

Interessengemeinschaft
zur Aufklärung des Brummtons (IGZAB e. V.)

Interest Group
for Research of the Hum Nuisance

Questions & Answers about the Hum

(Updated last: February, 28th 2005)



Further information to these and other related topics can be found on our web site www.igzab.de or www.brummt.de (predominantly in German language) under "Chronik", "Nacht für Nacht, eine kleine Chronologie der Brummtöne". The easiest way to follow up on latest developments is to read the IGZAB press releases. They are found on our web site under "Presseinfo".

Contents

Preface: The Unknown	3
[Question:] What is the IGZAB e. V. ?.....	5
The board of the IGZAB	6
1st Chairperson	
2nd Chairperson	
Treasurer	
Secretary	
Spokesperson for the Press	
Scientific Advisory Board	
Contact persons of the IGZAB in Germany by states/regions	7
Bavaria	
Baden-Württemberg	
Berlin	
Hesse	
North Rhine-Westphalia	
Contact persons of the IGZAB abroad	7
Switzerland, in general	
Switzerland - St. Gallen	
Switzerland – Solothurn	
Slovenia	
The Scientific Advisory Board	8
Working Group Communication	8
Contact person for internal communication, the web site, central data-collecting, processing and evaluating of our questionnaires	
Working Group Medicine	9
[Question:] How does the Hum manifest itself?.....	10
[Question:] What is the IGZAB doing against the Hum?	11
[Question:] How did the IGZAB come to be?	11
[Question:] Who is financing the IGZAB?.....	11
[Question:] How can my observations help solving the Hum problem?	11
Declaration about protection of personal data	
Raising and using of data	
Passing-on data to third parties	
[Question:] Is the Hum restricted to certain areas?	13
[Question:] Is the Hum result of mass-hysteria?	13
[Question:] Could the Hum have medical causes?	14
[Question:] Does the IGZAB have any leads to external causes of the Hum?.....	18
Infrasound	
Electromagnetic waves	
[Question:] Which external causes does the IGZAB exclude?	20
[Question:] What does the IGZAB want to learn more about?.....	20
[Question:] Does the IGZAB have an opinion to the various theories about the Hum, such as are in general circulation on the Internet?	20
[Question:] Do other countries have a Hum problem?.....	21
[Question:] Is the IGZAB in contact with similar groups of other countries?.....	22
[Question:] Does the German (Central European) Hum show parallels to the famous Taos-Hum?.....	22
[Question:] Is there any hope?	23
[Question:] What can we do against the Hum right now?	24
[Question:] How can I help to solve the problem?	24
[Question:] What does the IGZAB ask of its members and followers?.....	25
Principles of the IGZAB e. V.	
Copyright regulations	26

Preface: The Unknown

"Man fears nothing more than being touched by something unknown."

- Elias Canetti

In many cases the Hum may be quickly and easily silenced. Experience shows that low frequency annoyance often originates close by. Competent investigations by government authorities must (!) find the sources. In real life however, three questions suddenly become very important:

- 1.) Are the authorities in charge really competent enough for these frequencies?
- 2.) Does investigating strike any political interests?
- 3.) What about the other sufferers? What about all those, who call for more tracking down of hum and vibrations than generally observed? Constant stress often mixes with an uncanny feeling towards the unknown. That uneasiness causes a remarkable effect:

Almost every hum sufferer provides a self-tailored "explanation", for the sake of protecting their own sanity. They firmly insist on it and cling to it - however implausible or ridiculous it may seem to be. "Anything else would be frightening or threatening", observes IGZAB-activist Manuela Autenrieth.

One sufferer suspects the hum source to be idling engines at the airport close by her home, mainly because blatant nonsense seems easier to accept than the unknown. That lady sticks to her explanation, even though the hum continues to shake her out of sleep when she is hundreds of kilometers further off, and far away from her home. One sufferer from southern Germany demonstrates to others by moving his hand how the hum he is just hearing goes up and down in loudness. He remains totally convinced the noise comes straight from his neighbors heating system. At that point the group he is with is at the other end of town, 15 kilometers away from that house. Their rhythmical hand-movements all seem identical, but do all of that group hear the same sound? What about the academic guy, thinking of the hum as the consequence of drilling too many holes in concrete walls without ear-protection?

Examples like these could be continued at will: some suspect tunnel construction, the highway, or a low-frequency communication system for US-submarines. Another favorite: "secret experiments for mind control". Who could possibly be interested?

Interpretations as these impressively demonstrate how a constant fear of something unknown can become a horribly powerful mechanism unleashed inside of us. Remember Canetti's quotation at the top of this preface. That mechanism makes us to flee into our own illusions that we defend with all our might: "Its easier to part from a friend than from prejudices", observed a sufferer from northern Germany. That sort of stubbornness stems from an ongoing effort to see the things around us in a stabilizing context. Humans need that to react properly according to situation. In the last consequence this means we construct our own private reality. That's common knowledge amongst philosophers. Now science confirms it: "We are reason-giving machines", said the Neurologist Detlef Linke in an interview with Alexander Kluge.

Since the Hum has given us nil clues for sorting it into any known explanatory forms to date, perception becomes very personalized. In extreme cases, personalized perception can become strongly directed inwards! In that case perception does not illuminate an actual problem, but rather become a vicious circle that concentrates around phobias and deficits. Constructive views become impossible.

"Of course we must be open-minded, but not so open that our sense runs out!", sighed Sociologist Richard Dawkins in his open letter to the heir to the British throne. According to Dawkins, the reason was the Prince's attitude toward science in general, and in particular about the Prince's support for what Dawkins considered a mixture of contradictory and hardly thought-out alternatives.

Many Hum sufferers behave in a similar manner: They tend to follow rat-catchers, because science hardly shows any interest yet in them. Esoteric enterprises claiming to propagate high levels of "cosmic" awareness are such rat-catchers. In reality they offer a muddy broth of illogical and equally ridiculous pseudoscientific nonsense for clouding-up the minds of their pitiful victims. To say it quite

clearly: Those nonsense-producers don't care about the Hum problem at all, much rather about their own bank accounts. Denis Diderot said in the 18th century about motives for purchasing such rubbishy nonsense: "If you are nutty amongst nuts, you encounter less problems than if you remain reasonable all by yourself."

Strange how each one of us trusts their lives to scientifically based techniques. We drink from the public water supply, drink homogenized and pasteurized milk, trust computer-controlled traffic lights, travel on bridges, elevators, high speed trains or airplanes. We rightly assume they are built and under control of scientifically thinking people. Why should the same rational be switched off when looking into the cause of the Hum? Could it be because it has not been identified yet with scientific means?

