



## Eric Carl Svensson, 1940–2018

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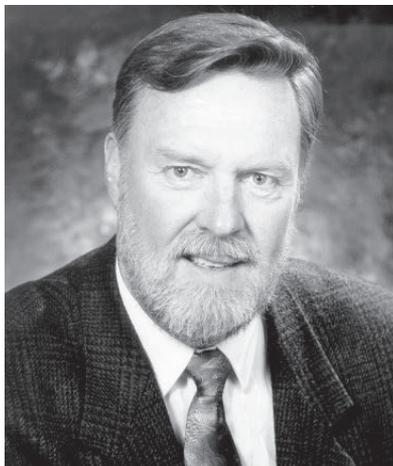
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## Eric Carl Svensson, 1940–2018

**E**ric Svensson, PhD, FRSC, FAPS, FInstPhys, passed away peacefully in Ottawa, Ontario on May 16, 2018 following a brief battle with cancer.

Eric was born on August 13, 1940 in the small hamlet of Hampstead, New Brunswick, Canada. After his early education in the one-room Hampstead school house and high school in neighboring Gagetown, a series of scholarships took Eric to the University of New Brunswick, where he completed his BSc in Physics, and then to McMaster University, where he completed his PhD under the supervision of (future) Nobel Laureate Bertram Brockhouse.

Eric joined the Chalk River Nuclear Laboratories in 1966 where he spent his career first with Atomic Energy of Canada Ltd. and subsequently with the National Research Council of Canada (NRC). At Chalk River, he established a reputation as a leader in neutron scattering and condensed matter physics. He made fundamental contributions to understanding amorphous and crystalline phases of ice that occur at low temperatures and high pressures. He was widely acclaimed for pioneering experiments that demonstrated the existence of a Bose-Einstein condensate in the superfluid phase of liquid helium-4 and measured precisely the associated condensate fraction as a function of temperature—measurements that were essential to develop our understanding of Bose-Einstein Condensation. He developed new methods of data analysis in collaboration with Varley Sears, enabling them [1,2], as well as Herbert Mook at Oak Ridge National Laboratory, to obtain measurements of the Bose-Einstein condensate that stood as the world standard for many years. Eric's



measurements [3] of the static structure factor of liquid  $^4\text{He}$  remain the most accurate to date.

Eric was an encouraging mentor and great source of technical ideas for many graduate students working at Chalk River through the 1980s and '90s. Fruitful discussions often took place in his vehicle driving to and from the lab. For one of us (BG), these discussions developed into a successful ongoing collaboration and our first PhD student's (Ron Rogge) thesis related to phonons and "spinodal ordering" in  $\text{Cu}_3\text{Au}$ .

Eric's many fundamental research contributions were recognized internationally and he was elected a Fellow of the American Physical Society (1987), the Royal Society of Canada (1996), and the Institute of Physics (1998). He remained actively engaged in research following his retirement and was named an NRC Researcher Emeritus in 2006.

Eric was also passionate about the advancement of physics in Canada in general and actively engaged in the operations of the Canadian Association of Physicists (CAP) over a period of more than 20 years, including serving as CAP President in 1997–

98. In recognition of his many years of exceptional service to the physics community, as well as the important role that scholarships played in his own education, the CAP is establishing an endowment fund for the "Eric C. Svensson Memorial Graduate Scholarship" [4].

Eric's gentle nature, his wry smile, and the sparkle in his eyes, whether he was working in the laboratory or meeting room, enjoying a fine bottle of wine at the dinner table, or paddling his canoe through Algonquin Park, will be deeply missed by all who knew him.

### References

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2. E.C. Svensson and V.F. Sears, *Progress in Low temperature Physics*, Vol. 11, Chap. 4, p. 186 (1987).
3. E.C. Svensson, V.F. Sears, A.D.B. Woods and P. Martel *Phys. Rev. B* **21**, 3638 (1980).
4. See <https://www.cap.ca/programs/medals-and-awards/prizes-students/svensson/> for details.

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