More Site Anthropogenic Noise Injections Follow-up

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LHO alog 21180, dcc#G1501189

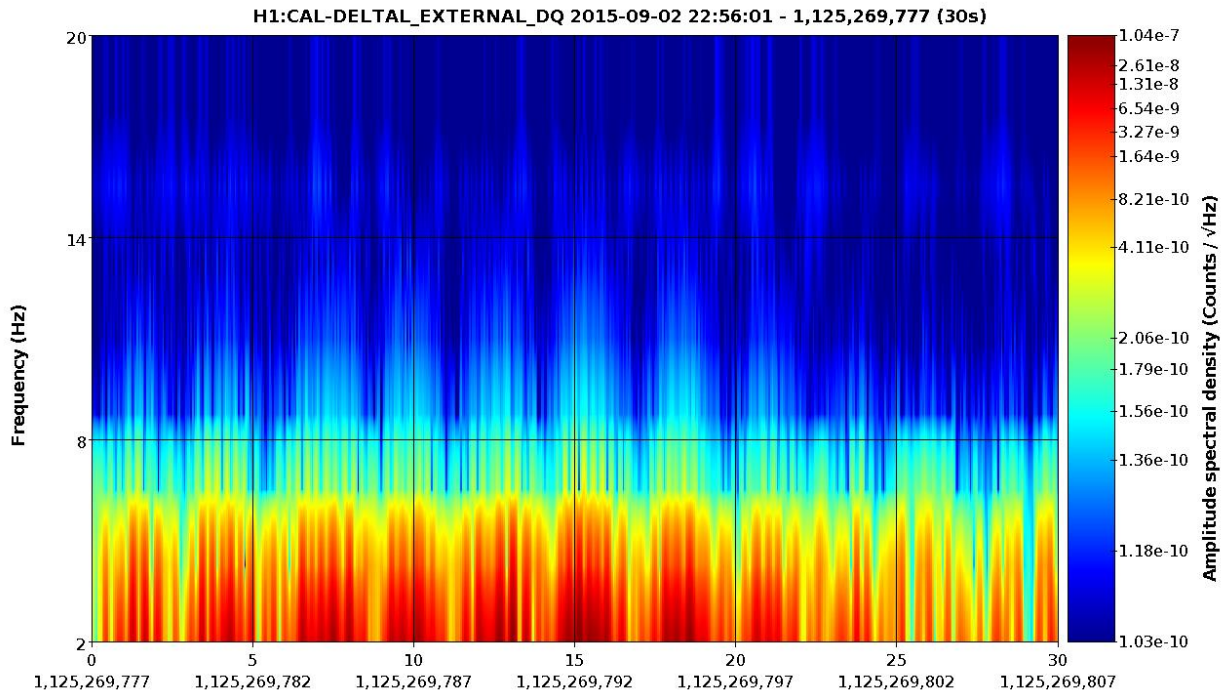## Site Anthropogenic Noise Injections (LHO alog 21180)

| Injection	Time of first injection, UTC	Injection spacing	Total number of injections	Good channels for environmental signal
	Sept. 2			
Truck braking by EY station parking area	22:56:00	5s	6	EY seismometers
	Sept. 3			
OSB shipping roll up door actuation	2:46:00 2:47:00	5s 5s	6 6	vertex seismometer and/or output optics mic
Loud Bach in control room (2s bursts of music)	2:52:00	5s	12	input optics mic
Loud Underworld in control room (bass heavy)	2:55:00	5s	12	input optics mic
Single bounces on exercise/seating ball in control room	2:57:00	5s	12	HAM2 seismometer, vertex seismometer
Dropping large super ball from about 5 feet onto control room floor	2:59:00	5s	12	H1:PEM-CS_ACC_LVEAFLOOR_HAM1_Z
5 people jumping in synch in control room	3:01:00	5s	6	HAM2 seismometer, vertex seismometer