Meanwhile, the IGZAB's media work and public relations is starting to bear fruits also among science: Some scientists in Germany are becoming interested! The Institute for Technical Acoustic at the Technical University of Berlin (www.tu-berlin.de) is planning an interdisciplinary research project. It shall start within the next two years. It will be headed by Prof. Dr. Brigitte Schulte-Fortkamp, who will be assisted by Dr. Ing. Joachim Feldmann. Main objective is to research criteria for the perception of the Hum. The IGZAB is in contact with the institute. Hum sufferers are planned to be integrated into the research.

[Question:] What is the IGZAB e. V.?

[Answer:] Sufferers originally formed the IGZAB as an informal and independent interest group in February 2001 in Nebringen, near Stuttgart in Germany. On May 17, 2003 the IGZAB held their annual meeting and acted to transfer informal activities to an incorporated association (German: "eingetragener Verein") of the same name. On June 4, 2003 the IGZAB received the official status of a charity by government authority (German:"anerkannte Gemeinnützigkeit") by the Finanzamt Ravensburg, tax number 77052/11521.

Being an official charity gives us the privilege to request public promotion funds, raise membership fees and collect donations to promote research about the Hum problem.

All sufferers hear an unnerving Hum that strongly impairs the quality of their lives, that shakes us out of our sleep, that keeps us awake night after night and has made some of us sick. In severe cases people have become unable to work for their livelihood. In spite of initial research, there is no plausible explanation for the Hum problem yet. But there are serious clues that the Hum does not exist as a noise or sound, but rather comes to be within the body:

- The IGZAB conducted a test with ten sufferers on the same day in the same room. With headphones on, sufferers tuned a sound generator to exactly match their individual hum frequencies. The results showed significant differences between the sufferers and there were even differences between the left and right ear of the same person, although that person had similarly good hearing of both ears. And all frequencies were within the normal range of human perception. The conclusion is that the Hum is not an actual acoustic sound from the outside. If so, the perceived frequencies would be the same, and people with similar hearing ability on both ears would hear it at the same loudness with each ear.

Nevertheless: The cause of the Hum may come from the outside, the environment. This has neither been proven one way or the other yet. All subjective perceptions point to one or more external sources. The same is for Tinnitus patients that are additionally perceiving a Hum and are clearly able to distinguish between both. According to current experience and in all probability the Hum is not a sound. If it comes from outside the cause or causes will certainly be complex. Maybe there are similarities to the manifestation of an allergy - slow and difficult to sort out, but scientifically researchable!

Our foremost goal must be: **The Hum must stop. Immediately!**

Centerpiece of the IGZAB-communication is the web site by our web master:

Elmar Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee
Germany
e-mail: info@igzab.de

If you would like to write us a letter, please include a self-addressed envelope, if possible with valid German postage.

The board of the IGZAB e. V.

1st. Chairperson

Elmar Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee / Germany

2nd. Chairperson

Hans-Jürgen Kraus
An der Salzach 19
75015 Bretten / Germany

Treasurer

Monika Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee / Germany

Secretary

Waltraut Scholz
Karwendelstrasse 11a
82152 Krailling / Germany

Spokesperson for the Press

Matthias Mayer
Im Öschle 11
89143 Blaubeuren / Germany

Chairperson of the Scientific Advisory Board

Dr. Franz Frosch
Auf dem Köppel
67098 Bad Dürkheim / Germany

All board-members can be reached by e-mail: vorstand@igzab.de

Contact persons of the IGZAB in Germany by states/regions:

Bavaria

Waltraut Scholz
Karwendelstrasse 11a
82152 Krailling / Germany
e-mail: bayern@igzab.de

Baden-Württemberg

Elmar Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee / Germany
e-mail: info@igzab.de

Berlin

Anke Pohl
Dorfstrasse 37
15831 Kleinziethen / Germany
e-mail: berlin@igzab.de

Hesse

Ingrid Schmidt-Welt
Zimmermannweg 17
64289 Darmstadt / Germany
e-mail: hessen@igzab.de

North Rhine-Westphalia

Elke Paul
Hochfelder Strasse 29
45478 Mülheim / Germany
e-mail: nrw2@igzab.de

Contact persons of the IGZAB abroad:

Switzerland, in general

Roger Baumgärtner
Rindelstrasse 15
5225 Schneisingen / Switzerland
e-mail: schweiz@igzab.de

Switzerland - St. Gallen

Marta Zogg
Schubertweg 3
9008 St. Gallen / Switzerland
e-mail: st.gallen@igzab.de

Switzerland - Solothurn

Stefan Bader
Hofstatt 20
4522 Rüttenen SO / Switzerland
e-mail: solothurn@igzab.de

Slowenia

Leopold Gregorac
Cegelnica 66
4202 Naclo
E-Mail: leopold.gregorac@igzab.de

The Scientific Advisory Board

The former working group "Physics" was integrated into the Scientific Advisory Board. Current Chairperson is Dr. Franz Frosch, Analytical Chemist and Physicist from Bad Dürkheim. Further member is Roland Pötzsch, Electronics Engineer at the Technical University of Brunswick in Germany.

Main actors are in the field of Physics and Electronics. They have developed some interesting experiments for sufferers. For example a program to reconstruct the hum, so that sufferers can locate and describe the frequency they perceive. Or a construction kit for an infrasound microphone. Furthermore, the Board is contact point and an aid to serious scientists wanting to explore the Hum. We want to help them find possible starting points for research.

Contact:

Chairperson
Dr. Franz Frosch
Auf dem Köppel
67098 Bad Dürkheim / Germany
e-mail: franz.frosch@igzab.de

Working Group Communication

It represents the IGZAB to the public. It mainly concentrates on informing sufferers and the general public by media work, but also optimizes information flow within the IGZAB. The main facts about the IGZAB, the Hum and about new developments are summarized in the press releases on our web site www.brummt.de under "Presseinfo".

Press contact:

Matthias Mayer
Im Öschle 11
89143 Blaubeuren-Gerhausen / Germany
Phone: 0049 (0) 7344 / 2 15 74
Mobile: 0049 (0) 175 / 87 62 440
e-mail: presse@igzab.de

Contact for internal communications, the web site, data-raising and evaluating of questionnaires:

Elmar Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee / Germany
e-mail: info@igzab.de

The working group communication needs help from professional translators, in particular for this web site. We suspect a solution can only be achieved in international cooperation.

Working Group Medicine

We would like to setup a medical working group to examine anatomical and neurological aspects of the Hum problem. We are looking for active helpers.

e-mail: medizin@igzab.de

[Question:] How does the Hum manifest itself?

[Answer:] Sufferers from around the globe use almost identical wording to describe the Hum. They assume the sound to come from a defective refrigerator, or from a diesel engine idling somewhere in the distance. Sufferers in Germany perceive the same.

The Hum-nuisance reaches its greatest loudness mostly after midnight. The tone is perceived much louder in closed rooms than outdoors. It is also perceived in closed parked cars. Some sufferers prefer to sleep outdoors, weather permitting.

