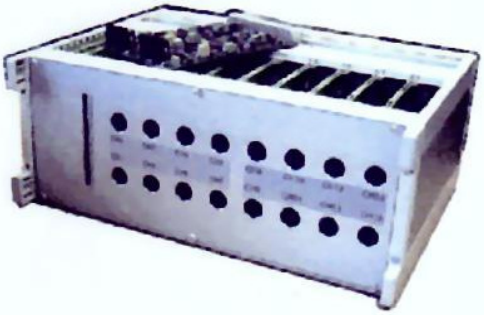
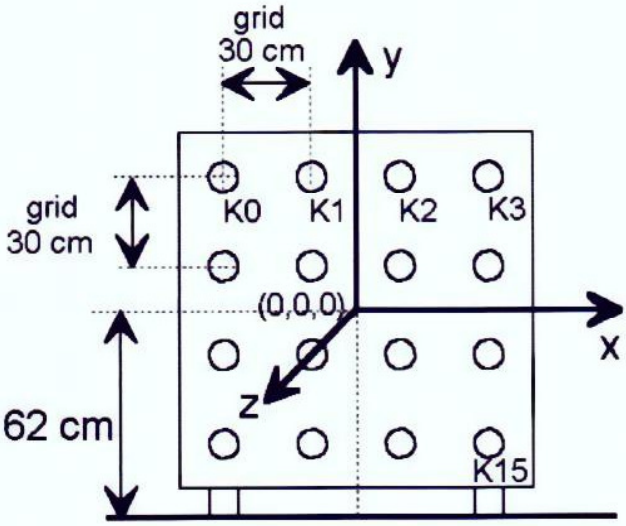
AKUSTISCHE KAMERA®

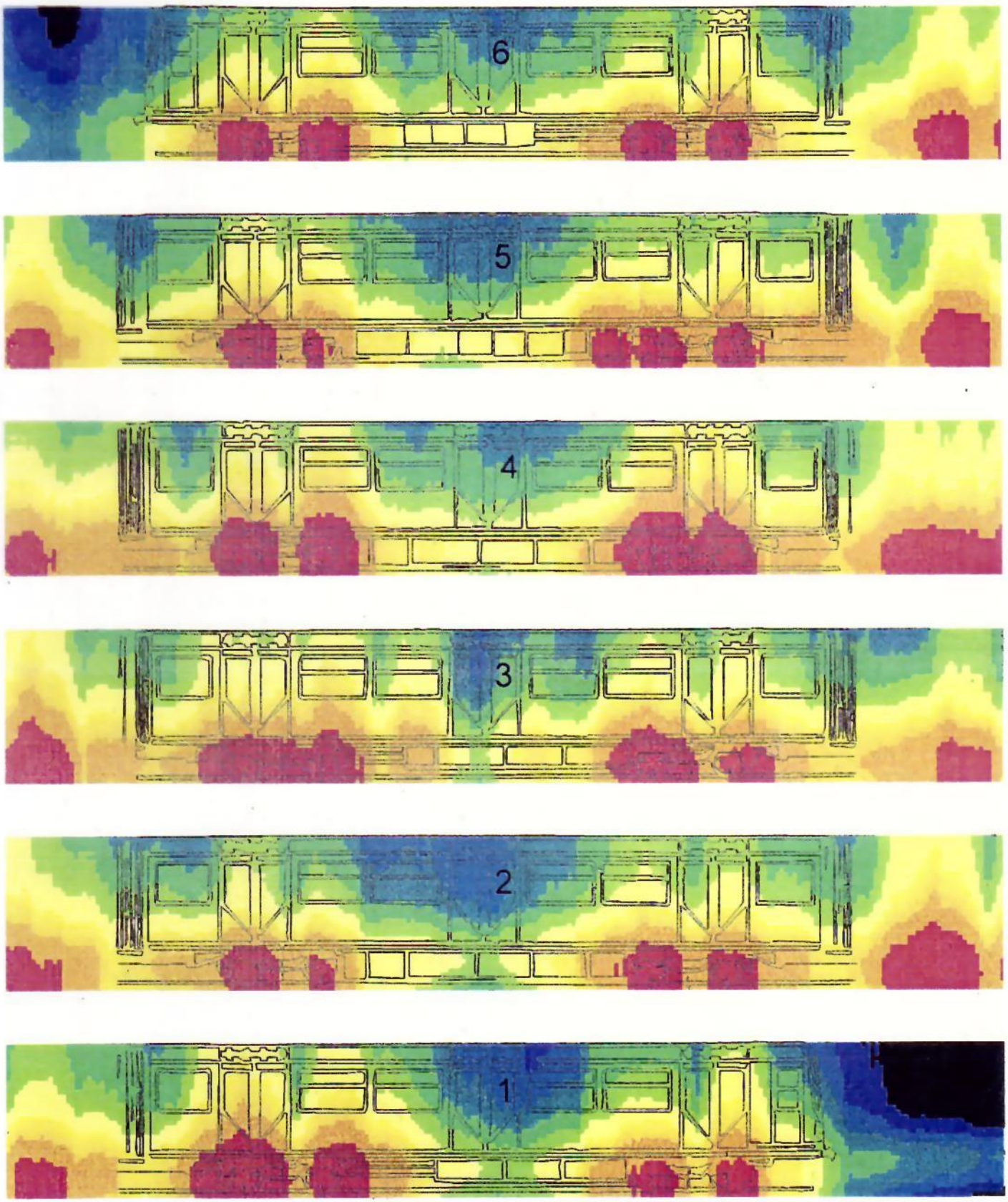


- 16 Kanäle
- Meßmikrofone 1/4", 0dB~1µV
- max. 100 kSps
- Aufnahmezeit ~ HS-Größe
- pro Sample 2 Byte
- softinitialisierter Vorverst.
- Verstärkung 0 dB...145dB (!)
- 2x Hoch- und Tiefpass in HW
- Pentium-Portable
- Laser markiert z-Achse



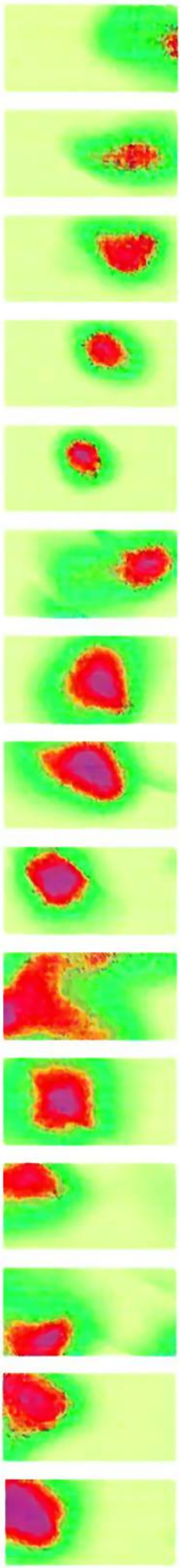
view from back!

