Abstract: The University of Helsinki Observatory closed at the end of 2009 after 175 years of operation. Its possessions were distributed among a number of libraries, the department of physics, the university central archive and the university museum. Relocating everything has been a jigsaw puzzle, often with too many pieces at hand. Where did everything go? How does one explain the value of astronomy collections to both astronomers and non-astronomers so that decision makers become willing to preserve them? Libraries are faced with an e-revolution. How to make the next generation of astronomers aware of physical collections they have never seen? A finding guide is presented to help to locate old astronomy collections.

I am going to tell you about the Helsinki Observatory. Its operations as an astronomical research institute were discontinued in 2010. I was the last but one staff member to leave the building. Very often I introduce myself as the only person who now knows where all the observatory materials are.

The observatory was a lovely place to work in. When I would climb the Observatory Hill in Helsinki, I would often think how lucky I was to have such a workplace. I was so very proud of it.

The observatory was founded in 1834, and it celebrated its 175th anniversary just before it was closed. But the history of the collections is much longer. University of Helsinki has its roots in the Royal Academy of Turku, which was founded in 1640. Our oldest and most valuable books were older than that.

A 175 years old observatory has enormous collections. There are old instruments, manuscripts, separata, books, photographic plates, maps, exchange collections, reprints, staff publications, journals, ephemerides, and so on. When the University discontinued our activities, everything had to go. And I mean everything.

The Helsinki Observatory was full of paper, both printed stuff and manuscripts. The printed collections amounted to one shelf kilometer.

There isn’t any how-to guide for emptying an observatory. For those of us with first-hand knowledge, it is an once in a lifetime experience. I want to share some insights which can be helpful for others who might go through a similar process.
Lesson 1: To Know What You Have Got

The first lesson is to know what you have got. An old observatory is typically a place with uncatalogued varia. If your observatory has not catalogued all of its possessions a long time ago, it is unlikely to happen now, or in the future. People very often think that a day will come when someone finally goes through everything - all the old papers and all the obscure stuff. No. In most cases, that is not likely to happen. It is a fact of life that old astronomy materials are seldom a high priority. There will never be enough resources to digitize everything.

My advice is: go through piles of paper. Document and catalogue. Yes, it does cost you money. But you do not necessarily need to use experts for everything. In Helsinki, we used students. Some of them are very capable and motivated. I was lucky to have very skilled students to help with the observatory collections during the years.

The more you know the more arguments you will have when you need to defend valuable collections. Often, you think that you know what you have got, when in fact you do not really know enough.

Lesson 2: To Know Who Else Will Get the Responsibility

The second lesson is to know who else will get the responsibility. Or rather, who can afford to take it.

This can be extremely difficult. Storage is expensive, and there is never enough storage. We live in the digital age - everyone wants to store their possessions in a cheap remote storage. Except that it is never cheap.

You also need people. They read your letters, they think about your offer to store books and manuscripts. Maybe they will attend meetings and visit your observatory. Their time is money! If they decide to take a part of your collection, they have to invest more time and expert work to handle the acquisition.

The first responsible actor to arrive at the Helsinki observatory was the Helsinki University Central Archive people. After they determined that there was a big job for them to do, there was a long delay because they had to wait for an expert to start the work. Their responsibility covered anything on paper that was not printed.

The next actor was the Helsinki University Museum, responsible for old instruments and other museum pieces. The Observatory had a museum of its own, started in 1984. Now everything we owned that was not paper was going to the university museum.

The start seemed easy. We shared the otherwise empty rooms between the archives, the library and the museum. The astronomers had already left by January 2010.

2010 was a big year. I and the most current part of the book collection had been transferred to Kumpula Campus Library. I was working only part of the week at the astronomical observatory.
Another person was there to help me - an astronomy student doing his compulsory community service at the library.

Soon, a massive amount of moving boxes started their journey to the Kumpula Campus Library. We tried to count them, but lost count at some point. There were two or three thousand boxes, I think. We paid a number of students to handle the packing.

Next in turn was the National Library. We had high hopes for them. With a house full of valuable publications, the National Library seemed like the right place to send the oldest and most valuable collections.

However, the National Library had updated their collections development policy in 2009. I had thought that they would be delighted to receive our most valuable items. Instead, my first contacts with them were difficult. Their collections policy had a cutoff year, 1800. Some of our books were older than that. Did this mean that we should split our collection of oldest books into two? The Helsinki observatory had inherited the Turku Observatory books in 1834. These books were kept safe from the great fire that destroyed large parts of the City of Turku in 1827. Books that were elsewhere suffered from the fire, but the Observatory Hill escaped the fire. The old collection survived a fire, but it was not clear at first that it would also survive a collections policy. Luckily, the books had once been deposited in the National library, and had been transferred back to the Observatory when its museum was opened in 1984. In the end, the National library decided simply to take it back as it was and not split it into two. However, they asked me to dust every book carefully. So I spent a day dusting books myself. You do not ask others to dust books that are as valuable as these.