The Hum is typically followed by sleep and concentration problems, periodic sweatiness, elevated pulse, pressure on the ears, vibrations on and in the body. The Hum's basis frequency is felt as a low bass tone. This basis frequency is accompanied by a second, (probably amplitude-) modulating frequency. This makes the Hum slowly go up and down.

One IGZAB member reports the Hum to occasionally lose its modulation, and then become a simple continuous tone. Another member believes to distinguish two modulating frequencies.

In many cases a whistling noise has been reported. It has been observed mainly at night for about 10 to 20 seconds. It causes headaches in one sufferer, always in the same spot at the back of her skull.

Almost all Hum-sufferers perceive the Hum as so technically perfect that they assume it to come from an artificial, thus human made origin.

Numerous sufferers additionally perceive vibrating within their bodies, often rising from the feet upwards. These vibrations can take up the whole body including the head, may the person be standing, sitting or lying down. It feels as if the interior of the body were under an electric current. Contrary to muscle twitching which is visible and can be felt from outside, these vibrations are not.

Vibrations need not be perceived together with the Hum, although that is often observed, in particular when it exceeds a certain median loudness. Since the beginning of 2001 vibrations have been observed gaining intensity, changing constantly and being felt also during day time. In heavy cases they cause nausea. One IGZAB-member reports being almost being driven to unconsciousness during particularly problematic nights. Another sufferer reports the vibration intensity increasing twofold when the above mentioned whistling appears.

Evaluated questionnaires show a continuous increase in the number of new sufferers since 1995. Remarkable are the increases of 50 % in 1998, and 65.71 % in 2001 (status of October 2002).

[Question:] What is the IGZAB doing against the Hum?

[Answer:] After the responsible authorities showed little interest at first, we decided to turn to press work. Together with simultaneous publications of other sufferers, about 300 complaints reaching the authorities in the German State of Baden-Württemberg alone and one sufferer being an employee of one of these authorities this resulted in a public examination of the phenomenon in the second half of 2001: Measurements were undertaken by the environmental authority Landesamt für Umweltschutz (LfU) in Karlsruhe. But the results were unsatisfactory, with more questions arising and fewer answers. The IGZAB reacted by open letter and press releases (see www.lfu.baden-wuerttemberg.de and look up "Hot news" and "Pressesinfo" on our web site).

In May 2002 the federal geoscience authority Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) in Hanover conducted measurements under the command of Dr. Manfred Henger, scientific director of the Seismic Data Analysis Center (SDAC): In a remote outdoor location near Blaubeuren he recorded frequencies below 20 Hertz. These frequencies are infrasound and regarded as non-audible for humans. The results of the SDAC analysis are available for public view since the beginning of 2003, see <http://sdac.hannover.bgr.de/web/gndc/infra/schall.html>. They suggest there is no connection between the recorded infrasound and the typical Hum pattern – as it was also perceived by sufferers, who attended the outdoor measurements.

Sufferers and regional contact persons of the IGZAB are repeatedly contacting diverse government authorities. They include the German Federal Ministries for Environment, Health, Defense, and members of European Union authorities as well.

Additionally, an IGZAB activist submitted a charge against a person/institution unknown to the public prosecutor in Stuttgart.

The IGZAB can not solve the problem on its own. Therefore activities should summon the interest of scientists and other experts from technical and medical faculties, and remind politicians of their responsibility towards the public. This may get comprehensive research on its way to eventually achieve our goal of silencing the Hum as soon as possible.

[Question:] How did the IGZAB come to be?

[Answer:] After a press effort of Hum sufferers from Swabia, so many new sufferers reported themselves that one person alone could not possibly cope. We started distributing the work amongst us.

[Question:] Who is financing the IGZAB?

[Answer:] Initially, the costs for home page, phone bills, mail or press releases were paid out of our own private pockets. Now our legal status as a charitable incorporated association (German: "gemeinnütziger eingetragener Verein") gives us the privilege to raise membership fees and collect donations.

[Question:] How can my observations help solving the Hum problem?

[Answer:] Today, we know far too little to silence the Hum. For this reason we have prepared a questionnaire about when, where and how the Hum is perceived. If you are a Hum sufferer, please request a copy. The preferred way is to download it from our web site (see "Download"). If you prefer a hard copy, please send a large (A4/A5) self-addressed envelope to:

Elmar Maronn
Abt-Moser-Strasse 11
88339 Bad Waldsee / Germany

Once you contact with us you will give us personal data, your name for example. The following "Declaration about Protecting Personal Data" shows what we do with such data. Since we have nothing to hide, we have placed that declaration right here below. The IGZAB consists of Hum sufferers, people just like you. We take protection of personal data very seriously.

Declaration about Protecting Personal Data

Raising and using of Data

- If you send us a letter, an e-mail or a filled-out IGZAB questionnaire, we will save it. In other words, we collect personal data.
- Our questionnaire asks for all sorts of entries. Some questions do not have to be answered, if you prefer so. When the questionnaire arrives here, we at least know your address.
- We use the data:
 - a) To put up anonymous statistics. Evaluating questionnaires has proven very helpful already; you may access that on our home page.
 - b) To ask professionally qualified persons to join one of our working groups.

Data transfer to third parties

- The IGZAB will not and under no circumstances sell, rent or otherwise pass-on personal data to third parties!
 - Only exception is if:
 - a) You have expressly given your consent,
 - or
 - b) If we receive a court order to do so.
-

All we can offer in return for receiving your information is to give you our information and our solidarity. This is combined with the hope of finding lasting and competent help.

Even if you are not a Hum sufferer, we would be happy to hear from you, in particular if you can contribute anything substantial (!) to the effort.

We are especially interested in verifiable proof of the first encounter with the Hum. The earliest we know of is in the year 1965 in England.

Our web site is full of compiled information of what we know by now. We are planning a printed brochure in the unspecified future, because many sufferers have no Internet access. We will inform the press when it appears. We continue our media efforts.

[Question:] Is the Hum restricted to certain areas?

[Answer:] We don't really know for sure. A few lucky persons have succeeded escaping the nuisance by living elsewhere.

One sufferer reports losing the Hum on a short trip to Paris. Another is fascinated by a vacation in Cyprus. He had silence there, too. Another IGZAB member did not suffer visiting his friends in Indonesia. When these friends visited him in Germany, they noticed unusual pressure on their ears in the guest room. He himself can not remain in his guest room at night.

Others perceive the Hum everywhere, on an Island or in Egypt. Some of us still heard it deep underground in an extensive cave system in Swabia.

In some cases different locations influence the perception of the Hum. It can take about two days before hearing the Hum at the place of vacation. Upon coming home the Hum seems to have disappeared, but it does not stay that way.

[Question:] Is the Hum result of mass-hysteria?

[Answer:] No.

