Obituary

Krzysztof Rybicki
1938–2003

On 27 March, after a short battle with cancer, Krzysztof Rybicki, professor at the Institute of Nuclear Physics (INP) in Cracow, passed away.

Until his very last days he participated in many high-energy physics activities, both as a researcher and as a member of numerous committees and councils. At his home institute he was head of the Leptonic Interactions Department and chairman of the INP’s Scientific Council. In January 2000 he became a member of CERN’s Scientific Policy Committee and from 2002 he served on the High Energy Particle Physics Board of the European Physical Society.

Krzysztof was born in Cracow on 25 February 1938. After graduating from Jagellonian University in 1960, he joined the Cracow high-energy physics group led by Marian Miesowicz, who pioneered experimental high-energy physics in Poland. Krzysztof’s early work dealt with cosmic-ray interactions in emulsion experiments, including the first measurement of the elastic proton–nucleus cross-section in the tera electron volt range. Between 1968 and 1972 he played an important role in the first studies of particle production at the Serpukhov accelerator. During that time he published, together with Oleg Czyzewski, the work on the multiplicity distribution that described all the data with a universal parameterization, the Czyzewski–Rybicki Formula. This contributed to the formulation of the famous KNO scaling.

In the early 1970s, Krzysztof formed an electronic-detector group together with Michal Turala, which under Krzysztof’s leadership grew to a department of almost 30 people. It was the first group in Poland to design and construct hardware for high-energy physics experiments. Because of Poland’s political isolation and “technology gap” at the time, this was a real venture, but soon afterwards, spark, proportional and drift chambers constructed in Cracow were successfully used in experiments at CERN and Dubna. Since that time hardware development has become an important contribution of the Cracow group, and soon after other Polish groups initiated similar experimental activities.

In 1973 Krzysztof began a very fruitful and long-lasting co-operation with the CERN–Munich team, which later developed into the Amsterdam–CERN–Munich–Oxford–Rutherford (ACCMOR) collaboration. It also marked the start of his group’s participation in many international collaborations working on experiments at CERN, DESY and KEK. He also initiated and coordinated the participation of Polish physicists and engineers in the construction of the HERA accelerator.

Although engaged in many organizational tasks, Krzysztof never gave up his own work on physics analysis, actively studying heavy flavours, for example. In ACCMOR, he worked on charm hadroproduction, in particular spin effects, double-charm correlation and absolute branching fractions, and he played a key role in the first measurement of the spin of the $\Lambda_c$. However, hadron spectroscopy was his real passion, dating back to 1973 when he began work on partial wave analysis for $\pi^+\pi^-$ and $K^+K^-$ systems using unique polarized-target data from the CERN–Cracow–Munich experiment. He continued these studies until his very last days, recently in collaboration with theoreticians from INP, on work that contributed to a revival of the $\chi(600)$ meson.

Krzysztof understood his duties from a broader perspective than just his personal career. He strove for a high level of research in Poland, and was highly dedicated to nurturing young physicists. For many years he lectured at Jagellonian University, and most of the members of his team were former students.

Krzysztof lived and worked during difficult times in Poland. Yet his life – strongly rooted in a deep faith that matured during his long-lasting friendship with Karol Wojtyła (Pope John Paul II) – is an example of constructive work regardless of external circumstances. With an optimism and competence that expressed his motto “Nulla dies sine linea”, he realized brave ideas, even when others considered them too risky. These efforts had a significant impact on the development of experimental particle physics in Poland.

Krzysztof’s collaborators benefited greatly from his broad knowledge, deep insight, comprehensive judgement and excellent intuition. Outside physics, he was a scholar, with a seamless knowledge of history and literature, as well as fluency in Latin. He was also an active tourist, familiar with almost all of the Polish kayak and mountain routes. For all these reasons, we sought advice from him not only in physics, but in all aspects of life. His unexpected death was a shock for all of us. We deeply miss his friendship, wisdom and guidance.

Grażyna Nowak and Maria Rozanska, INP-Cracow.