

## **Burkhard Heim, His Institute and His Legacy**

By Holger-Detlef Klein

At the end of April 2011 an old half-timber house in Northeim became the center of attention for a short time. This was the former institute building of Northeim physicist Burkhard Heim (born on February 9, 1925 in Potsdam, who died on 14th January 2001 in Northeim), as already reported in the Northeim Yearbook for 2009.

One of the rooms of this building at Wilhelmstrasse 25 was used for chemical storage with a total weight of about 35 kilograms of substances. About 15 kilograms of which were labeled and could be identified. The chemicals were probably purchased around 1970. Some substances were stored in metal containers which, over the course of 40 years had become corroded. Because the chemicals were flammable substances as well as fire accelerants, this was reported to authorities. The report was made on Friday the 30th of April 2011, and this led to a large-scale operation by the Northeim Fire Brigade, in which all chemicals had to be disposed of as salvage. This caused Wilhelmstrasse to be completely blocked off for half a day as the Northeim press reported in detail.

In the following I would like to describe briefly how this happened and why the mysteries having to do with this institution existed.

Shortly before the tenth anniversary of Heim's death in Northeim there appeared in November 2010 a book published by Scorpio-Publishing entitled "*Burkhard Heim - The Life of a Forgotten Genius* " by Illobrand von Ludwiger. In this book it was shown that there were still significant parts of the scientific legacy of Heim that were left in Northeim in a state of disrepair. A request to the City of Northeim revealed that the representatives of the city saw this with concern, however the town could do almost nothing, as all rights to the estate were in private hands and the heiress did not respond to inquiries by the city. It looked bleak for Heim's estate.

The turning point came in March 2011: Suddenly, the former Institute building of Heim at Wilhelmstrasse 25 in Northeim was put up for sale by the company Willmer Real Estate. I took this opportunity to visit the building, and to clarify the entire estate situation as far as possible. With the helpful cooperation of Sieghard Willmer and the consent of the owner Mrs. Hartung, I finally got permission to search the house on Wednesday, April 28, 2011 for remaining documents and to transfer any of scientific

value to the city archives. On this occasion I salvaged so many documents that my passenger car trunk was filled. They would otherwise have been lost forever. Likewise, I discovered the above mentioned chemical storage room and reported this to the authorities.

### **The former Institute building of Burkhard Heim**

The old house at Wilhelmstr 25, 37154 Northeim lies at the southern edge of old town on a 916 square-meter property directly opposite the "*Theater of the Night*", a 1998-2001 puppet theater converted from a former fire station. It was originally the home of Burkhard Heim's mother, Marie Heim, born as Marie Warneboldt (1896-1985). It was built in 1889 by the grandfather of Marie Warneboldt, Louis Warneboldt (1851-1931), who was a teacher in Northeim.



Figure. 1: The house at Wilhelmstrasse 25 in January 2009 (Photo: Klein)

The building has a floor space of approximately 110 square meters, has two full floors plus a loft and full basement. The ground floor was the apartment of the family home, in which Burkhard Heim first lived after the war. It was during the war that he was seriously injured. While doing

research in the Chemisch-Technische Reichsanstalt in Berlin in 1944, there was a large explosion, in which Heim lost both hands and much of his eyesight and hearing. In October 1950 he married the concert singer Gerda Straube (1922-2006). Since the apartment was too small the young couple moved to Göttingen.

In 1954, Heim submitted his oral diploma examinations to the University of Göttingen and began attending the Max-Planck-Institute in Göttingen where he worked on his thesis, which he completed in 1956, earning the Physics Diploma degree. In the same year he taught in the house on Wilhelmstrasse 25 in Northeim in the ground floor laboratory in which he also attempted to experimentally verify for several years an effect that his theory had predicted.

Heim founded the "*Research Institute for Dynamic Contrabarie and Astronautics Association*" in 1958 together with Helmut Goeckel at his suggestion, with the formal headquarters in Wiesbaden. Goeckel came from Wiesbaden and also lived there. The experiments were, however, carried out in Northeim in the laboratory on the ground floor. Heim split with Goeckel however, and this institute was disbanded in 1964 and replaced by the foundation "*German Research Institute for Force-Field Physics and General Cosmology*" with headquarters in Northeim. This Institute covered the entire ground floor. Heim worked there on his theory and he carried out experiments together with his colleague Wolf-Dieter Schott. Schott left the Institute in early 1972, and after that the premises were only used by Heim.

In 1971, Heim bought a condominium about 100 meters away at Schillerstrasse 2. , which he occupied until his death. Throughout his life he had hoped to be able to re-occupy his institute. Burkhard Heim died on January 14, 2001 in the hospital in Northeim. After the death of his widow Gerda in October 2006, the buildings became the ownership of Heim's adopted daughter Ingrid Hartung (1940 -2011).

