

## THE UNIVERSE BEHIND BARS - ASTRONOMY IN PRISONS

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**Abstract.** For more than two decades, we go in prisons in France and overseas territories for astronomy talks i.e. courses, lectures and discussions with prisoners. Paradoxically, these talks are very successful. It is very important for both prisoners and society that the time spent in prison would not totally lost time, but could be used to improve knowledge and culture of prisoners. We explain some aspects of these talks, we note some specificities, and we detail some organizational points

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### 1 Introduction

For more than twenty years, Régis Courtin and I, astronomers at the Paris-Meudon Observatory, are going in some prisons for astronomy talks to the prisoners. Whereas the prisoners are really interested, as proved by their requests for additional talks, this activity is a very interesting experience for the lecturer. A part of this study was already published (Briot 2011) and we briefly recall it. It could appear rather strange that people with and a complicated past, a very hard present way of life and an agonising future could be interested by astronomy, that is a science without direct utility for locked up people. Moreover, the aim of astronomy is to discover and open the whole Universe in all its infinite totality, whereas, in prisons, the audience is locked and confined as much as possible. This apparent contradiction is specially striking during the talks at the Prison de la Santé which is located in the block next to the Paris observatory. However as we shall see below, the audience listens carefully and is really interested.

### 2 Some reasons to come and talk about astronomy in prisons

We already expound this argumentation (Briot 2011), however, because it is a very important point, we recall it now. So many reasons justify to go and speak about astronomy in prisons.

1) First of all, that is a significant point for prisoners who are cut off from society, and who can sometimes have a feeling that they are forgotten from everybody and from everything, to see that professional scientists come for them, as for any other audience.

2) It is important to use a special moment in the life of these people to organise some meetings with scientists. Actually, most of imprisoned people have had very rarely the opportunity to meet and to discuss with scientists when they were outside.

3) It is also important to take advantage of this special moment to give them an opportunity to increase their knowledge. In some cases, the point is to increase a field of already acquired knowledge, whereas in other cases, it is to initiate in a new domain of knowledge, to open a door onto a new world.

4) Life in prison can be very hard and distressing, physically as well as mentally. Accession to pure and disinterested knowledge, uniquely connected to the pleasure of discovering a new field of knowledge or increasing it, can allow to escape ever so slightly of the awful daily life, and to keep one's mind occupied with other things. Our aim is to use constructively the prison time and to reduce its harmful effects.

5) Of course, reasons which hold for any popularising astronomy lecture in front of any audience, are still valid. Namely, astronomers being civil servants and it is quite natural to explain to the society the use of taxes.

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6) The last, but not the least, let us not neglect the pleasure to speak about a subject of which we are very fond, with some people who are very interested. Giving to prisoners any opportunity to think and learn can surely help them to be re-integrated in the society after they come out of the prison, besides of the interest of the prisoners for science and the entertainment brought by any distraction which breaks the routine of the prisoner life. More we give elements to think, more people become clever and cultivated, afterwards more tools will be at their disposal to choose their way on their discharge from prison, more they will have chance to become reintegrated in society.

### **3 Some information and technical details**

Nowadays, the number of prisoners in France reached a new peak : 71828 prisoners (1st of April 2019), what is more that the population of cities like Drancy or Colmar. Among those prisoners, 3.5% are women. The rate of overpopulation which is particularly high in pretrial detention causes additional work for warders. So activities involving some people coming from outside and transfers of prisoners outside their cells are not encouraged.

### **4 Some ways to enter in prisons**

A way for an astronomer who wish to go and talk about astronomy in prisons is to get in touch with the teaching team, or the cultural service of the prison, which may be dependent of the Service Pénitentiaire d'Insertion et de Probation (SPIP). This activity can be also organised by associations as those which manage the libraries of Fleury-Mérogis, that is the largest prison in Europe, or some organism as La Ligue de l'Enseignement. In order to improve efficiency, we talk about our activity all around when possible, so when any request arrives to the Paris-Meudon Observatory or in a astronomical association, for astronomy talks in prison, this request is not rejected but is transmitted to us.

### **5 What is allowed and what is forbidden**

Rules are different according the various prisons and may vary substantially over time. It is the same for the available teaching in the various prisons. And there is a widely shared opinion that safety measures and the rules in prisons can vary according to politics and circumstances, like a pendular movement. A basic principle is an authorisation renewed for years can be suppressed or on contrary some ban can be lifted. Some examples of things allowed or prohibited, according places or times : - to give some posters, calendars, ring notebooks, bookmarks, any object with cardboard... - to bring a laptop, a Macintosh, USB keys.. Sometimes the use of a laptop is possible, other times the talk is to be registered on a CD, or a USB key.