ADtranz U-Bahn Baureihe H, Zug 5001
Wagen 1 voran



Messung am 28.4.98
BVG Britz, Messgleis 47
Meßabstand 5 m, 20 kSps
90 cm Array, 16-Kanäle
dB(C)-Bewertung, 120/1500 S, Eff.wert
min: 70 dB, max: 85 dB, div. by 1.5 dB
60 km/h, Fahrtrichtung –>
http://www.gfai.de

min [dB] max [dB]



Akustische Kamera:

Bilder eines PKW in 170 m Entfernung

Bilder in 0,1 sec
Folgeabstand
PKW fährt auf der
Rudower Chaussee

.../hauswand/29_08_96/
3c_03k.ini
2908_3c.chl

Bildgröße 14x7 m
Algorith. ADDEXP3
20 kS/sec
16-Kanal-Aufnahme
Arraysize 6x5 m

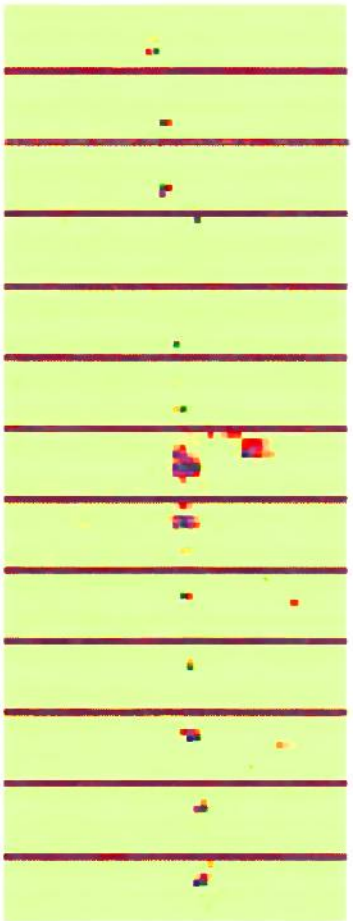
Akustische Bilder
mit 16-Kanal Mikrofonarray

Rudower Chaussee

Kekulèstr.

Ford Fiesta auf der Kekulèstr.