Truck braking by EY parking area

**H1:PEM-EY_SEIS_VEA_FLOOR_X_DQ 2015-09-02 22:56:01 - 1,125,269,777 (30s)**
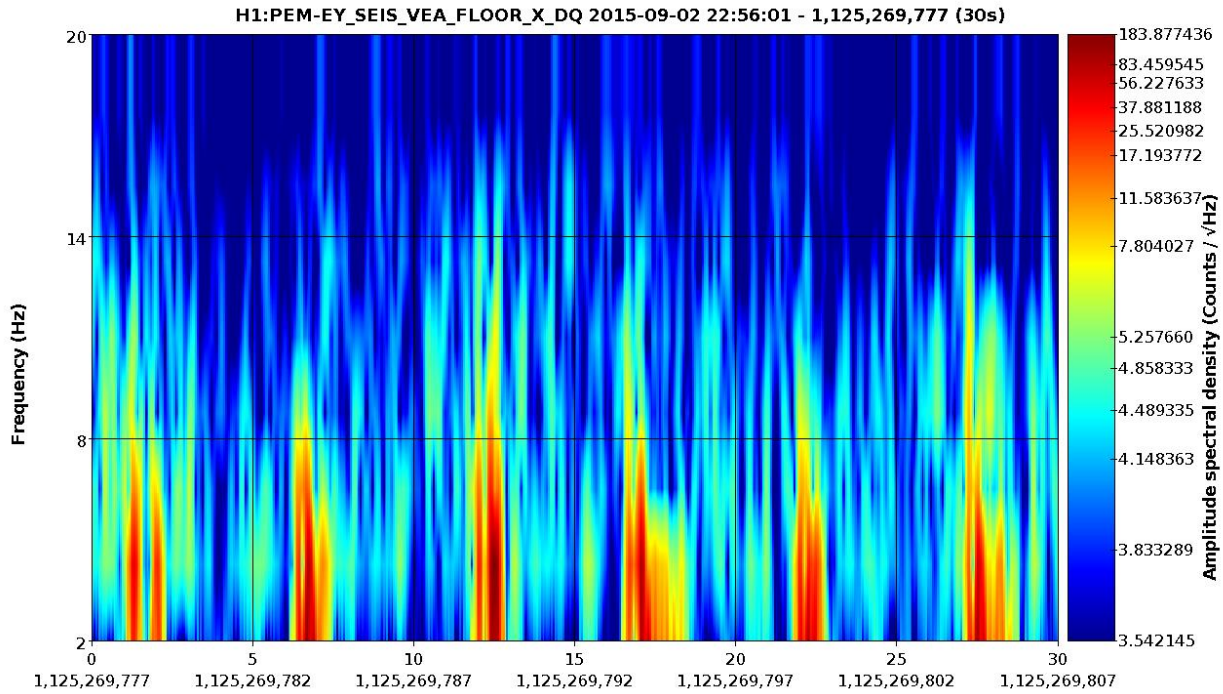
Fs=256Hz, sec/fft = 0.50, overlap = 0.90, fft length=128, #-FFT = 581/1, bw = 2, in samples = 8K, low = 0.20

H1:CAL-DELTAL_EXTERNAL_DQ 2015-09-02 22:56:01 - 1,125,269,777 (30s)

Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 590/1, bw = 2, in samples = 492K, low = 0.20

