STUDIO HELPER

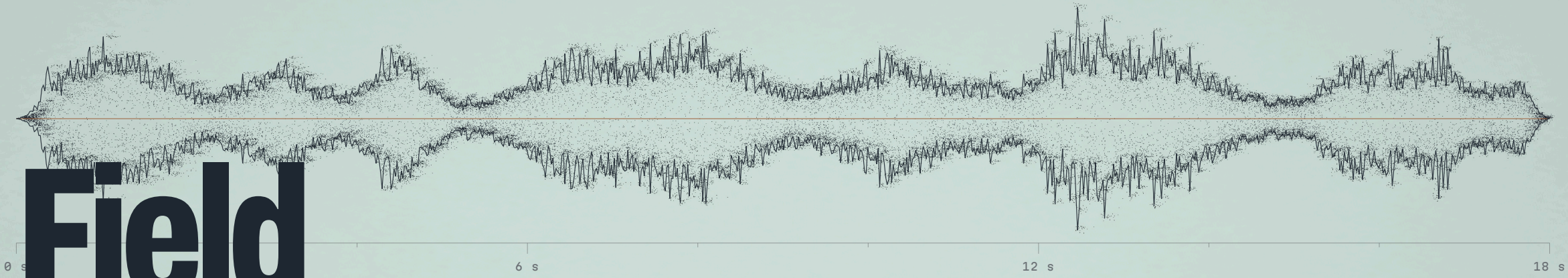
SELF-INITIATED CONCEPT · 2026

Twelve transcriptions · one transect · 240 km

In 1857 a machine wrote sound onto lampblacked paper and could not play it back. Its inventor did not think that was a fault.

FR-01 · SNOWFIELD DATUM · 0 KM · PEAK ENVELOPE

TRANSCRIPTION 001



Field Recordings

An archive of traces · 18 s per station · 2048-point analysis

Édouard-Léon Scott de Martinville expected the lines to be read, as what he called natural stenography. They stayed unread for about a hundred and fifty years. This archive takes him at his word: twelve recordings, held as the marks they make.