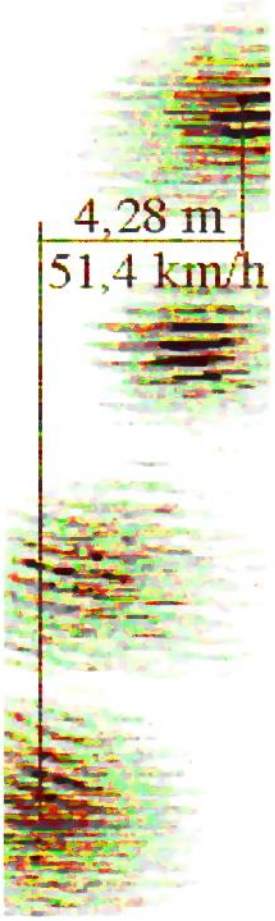
Schrittweite 0,1 sec



Feld 10x100m, Entfernung 70m

Bus auf der Rudower Chaussee

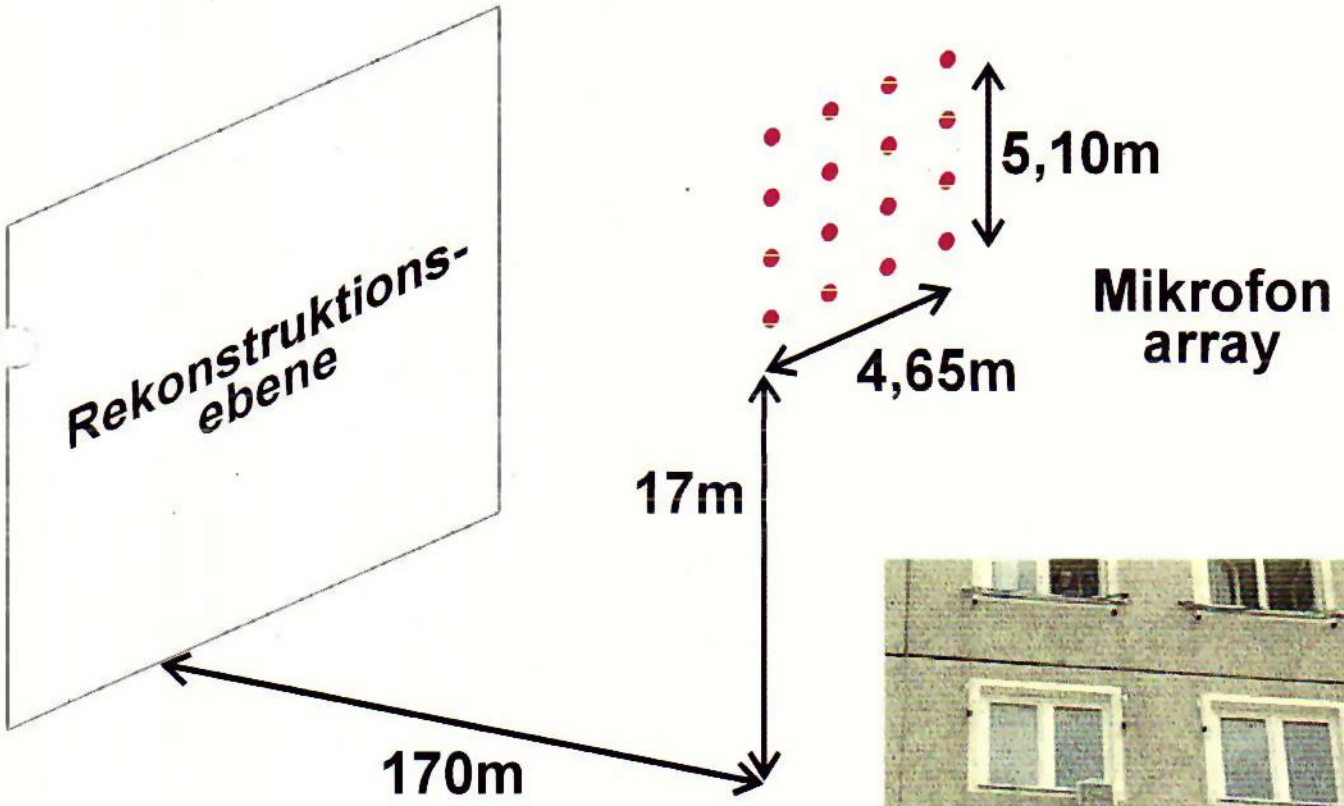
Schrittweite 0,1 sec



Feld 5x6m, Entfernung 170m

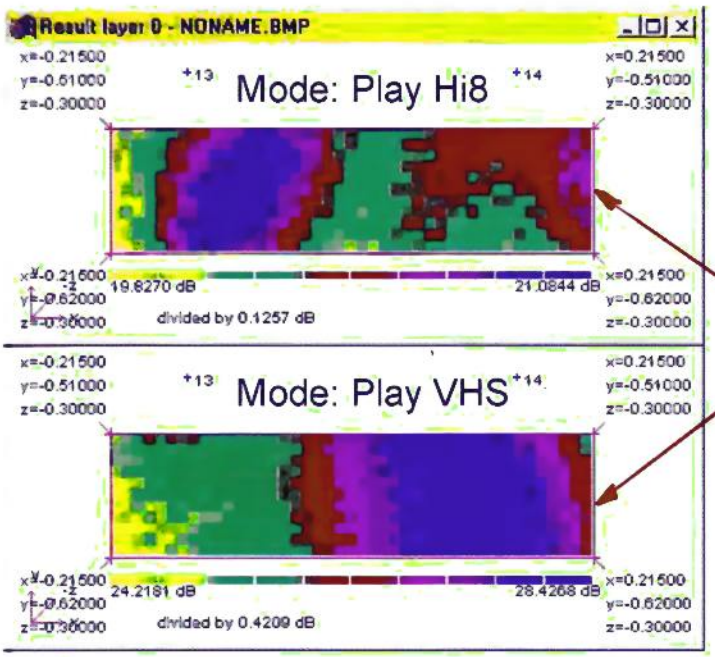
8/86

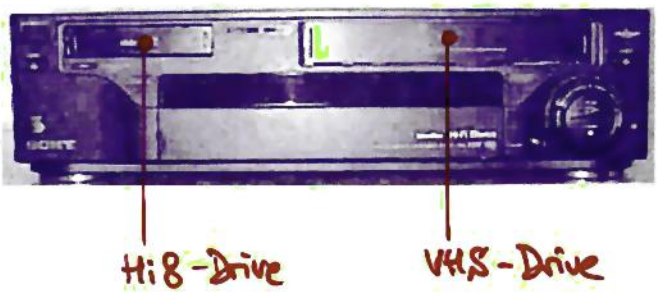
Akustische Bilder, Feldversuch

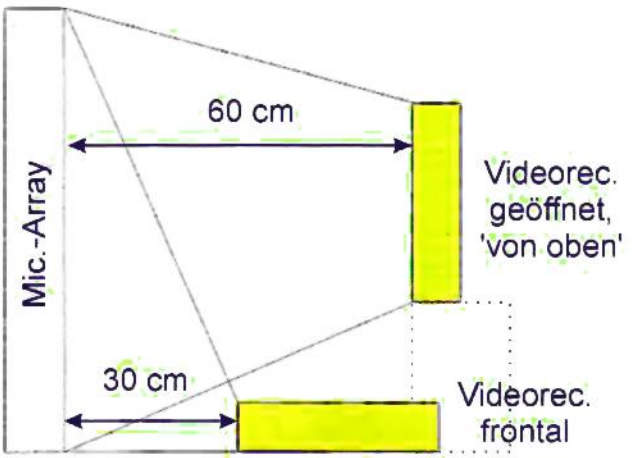


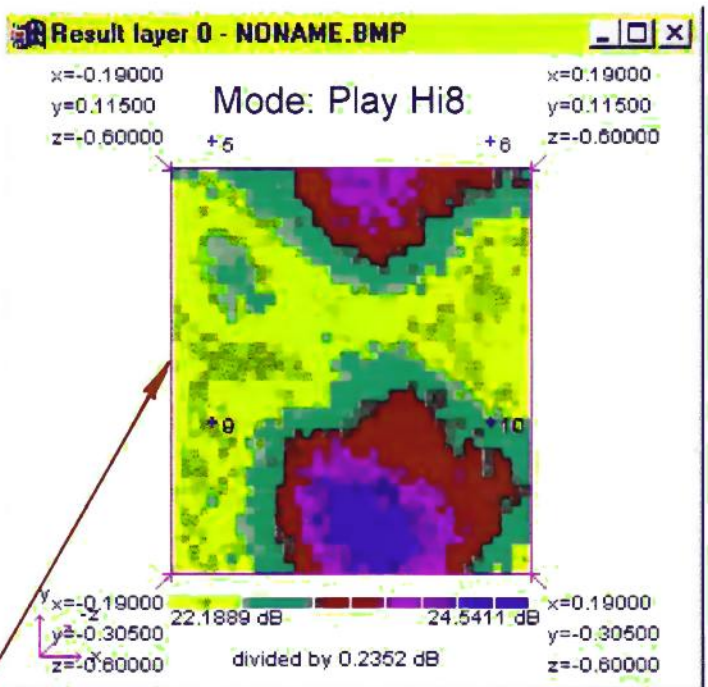
gh 20.8.1996

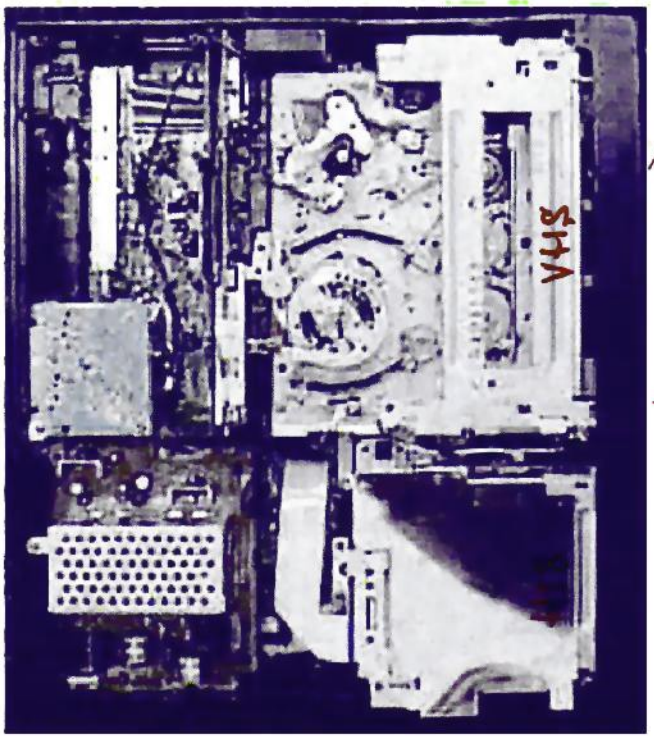
Schallbilder eines Videorecorders

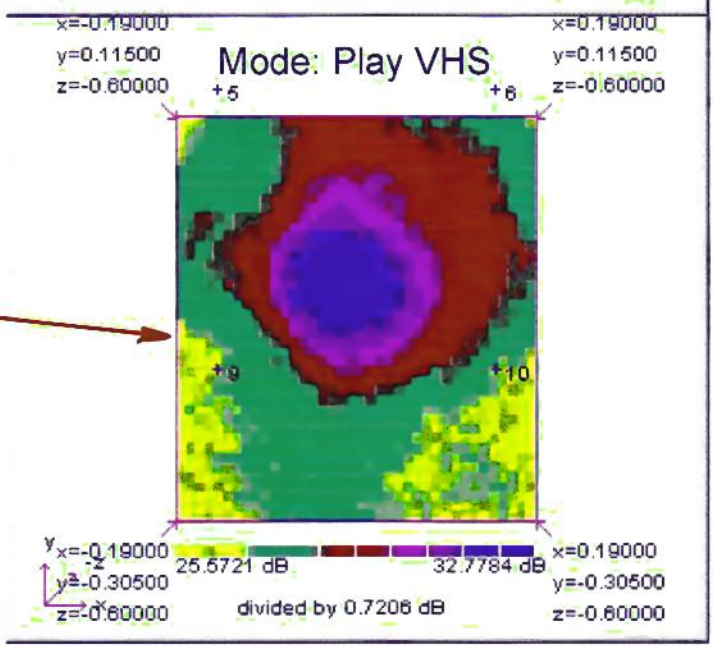