OSB shipping roll up door actuation (up)
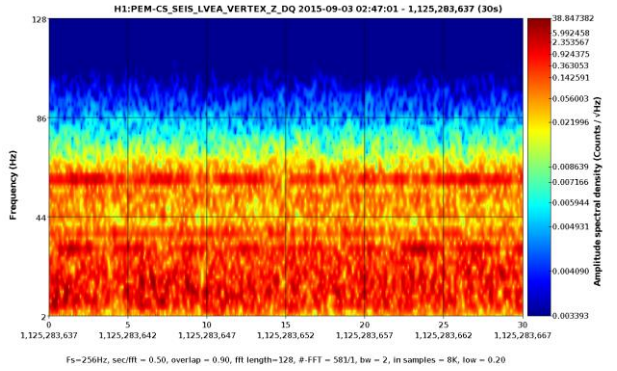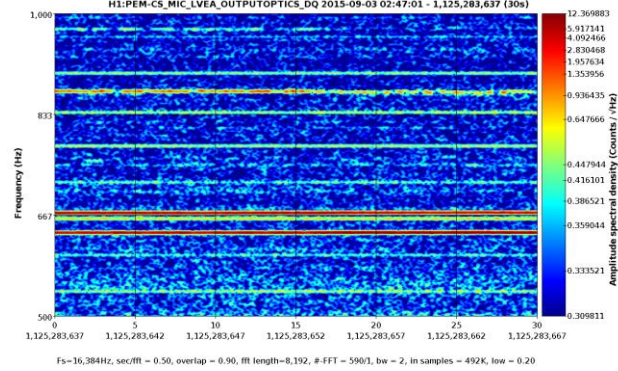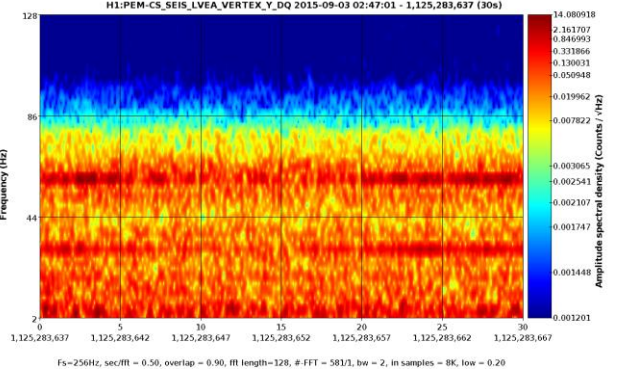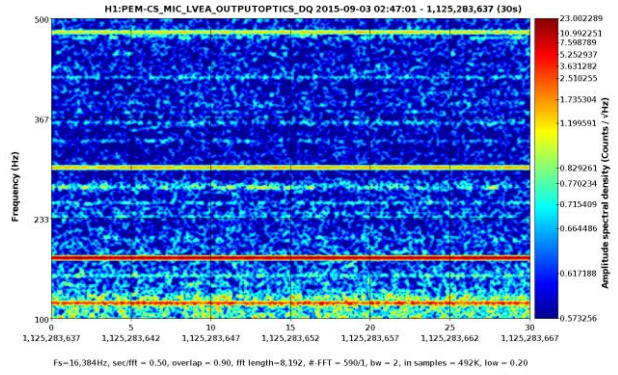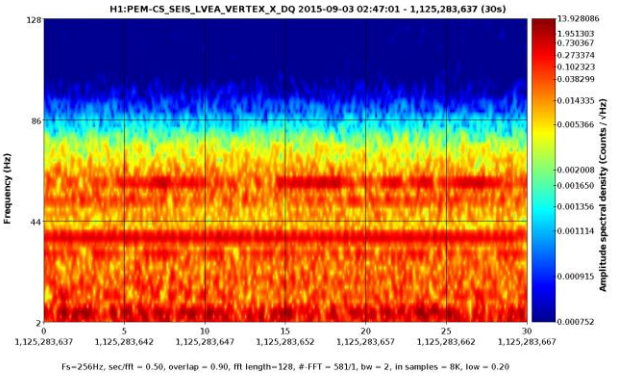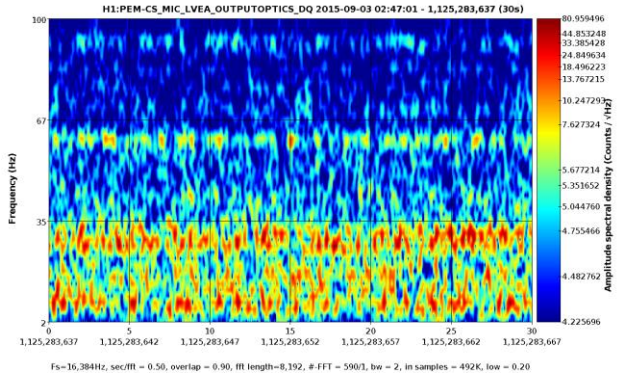
Not visible in any of the microphones or vertex seismometer.
