

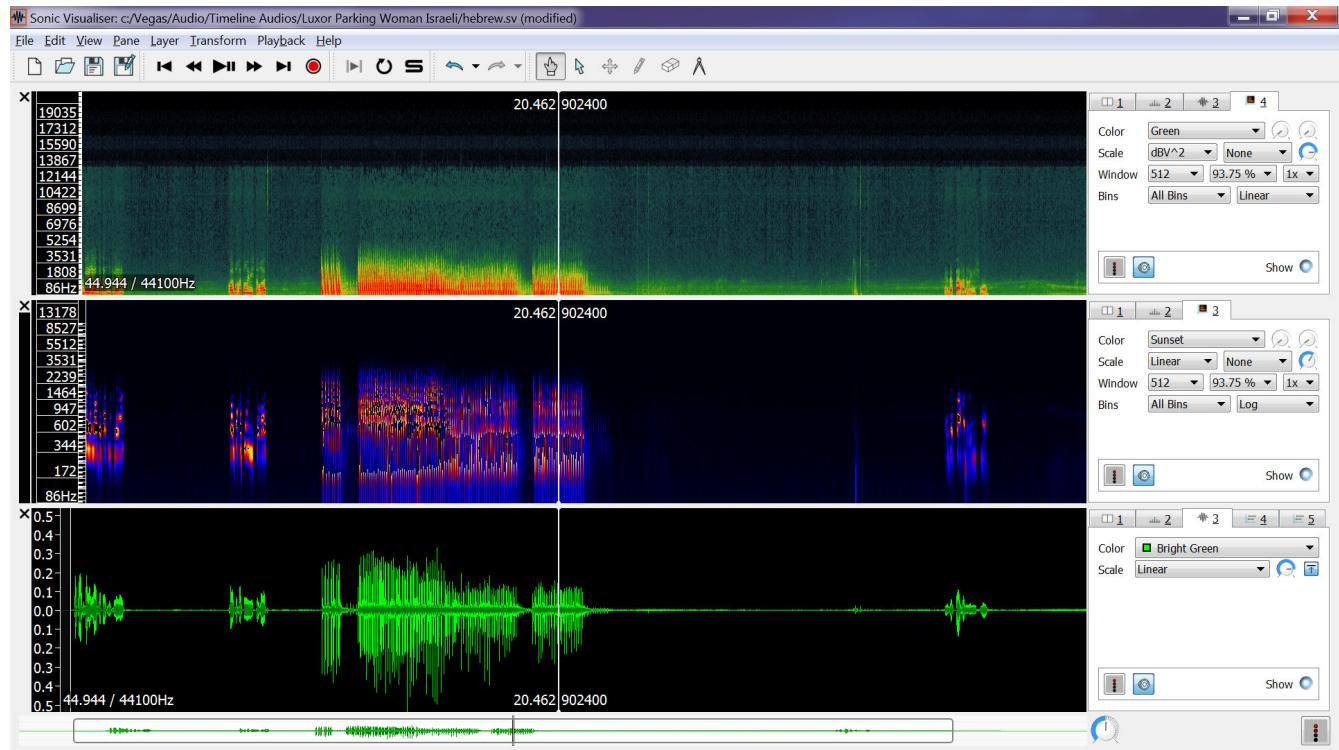
**Sound Samples With Corresponding Spectograms
Taken From Digital Recordings
On
October 1, 2017
Las Vegas, Nevada**

All sounds documented herein are taken from actual recordings made on Oct. 1, 2017. These are presented as a basis for understanding a “frequency domain” view on these audio files. This document will expand over time.