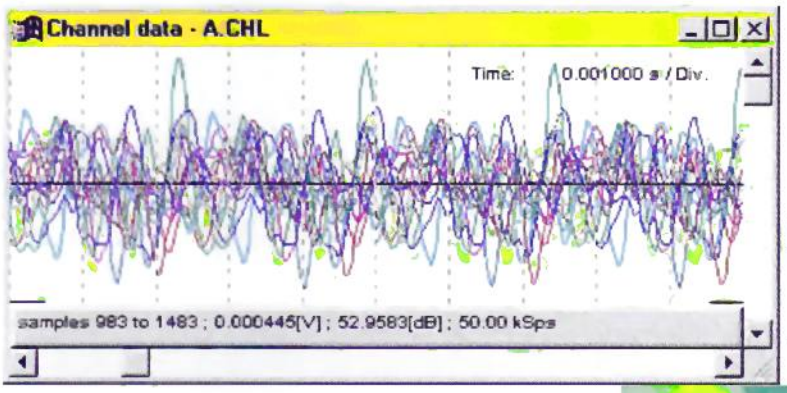




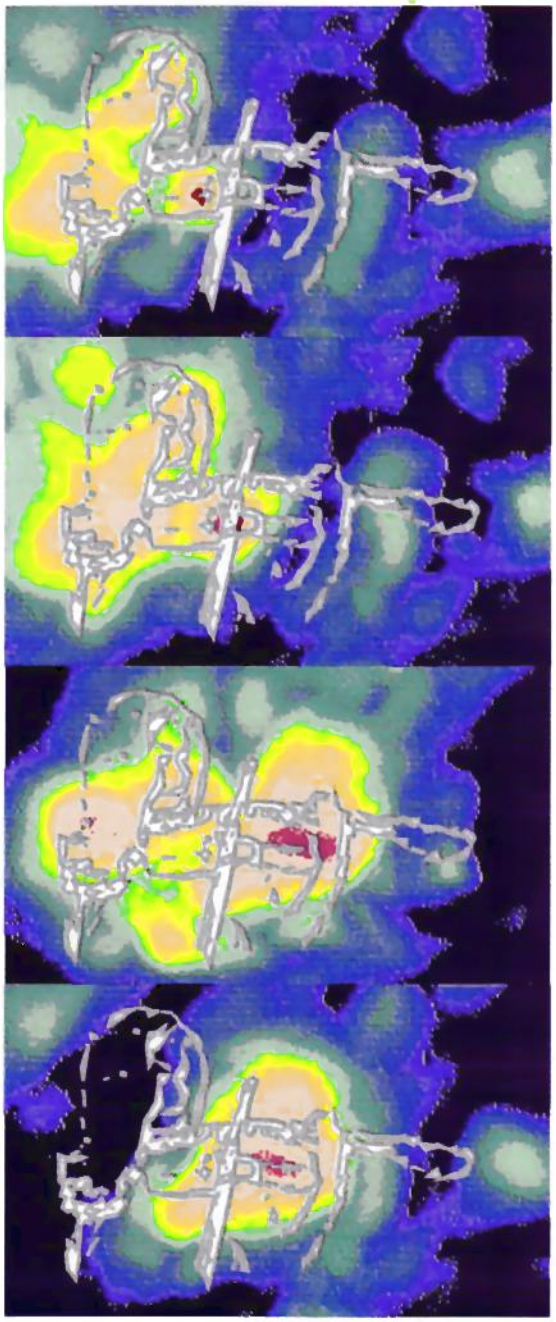


http://www.gfai.de/www_open/perspg/g_heinz/akustik/geige/violin.htm

Schallbilder einer Meistergeige

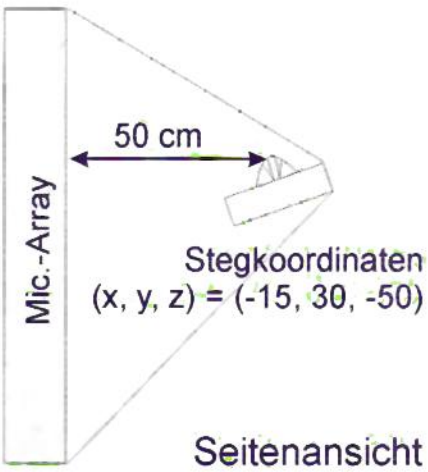


Zeitfunktionen der
16-Kanal-Aufnahme
50.000 Sps, 12 Bit



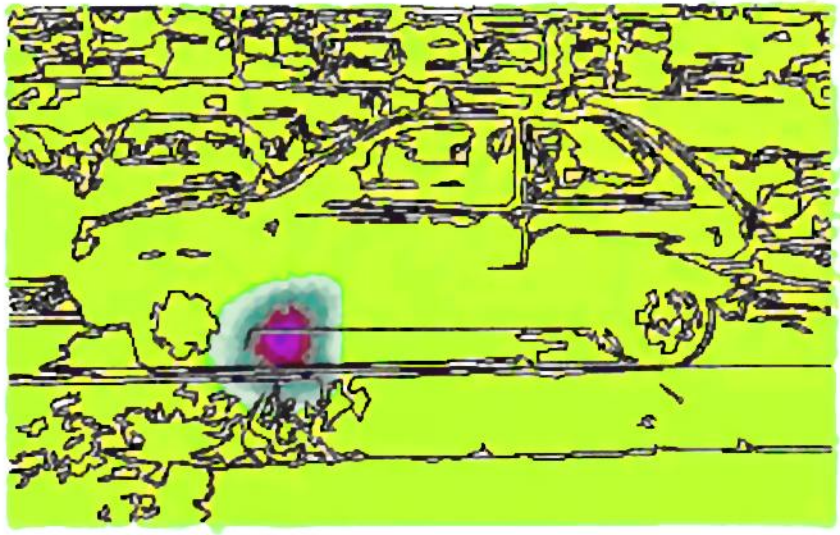
Interferenzintegral über 164 ms
mit überlagerter Skizze

links: Ausschnitt aus einem Movie
mit 25.000 Bildern pro Sekunde,
Int.-Interval 1ms, max.-Oper.



Vielen Dank an Dr. sc. F. Blutner, Synotec GmbH, Am Waldsportplatz 1, D-09468 Geyer