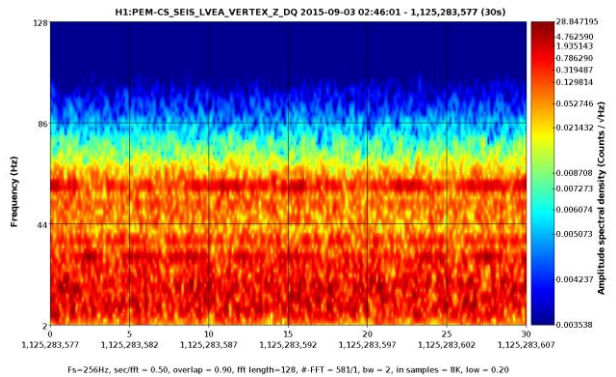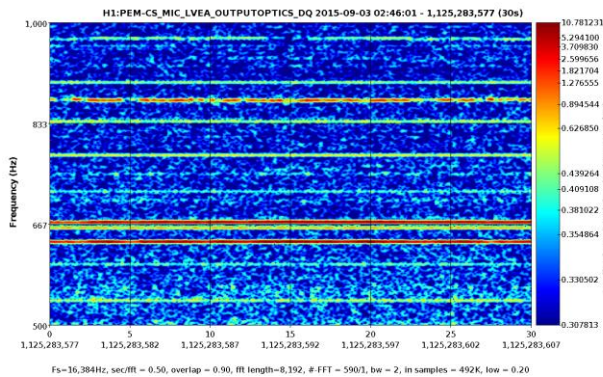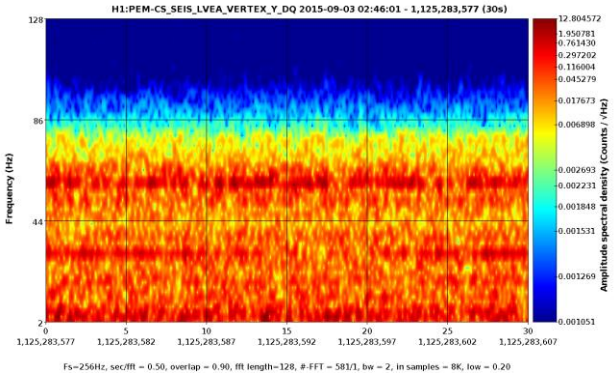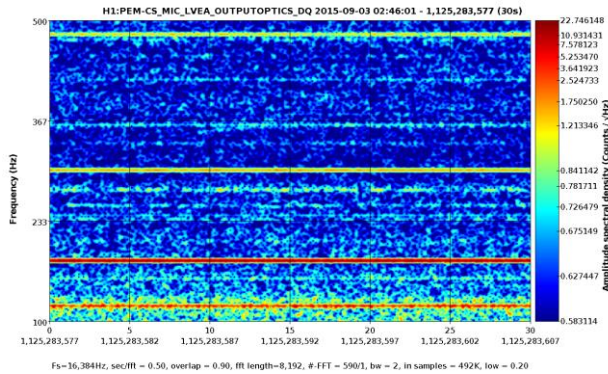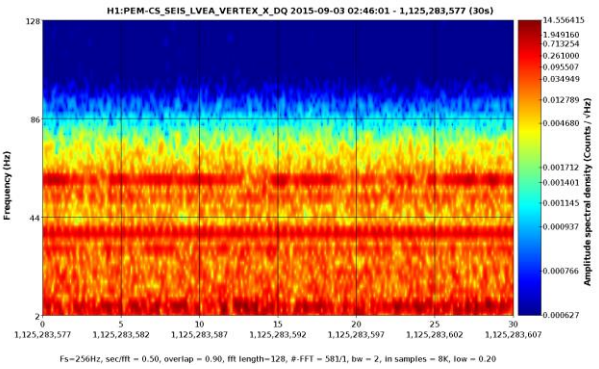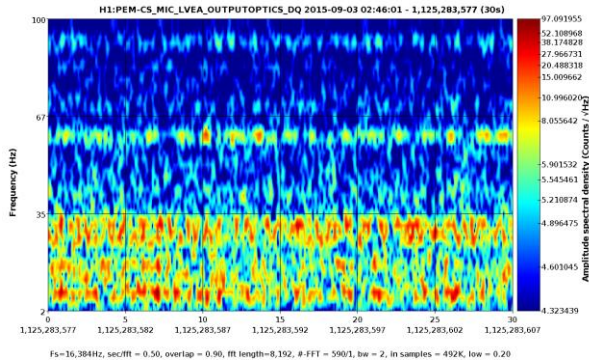
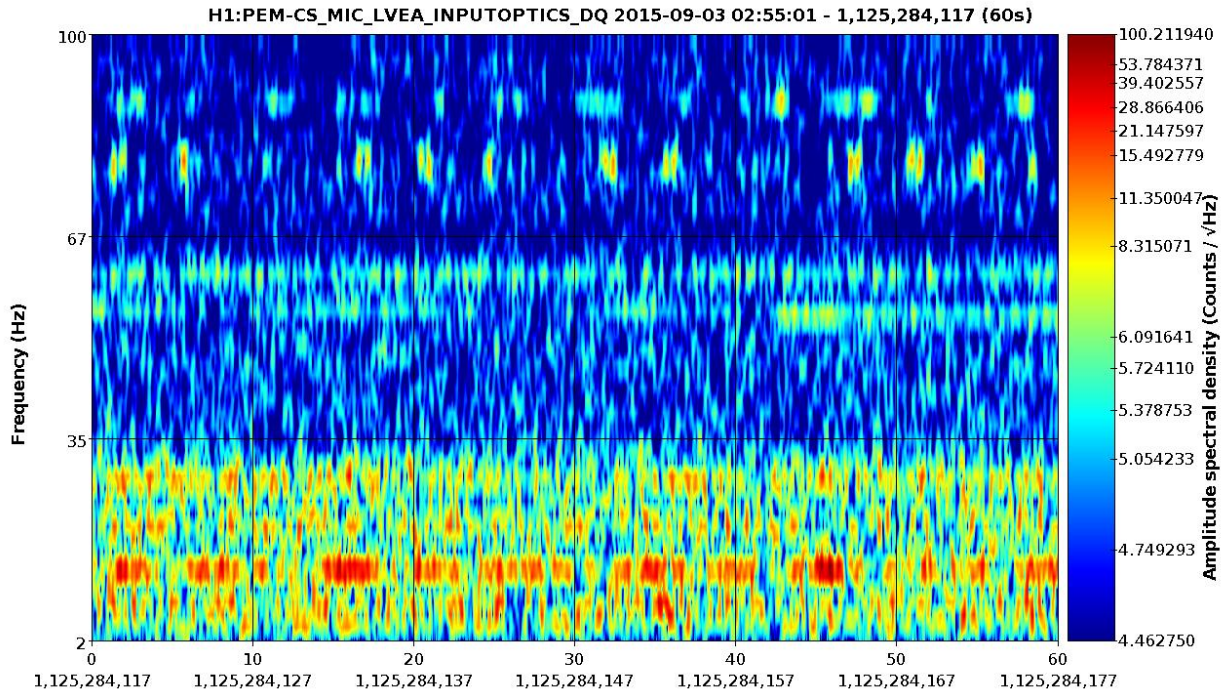# OSB shipping roll up door actuation (down)