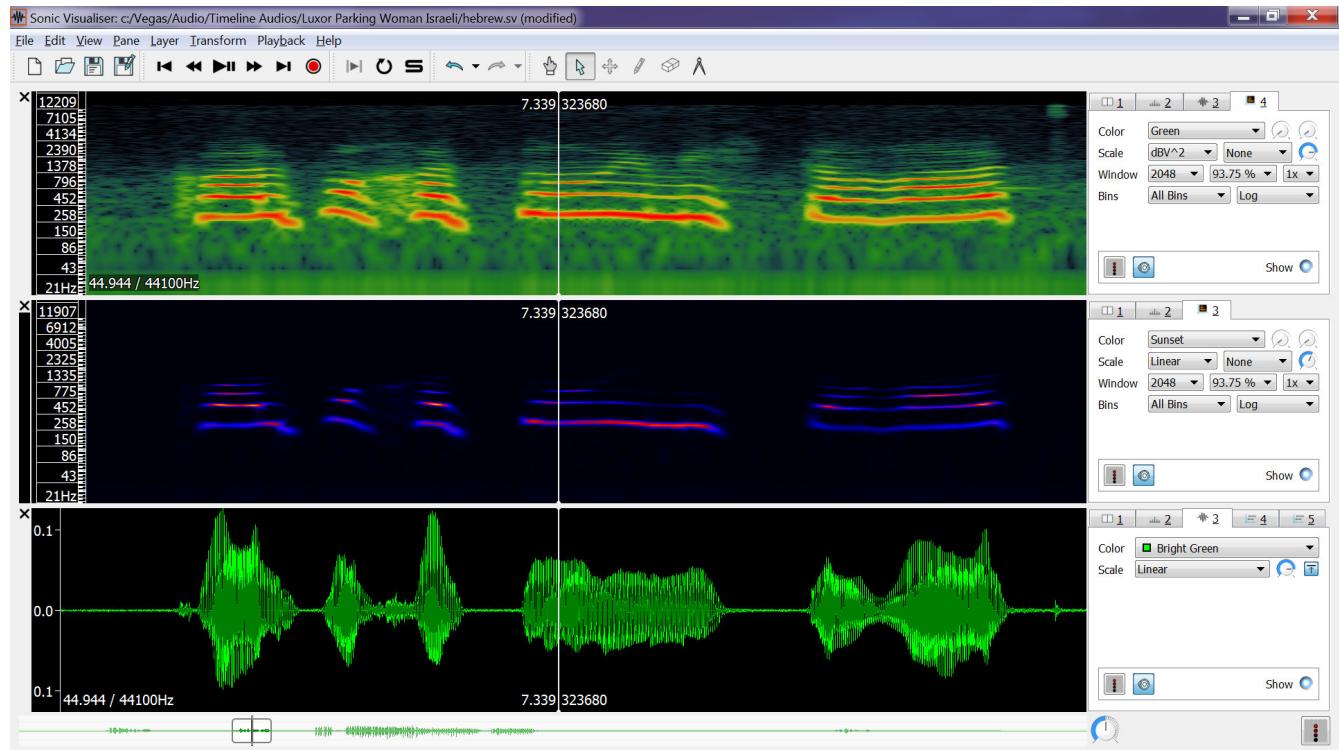
To simplify the confusion, most spectrograms are single channel only, usually channel 1.

Most spectrograms include the settings panels (right side) to enable viewers to reproduce the images presented.

