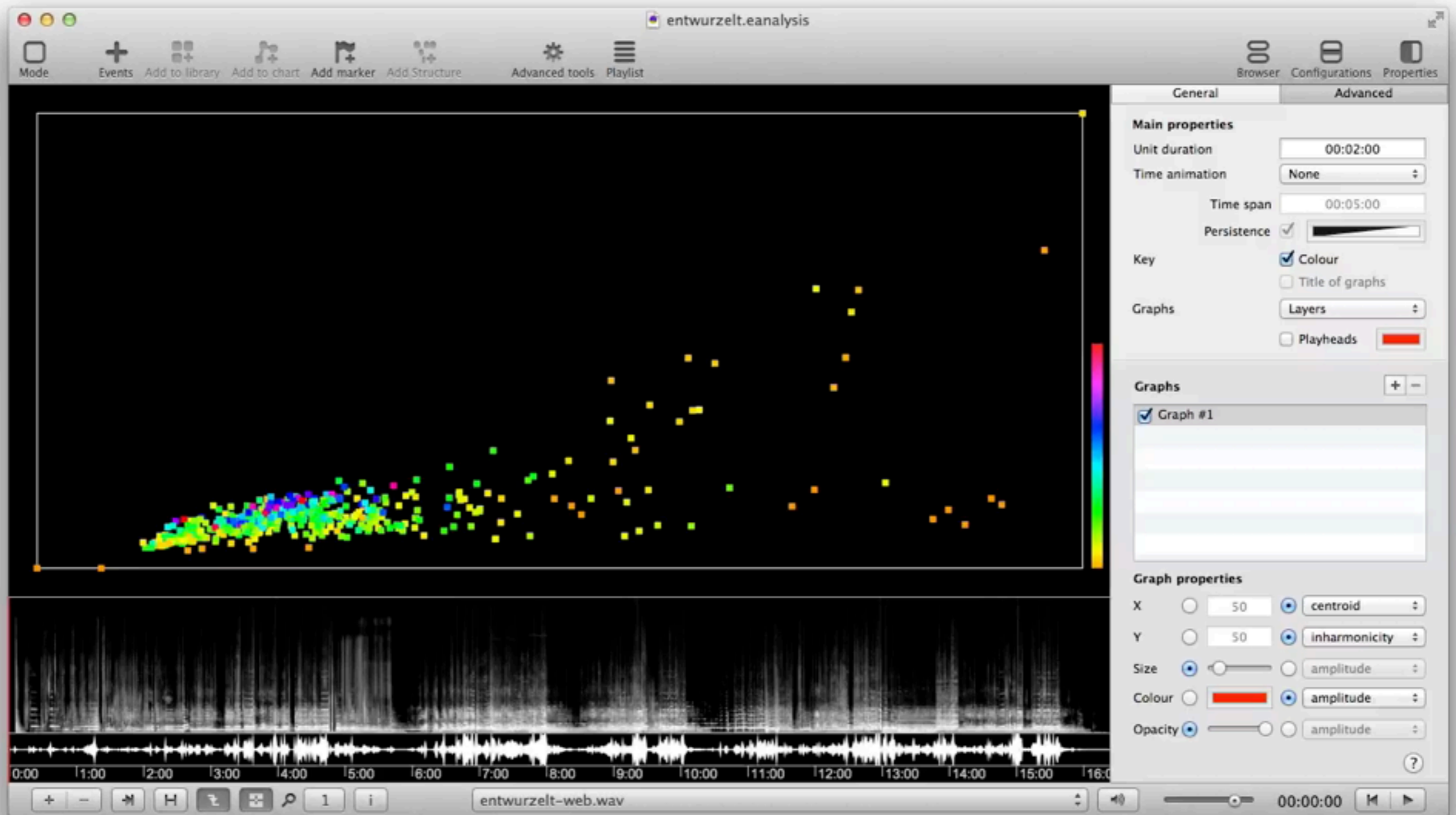
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Graphique en dégradé