Not visible in any of the microphones or vertex seismometer.

Loud Bach in control room (violin heavy, 2s bursts of music)

The injection does not show up in INPUTOPTICS microphone anywhere between 0-8000 Hz

Loud Underworld in control room (bass heavy, 2s bursts of music)

H1:PEM-CS_MIC_LVEA_INPUTOPTICS_DQ 2015-09-03 02:55:01 - 1,125,284,117 (60s)

Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 1189/1, bw = 2, in samples = 983K, low = 0.20

H1:CAL-DELTAL_EXTERNAL_DQ 2015-09-03 02:55:01 - 1,125,284,117 (60s)
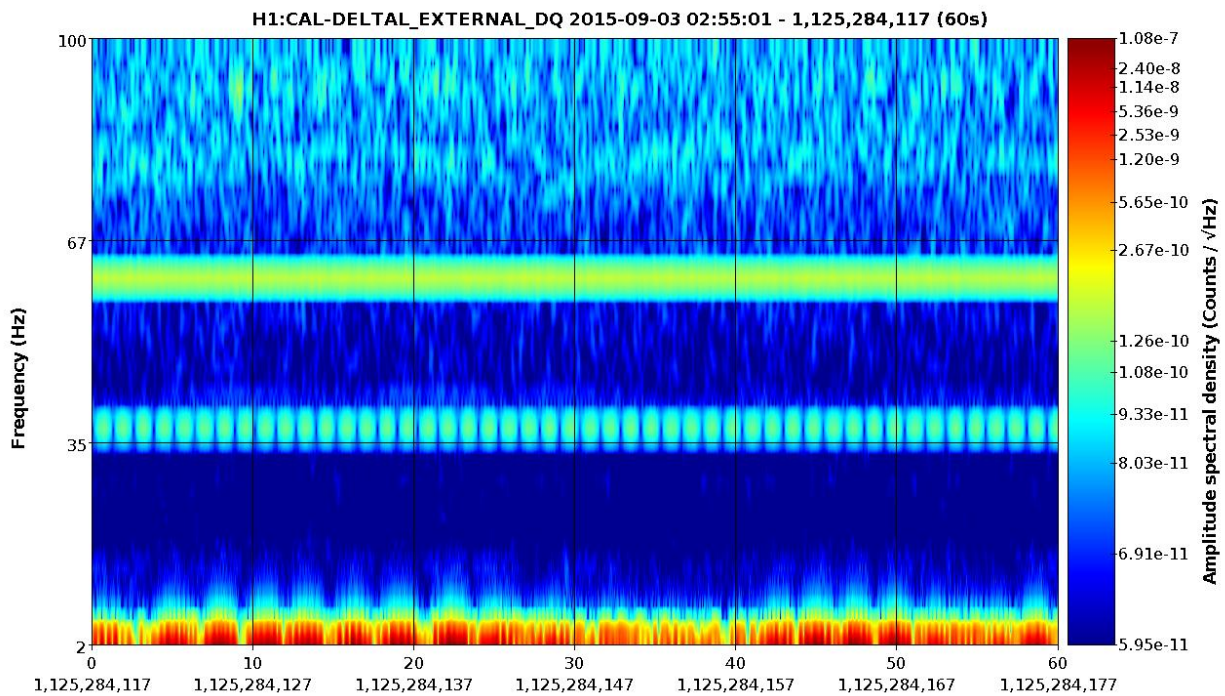
Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 1189/1, bw = 2, in samples = 983K, low = 0.20