This thesis was brought up 2001 by a lecturer of Psychosomatic and Psychotherapy in Hamburg during an interview with the German press agency dpa. Various papers printed that under headlines such as "Probably most of all the fear is humming". The lecturer was asked then by a journalist who supported the IGZAB about his knowledge on the subject. The expert said literally "I know the problem only from hearsay". Later on in the Interview, he expressly gave permission to publish that quote. He did lay value on stating that his previous statement on the subject was only a preliminary opinion.

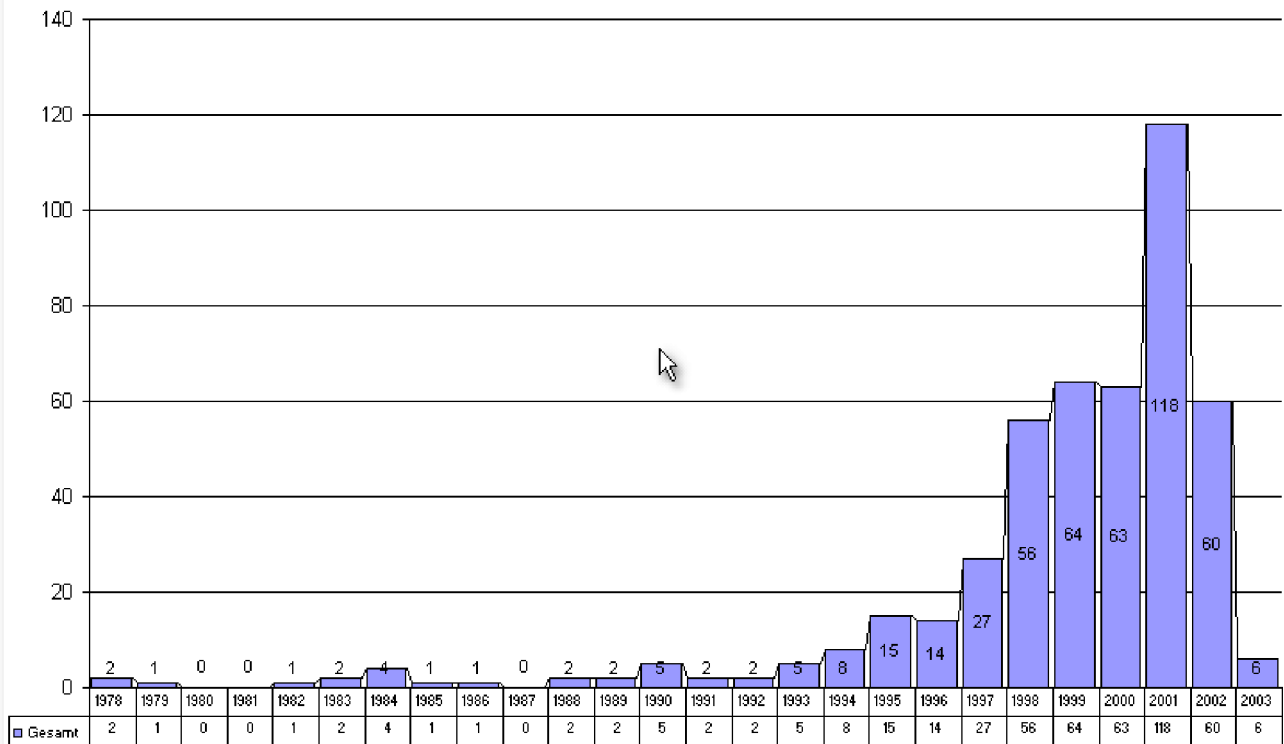
More reports from sufferers are coming in since the first publications, because they previously had nowhere to report to, and therefore nothing was publicly known.

According evaluated questionnaires, the first noticing of the Hum was currently seen as follows:

From 1978 to 1994 an average of only two persons reported hearing the Hum for the first time. Since 1995 there are continuously rising numbers. Remarkable is the rise in 1998 by 107.4 % and 2001 with 87.3 % compared to the year before. In 2002 less people (-49.15 %) reported hearing it for the first time compared to the year before. In 2003 only 6 new sufferers reported by now. Seven persons did or could not state when they heard the Hum first.

© IGZAB - Fragebogenauswertung

Betroffene hören Brummtön seit JJJJ
Stand 14.07.2003



Legend: Analysis of IGZAB questionnaires: First contact with the Hum – Number of sufferers per year. Status: 7-14-2003

[Question:] Could the Hum have medical causes?

[Answer:] Especially some of the more severely suffering have a long history of consulting specialists, unfortunately to no avail.

According to a small series of private tests, German Hum sufferers do not perceive the same tone. The individually recorded Hum frequencies differ. Obviously it is not actually "noise" from the outside, at least not within the human perception range (see chapter: What is the IGZAB e. V.) However: The described and subjectively as "sound" perceived Hum and the vibrations have physical and mental affects, and these are all being described in a very similar way around the globe.

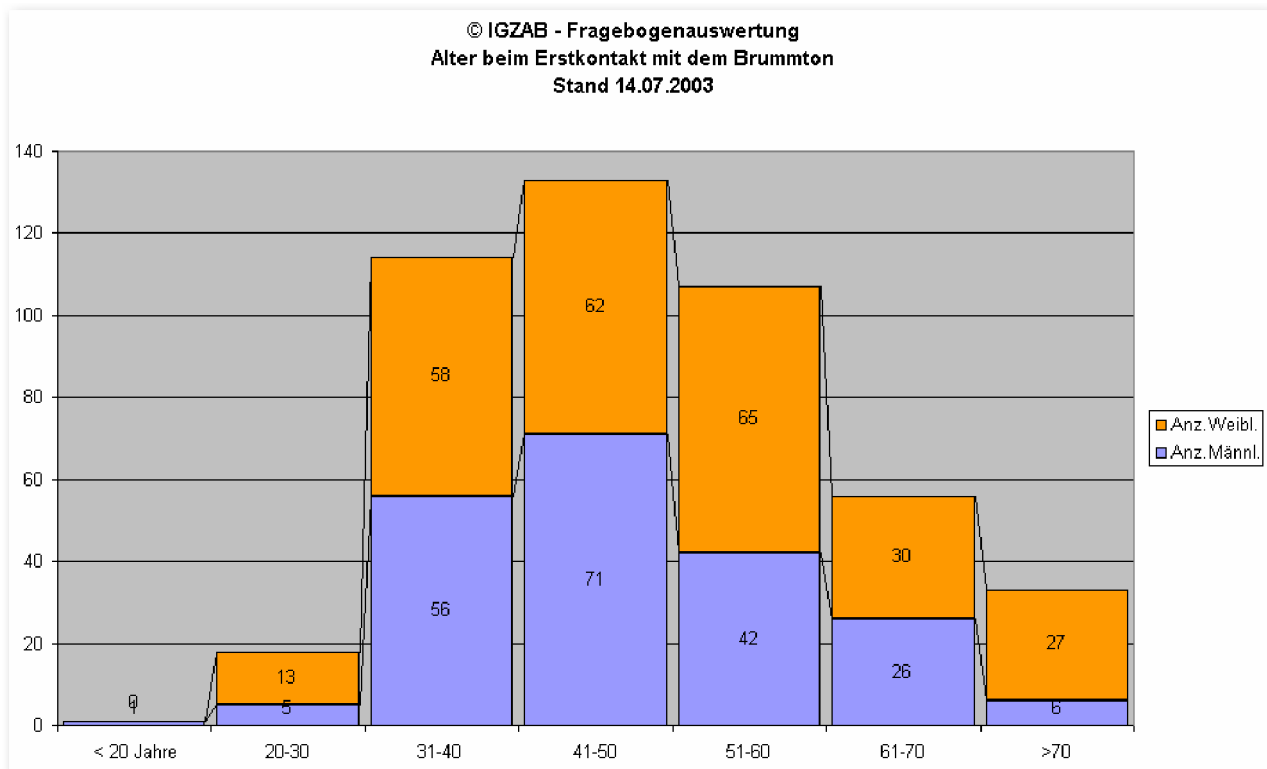
The entire problematic momentarily has three parts:

- Hums with a definite source in the vicinity of the sufferer.
- Endogeneous Hums. A theoretical Hum that the body causes by itself.
- A "Global Hum". According to known descriptions, a Hum is present in many places around the globe. Hums according to b) or c) could be partly or fully identical.

We suspect to meet certain personal factors to perceive it. We have no notion of how and why yet.

It is also unclear why the phenomenon seems to concentrate on certain regions. After many sufferers in the German State of Baden-Württemberg turned to their regional newspaper for help without knowing of each other, we suspect there must be another reason in that area aside from reports in the media.

Current information shows juveniles are less frequently affected as the age group over 40. Our current questionnaires show that most sufferers hear the Hum for the first time around age 50. This is confirmed by observations of Hum reports from Great Britain.



Legend: Analysis of IGZAB questionnaires: First contact with the Hum – Number of sufferers per age. Status: 7-14-2003

Statistical data those graphs are based on is always preliminary, because newly arriving questionnaires add knowledge and optimize our statistics.

It is remarkable that married couples and the inhabitants of entire houses are effected. This could theoretically have completely different reasons that surface in similar forms. This also needs clarification!

Ear, nose and throat examinations have shown that some of us have an extraordinary good hearing for bass tones. There are also a few Tinnitus patients among us, but they draw a clear line between their Tinnitus and the Hum: They perceive their Tinnitus as coming from within, the Hum positively from outside. From Britain we know of another statement with practically the same wording. The sorting between inside/outside is particularly remarkable, because humans have a poor ability for localizing bass tones.

Some, including our youngest can silence the Hum by putting their head under water. In the Internet we saw the note of an American sufferer with the same observation.

A sufferer from Stuttgart became deaf on the same ear, that perceives the Hum: "After an unsuccessful operation I hear almost nothing in my left ear. But I still hear the Hum with it". Her neighbors also hear a (her?) Hum.

Despite hearing the opposite occasionally: A low-frequency Tinnitus seems to be unknown in a review of medical literature. Specialists know of illnesses with similar symptoms, e.g. Morbus Ménière, the acoustic hyper sensibility Hyperacusis or Endolymphfluctuations – a regulation problem of the fluid within the inner ear. But with a proper diagnosis their symptoms do not match the Hum.

Very informative on this subject is:

Rudolf Probst, et al.:
A Review of Otoacoustic Emissions;
J. Acoust. Soc. Am. 89, No 5, May 1991, pp.2027- 2063
here in particular: p. 2038:
II. Spontaneous Otoacoustic Emissions, 4. Frequency

The importance of a careful diagnosis must be emphasized here. Unfortunately there are multiple reasons:

- An extraordinary irresistible drive amongst certain medical specialists to declare our problem – although they know it from hearsay at best – to definitely belong to their faculty.

And the opposite:

- The occasionally and drastically demonstrated unwillingness amongst certain medical specialists refusing to take our problem seriously.
- Inadequate technical facilities in many ear-nose-throat clinics. The cabins for hearing-level tests in the Clinic of the University of Tübingen for example are not sound proof. Patients having to concentrate on extremely weak tones have to ignore conversations in front of their cabin or from a neighboring cabin. You can hear even the click of a camera through the closed cabin! (observed 2001)

British sufferers report they had to ignore the noise of trucks roaring down the road. Generally speaking, the frequency range of standard examination apparatus (e.g.. headphones) does not extend low enough to get a reasonable picture of our hearing capacity in that frequency range. This is especially important for our problem and the associated low tones. Although laymen can easily recognize obvious methodological deficits, data generated by such methods is used as the basis for decisions by politics and authorities ...

The medical picture remains unclear. Since earplugs or sticking fingers in ears does not help, we must also consider endogen causes.

Outsiders often suggest that excellent hearing for bass tones brings about a sort of feedback effect with body-noises, especially when other noises from the outside subside. The heavily suffering think this is not plausible, because they hear the Hum amidst background noises, too.

On the other side, sudden noises can distract the lesser affected from the Hum for a short while. The core question remains: Do both groups have the same problem?

One specialist advised us to look for a tremor or shivering of the Musculus Tensor Tympani in the inner ear. That should be acoustically recognizable by comparatively simple means.

Remarkable is the approach of the British acoustic specialist Dr. David Manley, head of the "Low Frequency Noise Sufferers Association 2000" (LFNSA). He declares: "We believe it originates in the nerve system. We believe, the entire body acts as an ear."

At least, hardly one of us believes so far, that the Hum is a sign or symptom of any illness.

But we have overwhelming proof that the Hum causes illness. In this context, it troubles us to bear:

- “Acoustic” harassment year after year.
- Lack of sufficient sleep year after year.
- Shaking muscles (vibrations), that in extreme cases put some of us on the brink of unconsciousness.
- Three suicides in England.
According to reports, all three suicides are closely connected to, and probably caused by the Hum. The Bristol City Council confirmed one of the cases (the others were not in Bristol) to a German journalist. Victoria Brasher of the Bristol City Council /Corporate Communications Office suspects the deceased may have had a mental illness. If that was a result of his Hum is not known.
- The suspicion we may be hysterics.
A problem the majority fails to recognize, is quickly put aside as "Hysteria" or make believe. This is an enormous burden for a solitary sufferer. It is also problematic where only one of a couple perceives the Hum. This can jeopardize the stability of a relationship.

Many of us wept for relief when they found out there were others with the same problem. Some had believed they were losing their mind. We must thank the first ones of us for their courage, who dared to go public.

We summon all sufferers to join them and step into public sight. This is the only way we can convince politicians and authorities that the problem needs comprehensive, serious research. If you don't have enough courage, at least get in contact with us. Hum can overtax an individual. The only way forward is together.