When the Observatory was active, these books were kept in locked cupboards. Anyone could have broken the glass windows and stolen our Galileo. It is a miracle that nothing was stolen. There were always astronomers around when the Observatory doors were open. But when they left, one of the last purchases was a security cupboard. It was delivered to us right before the last astronomers left. An almost empty observatory would have been an ideal place for thieves. I sighed a big sigh of relief when the university delivery van finally fetched the books.

Another difficult part of the collections was the separata - articles and other publications sent to or collected by astronomy professors. Most of these have inscriptions, messages and notes. The central archives did not want our separata, as they were printed, despite the notes.

The National library people took their time thinking about it. But in the end they decided to take the separata. I do not know what influenced their decision, but I have sometimes suspected that it was because of Donald Duck. The National Library had just acquired a Finnish Donald Duck collection. Maybe the collections department felt that they should also add something scientific to balance Donald Duck.
We had also hoped that the National Library would take our *Carte du Ciel* plate collection. Helsinki took part in the astrophotographic catalogue project. As a result we had over a thousand direct plates - in reality a lot more. Not only plates, but also observation diaries, catalogues, instruments. They belong together, but now the museum has the instruments, the central archives has the diaries, and the library has the catalogues. But what about the plates? They were the very last item to leave the building when the observatory was emptied. The university technical department sent us impatient messages: "Have you yet decided where we can put the plates?"

After a very long wait, the National Library decided that they would not take the plates. It is not clear to me why not. By the time they made the decision, it was December and the plates were transferred in bitter winter weather into a department of physics cellar storage. Yes, the department of physics took the plates as no one else could take them.

I would like to say a few words about the role of the Department of Physics. It is where most of our astronomers are working now. And why? The reason is reorganization. In 2010, Finnish Universities became independent, no longer funded directly by the State. Accordingly, all units had to become bigger, and self-sustaining. The department of astronomy was too small. It was merged with the department of physics, which also comprises meteorology and geophysics. The department of physics was moved to Kumpula in 2001, and astronomy was the last physical science discipline to join it.

So - the merger was inevitable, and the fate of the astronomy department was inevitable. Many astronomers, particularly older astronomers fought long and hard against what was happening. After a certain point, their fight became futile.

The department of physics was unwilling to allocate any resources for old astronomy stuff. It only took the astronomers and it seemed that it would turn its back on everything else. They have *Carte du Ciel* plates in the cellar storage - in practice, a couple of old cupboards filled with plates. Not such a big deal. I also got them to take our *Palomar Sky Survey* and *SERC* sheets. And a year later, they also took the old publication series, reports and reprints of papers by Helsinki astronomers.

**Lesson 3: To Know What Is Unique**

The third lesson is to know what is unique.

Of course, each observatory is unique as it is. No other observatory has quite the same collections, instruments, astronomers and architecture. As for library collections, their provenience makes a collection valuable as a whole, not just a sum of its parts. However, we do not build our collections with preservation in mind. Instead, we develop them. And no collection is final. There are libraries who work with preserving everything, but astronomy libraries are not primarily publication archives.
It is our duty to know what to keep. It is a hard duty. What is unique enough? Who is the authority who decides the value of each part of our collection?

The experts we had were great. There was Tapio Markkanen, the leading expert on history of astronomy in Finland. He was available for every step along the way. There was also professor Kalevi Mattila. His detailed knowledge about our collections constantly astonished me. I have to thank him for my career as an astronomy librarian, as he hired me for my job in 1981. There were others as well.

Working with these experts was not always easy. They had very strong opinions about the value of our collection. But often I felt that they were trying to keep everything at the observatory, even after that battle had been lost. Also, they had either retired, or were going to retire soon. We had experts with protective views but with no decision making power.

There were times when I felt that there were two camps. According to the experts, everything was unique. According to the decision makers almost everything seemed to be obsolete. The less would be kept, the less it would cost. The library was in between these two camps.

We had formed an advisory group, consisting of a few astronomers and library people to meet and talk about our collections. These meetings were quite stormy at times, as the older generation of astronomers stuck to their views.

The library certainly had its own problems. It had experienced a reorganization process of its own. Suddenly, all the department and faculty and other libraries were put together to form a new separate entity: Helsinki University Library. It has its own budget and a new independent role.

In this situation, I was the expert in charge. I was no longer the astronomy librarian. Instead, I was one librarian among many at the big Kumpula Campus Library. It was my task to determine, what was unique and what was less so. I was trying to listen to all the points of view and to contact the right people. I also kept trying to find out everything there was to know.

**The Exchange Collection Questions**

Lots of knowledge was needed about the exchange collection. These were accumulated from the exchange between observatories, which was prevalent from the 1800s onwards, and slowed down in the late 1900s.

Everyone who owns exchange collections knows how special they are, and often hard to catalogue properly. There are lots of diverse items that do not exactly agree with modern library holdings. I knew that an exchange collection like we have in Helsinki is unique enough to preserve. But how to explain it to the decision makers? I decided to ask librarian colleagues on PAMnet mailing list a few questions to get a larger picture.
My first question: Do you keep your exchange publications as one collection, or have you integrated the publication series from observatories with journals, monographs with your book collections, and so on?