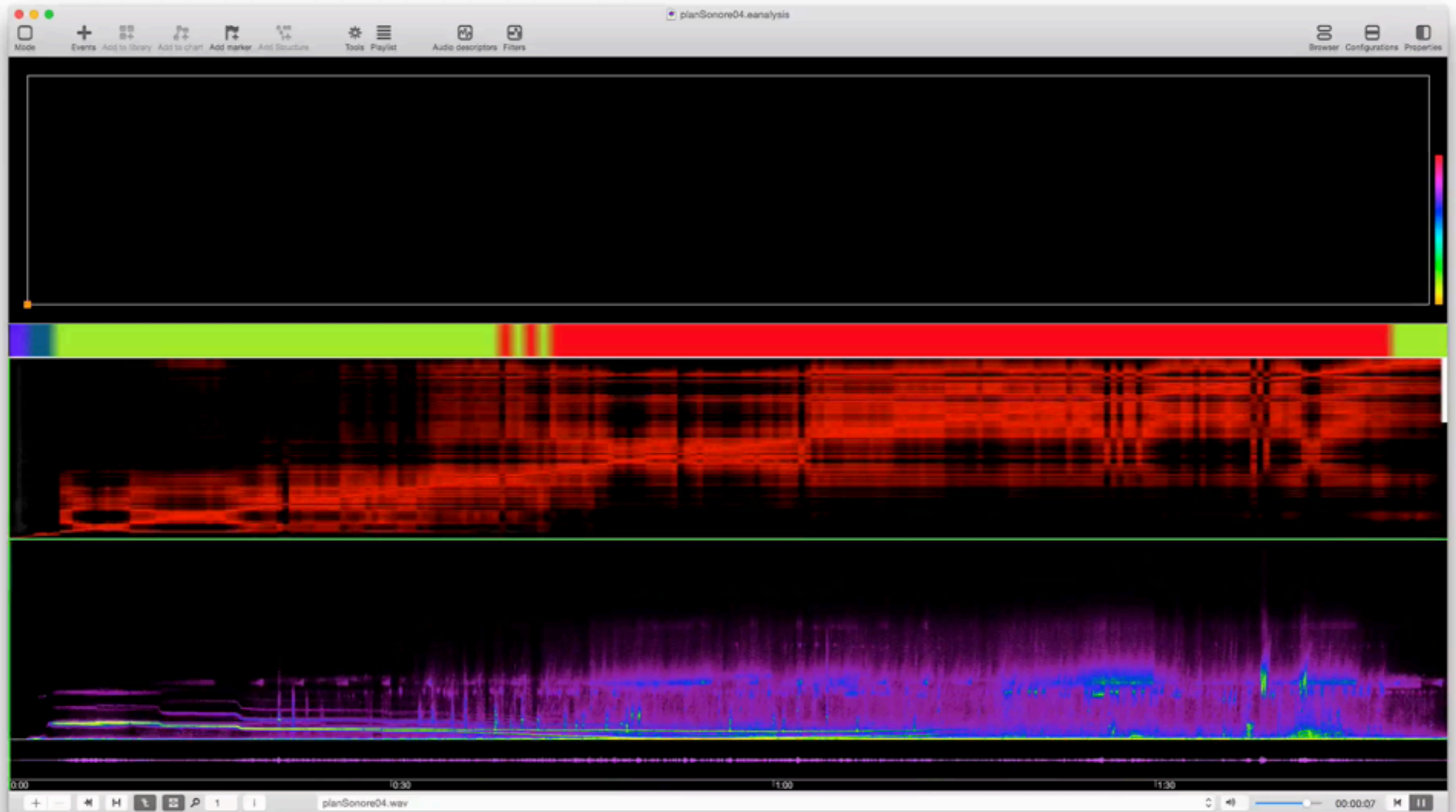
Graphique en nuage de points





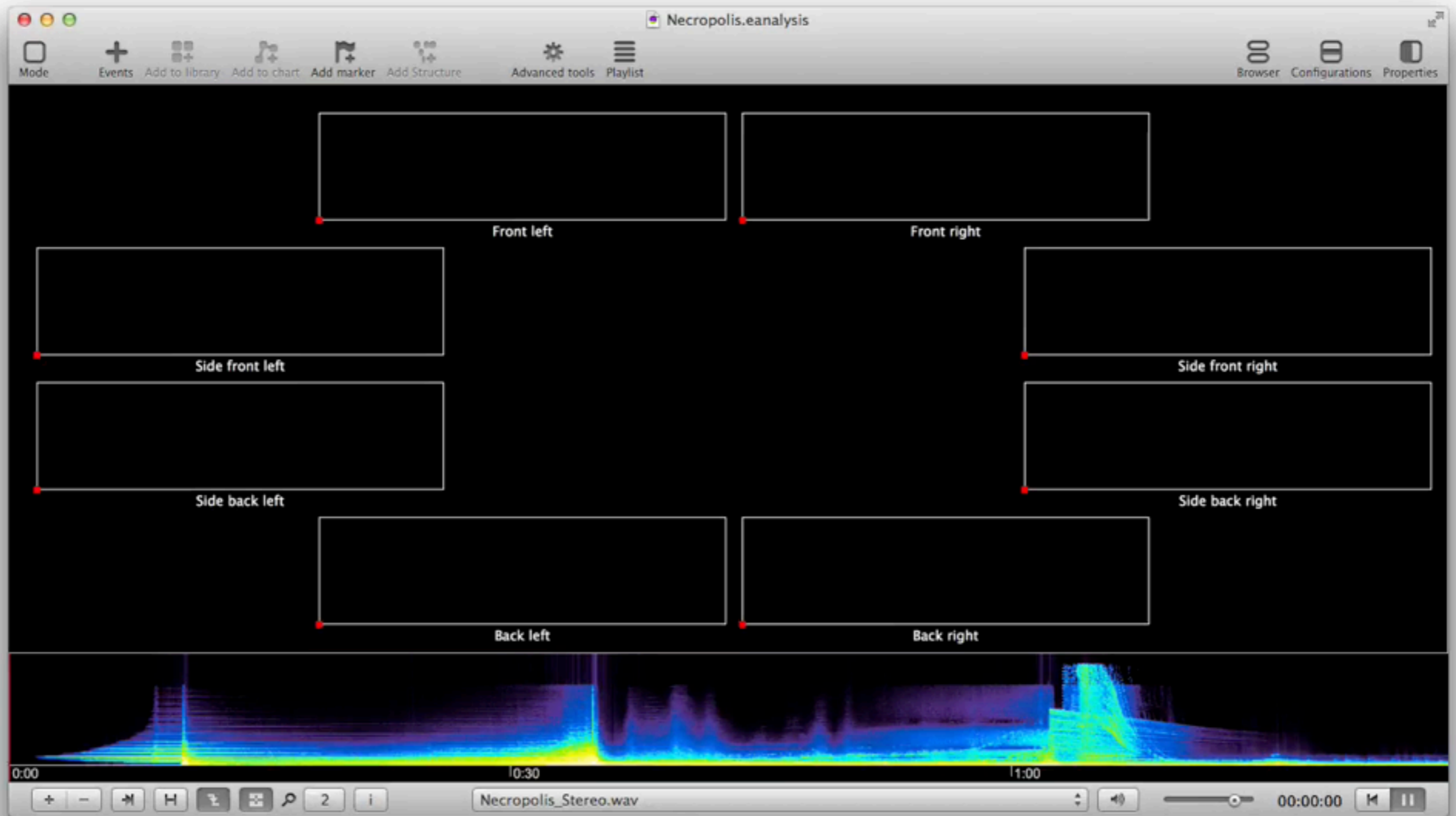
Entwurzelt d'Hans Tutschku (2012)
 barycentre spectral, amplitude RMS, inharmonicité

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Son Vitesse-Lumière de François Bayle (1980)
spectral rolloff, amplitude RMS, MFCCs