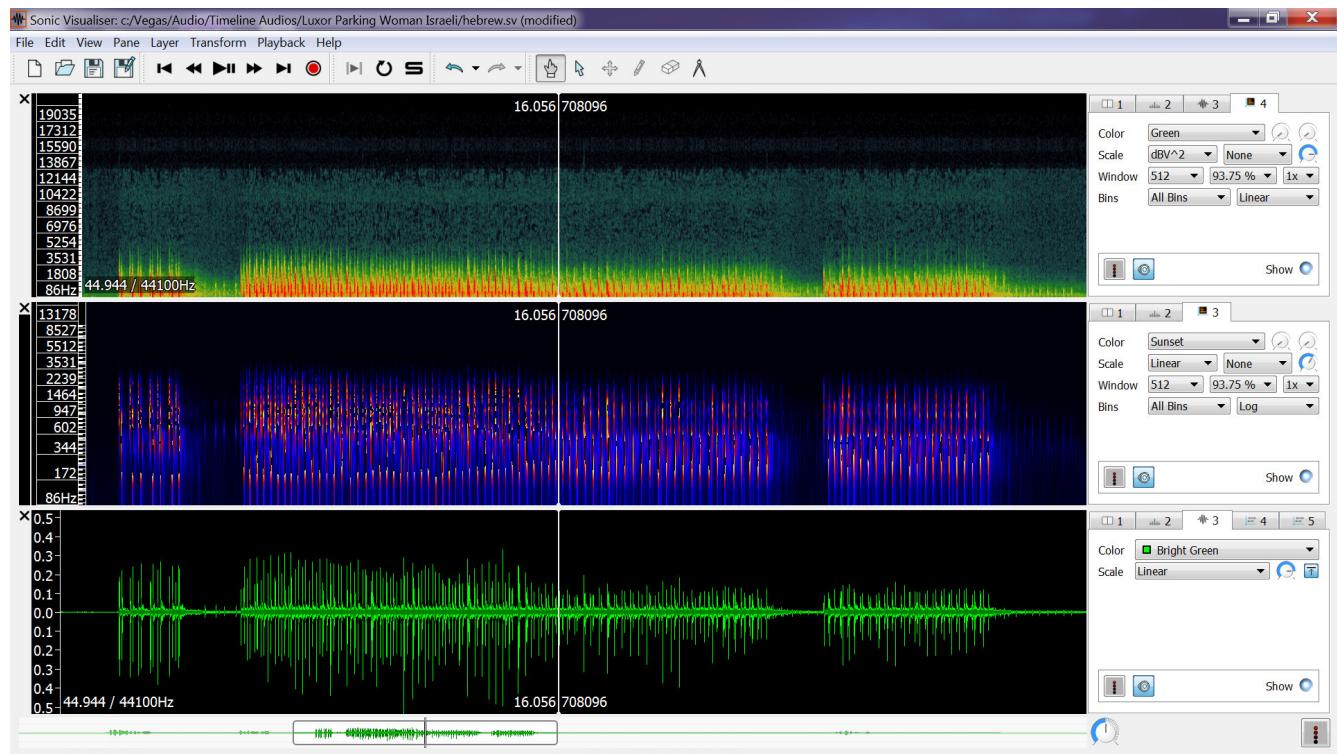
Luxor Parking Lot – Hebrew Speaking Lady