The answer was that usually, these are kept in a separate collection, especially the bigger ones. Those who started their collections later did not always feel that their collection was unique.

My 2nd question: Do you have an estimate about the size of your collection (as in shelf metres or other units)?

A typical size for large older collections was over 200 shelf metres), but the replies varied between eight to 2200 metres. The Helsinki collection is about 250 shelf metres, i.e. it is both old and pretty big.

Third question: When did your exchange collection start?

Older collections typically started in early 1800s but include older titles from late 1700s. Collections that were started later have often grown by adding older items or even whole collections that have been acquired afterwards.

Fourth question: If your exchange collection no longer exists, what happened to it?

All but one or two small collections still exist. The larger the collection, the more it seems to be valued. Typically, journals are put into the storage first while the exchange collections are kept at hand - partly because they consist of materials that might lack bibliographic records or e-versions.

The Helsinki Observatory owned a consistent exchange collection starting from the 1830s. I had to weigh the alternatives as to what would happen to it. The other Finnish observatory at Turku, with a younger collection from the 1920s on, is simply sending its exchange collection away to a national storage.

When the Helsinki Observatory was emptied, we stored the exchange collection in a temporary storage, as there was no space or use for it in Kumpula Campus Library. Last year we had to relocate it as the library could not afford the storage. The collection is now stored on another campus, at the Viikki Campus Library. Another alternative would have been to send most of it to national storage and dump the rest. However, as it became clear that the collection is unique enough, it was kept in its entirety. For the time being.

Note: ALL of those who replied were astronomy librarians working in astronomy libraries or institutes. No other librarians answered. I feel this is a cause for concern.

There have been other mergers where astronomy collections were integrated with larger library units. What happened to the exchange collections in such mergers? Did the collections disappear with their librarians and their observatories? We need to know what really happens, not only to the printed materials, but to the people. It is people who are experts and who determine what is unique. And they need to be in a position to influence the decisions.
And then there is the well known change from printed to electronic collections. It has been a topic that astronomy librarians have been discussing for a long time. We know that the change is real, and we do know that you cannot digitize everything that has been printed or stored on plates. We know actually a lot about the change that is taking place right now.

Lesson 4: Starting To Think Forward

This brings us to the fourth lesson - to think forward, and start planning years in advance.

My former boss, the last director of the Helsinki Observatory, Lauri Jetsu, liked to ask questions about the future. If your observatory is open now, will it still be open in ten or twenty years? What will an astronomy library look like in ten or twenty years? How much storage is there? Will everything that is printed be old, and getting older each year that goes by?

Imagine where your books will be in 2032. Who is looking after them? Try to estimate, who will know what you have got in your exchange collection. What sort of training will he or she have in astronomy librarianship? Will he or she know what you know about the old printed collection? Will future librarians want to pay good budget money for maintaining the old materials that they will inherit from you?

The best plan is to make others aware about what you have got. Never keep your collections to yourself. It does not help to think that only a few astronomers need to know about the collection.

Ask yourself what would be the best place for your collections if you had to move it and could choose. Then start building ties to the relevant actors.

It is always a good thing to be proactive. We had cooperated with the Finnish Museum of Horology in the past. So we could contact them and ask whether they wanted our books about old clocks - yes, they did. Likewise, we gave some books to the Finnish Amateur Astronomical Association and other places. It is always a good feeling when someone you have got to know over the years can help you by taking some of your books.

If your observatory is still open, you need to plan ahead anyway. It helps to keep your collection alive and healthy.

And, remember that preservation is not an end in itself. It is always wise to develop a collection so that it meets the needs of your users.

When Helsinki observatory was almost empty, we had some journals left. Kumpula Campus Library already had some titles, so these were duplicates. Astronomers from Tuorla Astronomical Observatory, University of Turku, came with a van and their own cars to take the remaining Astrophysical Journal volumes and other duplicates to Turku. Afterwards, I felt that this was perhaps not very wise. A year afterwards, the boxes they had fetched were still standing in their storage, unpacked. The astronomers felt that it is a crime to dump old Astrophysical Journals. I think they will have to dump them anyway.
The Helsinki Observatory was emptied. But it will be opened again in September. The university of Helsinki museum will open a centre for the public. There is an exhibition of astronomical instruments, aimed at the general public, especially school children. Also, the Amateur Astronomical Association Ursa moves to the observatory. The Almanac Office at University of Helsinki will reopen its office at the Observatory.

So – the observatory was emptied of books and publications. Old instruments no longer in use will be back. Maybe the exhibition will also succeed in showing the visitors what modern astronomy is like. Time will show.

All the books, publications and other documents have a new home. I do not want to be the only one who knows, so we have been working with an online finding guide. It will help people to locate everything they are searching for. Do they want to read old correspondence? Are they looking for old astronomical year books? I want to list everything that I think people have been asking for during the years I have been at the Helsinki Observatory.

I do not know whether this is a success story. I did learn a lot during the process. No one has written a how-to guide about emptying an old observatory. This is my take on it, and it is up to others to decide whether they will use my advice.

Thank you!

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1 http://www.helsinki.fi/astro/guide/