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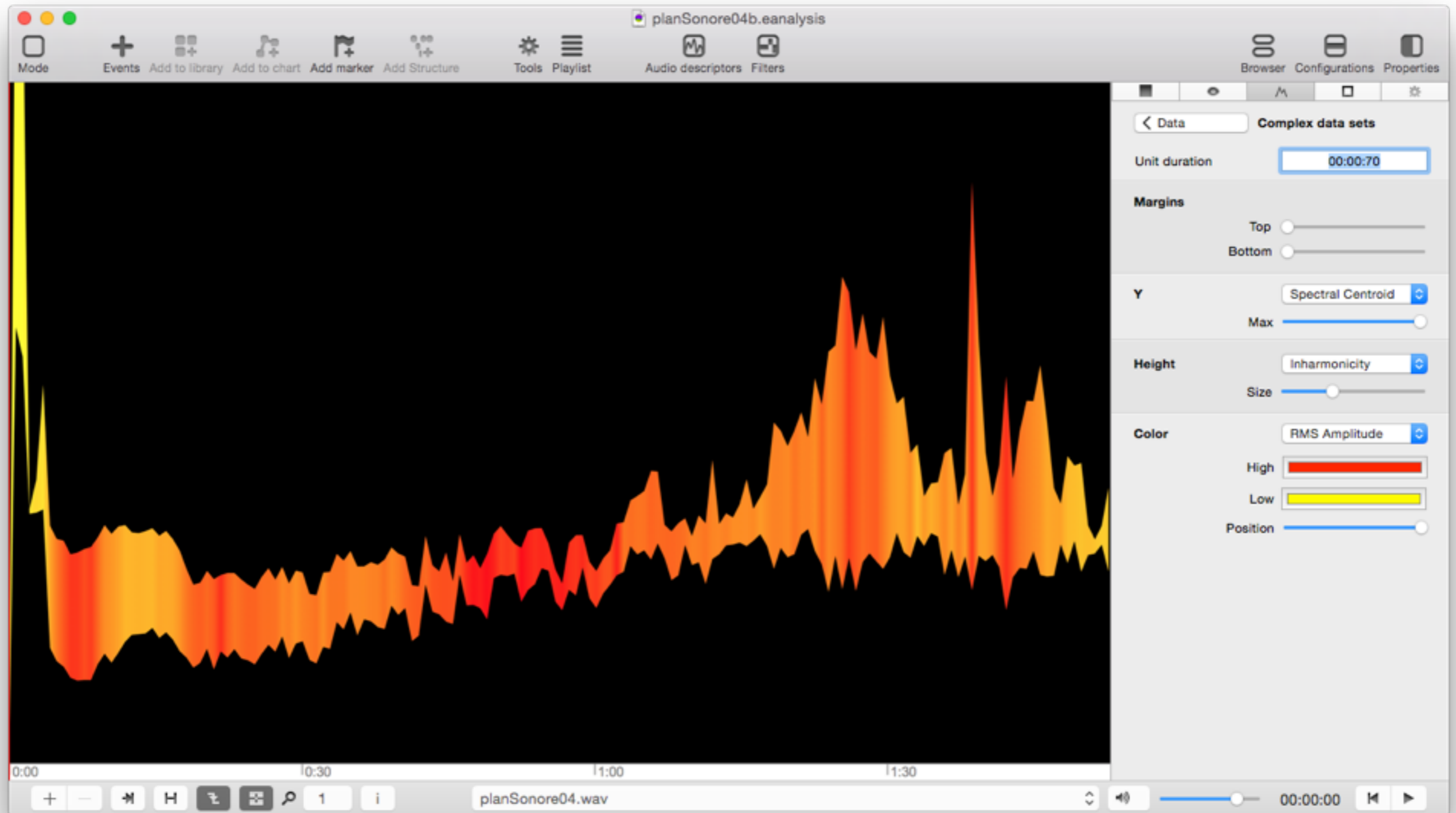


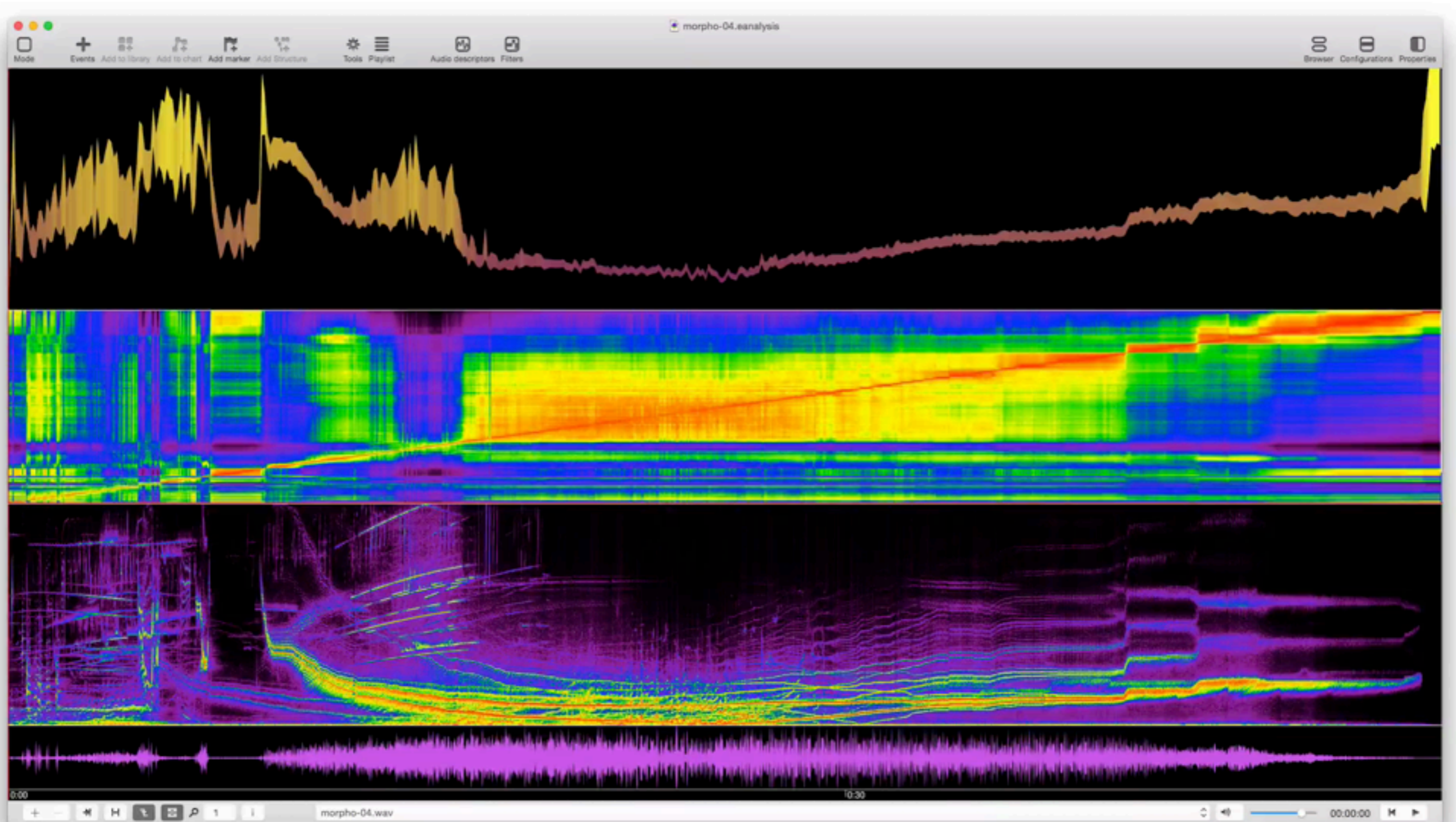
Necropolis-City of the Dead d'Åke Parmerud (2011)