Vocal 1

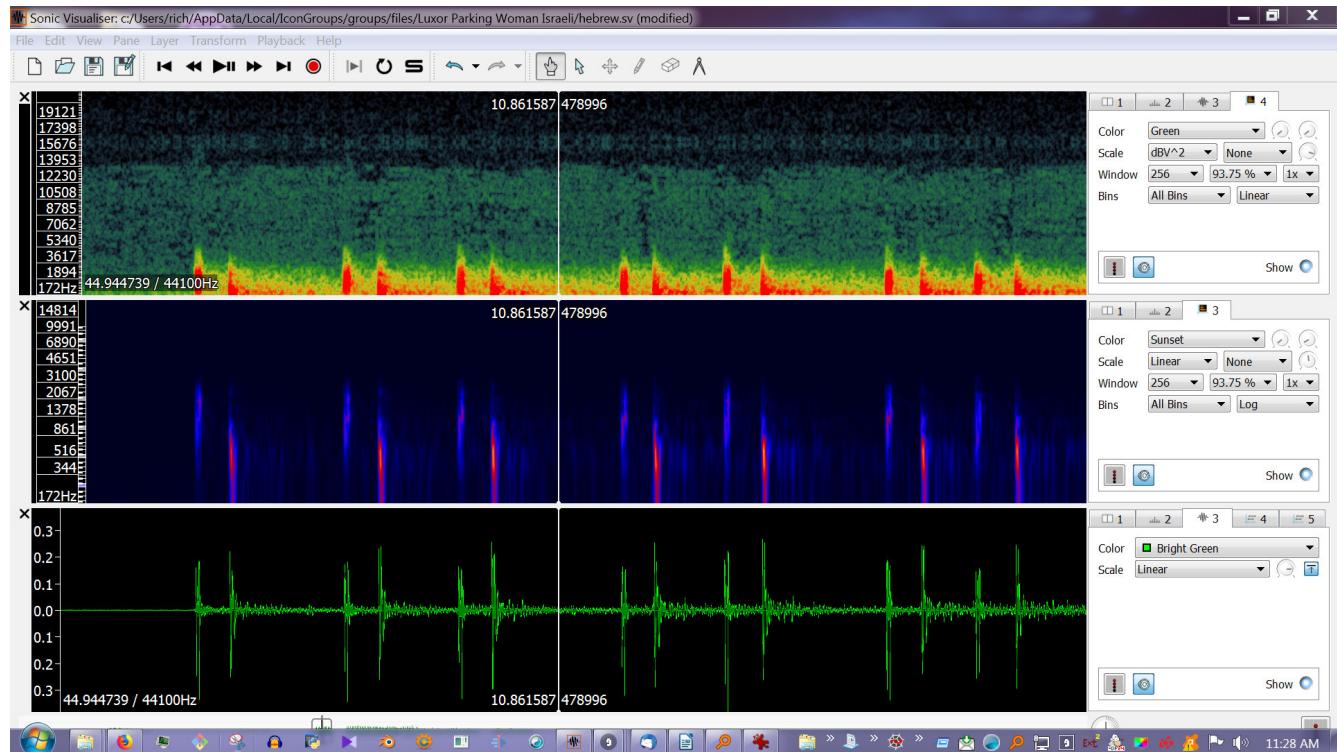


Volley 9 (a,b,c,) Total 101 shots in groups (7,72,22)



- 3 groupings (a,b,c) totaling 101 shots, since largest magazine was 100 must have had one in the chamber. Total duration 11.022s. Gaps between groupings are 0.7 sec
- (a) 7 (b) 72 (c) 22
- muzzle and sonic well separated
- signal to noise ratio is superb
- “lag” is relatively small
- energy of muzzle dominates energy of sonic
- two overlapping energy bands
- frequency of centroid for sonic rather low indicating some distance to shooter
- frequency of centroid for muzzle about normal for some distance to shooter
- time waveform well defined, probably one of the clearest signals of all audios
- rpm is 10 per sec plus or minus 2