sowie an Geigenbaumeister Jörg Mayer, Gärtnerweg 3, D-09427 Ehrenfriedersdorf

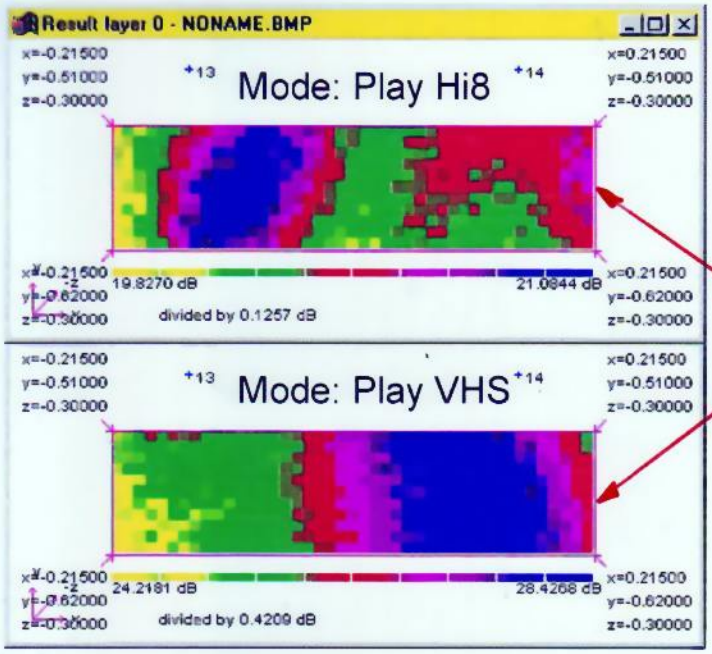
Frontal view. We find excitement locations as directed noise and as ground reflexion.
Data: vorn.ini, vorn.bmp, 17_02_97.txt, 50kSps, 1000 Samples used, 2xHP 3kHz, distance 3 meter.

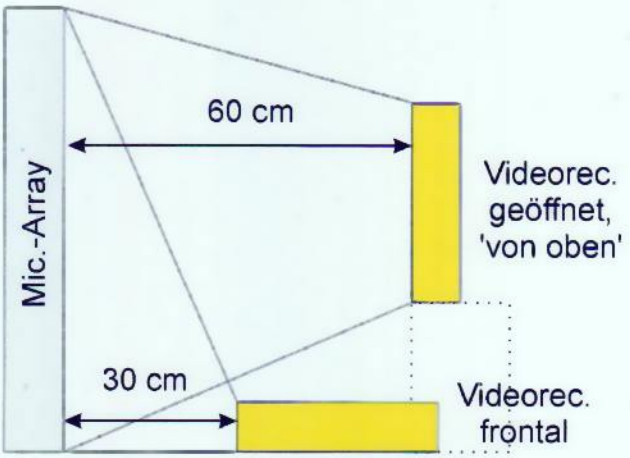


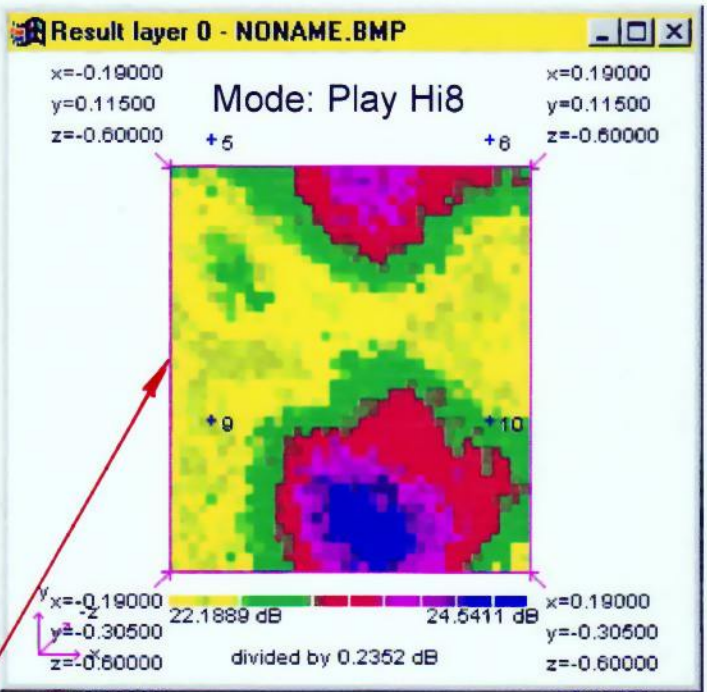
Side view. We find the strongest noise emission comming from the exhaust pipe or the exhaust silencer.
Data: links.ini, links.bmp, 17_02_97.txt, 50kSps, 1000 Samples used, 2xHP 3kHz, distance 5 meter.