Hum sufferers that refuse getting involved delay a solution of their problem!

Our contact address and the Declaration about Protecting Personal Data are further up on this document, under the question "How can my observations help solving the Hum problem?".

- The Hum as a projection surface.
Unfortunately, our problem provides an excellent projection surface for phobias and mental problems. In extreme cases this can be paranoia. To speak out clearly: We do not believe in conspiracy theories. Instead we hope to reduce fear by a growing amount of information and contact among sufferers, in order to come to a constructive solution.

[Question:] Does the IGZAB have any leads to external causes of the Hum?

[Answer:] In September 2001 there was an interesting phone-conversation between two sufferers in Hamburg. "I already know why you're calling!", said one of the ladies: "Last night was the first in a long time without the Hum!" The caller confirmed. They live about 13 kilometers apart.

On the 19th of August 2001 at 10:44 p.m. six persons in Baden-Württemberg perceived a sudden whistling noise. It lasted about 10 to 20 seconds. That the Hum is accompanied by a whistle for a while is nothing unusual. In this case it was heard in Bretten, Tailfingen and Schönberg. Two sufferers were on the phone with each other when the whistling started.

Note well: These are not scientific observations. They can not be scientific proof for the correctness of an assumption.

Since we know of several similar clues, we want to get to the bottom of this with an observation network. Working title "Hum Diary".

As mentioned earlier, we suspect a personal disposition in combination with an external influence. We would like to mention two transmission methods: infrasound and electromagnetic waves.

The greater loudness of the Hum suggests a resonance phenomenon. Infrasound would be an ideal medium for that. Acoustic measurements by the authority "Gewerbeaufsichtsamt" in Stuttgart proved this in one case: Measurements were conducted on Friday, 19th November 1999 between 4:30 and 5:30 a.m. Outdoor temperature was 2° C. and it was almost wind still. A Norsonic Sound Analyzer, type 110KI.1, was used. The instrument was calibrated to the lowest range. Measuring cycles were about 2 minutes each. Results were in dB L (linear). It was setup in the house of a sufferer, and detected a tone of 8 Hz at 79,8 dB (L) sound pressure level.

The abbreviation dB for decibel describes the sound pressure, or in others words the loudness, also called amplitude or level of a sound.

(L) means to measure linear and unweighted. Those measurements do not take the average human hearing as criterion but just record the existing sound pressure. In English it is called sound pressure level, abbreviated SPL instead of L like in German. Unweighted measurements are the best way to register low frequency noises.

The measured frequency of 8 Hz (8 oscillations per second) is infrasound, normally not audible for humans. During the measurements in Tailfingen, higher audible frequencies were also present, but with less SPL. Combinations of audible and inaudible sound are commonplace. It helps finding the source, because you can follow your ears.

The levels at Tailfingen seem remarkable for a small village at sleep. As of October 2001, with other measurements of positive outcome in Swabia that always were under the legal limit, no Hum source was found, neither in the house nor outside.

Extremely long wave infrasound with a sufficient amplitude can easily travel thousands of kilometers. The measured 8 Hertz belong to the upper infrasound range (Near Infrasound) and those generally carry just a few hundred meters from the source, usually an artificial one. Perhaps technical reasons within the equipment prevented finding the source; it is difficult to measure infrasound out in the open.

Hum sufferers report similarly when they describe the Hum and associated physical effects. That figures they must all be suffering from one common or practically identical source.

Since special infrasound protection suits for workers are available, it should be possible to find out if infrasound is conveying the Hum.

Probably a high pressure chamber as used by divers could be of help.

Electromagnetic Waves

Another theory is based on the fact that Hum reaches maximum loudness at night. Many of us are woken at 2:30 a.m. That leads to the question if electromagnetic waves may be involved. These can be reflected by the ionosphere, usually best after nightfall. Radio listeners and ham radio operators are familiar with this effect.

Electromagnetic transmittal of the Hum by (partly?) passing the regular hearing system is quite possible. Nature gives examples for this with the audible effects during the Northern Lights (Aurora borealis) and when meteorites enter the atmosphere. Both phenomena can cause the perception of tones in the head. These tones are not transported by sound pressure in air (!) but rather by electromagnetic waves into the nerve system. Therefore these tones can not be called sound.

Summary of latest research on this matter:
New Scientist, 6.1.2001, p.15 ff.

The American scientist Allen H. Frey already demonstrated similar "live transmissions" under lab conditions in the early sixties. The result of his experiments at Cornell University, N.Y.: "By certain types of modulation, perception of various tones can be induced over distances of several hundred yards in clinically deaf and normal hearing persons". Frey also reported what was heard: "According to adjustment, the tone is described as clicking, hissing, knocking or humming".

Frey, Allen H.:
Human Auditory Systems Response to Modulated Electromagnetic Energy;
in: J. Appl, Physiol. 17 (4): 689-692. 1962-

The question in this case remains: Where would such waves come from?

It is quite possible that these thoughts are superfluous: Research in Taos/New Mexico, USA, did not suggest infrasound or electromagnetic waves to be the carrier medium for the Hum. More about that below, under "Does the German (Central European) Hum show parallels to the famous Taos-Hum"?

The TÜV organization in the German State of Thuringia came to the conclusion after measurements in the house of one sufferer, that electric or electromagnetic waves "are definitely to exclude" as cause for the Hum. The engineers heard a Hum, too, and defined it as infrasound. The source remained unknown.

There is a further problem trying to link the Hum with electromagnetic waves: If the Hum is caused by perception of electromagnetic waves of low frequency, especially sensitive persons would not bear being in the vicinity of a transformer or certain medical diagnostic equipment. A few IGZAB-members are electro sensitive persons, but appropriate observances have not been reported to us yet.

An interesting experiment would be to stay in a room that is fully shielded against magnetic fields. Such rooms are normally used for examination of human brain functions.

[Question:] Which external causes does the IGZAB exclude?

[Answer:] We presume following causes are not involved in the Hum:

- All factories in Europe running generally synchronized
- Gas pipelines including pump stations
- Heating systems
- Sound of Sea
- Water pipes
- Wind generators
- 16 ²/₃ Hz frequency in the power lines of the German Railway (Deutsche Bahn AG)
- Schumann Resonance including harmonics
- Change in general mains voltage, e.g. from 220 to 230 Volt AC

[Question:] What does the IGZAB want to learn more about?

[Answer:] " Methodology of science should be falsification instead of verification!" said the Philosopher Karl Popper. Accordingly, we would like be able to exclude following sources:

- Generally increase in electrosmog
- Guiding systems for air traffic
- Mobile phone networks
- Terrestrial communications
- Civilian and military communication systems, e.g. LORAN -C / NELS
- Civilian and military satellites

[Question:] Does the IGZAB have an opinion to the various theories about the Hum, such as are in general circulation on the Internet?