FR-01 FR-02 FR-03 FR-04 FR-05 FR-06

FR-07 FR-08 FR-09 FR-10 FR-11 FR-12

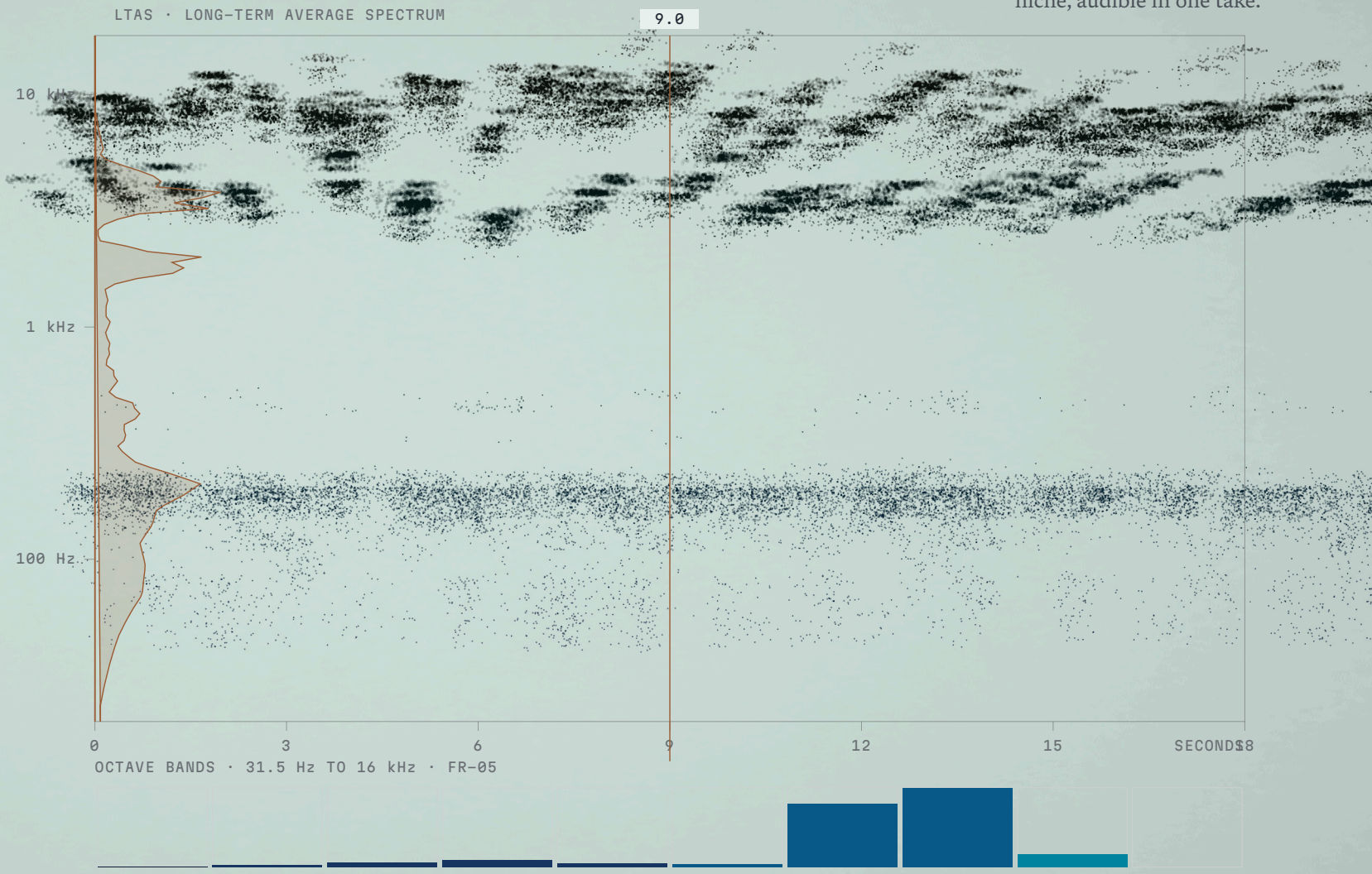
01 THE SIGNAL

A recording is a line before it is a sound.

A short-time Fourier transform cuts the take into 2048-sample windows and asks each one what frequencies it contains. The answer, stacked in time, is the relief on the right: time runs across it, frequency runs up it on a log scale, and height is energy. Nothing here is an impression of the sound. It is the sound, in another basis.

FR-05 · DAWN CHORUS · 67 KM · BIOPHONY

Three species, three bands, no overlap. Krause's acoustic niche, audible in one take.



THE WHOLE TAKE

CENTROID	2.87 kHz
ROLLOFF 85%	3.55 kHz
FLATNESS	−37.4 dB
ONSETS	6 in 18 s

AT THE CURSOR

CENTROID	2,058 Hz
LEVEL	−53.4 dB
FLATNESS	−120.0 dB

02 THE FIELD

Eighteen seconds, opened out.

ADVECTION FIELD

64 × 24 VECTORS

–

The field is the gradient of this station's spectrogram, turned a quarter turn. A gradient points up the slope; rotating it gives a flow that runs along the contours instead of across them, so a particle carried by it is tracing the shape of the sound rather than falling into its loudest part. Move the pointer and the field parts around it.

0 18 s · ONE TAKE, ADVECTED

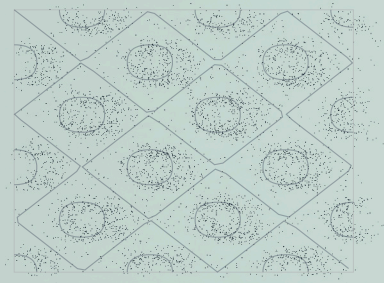
Every recording resolves to a figure only it makes.

Twelve plates

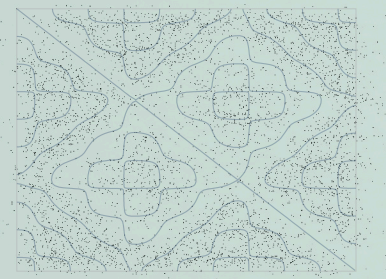
HOVER A PLATE

Each plate is the nodal figure of a square plate driven at the mode numbers this recording resolves to. Hover one to see the line the sand is lying on.