barycentre spectral, amplitude RMS avec un empan de 15 secondes

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Courbe BStD (Brightness Standard Deviation) (Malt & Jourdan, 2015)





Son Vitesse-Lumière de François Bayle (1980)
barycentre spectral, variance spectrale, amplitude RMS

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Corrélation hiérarchique

(1,2,3)			(3,2,0)		
(1,2)	(3,3)	(2,0)			
1	2	3	3	2	0

(1,3,5)			(6,0,6)		
(1,3)	(5,6)	(0,6)			
1	3	5	6	0	6

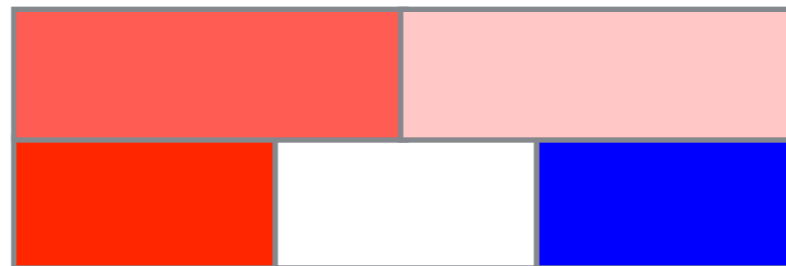
0,9897		0,3905	
1	0	-1	

Pearson Product Moment Correlation (PPMC)