[Answer:] The IGZAB presumes only serious scientists can help. Esoterics, wonder healers, self-appointed pseudo scientists, spaced out freaks, witches, etc. are not what we need. This does not mean blindly taking established science as a religious replacement. History shows: Also scientists have their share in dangerous nonsense.

In this context we would like to name two frequently voiced suspicions: The US-American experiment HF Active Auroral Ionospheric Research Program (HAARP), or the US-Marine's submarine communications system working with Extreme Long Frequencies (ELF).

We know, that the European Parliament has demanded – with no success yet – a moratorium on HAARP and wants independent research about alleged risks.

Resolution No. A4-005/1999
of the European Parliament, voted on the 28th of Jan. 1999
published on 7th of May 1999

We know as fact, that the US-Marine's ELF-system for communicating to submerged submarines has impacts on vegetation.

"Verändertes Wachstum durch Radiowellen"
(Changed Growth through Radio Waves),
in daily newspaper Frankfurter Allgemeine Zeitung, 8th of March 1995, p. N2

We can not positively identify connections with our problem in any one of these two points yet. Furthermore, the results in the Taos investigation clearly do not point in this direction. More to that further down under "Does the German (Central European) Hum show parallels to the famous Taos-Hum?" As pointed out earlier, we know that the unknown is a popular projection surface for all sorts of anxieties, phobias and deficits. Instead of speculating or putting forward improvable allegations, we prefer to look at science. Everything else would be a waste of our limited energy.

[Question:] Do other countries have a Hum problem?

[Answer:] If not the same, then a frighteningly similar one.

Australia: A student near Darwin reported that an official inspector measured stubborn low frequency noise at her place without finding the source. The young Lady also suffers from Tinnitus. Other people hear the Hum in that area, too. She asks: "How can clear and independently thinking people get to the bottom of this? I had a few terribly bad nights, so I was getting ready to scream. We must fight it!"

Austria: Our press speaker met villagers in Kärnten that know about the Hum.

Belgium: No reports yet.

Canada: "I have experienced similar in Canada", wrote a B. C. (full name known).

Denmark: So many Hum sufferers complained to their newspapers that the University of Aalborg started a questionnaire in 2000. It went to all communities throughout the entire kingdom. After about 200 had given similar answers, the Institute of Electronic Systems at the University of Aalborg looked into the problem. We are impatiently waiting on the results, especially since the group in Aalborg around Henrik Møller and Morten Lydolf have been researching low frequency noise and vibrations for years, and their methodology is different from that in Baden-Württemberg. After initial financing seem to be secured, the Danes would start if they could find an experienced acoustic engineer for that job. Morten Lydolf said to us, that some of the complaints seem to concentrate on an area north of Copenhagen. There already is a group in Denmark called "Infraalydens Fjender" (Infrasound Enemies).

France: There are reports of a Hum quite similar to ours from Alsace.

Great Britain: Has Hum problems since 1965. A few report a Hum in London in the early forties already. A Low Frequency Noise Sufferers Association was founded in 1989, and refounded in 2000. They are looking for competent scientific help, just as we do.

Ireland: We received an e-mail of a Hum sufferer from Mayo in the west of Ireland. The problem sounds similar.

Luxembourg: There are Hum sufferers, too.

Netherlands: Low frequency "Noise that only you hear" (Title of a flyer) is a problem around Rotterdam. Due to the continuously rising number of complaints, the authority DCMR Milieudienst

Rymond has set up a unique and representative help system. There is, among other activities, a 24-hour-service to attend to sufferers and localize low frequency noise nuisance. The intervention teams have a database (MIRR) at their service. It contains information about 25.000 factories of the region, and of the normal acoustic "climate" in residential areas. The DCMR know many good reasons for swiftly looking after complaints about low frequency noise. Most important is:

"Health complaints take time to develop. Waiting for epidemic numbers wastes time". Also the Dutch have cases they can not solve. But the way they follow up complaints is so exemplary that German authorities should be ashamed of the way they handle the Hum problem (we especially remember cases in Hamburg and Bavaria). The DCMR flyer ends with the line: "People suffering from low frequency noise are uniting!".

Sweden: As in many other places, the problem is being treated as "low frequency noise". The environmental physician Kerstin Persson-Waye from the University of Göteborg wants a European-wide investigation. This could be possible financed by European funds and more easily imposed with German scientists on board. A survey amongst representatives of the Swedish Health Authorities in 2000 found out: 30 % of all noise complaints are about low frequencies. Amongst those asked, 40 % even stated, noise complaints about low frequencies level to 50 % and above. There seems to be an increase among these complaints in Sweden.

Switzerland: Following an article in the newspaper "Weltwoche" we know of Swiss Hum sufferers.

We have no reports from eastern Europe. This could be due to language barriers, or because the Internet is not ubiquitous there yet.

USA: According to the Internet, "The Hum" is known in many States. In the early 90's New Mexico was intensively affected. More to that further down under "Does the German (Central European) Hum show parallels to the famous Taos-Hum?" New press reports are about a Hum in Kokomo, Indiana.

[Question:] Is the IGZAB in contact with similar groups of other countries?

[Answer:] Not yet. We shall when we know our "tone" well enough to compare it with others. We do like to establish contact with Hum sufferers from other countries, because we can learn from each other. If it seems probable that Hum sufferers from different countries are all suffering from the same, then we must bundle our efforts. Single national efforts would then be counterproductive.

[Question:] Does the German (Central European) Hum show parallels to the famous Taos-Hum?

[Answer:] We are not sure. The Taos-Hum was researched thoroughly in May 1993. Sufferers around the community of Don Fernando de Taos, New Mexico, describe something very similar.

We talked to the head of the research group, the high energy physicist Joe H. Mullins, then Dean of the Faculty of Machinery Engineering at the University of Albuquerque, New Mexico. His team of scientists from leading US-research institutes was formed after sufferers called their congress member for help.

They researched everything in Taos what may have been source or carrier medium: Electromagnetism, earth magnetism, further geophysical phenomenon, acoustic frequencies including infrasound, and even electrostatic of the region.
Result: None of the results fitted to the sufferer's perceived Hum.

Parallel to measurements, ten Hum suffering musicians replicated their Hum. They had an amplitude modulating audio generator driving a loudspeaker. They could adjust three parameters: Frequency,

modulation frequency and volume. The result: Each had adjusted a different individual Hum frequency. All ten frequencies ranged between 32 and 80 Hertz, modulation frequency between 0.5 and 2 Hertz, loudness between 29 and 62 dB (SPL / sound pressure level). So each had recognized a different Hum tone and associated loudness!

All measurements were made at the same location. Background noise between 1 and 200 Hertz was recorded parallel to the measurements. It showed: In each case, the Hum was at least 15 to 20 dB louder than the background noises in its same frequency ranges. That proves: The musicians did not filter their Hums out of the background noises, since their Hums were louder.