Single bounces on seating ball in control room

H1:ISI-GND_STS_HAM2_Z_DQ 2015-09-03 02:57:01 - 1,125,284,237 (60s)

Fs=512Hz, sec/fft = 0.50, overlap = 0.90, fft length=256, #-FFT = 1172/1, bw = 2, in samples = 31K, low = 0.20

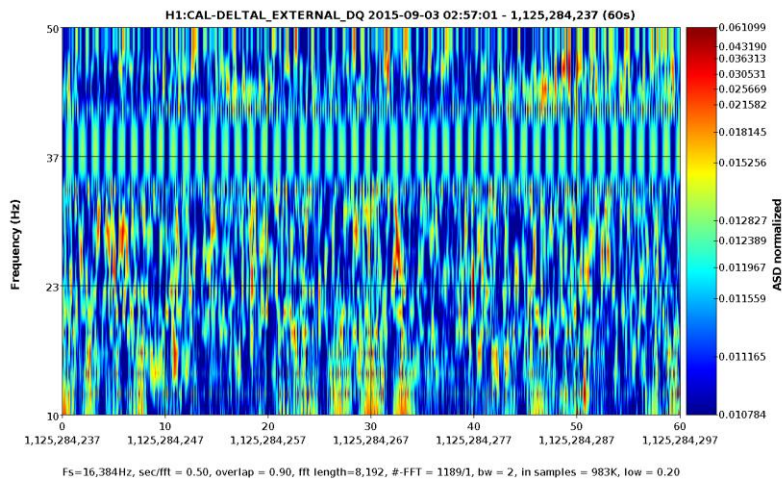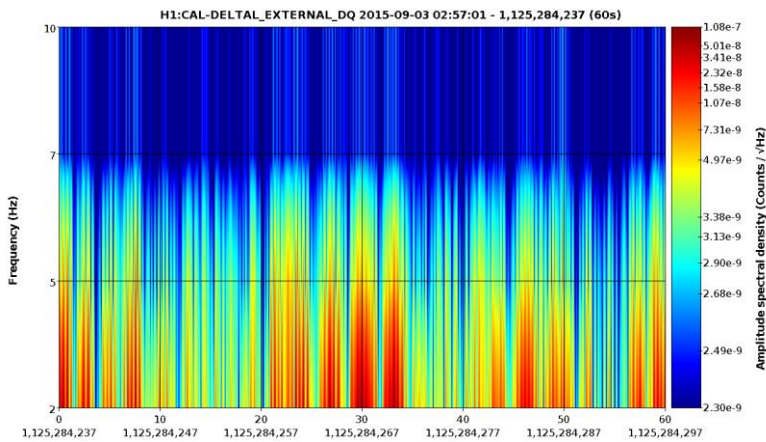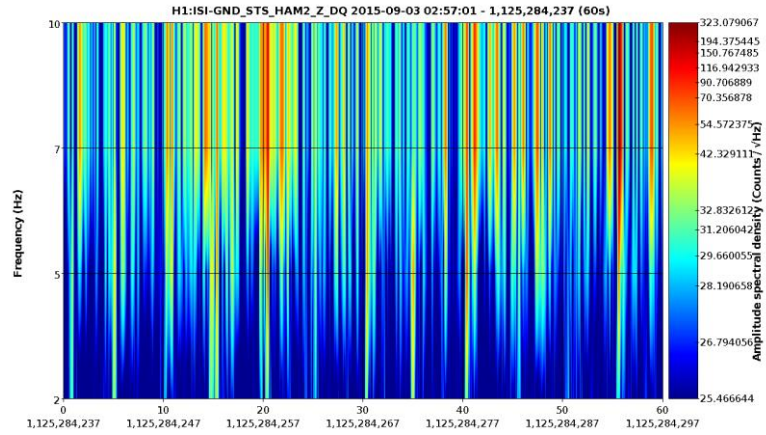H1:CAL-DELTAL_EXTERNAL_DQ 2015-09-03 02:57:01 - 1,125,284,237 (60s)

Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 1189/1, bw = 2, in samples = 983K, low = 0.20