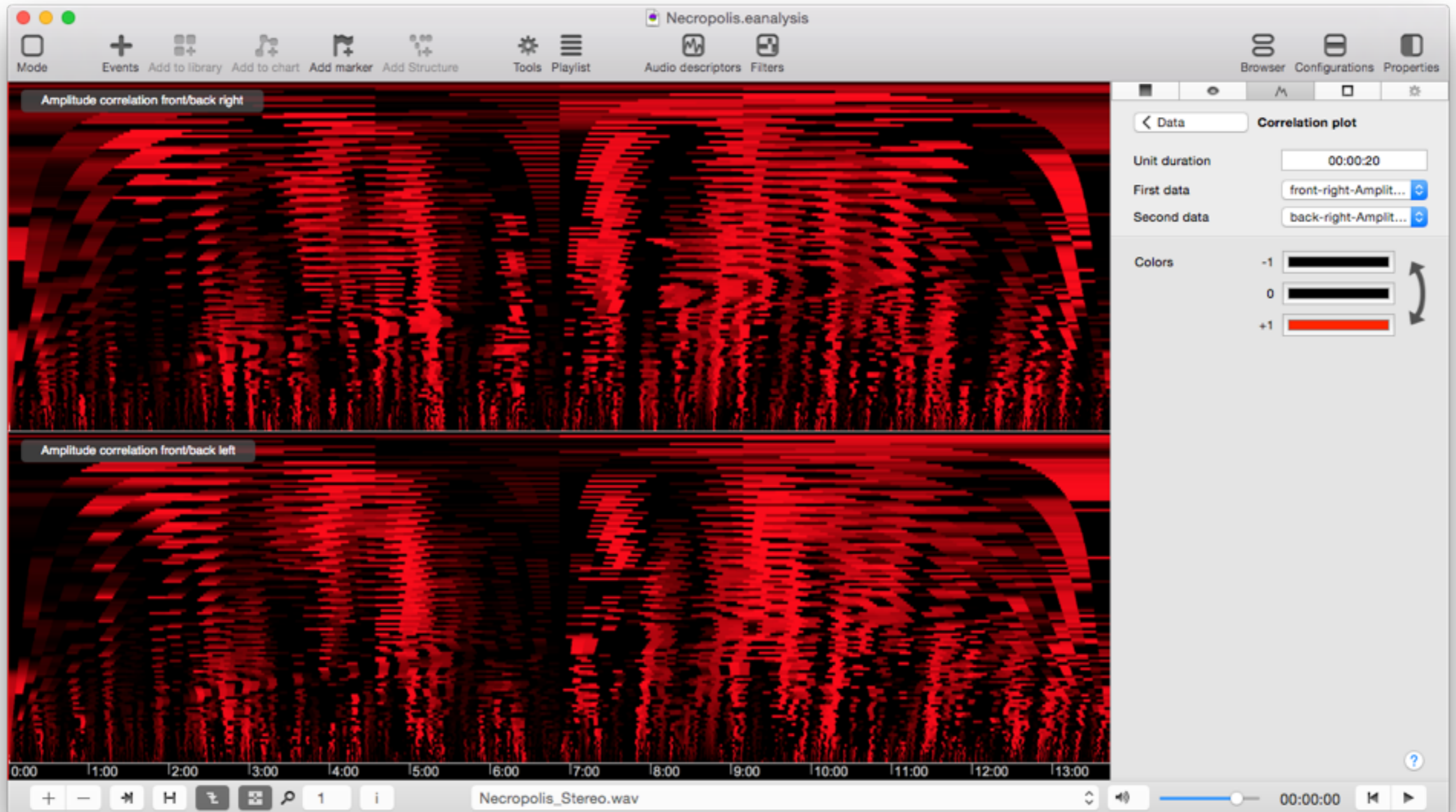
Corrélation hiérarchique

(1,2,3)			(3,2,0)		
(1,2)	(3,3)	(2,0)			
1	2	3	3	2	0

(1,3,5)			(6,0,6)		
(1,3)	(5,6)	(0,6)			
1	3	5	6	0	6



Pearson Product Moment Correlation (PPMC)



Necropolis-City of the Dead d'Åke Parmerud (2011)
Corrélation hiérarchique de l'amplitude droite & gauche
(projet Charm > Mazurka, King's College)

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Matrice de similarité/d'autosimilarité

