

## IN MEMORIAM GÜNTER BAUER

Our colleague and friend, Günter Siegfried Bauer, died December 13, 2013, 72 years old. It is fitting to remember him here, today, as one of the most respected, beloved, stalwart, influential leaders of our ICANS community.



Günter Bauer during the Cold Moderator Conference at Argonne in 1997.

Günter earned his PhD in Physics at University of Bochum in 1975, spent some time at Oak Ridge National Laboratory, and then joined the scientific staff of Kernforschungszentrum, Jülich (KFZ). There, he undertook work on the Spallation Neutronen Quelle, SNQ, conceived as a 5-MW 1.1-GeV proton linac-compressor-ring neutron source, a joint project of KFZ and KfA (Karlsruhe) pursued from 1980 and presented in 1985. Günter led the target station work, based on a water-cooled rotating target. A prototype tested (without protons) successfully for 1000 hours, which he proudly showed me once, still stands on display.

He moved to the Paul Scherrer Institute (PSI) in the late 1980s, where he took up work on the target for the SINQ neutron scattering facility, an upwardly incidence system based on the steady beam of protons from the 600-MeV sector-focused synchrocyclotron. The SINQ target system was built under his scientific leadership. A steady progression of successively more aggressive target arrangements, accompanied by materials irradiation tests, led to the present “cannelloni” Pb target, which now operates at about 1.5 MW proton beam power. Later, in support of rising

interest in accelerator-driven “energy amplifier” systems, Günter pushed the MEGAPIE developments. The liquid Pb-Bi eutectic target operated successfully at MW power in SINQ for several months.

Günter’s avid interest in liquid metal targets led him to advocate liquid mercury targets for the SNS at ORNL (1.4 MW so far) and for the Material and Life Sciences facility in JPARC (1 MW to come), which are operating successfully. The problem of cavitation erosion in the pulsed source gradually became evident, and Günter worked diligently with others to develop solutions. Progress in that work continues. He took a prominent part in special interest meetings devoted to development of high-power accelerator-based neutron targets.

He tended not only to spallation target questions, but also to moderator questions, especially those of cold moderators. Günter took part in all the international meetings devoted to cold moderators and stimulated development and testing, promoting the building and use of a mockup pulsed source at the COSY synchrotron at Jülich.

Günter did not sit still at home. In early years, he traveled, sometimes with me, to spread the word for accelerator-driven neutron sources. Later, with others of us, Günter served, usually as chairman, on technical advisory committees on all of the accelerator-based neutron source projects, and some of the advanced reactor projects, some of which have been built, others not but not for want of good advice. In those sessions, he guided discussions most effectively, using his broad knowledge of the physics and engineering of sources. If other committee members failed to contribute to committee reports, he himself did the job. In these ways, Günter was a member of the ubiquitous “group of five,” with Tim Broome, Gary Russell, Noboru Watanabe, and me. We of ICANS know of all this, because Günter attended all of the ICANS meetings after 1980, and reported there.

Günter was devoted to his family: wife Gitti, Axel and Karin. When he moved to PSI, he designed and built, doing much of the work himself, a magnificent house on a hillside in Waldshut, Germany, across the Rhine from Switzerland. He equipped his Mercedes camper van with all the needed amenities for off-the-grid living and they traveled a lot. He and his family enjoyed cruising the canals of France, and included Rhonda, my wife, and me on one week-long travel in Alsace; he took patient glee watching me poorly guide our boat through the narrow waterways. Günter was fluent in English and French, and in German, of course, and perhaps also Chinese, whose country he loved and traveled extensively.

Günter was an exceptionally kind person, not only in relation to people, but also to Nature’s wild creatures. “Why did you do that?” he asked me once when I tried to kill a wasp that threatened us once in the PSI guesthouse. I felt ashamed.

And Günter had immense charm. It was almost always Günter who thanked, and arranged flowers, for the hosts and assistants at our meetings.

Now it is our turn to express our admiration and gratitude to Günter, for his long and invaluable service to the neutron science community.

THANK YOU, GÜNTER!

J. M. Carpenter