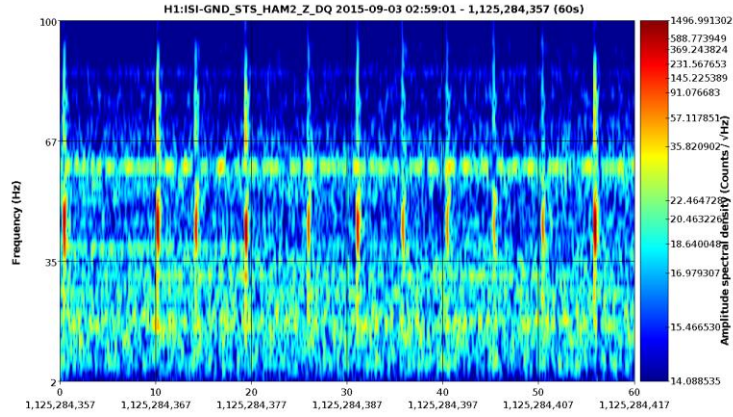H1:CAL-DELTAL_EXTERNAL_DQ 2015-09-03 02:57:01 - 1,125,284,237 (60s)

Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 1189/1, bw = 2, in samples = 983K, low = 0.20
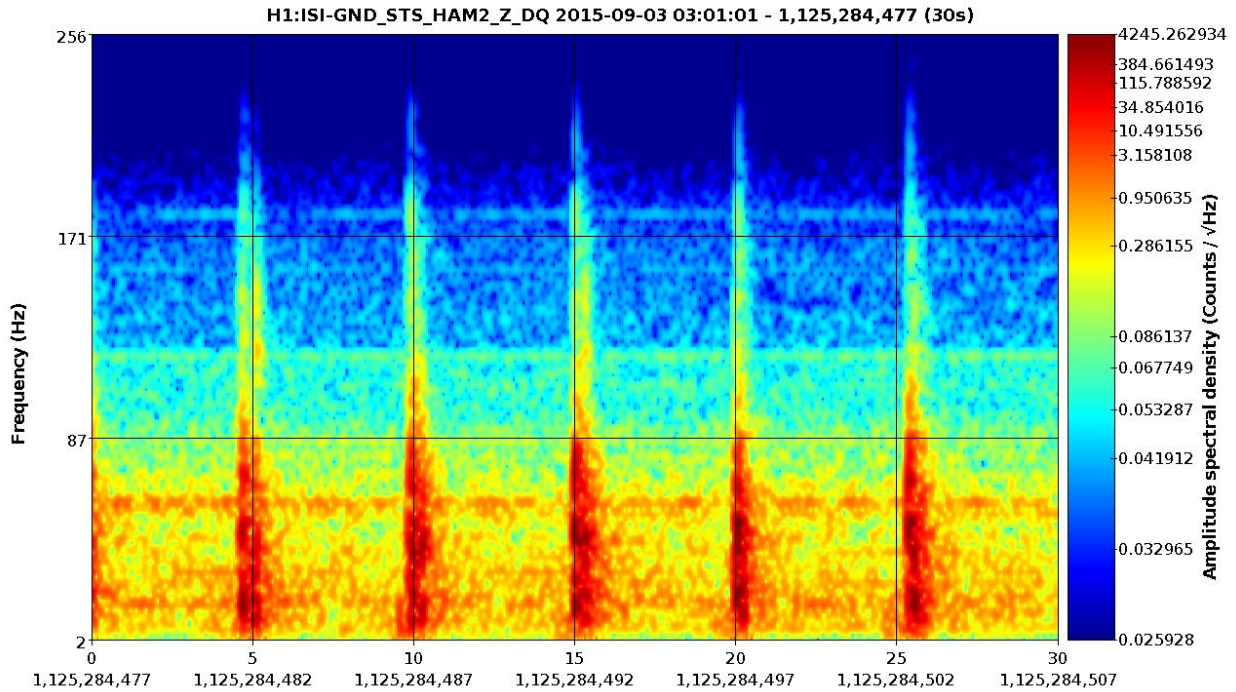
Dropping large super ball from 5 feet onto control room floor

