

David Shoenberg
(1911–2004)
To the 100th birthday anniversary



David Shoenberg. Speech at the Seminar at the House of Scientists in Kharkov
November 20, 1991 (Foto: Yu.A. Freiman)

Born 4 Jan 1911 in Russian Empire and gone in Cambridge, UK, David Shoenberg, the graduate of the Trinity College and professor of the Cambridge University, sustained a fruitful collaboration with FSU physicists when personal relations conquered the cold war. His direct contacts with Lev Landau and Lev Shubnikov at Kharkov Institute of Physics and Technology helped sufficiently to understand the quantum phenomena, such as magnetic quantum oscillations and superconductivity. «His last 20 years before retirement in 1978 were devoted to experiments on the peculiar magnetic properties of metals at very low temperatures. By then he and his students, together with disciples elsewhere, had extracted detailed information about the complicated dynamical behaviors of electrons in metals. From this has sprung much deeper understanding of

the differences between metals, why (for example) some conduct electricity well and others not so well. Moreover, the experimental results provided much-needed data for theoreticians to compare conflicting methods of calculating the quantum-mechanics of electrons in solids. David Shoenberg must therefore be remembered as a central figure in a whole new discipline which, when he began, was in a fragmentary and almost chaotic condition.» [Brian Pippard, *Professor David Shoenberg. Central Figure in Cambridge Low-Temperature Physics*, *The Independent*, March 16, 2004].

This special issue addresses recent developments in the relevant areas with a focus on quantum oscillations and superconductivity in exotic states of matter, quantum phase transitions and related items.

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