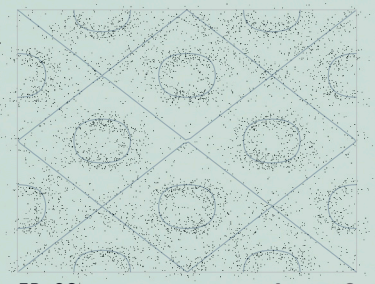
Chladni, 1787 · $\cos(n\pi x)\cos(m\pi y) - \cos(m\pi x)\cos(n\pi y) = 0$



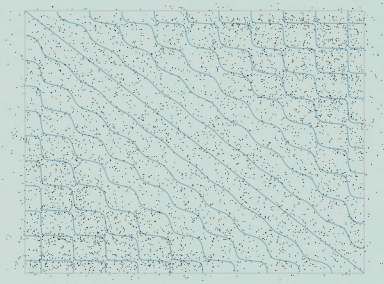
FR–01 m 5 · n 10
SNOWFIELD DATUM



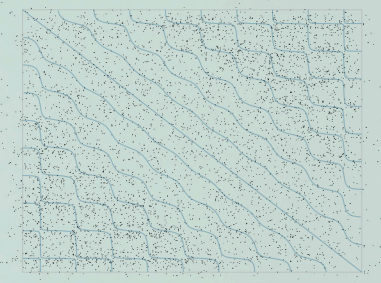
FR–02 m 8 · n 11
CIRQUE, MELTWATER



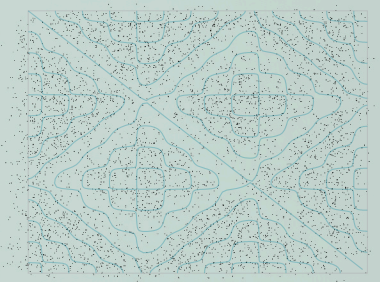
FR–03 m 4 · n 8
SCREE



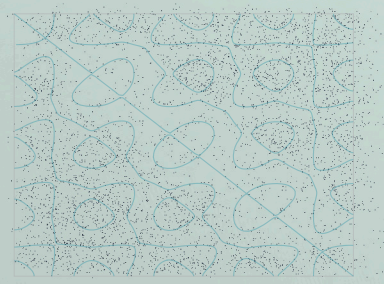
FR–04 m 10 · n 11
TREELINE



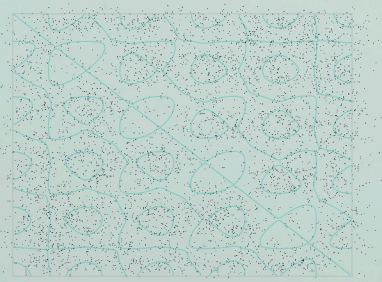
FR–05 m 9 · n 10
DAWN CHORUS



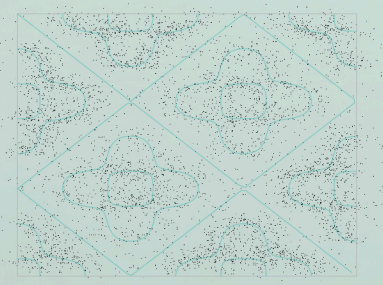
FR–06 m 11 · n 14
INSECT STRATUM



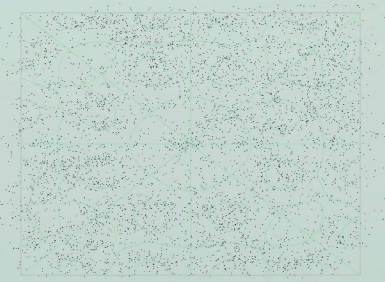
FR–07 m 4 · n 13
TRANSFORMER YARD



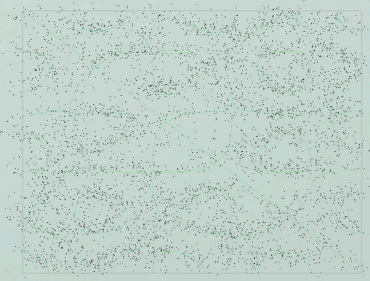
FR–08 m 5 · n 14
RAIL CUTTING



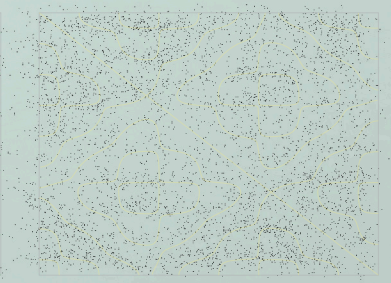
FR–09 m 6 · n 9
REED BED



FR–10 m 5 · n 13
CULVERT



FR–11 m 4 · n 9
ESTUARY, LOW WATER



FR–12 m 7 · n 10
LITTORAL

The transect, measured.