Just as remarkable: As soon as the adjusted tone from the audio generator came close to the individual Hum frequency, the musicians noticed beats * that develop between two neighboring frequencies. That means, the replicated tones interacted with the perceived Hums, between both had started rhythmic variations in volume. Most remarkably again is that there was only one external source, the audio generator. The Hum, acting as the other source, could not be detected in the ambient background noise. In their final report, the scientists stated that such interactions were unknown in similar tests with Tinnitus patients.

(*Guitar players know of comparable effects tuning guitars with the help of overtones (Flageoletts). Beats show that both frequencies are getting quite similar. When tuned exactly, beats disappear.)

A summary of the Taos investigation:

Joe H. Mullins, James P. Kelly: Environmental Noise;
McGraw-Hill Yearbook of Science & Technology 1998, p.120 ff.

Joe Mullins' co-author was James P. Kelly, the hearing specialist of the team (then at University of Albuquerque). To find out where the Hum "couples" onto the hearing, Kelly would have liked to compare the inner ear of Hum sufferers with non-sufferers. Unfortunately, funding was a problem. Our American co-sufferers had been left alone with their problem ...

Our web site contains a little chronology under the title "Von Nacht zu Nacht" in German language. In the years 1989 to 1994 it contains further information about the Taos-Hum of New Mexico.

[Question:] Is there any hope?

[Answer:] We had contact with a sufferer from Great Britain. She lost the Hum after a decade of prolonged aggravation. She does not know how or why.

[Question:] What can we do against the Hum right now?

[Answer:] Tinnitus patients know an answer already: Autogenous training. It does not work with everyone, but a good try seems very much worthwhile. "You can build up a certain feeling of carelessness," states IGZAB-member Elmar Maronn.

Some find it helpful to overtone the Hum. Some use soft music, other try the hiss between stations of an FM radio. Others try sleeping with the noise of an air moisturizer, a little fountain or a ventilator. Some hear music by pillows with a built-in speaker. All this helps only in minor cases.

[Question:] How can I help to solve the problem?

[Answer:] Hum sufferers refusing to get involved delay a solution of their problem!

- 1.) The Hum can only be fought by an interdisciplinary effort. Considering the necessary funding, only government help will succeed. It is necessary that you turn to your authorities for help. They need to be pointed towards the problem, because they will not turn to it by themselves. These authorities may be environmental, business, health, etc. We can only expect real help when authorities see the whole scope of the problem.

When you submit a complaint, be sure to make it in writing! This creates a precedent they have to react to. A phone call is quickly forgotten.

The mass makes it. Only if they get enough complaints will they start thinking what to do. Everyone's voice counts. Hum sufferers refusing to get involved delay a solution!

- 2.) Get involved with the IGZAB e. V.! There are numerous things to do:
 - Please download our questionnaire and return it filled out. The better we know the problem, the quicker we can get things moving.
 - Perhaps you can establish a regional group, wherever you are. Keep in contact to each other. Talking from face to face helps. Try to convince authorities and press that there is a serious problem.
 - We want to build up a network of Hum sufferers that act as observers. All participants will have to perform some very simple tasks, but will have to keep strictly to schedule for a few months.
 - We are looking for physicians, physicists, neurologists and other highly qualified specialists for our working groups and the Scientific Advisory Board. Main goal of these groups is to clear the ground for competent and swift research. Non-sufferers are most welcome. We have one thing to ask: Experience from other countries shows that this can take quite some time. We prefer helpers with stamina.
 - Our Communications group desperately needs translators for other European languages. We want to build and maintain contact with suffers from other countries. We want to exchange experiences and views. We want to integrate them into our observation network, and would like to participate in theirs.

By the way, we have no riches to hand out. But we do have hope of obtaining a little public funding, especially after our interest group has grown into an incorporated association and received the official status of a charity (German: Gemeinnützigkeit). We can give donors a statement for tax exemption for German tax authorities.

The best we can do at present is to give solidarity and the hope of ending the nerve racking Hum.

[Question:] What does the IGZAB ask of its members and followers?

[Answer:] We have a minimal consensus based on our principles:

Principles of the IGZAB e. V.

The IGZAB e. V. is a community of sufferers of a unexplainable Hum. We are normal citizens with a very abnormal problem that strongly impairs the quality of our lives and has made some of us quite sick.

Our utmost goal is: The Hum must stop. Immediately!

Negative experience with similar (identical?) phenomena in Great Britain and the USA clearly show that this task can only be accomplished with sufficient financing and competent scientists and experts.

We suspect that there must be cooperation between various disciplines. Cost of interdisciplinary exploration usually adds up to millions! Governments have to protect their inhabitants, but in times of very limited resources, expenditure is closely watched. Governments need to recognize very good reasons before spending that kind of money on research programs for a minority. Hum sufferers are a minority, although it seems plausible that the problem can also harm those, that do not consciously suffer from it.

Therefore, first priority for Hum sufferers is: Stick to the facts!

The IGZAB asks its members and followers to stay with the facts and away from speculations about possible causes in public. We do not know the cause(s) yet. As long as we have to put up with the Hum nuisance, the media and public will have to put up with the fact that we will not be part of speculations. Most of us are not experts in complementing scientific disciplines. Therefore, there is an immense danger stemming from a few unqualified opinions in public, making all of us look fully ridiculous. There will never be public support for unqualified nonsense, and we need public support.

We will only get public support if we refrain from the stupid kind of nonsense, that some media would love to see us in.

For this reason we have no desire of cooperation with esoterics, followers of world conspiracy theories, etc.

Furthermore, we distance ourselves from all those wanting to capitalize on our problem. This includes publishers of pseudo scientific garbage, or attempts by uninformed scientists to profile themselves in the media by making rubbishy statements based on hearsay about the Hum problem.

Our strategy is quite simple:

We want to clear the ground for competent research leading to a quick end of the Hum.

We progress as follows:

We bundle others with the same problem to make outsiders understand its urgency.

We collect information, also from experiments and observances.

We try to keep sufferers and the interested public equally well informed in this matter, by means of internal communications and by press effort.

We establish working groups. They should help lay paths for interested scientists wanting to solve our problem, which probably can only be done by international cooperation.

For us the consequence is: Hum sufferers that don't get involved delay a solution!

IGZAB e. V. , 20th of July 2003

Copyright regulations:

Please observe our Copyright:

All graphics, scripts and texts of the Internet offering www.igzab.de or www.brummt.de are, if not stated otherwise, subject to copyright of the IGZAB e. V. Without our expressly stated written consent they shall not be copied on the whole or in part.

Suggested bibliographic readings appear between lines as these. They should be available at medium-sized university libraries in Germany and most other countries. On our web site we offer a bibliography about the Hum and related topics. We do not guarantee it to be comprehensive.