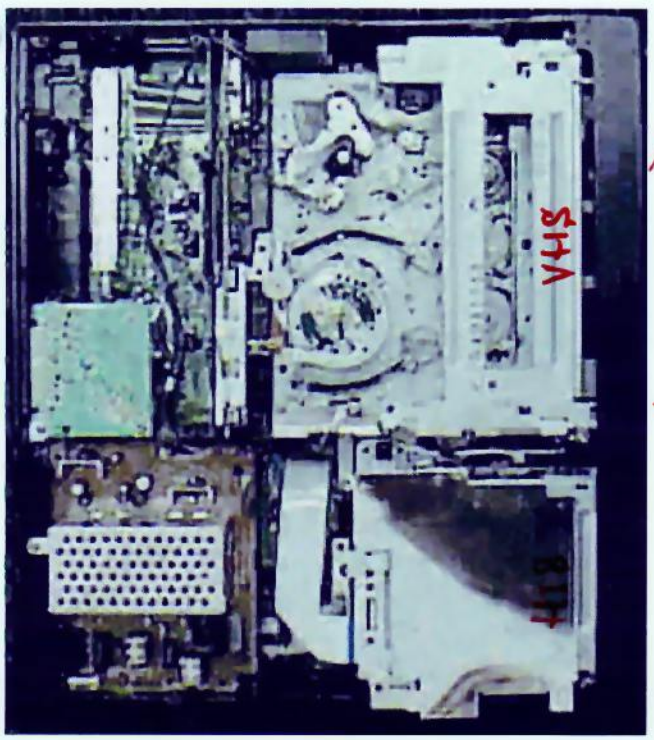
For more see http://www.gfai.de/www_open/perspg/g_heinz/demradio/autos.htm

