

The International Space Science Institute in Beijing

--- Interview with the director, Prof. Maurizio Falanga

by Pietro Fiocchi (***El Popola Ĉinio***)

" ... now the attention of U.S., European and Japanese scientists moved to China for future space missions... "

Recently a new scientific, and I would say also social, reality appeared in the Chinese capital: the International Space Science Institute in Beijing, its director is Professor Maurizio Falanga.

Professor Falanga told to ***El Popola Ĉinio (China Report)*** about himself and about this adventure, whose further developments soon or later may amaze us.

Who are you? Where are you from?

My name is Maurizio Falanga and I have Italian origins, as my parents are Italian, but I was born and grew up in Switzerland, I have the Swiss citizenship. I studied theoretical physics in Basel, so I got a master's degree in physics discussing my dissertation in astrophysics , compact objects, black holes, neutron stars, high-energy astrophysics . I got my Ph.D. at the University of Rome "La Sapienza" in astrophysics, exactly on the compact objects.

What are the compact objects ?

At the end of the stellar evolution, when the star has no more fuel it happens that the radiation and the gravitational forces are no longer in balance, then, because of the absence of the radiation, the only remaining force is the gravity, which is a force of attraction, then what happens is the collapse of the matter, which finds another point of balance, whose ray is very small and very compact. At the end of stellar evolutions what remain are compact objects: white dwarfs, neutron stars or black holes.



First picture: *Professor Maurizio Falanga and I at the International Institute for Space - science , "ISSI-BJ"*

What are the stages of your career?

After my doctorate, I worked for six years in Paris in two different institutes, where I used to analyze data sent from an INTEGRAL-satellite. "INTEGRAL" is a space mission of the European Space Agency. The satellite observed the high-energy emissions originated from black holes, neutron stars, and white dwarfs.

And after Paris?

I wanted to go back to Switzerland and luckily I was employed by the International Space Science Institute (ISSI) in Bern, where I am a Science Program Manager and I deal with administrative issues, management, scientific policies and still devote part of my time to the research.

How did you get to China from there?

The institute where I work in Bern offers a service to all the scientific communities that use scientific data from the space. It gives the possibility to come to Bern and work together for a while. Scientists can make a research proposal, then organize the working group. Any activity at the Institute must be international, multidisciplinary and completely informal.

The numbers of scientists who come to Bern has increased exponentially in the past few years so that we wondered whether ISSI should be expanded or remain as it is. At the Institute work approximately fifteen employees and come nine hundred visitors every year. Eventually they decided that ISSI has to remain small and beautiful and always aim for excellence.

One day the general director of the National Centre for Space Science came to the Institute and proposed to us the realization of a branch of ISSI in Beijing in order to let the Chinese scientists more and more often participate in international scientific meetings, the same institute could contribute to the establishment of scientific communities, bringing researchers from Europe, USA, Australia and Japan to China to work together with Chinese scientists.

China nowadays opens its doors to all and this Institute is a small part of this new philosophy: be open to other countries, to welcome scientists here to work together with Chinese colleagues to facilitate international cooperation in space research. So, all what is organized here, must be international, multidisciplinary, and informal. This is a neutral area where scientists meet just for the sake of scientific research.



Second picture: *Professor Falanga illustrates to me the satellite Dongfanghong -1, which is the first artificial satellite of China*

And you became the director ... What do you do exactly?

When they decided to create this institute, they offered me to be the executive director and establish in Beijing the same institute (ISSI) like the one which is already active in Bern. Now I deal with the scientific program, I am busy with the forums about the eight candidate scientific missions, approximately half of them will be carried out. I am organizing a school, the ISSI-BJ's summer school. We have created both the website (www.issibj.ac.cn) and the magazine of ISSI-BJ, which is called TAIKONG, it means in Chinese "outer space", in which we report in detail about the Forum outcomes.

A part of my work is about the promotion of the activities of this Institute in Beijing. That is what I am realizing with focused activities, included the so-called meetings "Understanding Science", organized by the Institute (ISSI-BJ) in collaboration with the British Royal Society of Chemistry and the Institute of physics of the Beijing University. They are informal seminars, three times per year, which take place at the Bridge café in Wudaokou (the university district), during which high-level scientists present topics to university students, who can ask questions.

We want to get out of our four walls and give the chance to the Chinese young people to listen too, the Institute is going to the people. The last seminar, whose theme was "Playing with earth climate - How long will we survive? " There were about 50 people, including officials from the British Embassy, to listen to an eminent lecturer, Professor Roger M. Bonnet, who for eighteen years led the scientific program of the European Space Agency (ESA).

This Institute (ISSI-BJ), where the added value has to be Chinese, offers a service to the international space community and in part helps the Chinese to define the scientific cases and the advanced technologies to be used for future space missions in an international context. This is important because it helps to gain knowledge from the past experiences of others and therefore not to duplicate anything that has already been done, to produce innovation.

In this framework, what offers China?

The U.S. NASA (National Aeronautics and Space Administration) and the European ESA cut some financial resources, but China has a remarkable space program. Before Europe used to look at the United States for international cooperation, now the attention of U.S., European and Japanese scientists moved to China for future space missions, they even come to Beijing at their own expense, to take part in our international and neutral platform to do research, to bring their contribution and to discuss about future missions.

What would you like to achieve?

I wish science could be a tool, just like sport, to break any political barrier and bring people to work together on science. China contributes a lot to this process.

What are the practical benefits of this research?

The immediate benefit, for example, may be the observation of asteroids heading toward Earth, in the past few years about 26 of them have fallen, they often fall into the oceans, but some of them have fallen even on inhabited areas, as it happened last year in Russia.

What about your life with the Chinese people?

It is excellent, they are very hospitable and respectful. Chinese people have a unique sensitivity to discuss with people, they are friendly people.

Link: http://www.espero.com.cn/2014-05/23/content_32472224.htm