### **6 Some of our activities**

Since 1998 we have made talks, courses, or other activity in numerous prisons. That is, in Paris and the surroundings : La Santé, Fresnes (men) and Fresnes (women), Fleury-Mérogis, Nanterre, Porcheville (juvenile prison), Poissy (for long prison sentences), Bois d'Arcy ; other parts in France : Melun, Liancourt (juvenile prison), Laval, Angers ; overseas territories : Domenjod in the Réunion island. That list is non-exhaustive. Most of the time, we give some courses or talks, adapted for the audience, juvenile as an example, and to the subject treated. The subject is sometimes chosen by us, sometimes by the teacher and some other times by the prisoner audience. In two circumstances, we organised observations for a partial solar eclipse in France, one time in the prison of Fresnes and another time in the juvenile prison of Liancourt. The sky was cloudy both times, that was actually better, because no special sunglasses for solar eclipses were provided for prisoners, but our audience. We invigilated an astronomy examination for a prisoner in the prison of Poissy. A few years ago, we set a continued astronomical program up, at the request of the SPIP of the prison La Santé. This program comprised three parts. First we gave five astronomical talks in the prison. Second we organised an outing from the prison to the Paris-Meudon Observatory, with a visit of the observatory during the day and some astronomical observations after the sunset. Third we exhibited astronomical documents and pictures in the library of the prison. It was rather complicated to finalise this exhibition because the library was closed during several weeks, no warder accepting this post. This program was extended by two additional talks, and a "meridian outing". This outing comprised an other visit of the Paris-Meudon observatory, a visit of the meridian sundial of the Saint-Sulpice church, and an organ concert in this church by the titular organist that

we thank very much. Let us note that the organ of the church Saint-Sulpice in Paris is often considered as the best organ in the world.

## 7 Some features of these talks

As for any talks in front of a non-specialized audience, its knowledge is very inhomogeneous. It depends also of the organisation of this lecture. As an example, if the lecture is organized by the library of the prison, the mean level of the audience is higher than in the case of a class for illiterate people. Whereas the audience of a public astronomy talk is generally composed of people who are interested by astronomy, an astronomy talk in prison is the first introduction to astronomy for the major part of the audience. However the questions can be of a rather good standard. The references to religion, particularly to the Coran, are frequent, and actually more and more frequent. How could those questions and comments be answered?:

“Yes, I believe in planets, because this is in the Coran.”

“The Coran speaks about the expanding universe. What do you say about that?”

“Anyway, it is God who created the world.”

“What about the seven skies?”

“Earth is flat, the proof is that all the planes fly over Europe.”

“Anyway, astronomers are not religious.”

Simple answers do not exist. In this case, I suggest that there are several independent ways to search the truth: science, religion, and also art, philosophy... For example, I explain that the seven skies do not correspond to the Universe studied by astronomers, that it is a symbol, an allegorical figure.

Some (personal) rules :

- as much as possible, answer to the questions. Do not forget that the audience has no access to internet and has only few books at disposal.

- be careful to avoid to humiliate somebody who asks a question, whatever the question.

- stay neutral, do not expose personal beliefs, do not give private information, never give an opinion about any religion.

It is very likely that many middle and high school teachers have similar problems. They have to answer to the same questions, as well as some astronomers who go in schools for astronomical talks. It would be very useful that special sessions would be organized to help astronomers in front of this kind of problems to find some answers.

## 8 Our present activities

We expose as an example our activities during the recent time. The last year, we were asked by a mathematics teacher in the prison in Fresnes who organised a series of multidisciplinary lectures about “Black”. During our cycle of six talks about “Black in Astronomy”, we untiringly answered to countless questions about near and far the Muslim religion. Questions about astronomy happen only about during the third talk. However, to our satisfaction, when the cycle of planned talks was over, we were earnestly requested by prisoners to come again for an additional series of six astronomy talks. The subjects were chosen by prisoners by a democratic vote on our proposals. A few weeks ago, with the same mathematics teacher, we made again two talks about astronomy, and then at the end of the session, the audience asked insistently that we come again. The subjects were chosen among the questions of the participants. We gave also some talks in the prisons of Fleury-Mérogis and Poissy.

## 9 Conclusions

Any opportunity to increase the knowledge, the culture, and the thought of prisoners is very important. This can help them to take relevant decisions after coming out of prison. When a former prisoner recognises me in the Paris metro, what happened several times, and discusses with me for a long time, I think that I did not waste my time when coming in prison. About lectures organised by the philosopher François Chouquet at the Prison de la Santé some years ago, lectures to which I participated many times, a prisoner has written: “After years in isolation quarters, I took tremendous comfort from this cultural activity, which is a real opening on the world of lights, because I had the impression to rediscover the beauties of civilisation.”

I wish to express my grateful thanks to :

Régis Courtin, astronomer at the Paris-Meudon observatory, my collaborator for more than thirteen years, with the hope that our collaboration will last a long time.

François Chouquet, philosopher, former in charge of the teaching for prisoners of the Parisian university Denis Diderot, who understood at once that prisoners could be interested by knowing the the largest part of atoms of our bodies are made in the cores of stars, and who asked to me for explaining this point to prisoners, and then many other astronomical subjects.

Eliane Lagrée, former teacher for illiterate prisoners at Fresnes, with whom I collaborated during many years.

## References

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