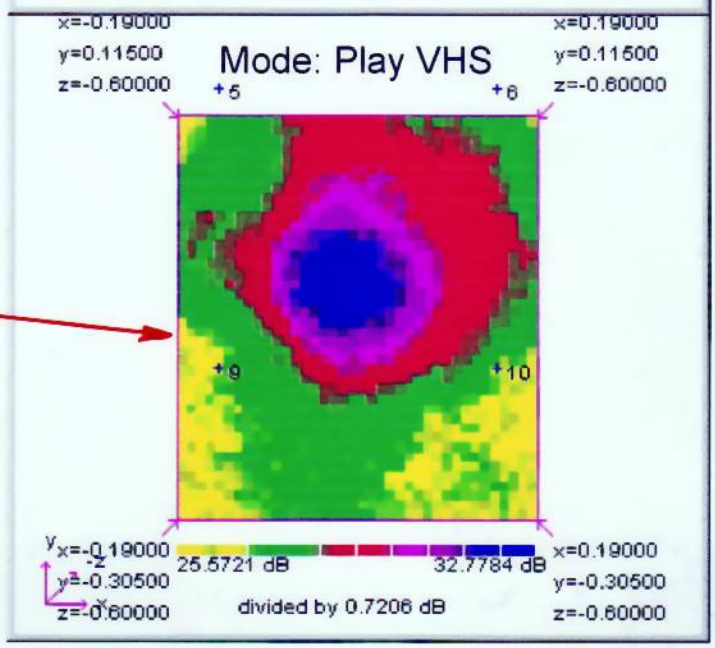
Schallbilder eines Videorecorders

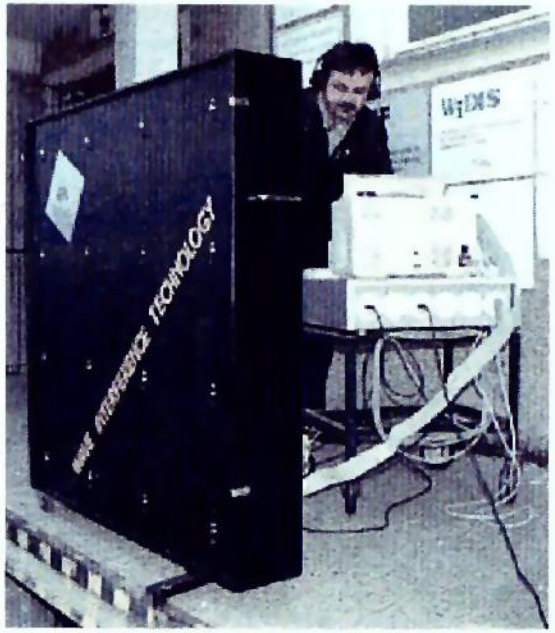




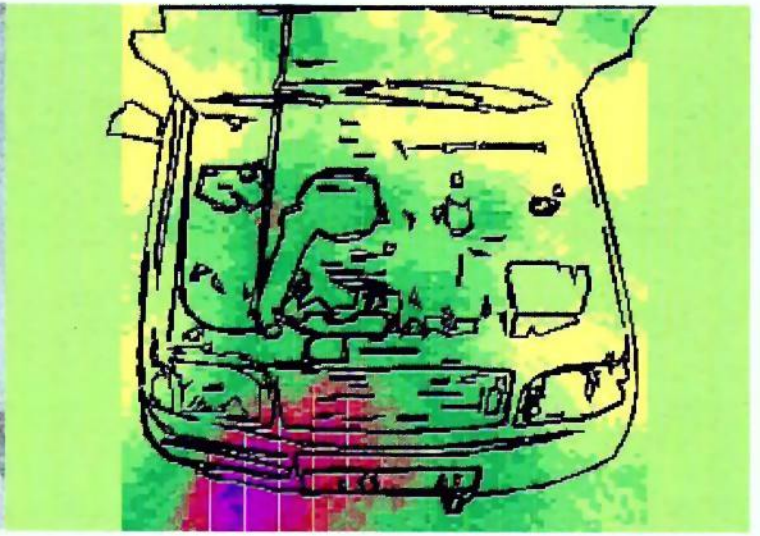






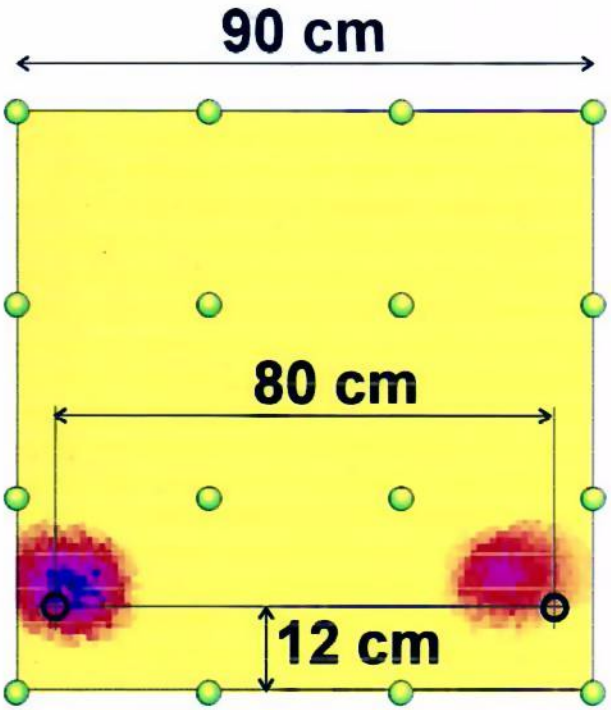


Motor-Emission, Ford Fiesta

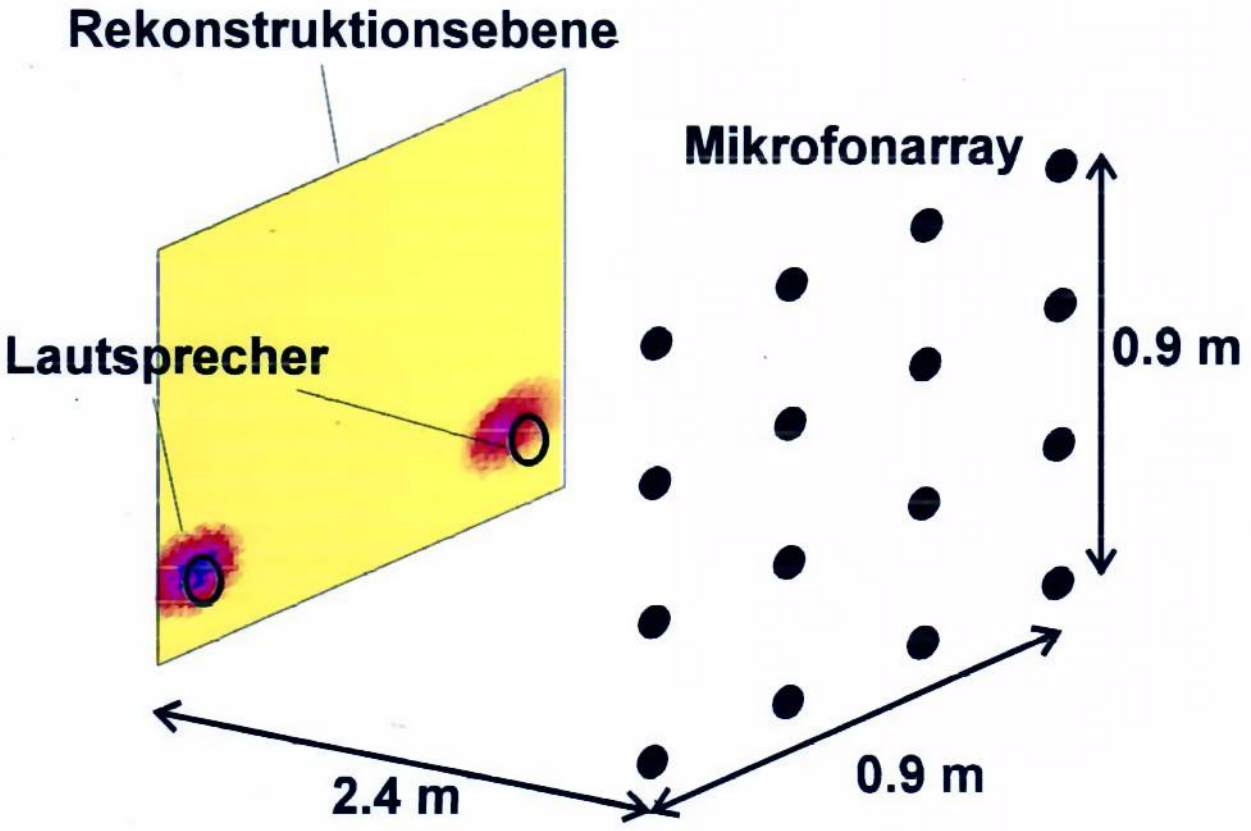


Data: motor ca. 2000 rpm, PSI-PORTKONFIG=2189742931, hardware-filter (-2 dB): 2x TP 5000 Hz, 2x HP 3000 Hz, 16 channels, 20 kSps, calculation integral 1.2 kS = 2 revolutions, files: 2300_1k2.chl, 2300_lg1.ini, 2300_lg1.bmp

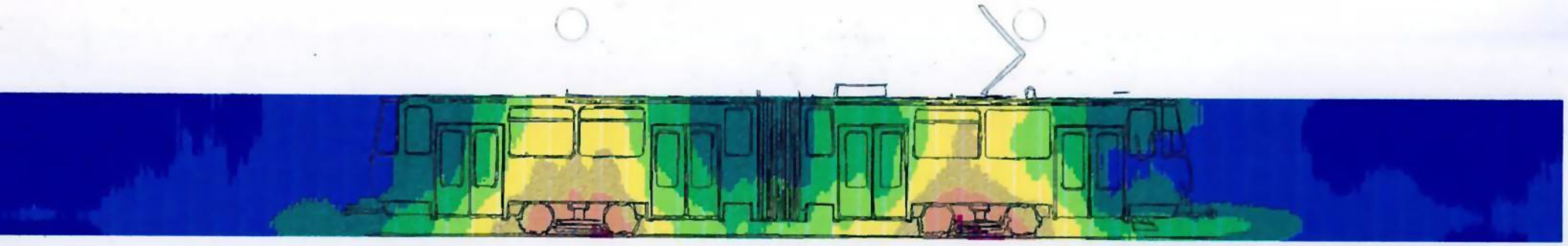
Akustische Bilder als Interferenzintegrale