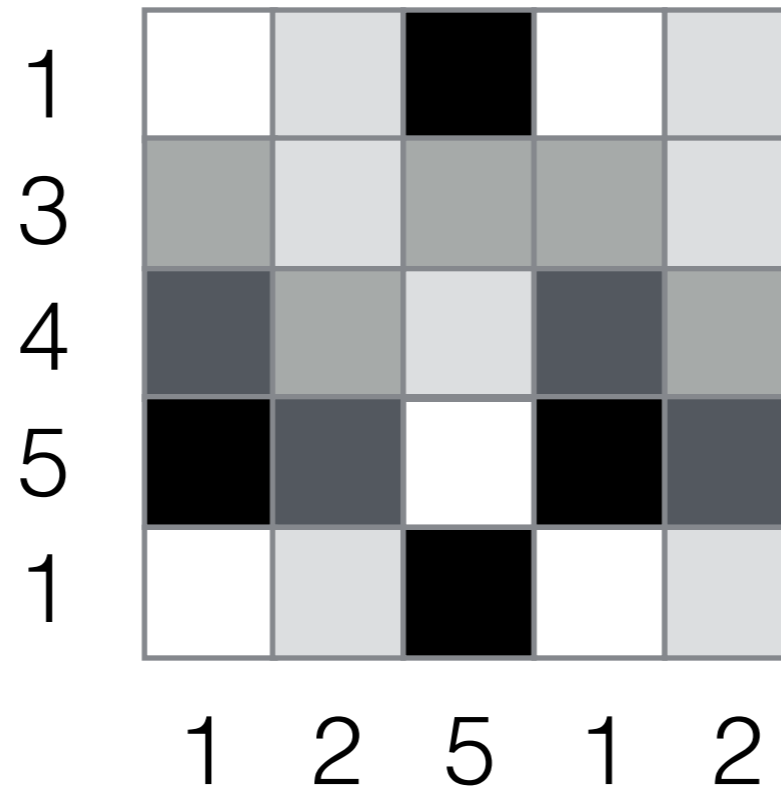
1 3 4 5 1

1 2 5 1 2

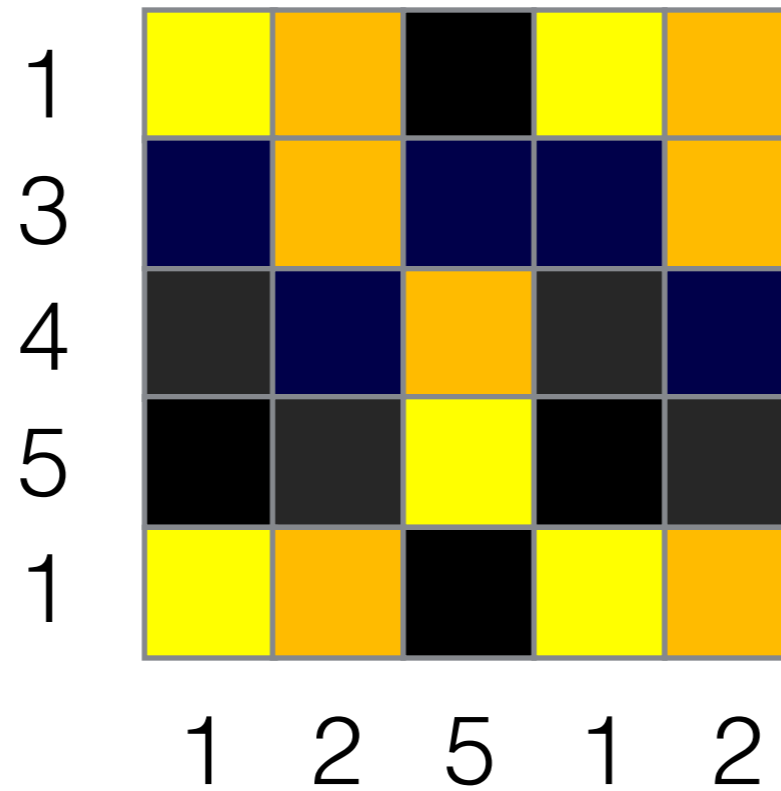
Matrice de similarité/d'autosimilarité

1	0	1	4	0	1
3	2	1	2	2	1
4	3	2	1	3	2
5	4	3	0	4	3
1	0	1	4	0	1
	1	2	5	1	2

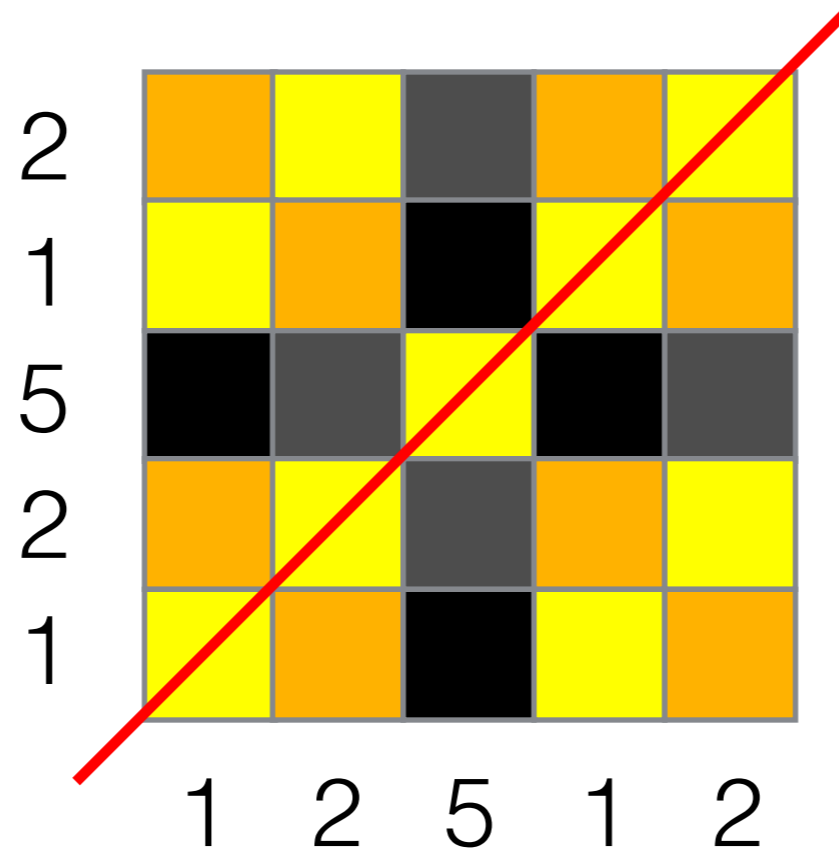