Volley 9 (a) 7 shots

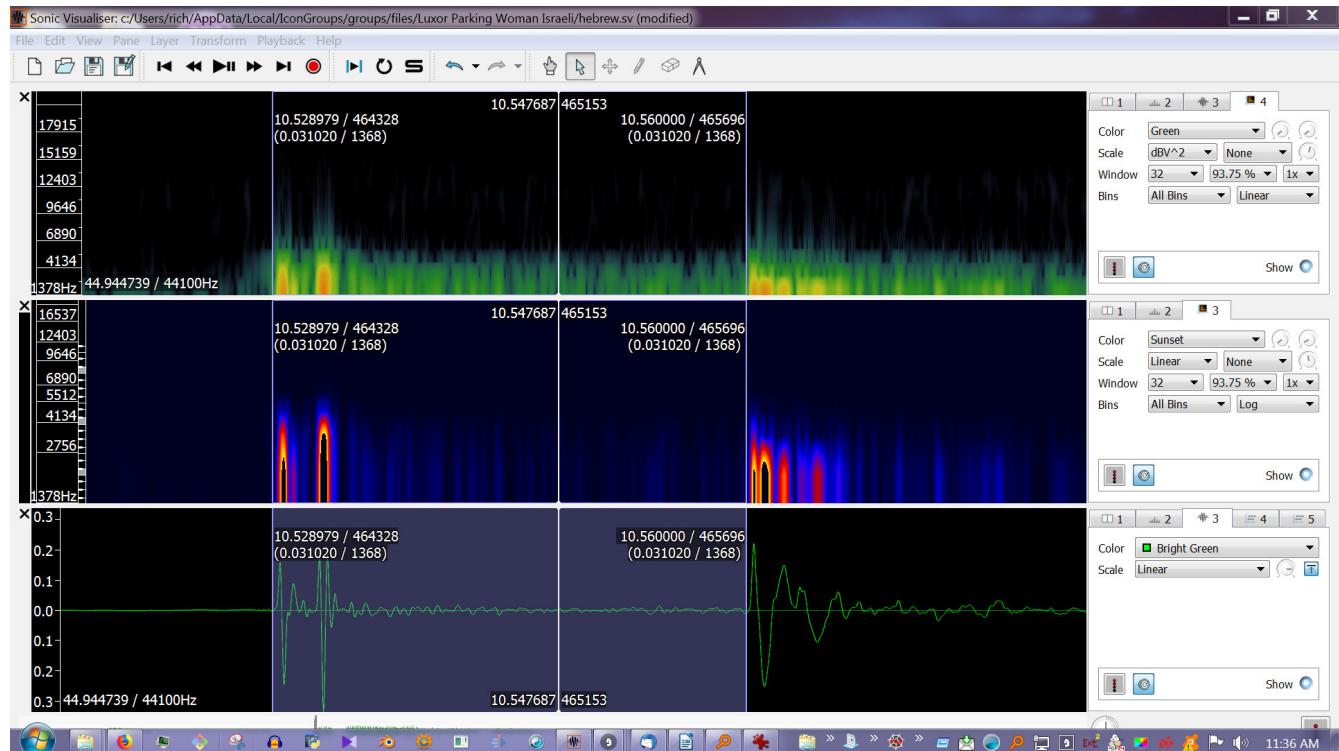


- 7 sonic waves, 7 muzzle blasts
- average “lag” about 30 ms