Snowfield datum

FR–01 · 0 km · GEOPHONY

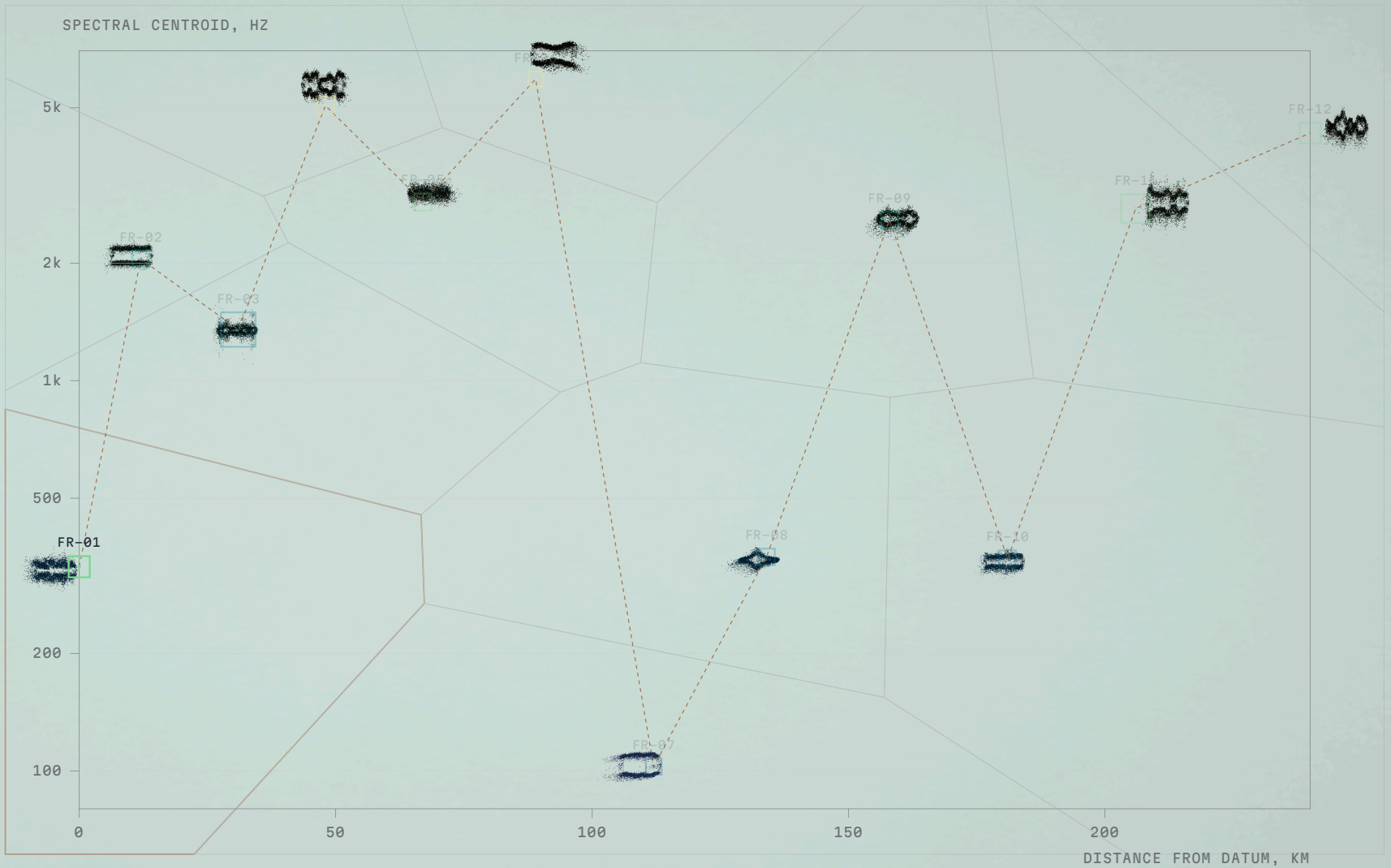
Wind over a wind-slab crust at the survey origin. Nothing biological in eighteen seconds.