Matrice de similarité/d'autosimilarité

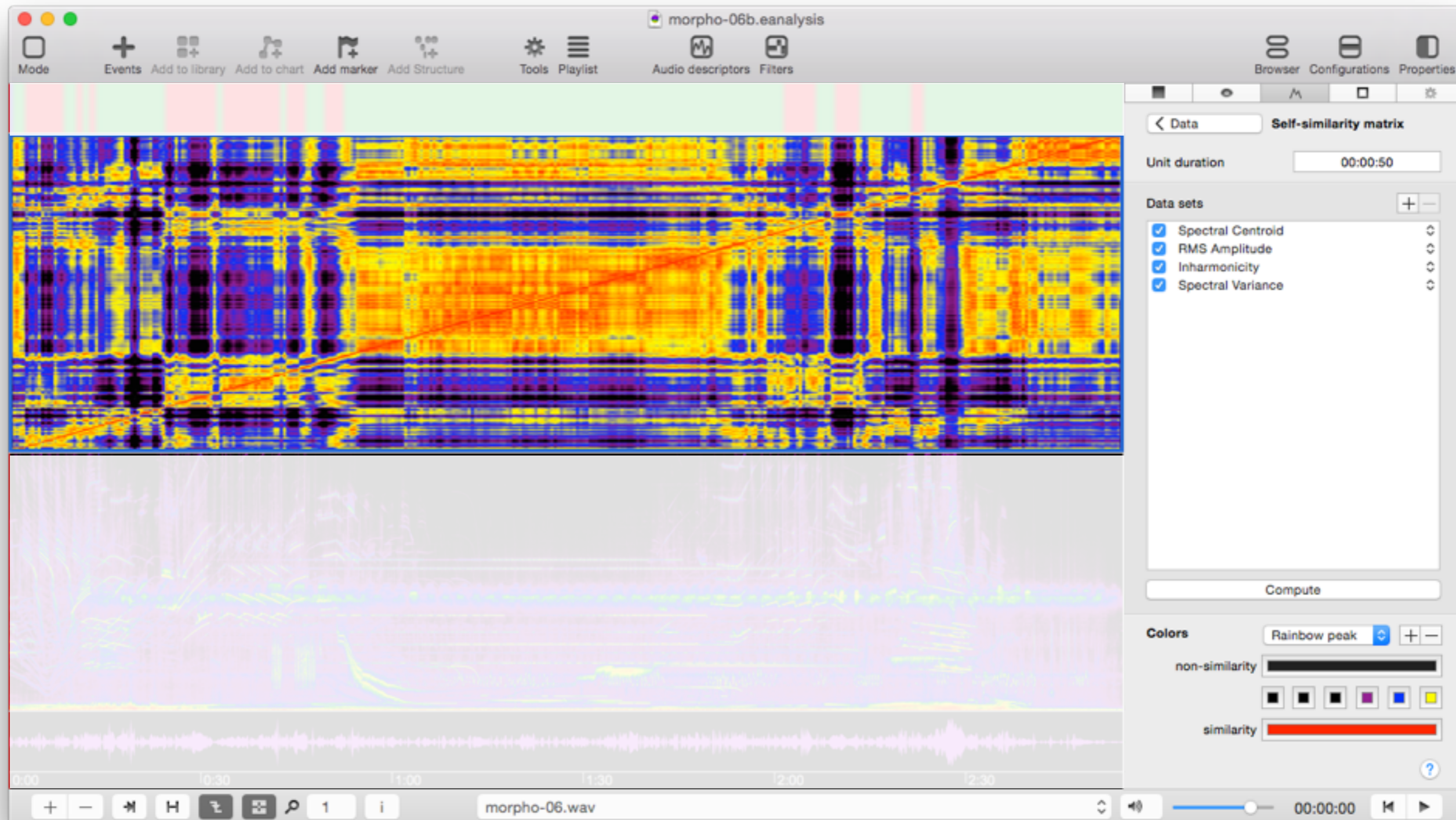


Matrice de similarité/d'autosimilarité



Matrice de similarité/d'autosimilarité





Son Vitesse-Lumière de François Bayle (1980)

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