

PALS 10th anniversary workshop
address by H. Illnerova,
former president of the Academy of Sciences of the Czech republic
23 September 2010, PALS - IPP , Prague 8

Dear Mr. Chairman, dear Karel, dear colleagues, ladies and gentlemen!

We have gathered here on a very nice occasion – at the celebration of the 10th anniversary of the Prague Asterix Laser System, the so called, PALS. Allow me, please, to tell you few of my memories on the beginning of PALS. Although I am not a physicist myself and come from the field of physiology and biochemistry, namely from the research on biological clocks and rhythms, I watched PALS progress since the beginning, first as a Vice-President of the Academy of Sciences of the Czech Republic responsible for the field of chemistry, biology and biomedicine and then as the President of the Academy. My memories will be personal and I apologize if I'll omit something or somebody important.

I first learned about an existence of a smaller iodine laser in Prague, when in 1992 dr. Karel Rohlena and his team from the Institute of Physics of the Academy finished their complete reconstruction of the laser Perun 1 created in the Lebedev's Physical Institute in Moscow into a more efficient iodine laser Perun 2. At that time, I had no idea that in Garching in Germany they had a high-power iodine photo dissociation laser system Asterix, which was upgraded in the Max Planck Institute for Quantum Optics to the terawatt laser Asterix IV. One of the fathers of Asterix was Prof. Witte who was later awarded the Honorary Medal of Ernst Mach for Merits in Physical Sciences by the Academy of Sciences of the Czech Republic.

At some time close to the end of 1996 and beginning of 1997 dr. Karel Jungwirth, then responsible for the field mathematics and physics in the Academy, came with wonderful news that the Max-Planck Institute for Quantum Optics in Garching might generously commit Asterix IV to the Academy of Sciences of the Czech Republic. The then President of the Academy of Sciences, Professor Rudolf Zahradník, as well as almost the entire Academy Council, supported wholeheartedly the idea. This was not that obvious at that time. Not so much time had elapsed since the Velvet Revolution and the Academy budget was still very tight. And thought the Garching Institute offered Asterix IV just for one deutsche mark, it was clear that a lot of money would be needed for dismantling the laser, transferring it to Prague and for constructing a new building for it there. But the idea of transferring the laser to Prague was very much supported not just by the President and Council of the Academy, but also by the late Professor Vladimír Dvořák, the then director of the Institute of Physics, and by dr. Pavel Šunka, director of the Institute of Plasma Physics and dr. Chráška, member of the Government Council for Research and Development. Later both of these institutes joined their forces and established a joint Laser Research Center, PALS. But the most important advocate of the project was dr. Karel Jungwirth, the then Vice-President of the Academy, who enthusiastically tried to find enough of funds not just at the Academy, but also at the Ministry of Education, Youth and Sports as well at the Czech Parliament.

The Academy of Sciences signed an agreement approved by Euroatom with the Garching Institute in the early summer 1997 and only then Asterix IV started to be dismantled and transferred to Prague. And also only then I realized what it really meant to dismantle 120 tones device, transfer it and then try to reconstruct and reinstall it again. I remember my surprise when I visited the Institute of Plasma Physics and dr. Jiří Ullschmied. Who was responsible for dismantling and again reinstalling the laser showed me hundreds and hundreds of boxes full of smaller and larger pieces of the laser. The only thing, which came to my mind when I saw all the boxes, was the English nursery rhyme:

Humpty Dumpty sat on the wall,
Humpty Dumpty had a great fall
And all the king's horses and all the king's men
Could not put Humpty Dumpty on the wall again.

Only that this time the laser did not fall, but was carefully dismantled, thousands of its pieces were numbered, and not all the king's men, but only 23 members of the dr. Ullschmied's team, among them also some young ones, namely dr. Rus, dr. Juha and dr. Mocek, put the Humpty Dumpty Laser together again. I would like mention still one name, that of the delegate of the Institute of Plasma Physics as of an investor of building the hall for Asterix, Mr. Lubor Dudek, who put his soul into the construction of the laser hall.

A must admit that I had been quite nervous before I learnt that the first shots were OK and before I took part in the festive launching of the completed laser system in the late spring 2000, after successful operational tests had been performed, only three years after the original agreement. I was indeed happy at that time and I appreciated very much when in September 2000 the first European physicists begun to use PALS for their own experiments or in collaboration with the Czech scientists.

And I was again very glad when in 2003 PALS has become a part of the Laserlab-Europe Consortium. As the then President of the Academy of Sciences of the Czech Republic, I was invited to the PALS ceremony celebrating its new membership in this elite club of the best European laser labs. I was at Vatican at that time, at the anniversary of the four hundred years of the Pontifical Academy of Sciences, which was founded in Rome in 1603 as Academia dei Lincei as the first exclusive scientific academy in the world. The same day when the Laserlab-Europe Consortium meeting had to be held in Prague, guests of the Pontifical Academy were supposed to be received by the Pope John Paul the second. Although I admired very much John Paul the second, as a great global personality and a great man, I decided to return to Prague and take part in the meeting there as I also admired and regarded highly all people who were involved in the PALS project and made it work. I would like to stress that PALS is not only supported by Laserlab-Europe and the Academy of Sciences, but as a joint research center of the Academy and the Czech Technical University in Prague, it is supported also by the programme Research Centers of the Ministry of Youth, Education and Sports.

And the very end, allow me, please, to wish PALS al the best to his 10th anniversary and a lot of exciting new data in the physics of laser plasma. And to everyone who has helped to the PALS success, wherever you are today, I thank you.