In the spring of 2007, Illobrand v. Ludwiger saved from the basement of the house a large part of Heim's correspondence, about the extent of a car trunk full, of documents so that his Heim biography which was published in 2010 could be completed. Also, all of the "Contrabator" apparatus, parts of the measuring system and a blackboard, which still contained Heim's calculations, were acquired. These items are, however, now only of value to a museum.

Figure 2:  
Sign on the house at  
25 Wilhelmstrasse  
“German Research  
Institute for Force Field  
Physics and General  
Cosmology”  
(Photo: Klein, 2009)



Sometime during the following years, actions similar to vandalism occurred in the rooms on the ground floor, where almost all the furniture was overturned and heaters and electrical installations in the walls were torn out. Windows were not smashed, so that these actions were not visible from the outside. The building was still inhabited until the end of 2009 with the exception of the ground floor. In December 2009, there was further significant damage inside the house caused by water damage. A burst pipe on the first floor caused the interior to be flooded which caused a layer of clay to partially break down. Although the structure of the building was not affected by this damage, the remaining inventory was largely covered with a greasy layer of clay and in the walls and wallpaper a mold had grown in the moist atmosphere. Of course, the estate documents were also affected, many of which were damp and infested with mold and mildew. They had to be dried out and prepared before an accurate evaluation was possible. For the preservation of the estate the acts of vandalism actually proved to be helpful since a number of documents were protected by the overturned shelves from the lumb mass dripping from the ceiling.

In this condition the house was offered for sale in March 2011. The building was not listed, because of the dangerous state caused by the internal water damage. The cost for renovation of the building is probably higher than the cost of a new building.

## Work at the Heim Institute

After this description of the building there remains the question of what exactly the Heim Institute was working on and what the dangerous chemicals were used for. One can state this briefly in one sentence: Heim wanted an experimental verification of his theory to provide proof of its predictions.

But there are also other problems, because, first of all it must be asked, what does Heim's theory consist of. It is worth considering that Heim had worked consistently on his theory for over thirty years. So now it is a highly complex theory which has gone far beyond the purely physical problems it sought to address. We need to focus here on only that part of this theory which is involved directly in the experiments which his Institute was investigating. To understand just this small fraction is very difficult even with a university degree in physics and mathematics. However, if one allows for some simplifications at least a "common theme" can be followed.

Albert Einstein's general relativity theory is one of the great achievements of physics. Einstein's great discovery was that the gravity is directly related to space. It is a sort of property of space. To describe this relationship Einstein, in his general relativity theory, recognized only the simplest math this description allows. For the layman, this sounds like a joke, because this "simple" math is actually already extremely complex.

He had, however, only described gravity, however there are also the electro-magnetic forces which were not described. Einstein later tried to combine both these forces in a single theory, but he was unsuccessful. And this happened to many other great scientists, for example Hilbert, Weyl, Cartan, Kaluza, Klein and Eddington. Now, Heim said when so many bright minds failed in that attempt, then it must not be possible to formulate the theory using this approach. You have to do it differently. So he did not even try to combine electromagnetism with the theory of relativity, but from the very start took another path. Heim has used a much more complicated mathematical structure than Einstein recognized so that electromagnetism can be incorporated in his theory.

Again to clarify, because this is shown over and over to be true: Heim's theory is **not** based on the theory of relativity of Einstein and does not in any way use it. Heim never said that relativity theory is wrong or incomplete. He just said that while Einstein's approach was straightforward, it did not describe all possible interactions.

From his own theory, he could now predict new, as yet unseen effects. In physics, a theory is measured by how well its predictions agree with the experimental data. Heim was trying to obtain evidence of this experimental confirmation at the Heim Institute.

Heim's theory resulted in two major predictions:

1. First, electrically neutral rotating masses will produce a magnetic field.
2. Second, under special conditions electromagnetic radiation can be converted directly into mechanical acceleration similar to gravity.

It was not possible to check his first prediction experimentally, because at that time the measurement would have taken a mass as large as a planet to verify the effect. He found however from this part of his theory, an explanation for the magnetic field of the earth.

To his second prediction he gave a name, he called it the "*Contrabarcic Effect*". Heim now speculated that this "*Contrabarcic Effect*" may be suitable for use as the basis of a powerful antigravity drive for spacecraft. He aroused much attention in the mid to late fifties with this speculation. He gave lectures and attracted the attention of the press. He wanted to obtain financing for experiments he was planning to verify this part of the theory.