The injection shows up in HAM2 seismometer, HAM1 accelerometer, PEM vertex seismometer, and DARM between 10-100Hz and possible 100-200Hz. What a ball…
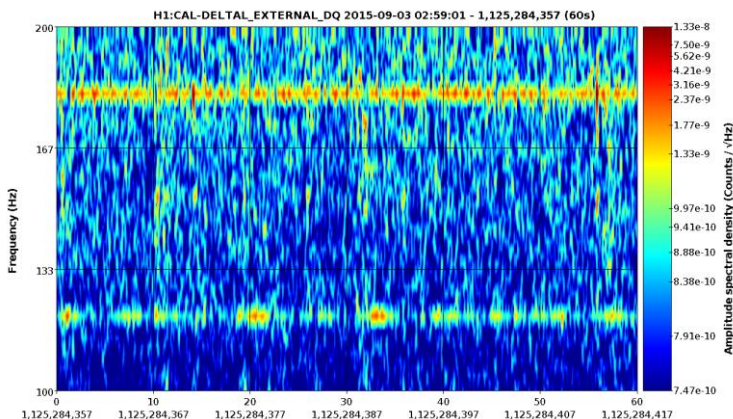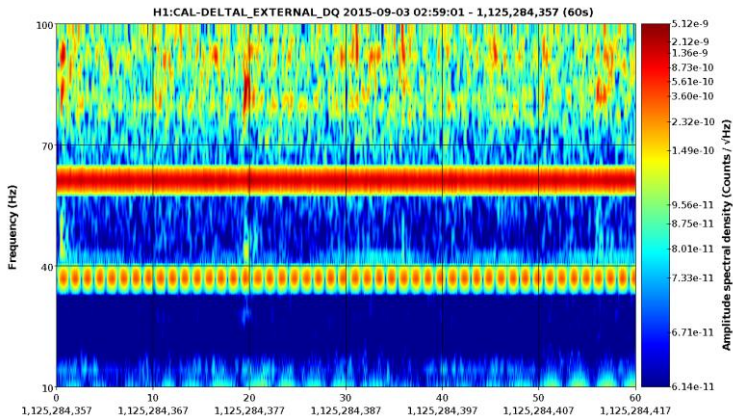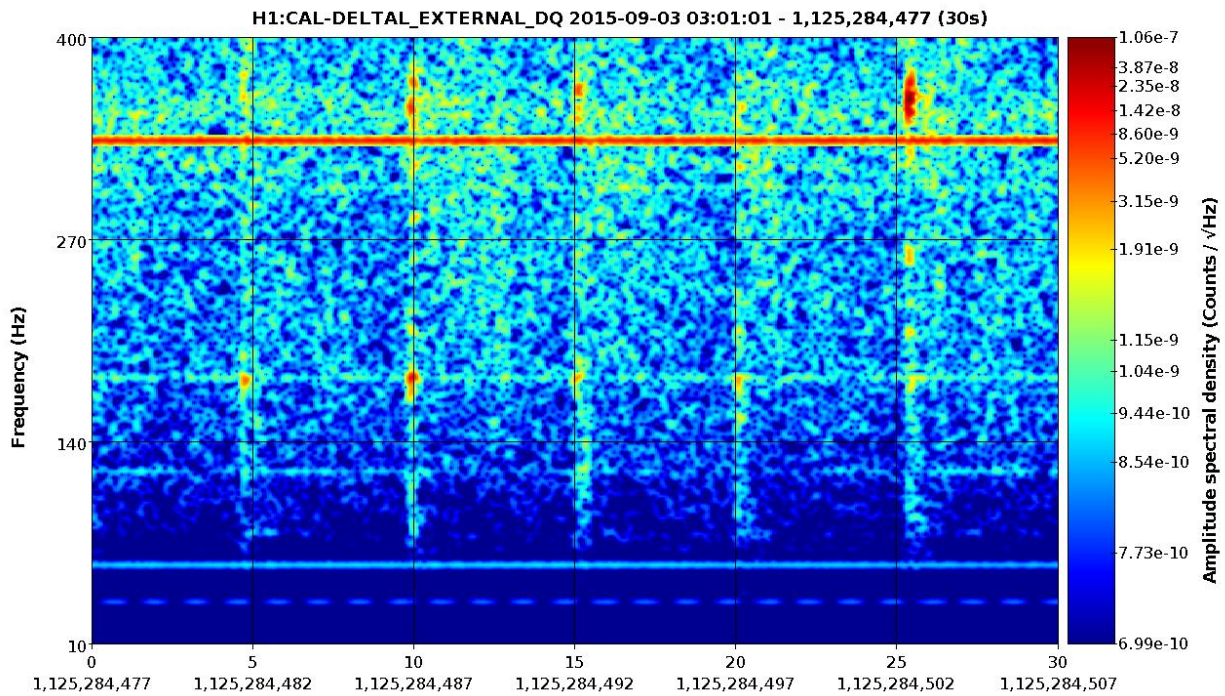
5 people jumping in synch in control room

The injection shows up in DARM from 20-400 Hz.

H1:ISI-GND_STS_HAM2_Z_DQ 2015-09-03 03:01:01 - 1,125,284,477 (30s)

Fs=512Hz, sec/fft = 0.50, overlap = 0.90, fft length=256, #-FFT = 581/1, bw = 2, in samples = 15K, low = 0.20

H1:CAL-DELTAL_EXTERNAL_DQ 2015-09-03 03:01:01 - 1,125,284,477 (30s)

Fs=16,384Hz, sec/fft = 0.50, overlap = 0.90, fft length=8,192, #-FFT = 590/1, bw = 2, in samples = 492K, low = 0.20