

I was deeply shocked to hear that Sachio Komamiya, or Komamiya-san, passed away last month, on June 5th. Although I knew he had been struggling with illness, his passing at the age of 71 is far too soon. I would like to offer my sincere condolences to his family.

Sachio was a true leader in our field, in particular in electron-positron collider experiments, both in Japan and worldwide. Bright, cheerful, and naturally sociable with a great sense of humor, he was a person loved by many, many people, like the sun.

On a personal note, Sachio was a senior colleague in the Koshihara group at the University of Tokyo, five years ahead of me, and he was one of key people who introduced me to particle physics. He was someone whom I respected and admired.

When I joined the Koshihara group, Sachio was a temporary researcher at the University of Tokyo, working on the JADE experiment at DESY in Hamburg. Nevertheless, he occasionally returned to Japan and visited the Koshihara laboratory in Tokyo. I remember that he spoke to me in a very friendly way at the end of year 1981 when I was alone testing many used photomultiplier tubes for a small experiment.

The JADE collaboration was an experimental group consisting of institutions from Japan, Germany, and the UK, and later also from the US. The role of the University of Tokyo team was to construct and operate an electromagnetic calorimeter with 3,000 lead glass counters. Under the supervision of Professor Totsuka, Sachio built a high-voltage power supply system that could individually control the voltages of the photomultipliers by computer and installed it in the JADE detector. This device, known as “Komamiya Dengen” in Japanese, was used reliably until the end of the experiment.

Sachio obtained his doctorate in 1982 with the JADE experiment. His thesis was entitled “Study on hadron production in electron-positron annihilation at PETRA energies.” While he was preparing his thesis in Tokyo, I helped him a little by counting the number of charged particle tracks in multi-hadron events taken by the JADE detector, which he had already counted himself, in order to estimate human systematic errors. As a master’s student, I didn’t fully understand the meaning of counting charged particles, but I was excited to be working with experimental data from the most energetic collider at that time. I also enjoyed hearing about his experiences at the international collaboration and his life abroad. Even then, he was very attractive to involve young students and researchers.

In 1984, when the JADE experiment was nearing its end, I joined it as an exchange student at the University of Hamburg. At that time, Sachio was working as a researcher at the University of Heidelberg. His contributions to the physics analysis during this period were more than remarkable with a number of papers on the search for new particles, in particular supersymmetric particles. In fact, he was the shining star of the JADE experiment. As Rolf said, one of his Heidelberg colleagues nicknamed him “Sachion” or “Sachino”, a person who was eager to discover new bosons and fermions beyond the Standard Model. During this time, Sachio not only provided me various research insights, but also frequently invited me to his home for meals and various events, which greatly supported my personal life. I am very grateful to Sachio and his wife, Ikumi-san.

After the JADE experiment, Sachio moved to the United States to participate in the Mark-II experiment at SLAC SLC. After important early achievements at the SLC, he returned to the University of Tokyo in 1990 to lead the Tokyo team for the OPAL experiment at LEP, CERN. He vigorously advanced various physics analyses with his own unique ideas and successfully mentored many young researchers, producing numerous results. His combination with the OPAL spokesperson Rolf Heuer, a close friend since the JADE era, was outstanding, and he was effectively coordinating and supervising the entire OPAL physics analysis.

When the LEP experiments came to an end, Sachio returned to Japan and succeeded Professor Orito, as Director of the ICEPP, at the University of Tokyo, a position he held for many years. He truly represented the Japanese high energy physics community. One of his most important missions, was, as you all know, the ILC project.

Sachio was a long-standing member of the ICFA from 2000 to 2013. The future lepton collider has long been the most important issue of the ICFA. In 2005, linear colliders were unified into the International Linear Collider with superconducting accelerator technology, and then accelerator R&D was carried out internationally under the Global Design Effort led by Barry Barish. Sachio strongly supported these activities as the Asian representative of the ILC steering committee, ILCSC. In July 2012, the Higgs boson was discovered using the Large Hadron Collider at CERN, and the High Energy Physics Committee of JAHEP, representing the Japanese HEP community, proposed to host and build the ILC in Japan as a global project. Sachio chaired the committee and led the discussion. This proposal received strong support from the Asian, European and American HEP communities. The ILC TDR was completed in late 2012,

and the LCC (Linear Collider Collaboration) and the overseeing LCB (Linear Collider Board) were established under ICFA in 2013. Lyn Evans was Director of the LCC, and Sachio chaired the LCB until 2017.

Sachio collaborated with researchers in Japan and abroad and worked tirelessly to make the ILC a reality. Although there were occasions when the project came close to success, it still remains incomplete, which is truly unfortunate.

Sachio has always loved lepton colliders and the physics they make possible. As a core member of the effort to realize the future lepton collider, he worked with colleagues around the world. His legacy lives on in many of us. I hope that younger researchers will carry on his work, and I will continue to work together with colleagues here and around the world remembering my gratitude to Sachio. We miss you Sachio, Good-bye.

July 9th, 2024

Kiyotomo Kawagoe