However the press developed this story in a sensational manner and concocted a story that the Heim Institute was developing a "*flying saucer*".

In fact, he tried with very limited and primitive means, to develop a sufficiently sensitive measurement to verify the effect. He used a very delicate balance so that the weight of a sample mass, which should change slightly when this sample is suspended over his experimental apparatus, could be detected when the experimental device (the "*Contrabarcator*") is turned on and off.

The first attempt failed completely, because Heim needed a microwave generator for his experiment to succeed, however he could not afford to buy a microwave generator. Today these devices exist in the form of microwave ovens in kitchens in huge numbers, but at that time such a device was hardly affordable. Also, further experiments led to no clear result.

Later Heim worked on the idea that the desired effect must also appear in certain crystals and can be optically detected. To make these special crystals he used the chemicals. Unfortunately, he did not proceed past his preliminary tests, however, these tests were very promising. Heim's

coworker, Wolf-Dieter Schott left the Institute in 1972. He had since married and together with his wife purchased a property in Hanover. Now he needed to earn more money than he could while at the Heim Institute. Without competent help, Heim could not continue his experiments because of his severe disabilities.

There was always much speculation about why Heim ever founded an institute. For his theoretical work a blackboard and later a powerful enough computer would be all that is necessary. As a severely handicapped person without hands, nearly blind and at times almost deaf, he could not experiment without expert help. If he had published his ideas earlier and had left experimental evidence for others to verify, it is argued, he might have won the Nobel Prize.

However, Heim placed no value on fame, wealth and honors. He only wanted to give a correct description of nature. Certainly he was also plagued by his own doubts about whether his theory was really correct. The only remedy for such doubts are the experiments. Possibly he was afraid that a trivial error in a publication would end his work with the scientific world. We are unsure of his real reasons and will probably never know why the institute was founded and must just accept it as a historical fact.

### **The current estate situation**

In the following, estate will be understood to refer only that part of the estate of scientific interest, especially the estate concerning Heim's Theory. The actual estate situation proves to be extraordinarily complicated.

Burkhard Heim was laid to rest on January 19, 2001 at the Northeim Cemetery (Lot 45, grave No. 50/51) by his longtime friend and publisher Father Prof. Dr. Resch. Father Prof. Resch suggested that the complete works of Burkhard Heim (including unpublished work) be transferred to a foundation and this material be fully cataloged, and to make it accessible to researchers interested in it in a protected setting. This proposal received broad support but has been implemented only in a very limited scope.

Shortly after the funeral, the "*Working Group on Heim Theory*" in Innsbruck was founded as a section of IGW. IGW was founded by the Father Prof. Resch as the "*Institute for Frontier Questions of Science*", also based in Innsbruck.

The Working Group focused in particular on the working papers of Heim, available as so-called notebooks, some of which Heim's widow handed

over to Father Resch. These are in the form of account books, which Heim's father had made entries into at the family home. These entries are what were dictated by Heim to his father, because Heim could not write them himself. The scope of these notebooks is about 4200 pages (Heim himself estimated the size of these notebooks as being 27 volumes with 300 pages, therefore amounting to 8100 pages).

In addition, the Working Group has the *script "Syntrometric Maximum-Telecentric"* amounting to about 330 typewritten pages, which Heim presented in 1972 at MBB. The working group met between 2001 and 2004 a total of seven times in Innsbruck. At that time they had only seen only a fraction of the entire estate. From these fragments the documentation published on the internet was generated.

The activities of the working group were largely discontinued after 2004. Heim's widow sent further material to Father Resch after 2004, including an elaboration of Heim's theory in five books and notebooks with more on the Contrabarie theory.

Heim's correspondence became partially accessible to Illobrand v. Ludwiger in 2007 after the death of Heim's widow. This material was used in his biography which appeared in November 2010.

Not directly belonging to the estate is correspondence, work reports and negotiations between Heim and the companies Bolkow / MBB / DASA/ EADS, which are in the possession of von Ludwiger. This also applies to 41 reels of tape with recordings of conversations and telephone calls between Heim and v. Ludwiger which are of a predominantly private nature.

### **The remains of the estate which are currently known**

The following list of the scientific legacy of Burkhard Heim refers only to unpublished material and does not include publications which are already available. Some other sources of Heim information are mentioned, but their existence is not proven.