- 1st shot same as last

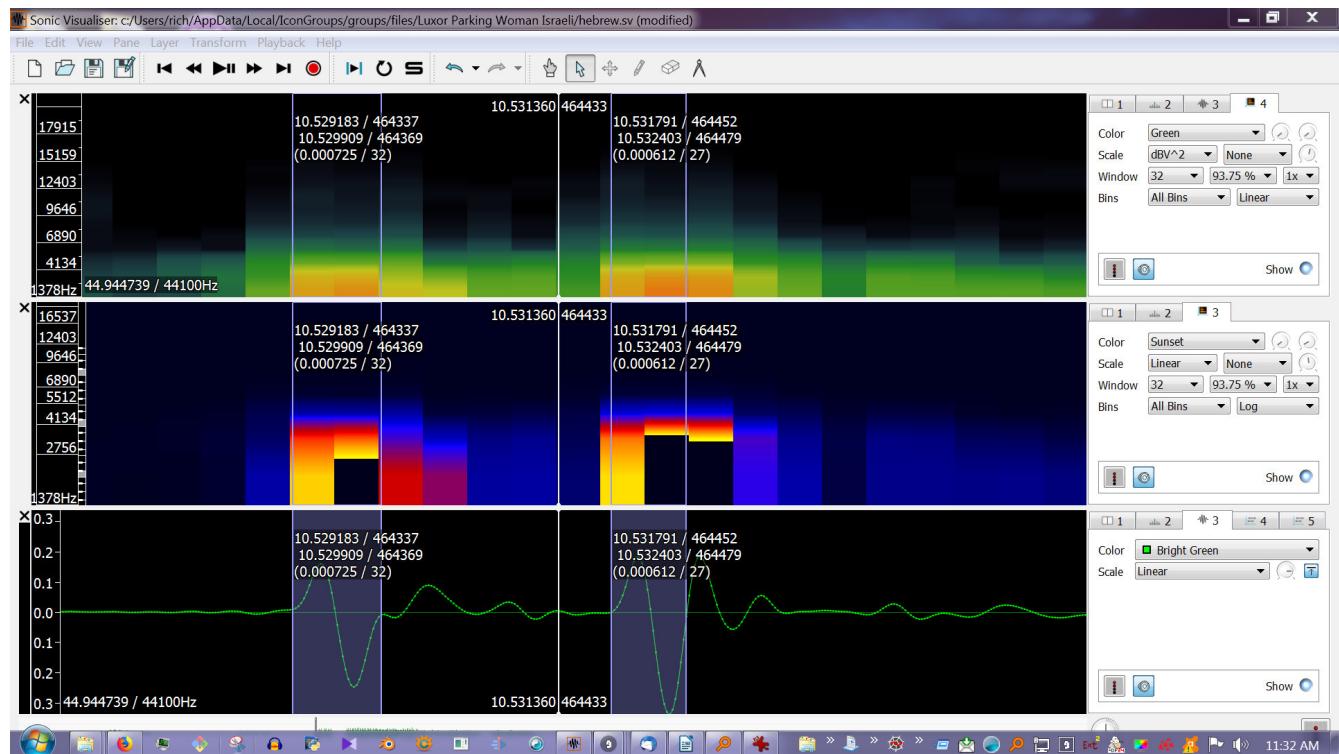
- 72 shots
- lag varies from about 0.21 to 071