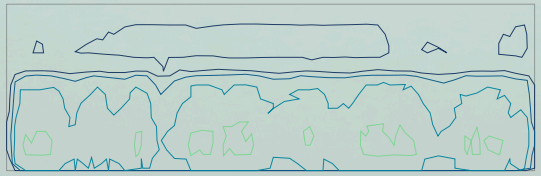
CENTROID	334 Hz
ROLLOFF 85%	509 Hz
FLATNESS	−30.6 dB
ACI	532.2
ADI	2.05
NDSI	+0.772

FREQUENCY

20 Hz — 18 kHz

ACI · Pieretti, Farina & Morri 2011
ADI · Villanueva-Rivera et al. 2011
NDSI · Kasten, Gage, Fox & Joo 2012, after Krause



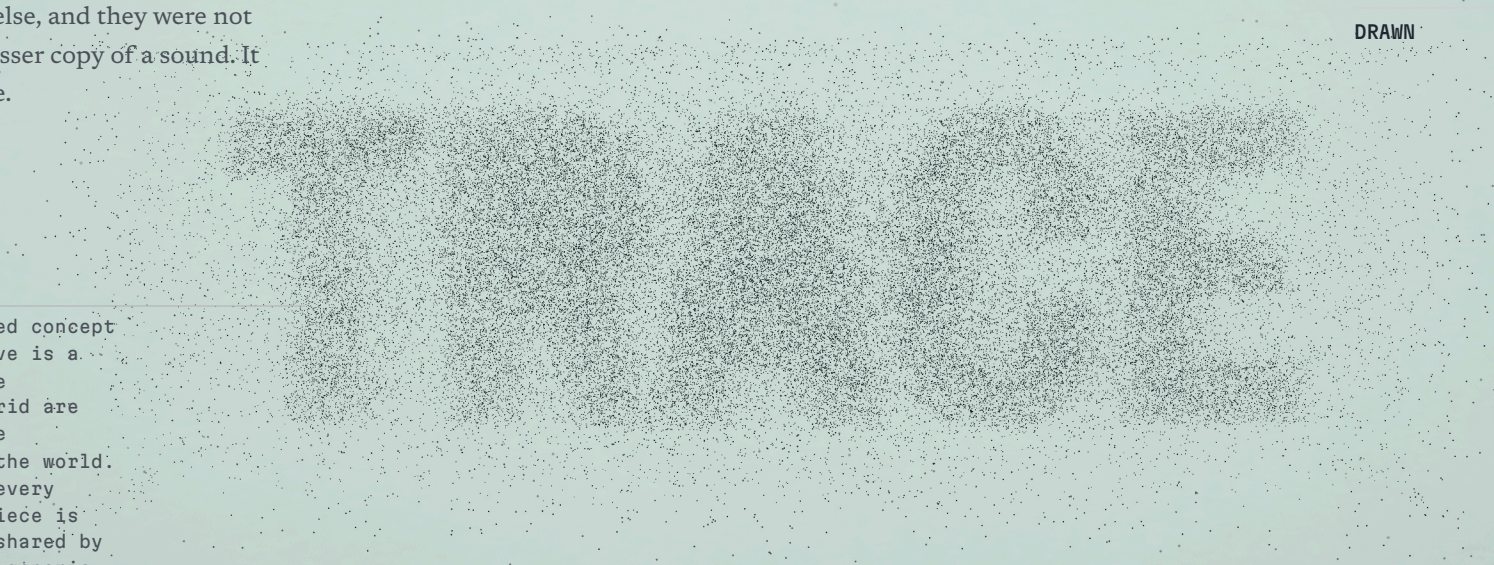


FR–01 · SPECTROGRAM TOPOGRAPHY · 4 LEVELS

05 THE RESIDUE

What survives is the trace.

Scott's phonautograms were recovered in 2008, when First Sounds scanned them and Lawrence Berkeley National Laboratory turned the scans back into sound. For a hundred and forty-eight years before that they were graphic objects and nothing else, and they were not diminished by it. A trace is not a lesser copy of a sound. It is a different thing the sound made.



Field Recordings is self-initiated concept work by Studio Helper. The archive is a designed construction: the twelve stations, the transect and its grid are invented, and the recordings were synthesised rather than made in the world. The signals are real files, and every figure and every shape in this piece is measured from them. The name is shared by a California wine label and is a generic term in audio; this concept has no connection with either.

Studio Helper · Sulman Ahmad Cheema · studio-helpers.com

COLOPHON

TYPE	Archivo · Newsreader · Martian Mono
COLOUR	achromatic, with one frequency ramp
SIGNALS	12 synthesised takes, NumPy, 48 kHz
ANALYSIS	SciPy · STFT, indices, partials
FORMS	Chladni fields, contours, SDFs
DRAWN	WebGL 2, written for this object