Existing and probable sources	Suspected Scope	Known Scope	Location
Notebooks		About 27 volumes	IGW
Script of Heim Theory, 5 volumes for publication as a book.		About 800 pp	IGW
Scripts of Heim Theory for Publishing in magazines	About 450 pages		Unknown
Script of Syntrometric Maximum Telecentricity		About 350 pp	IGW
Script of Syntrometric Maximum Telecentricity, Vol II *	Unknown		Unknown
Scripts for “Applications of Syntrometric Maximum Telecentricity”	Unknown		Unknown
Manuscript of Heim Theory for C. F. von Weizäcker - 1954	Unknown		Unknown
Short reports and lectures I	Unknown		IGW
Short reports and lectures II	Unknown		v. Ludwiger
Correspondence and letters		Six boxes	v. Ludwiger
Correspondence, work reports and negotiations with MBB		Unknown	v. Ludwiger
Tape recordings		41 reels	v. Ludwiger
Films of lectures		Unknown	IGW
Documents, recordings and Interview in Berlin	Unknown		Harrer/ Berlin
Documents secured in 2011		See below	Norheim City archives

\* The existence of these sources is considered uncertain

## **Open questions dealing with the estate**

From the analysis of the known sources and Heim notes there arise some questions about the estate that are not yet satisfactorily clarified. There are essentially two questions:

### **- Fate of scripts intended for publication**

For a very long time Heim did not publish his ideas except to state his conclusions "*to a certain degree*". When he then tried to send his theory to magazines and publishing houses starting in the late sixties, he came across a situation which reminds us a little of *Zuckmayer's "Captain of The Koepenick"* : Heim's theory had grown to a considerable size. Magazines would publish parts of it only when the entire theory could be obtained in book form. For publication in book form however, the publishers would only agree to this if parts of it had already been published earlier in magazines. Heim pursued different proposals as well as he could. He claimed to have provided manuscripts totaling approximately 1200 pages created directly for publication. The five-volume script of 800 pages which is now at IGW might have been / was part of this. The whereabouts of the remaining scripts have not yet been found.

### **- The missing works**

Some Heim manuscripts which he had identified in letters and speeches could not be found and are now considered lost. There are essentially three parts:

1. In 1954 Heim had written a summary of his theory which was then in a contemporary state, for his teacher, C.F. von Weizsäcker on his 42nd birthday. This caused Heim great consternation because von Weizsäcker did not expect the paper and did not look at it. The whereabouts of this manuscript is unknown.
2. During the "Imago Mundi" congresses Heim gave several presentations on the application of syntrometry to biological, psychological and spiritual matters. The location of these papers on these issues is not known. The question of the existence of a second volume and the third part of the "Syntrometric Maximum-Telecentric" that Heim had mentioned in a letter is unknown.
3. The final Heim equations for parameter-free mass formulas are not available. Probably they exist only on floppy disks. These disks along with 12 notebooks were offered to Mr. von Ludwiger for purchase in 2008 from an unknown dealer. The identity of this dealer, who must have received the material from Heim's heiress is unknown.

Perhaps some parts of the estate that are still missing remain in Heim's apartment in Schillerstr. 2 in Northeim.

### **Thematic scope of the material in the city archives of Northeim**

In the city archives of Northeim, storage was established for material from the "*Burkhard Heim*" estate. On April 28, 2011 the material from the house at Wilhelmstr. 25 was processed and a total of 16 standard archive boxes (38 × 27 × 11 cm) were filled.

This is a list of the contents of each box:

Box	Contents
1	Personal documents, land documents and communications with authorities
2	Letters and other personal correspondence
3	Essays, reports and short articles
4	Correspondence with Walter Dröscher, Vienna I
5	Correspondence with Walter Dröscher, Vienna II
6	Correspondence with German Synchotron, DESY, Hamburg
7	Galley proofs for Resch Publishing House, Innsbruck I
8	Galley proofs for Resch Publishing House, Innsbruck II
9	Manuscripts for two books which are incomplete
10	Documents on processes performed
11	Documents about Heim's activities for Northeim Citizens Initiatives I
12	Documents about Heim's activities for Northeim Citizens Initiatives II
13	Miscellaneous
14	Sources - Text I
15	Sources - Text II
16	Sources - Text III

Further investigations of the contents of individual boxes will be carried out only if there is a serious scientific reason to do this.

### **Concluding remarks**

After completion of the screening and classification work in the spring of 2011 at Wilhelmstrasse 25, the material acquired in the house was put into the archives in Norheim City in August and a final report was written, which is the basis of this article. A short time later Burkhard Heim's heiress daughter Ingrid Hartung passed away.

The probate court has since ruled that any further scientific material in the former private dwelling of Heim at Schillerstrasse 2 could be retrieved. This gives new hope that there is a possibility that any remaining documents can be viewed and classified in the foreseeable future. Therefore, this article regarding the Heim legacy is not exhaustive and is what was available before the editorial deadline of Norheimer Yearbook for 2011.

English translation by J. R.

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