Sonic & Muzzle with “lag” indicated

Volley 9a, first wave pair

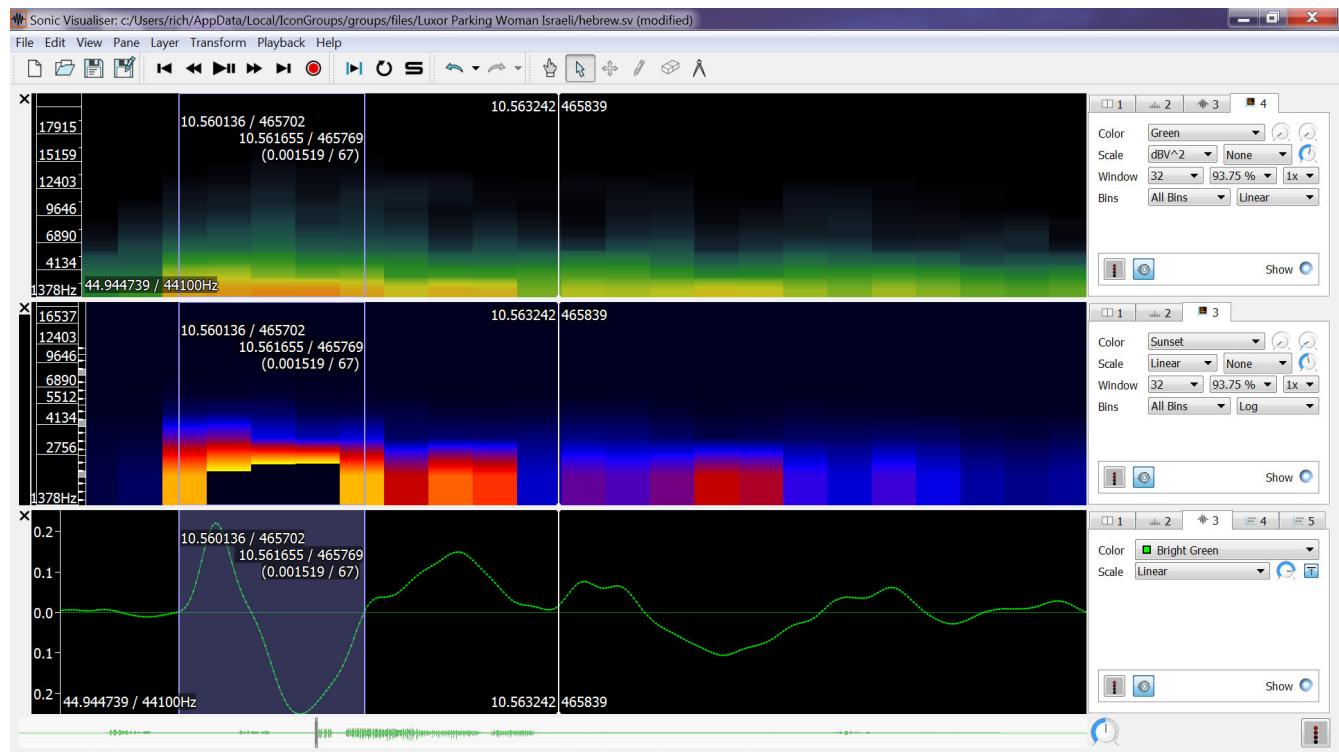


Sonic, 9a, 1st wave



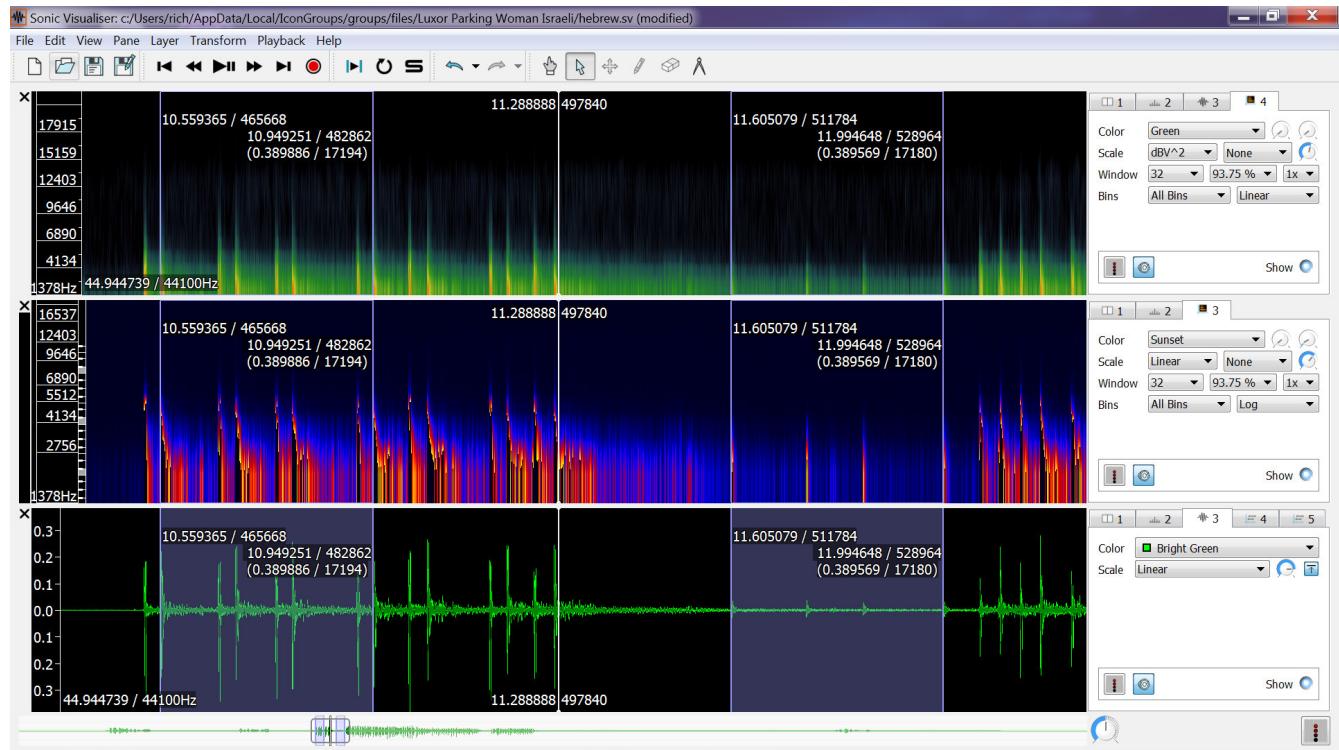
- Sonic Shock Wave
- Double peak
- 0.725 ms N wave length

