Vladimir Peskov recalls his first encounters with the influential scientist.

Georges Charpak (1924–2010), well known for his remarkable work on detector techniques that led to the 1992 Nobel Prize in Physics, would have been 88 this month. Here I would like to recall his warm personality, sense of humour and willingness to help people.

Having been born in the USSR in the Republic of Kazakhstan close to the labour camps (the “Gulag”), I never dreamt of becoming a researcher lucky enough to collaborate with as great a scientist as Georges. However, despite a hard childhood, I succeeded in joining the Institute for Physical Problems in Moscow, where I became a researcher in Piotr Kapitza’s plasma laboratory.

Kapitza was investigating stationary high-power, high-frequency discharges in H₂ and D₂, but the plasma diagnostics was difficult: strong emission in the visible region masked the short-term instabilities developing inside the plasma column. After many attempts we realized that the best way to visualize the instabilities was to use the multwire proportional counter (MWPC) invented by Georges. Among several modifications, we developed a photosensitive MWPC capable of detecting single photoelectrons created by the absorption of ultraviolet photons in a special, low-ionization gas mixture – and we succeeded in visualizing the hidden plasma instabilities.

Invitation to Vienna

One day (in 1981, I believe) I wrote to Georges describing our success in the application of his MWPC in plasma diagnostics. I had no hope of receiving a reply: not all letters were allowed to leave the USSR and Georges was so famous, would he reply to an unknown person in Moscow? How surprised I was when, two months later, I received a short, hand-written reply. He said that he would be very interested to learn more about our work and invited me to attend the Vienna Wire Chamber Conference in February 1982.

I later received a formal invitation from the organizing committee, offering full coverage of the trip. It was extremely difficult to get permission from the Soviet authorities to go, despite Kapitza’s support, but I was able to meet Georges for the first time in Vienna.

Following a brief encounter at registration, he invited me for lunch on the first day of the conference. “I am very interested by your work and applications of the MWPC in plasma studies,” he told me. “But you are not the first to develop a photosensitive MWPC.” He gave me a paper, the authors of which were unknown to me, Tom Ypsilantis and Jacques Seguinot. I gave him my paper printed in Russian and translated into English. Georges briefly looked through it. “This is interesting! So your group developed almost the same detector, but independently ... and you use another photosensitive gas.”

Suddenly, he asked: “What do Soviet physicists think about Andrei Sakharov? Do they protest that he is in exile in Gorki? I heard that there was even an attempt to expel him from the Academy of Sciences.” This was a provocative question. In Brezhnev’s time, to be involved in such discussion was a dangerous exercise. After a pause, I related how Kapitza had managed to defuse the situation so that Sakharov was saved.

“Saved?” asked Georges ironically. “But he is in Gorki.”

“But even this was a heroic act”, I explained. “Do you know that Kapitza saved several lives during Stalin’s Terror? Landay, Fock were liberated from prisons because of Kapitza’s letters sent directly to Stalin, which was real heroism!” Georges looked at me and I began to feel some mutual sympathy.

During the conference I stayed in a small hotel close to the famous Vienna Opera and the temptation was great to go to the ballet. There were no tickets available but a person whose companion could not go sold me one, and I spent all of the money that I had received from the organizing committee. During the break I suddenly met Georges with members of his group and for the first time, I met Amos Breskin, Stan Majewski and others. When the ballet was over, Majewski asked Georges: “Why don’t you invite Vladimir to CERN?”

“Good idea!” he replied. “But first I want to go to Moscow to see his institute and to be introduced to Kapitza!” The next morning, the young woman from the organizing committee who had introduced me to Georges was waiting for me.

“Professor Charpak told us that you spent all of the money at yesterday’s ballet,” she said. “The organizing committee decided to compensate you! You will receive extra money from us at lunchtime.”

Return to Moscow

Seven months later, I was at Moscow airport to greet Georges, who had arrived thanks to Kapitza’s efforts, but on the morning they were to meet, we learnt the sad news that Kapitza had been taken to hospital. Indeed, Georges’s dream of meeting Kapitza never materialized. After some time in hospital, Kapitza became weak and passed away in 1982. Plasma research was stopped in our institute and I could no longer continue the work that I so much enjoyed.

Georges later sent a letter inviting me to join his lab at CERN for a year. I decided to use this opportunity to begin a new chapter in my own life, with many more interactions with Georges – but that is another story.

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