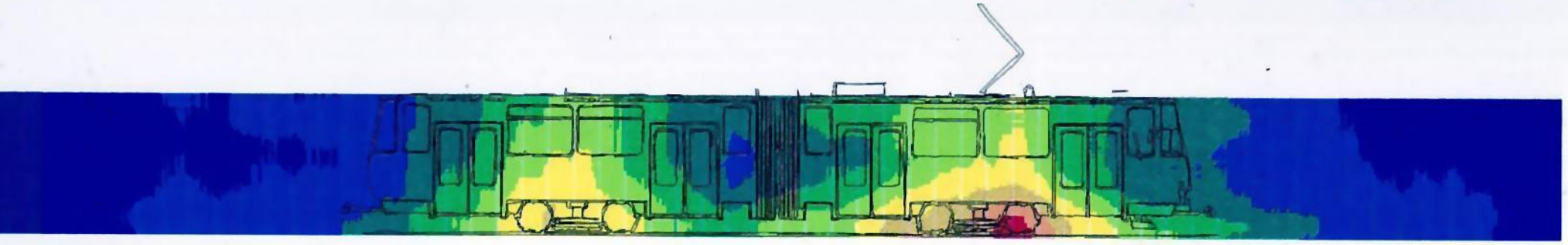
Erstes mit HHT gelungenes akustisches Bild eines Streurades März 1996
Sabine Hölzl & Gerd Hartz



sh/gh 03/96



7070 44,4 km/h



7083 42,3 km/h

7097 38,5 km/h

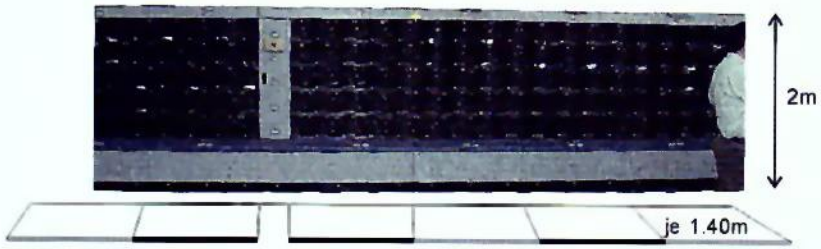
min dB(A) max

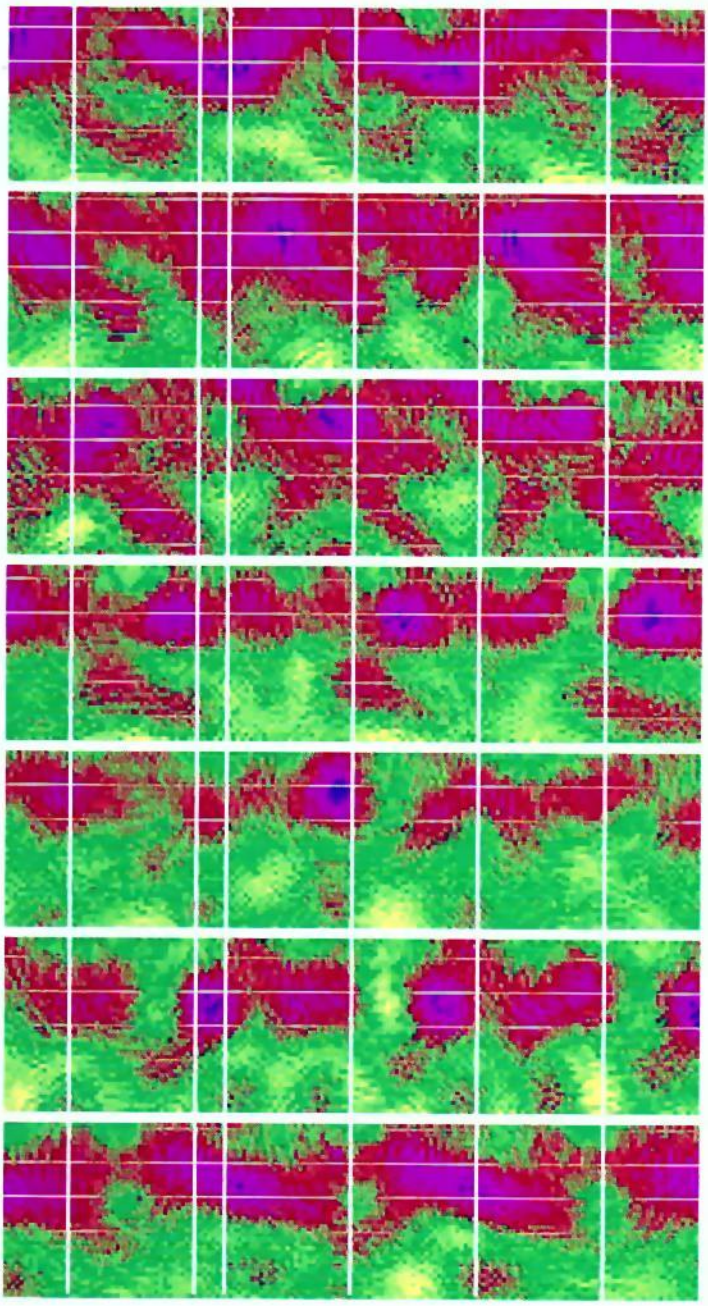
divided by (max - min)/10

http://www.gfai.de
heinz@gfai.de

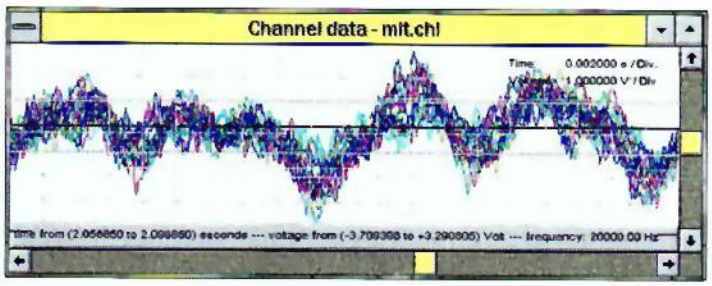
Schallemissionsbilder der Züge KT4DT mod. (Tatra)
Ort: Langhansstraße 93, 16.6.1998, 21-23 Uhr, dB(A)-bewertet,
Farbtabelle 80 bis 100 dB in Stufen zu 2 dB pro Farbwert
Meßabstand 2,5 m, ebenerdig mit 16-Kanal Array 90 cm

FVM Briefdurchlauf, Movie





mit_obn.chl, Hochpass 2kHz/-40dB, Kanaldaten mit Brieflauf aufgenommen,
Rechenfeld 2x8 m, Maschinenhöhe 2.00m, Sockelhöhe 60cm
Bildfolge zu je 500 Samples = 25 ms aufeinanderfolgend



gh 29.4.1997 movie1.cdr

Ungefilterte Kanaldaten, Schwerpunktfrequenz 100Hz