Muzzle

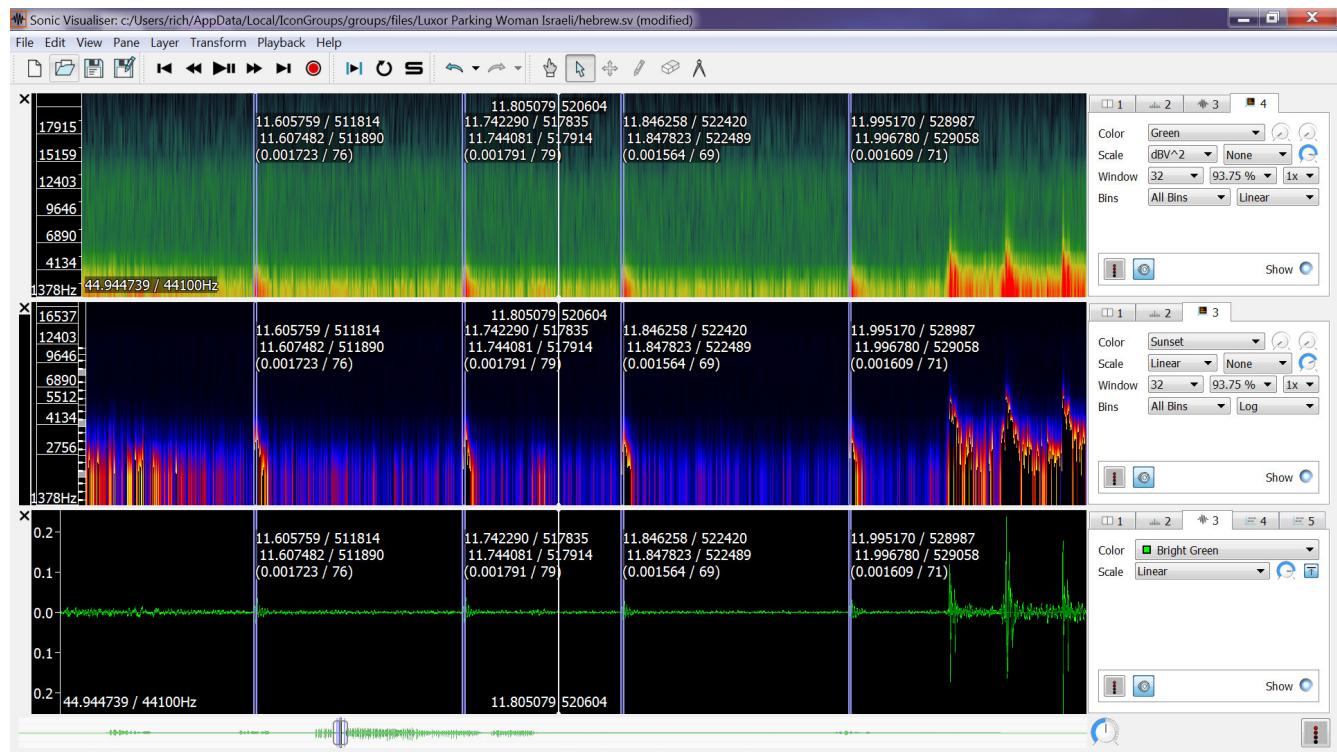


- Muzzle blast
- 1.5 ms N-wave period (2x sonic shock wave period)

Matching reflection(s) period to Muzzle blasts



9a reflection, 4 N waves period measures



- Reflection
- appear 1.047 s after 1st muzzle blast (9a)
- appear 1.049 s after group 9c