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ceedings of the Fourth International Conference of Cold Fusion; H. Ikegami, ed., *Frontiers of Cold Fusion*, vol. 5, Universal Academy Press, Tokyo (1993), which contains the proceedings of the Third International Conference on Cold Fusion; *The Science of Cold Fusion*, T. Bressani *et al.*, eds., Italian Physical Society, Bologna (1991), issued as volume 33 of the society's conference proceedings; *Anomalous Nuclear Effects in Deuterium / Solid Systems*, S. E. Jones *et al.*, eds., American Institute of Physics, New York (1991) [AIP Conf. Proc. **228**].

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Henry Russell Had a Role in US Astronomy, but Not in *PT* Story

John Lankford and Ricky L. Slavings's article on American astronomy from 1880 to 1940 (January, page 34) is interesting but gives an inadequate summary of the 1910–40 era. It suggests that hack work was basically the order of the day in US universities and observatories.

Although many institutions were still burdened by tedious data acquisition programs during that era, forward-looking academic programs did exist at Princeton and Harvard Universities and Yerkes Observatory before 1940.

One key figure in pre-1940 American astronomy that Lankford and Slavings seem to have overlooked was Henry Norris Russell. His monumental contributions included the theory of Russell–Saunders coupling in atomic operation; a theory of stellar evolution, in which he introduced the Hertzsprung–Russell diagram; binary-star analysis; and methods for quantitative chemical analysis of the Sun and stars. Russell's achievements created an observational foundation for the stellar nucleosynthesis investigations to come. Among Russell's students was Donald H. Menzel, who after a lonely stint at Lick Observatory went to Harvard to establish a graduate program in astrophysics in 1932. Menzel's group labored at the frontiers of atomic spectra and interpretation of the physics of stars and nebulae. Particularly outstanding among his disciples were Leo Goldberg, whose research and administrative prowess did so much to fashion 20th-century American astronomy, and James G. Baker, an eminent optical designer. I too was fortunate to have been one of Menzel's students.

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LANKFORD AND SLAVINGS REPLY: Lawrence Aller misses the point of our article, which focused on the industrialization, not the overall history, of American astronomy. Far from providing a summary, we looked at a specific problem: the ways in which the production of many forms of astronomical knowledge came to resemble the production of goods and services in other sectors of industrial America.

Nor did we overlook Henry Norris Russell. He simply was not relevant to our story. Russell was arguably the most important astrophysical theorist America produced before World War II. But theoretical work and large-scale data collection are very different social activities.

In short, although Aller's historical references are correct, they have nothing to do with our topic. We were writing as social historians; Aller views the past as an intellectual historian. Although the two perspectives are not incompatible, we did not attempt to synthesize them.

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Phase Diagram Was Out of Sync with Record

Since Newton's time (and even before), there has been a tradition in science of citing relevant antecedents to current research. In these days of millisecond publishing, this tradition regrettably seems to be going out the window. The essentials of the phase diagram for underdoped high-T_c superconductors presented in Barbara Goss Levi's "Search and Discovery" story (June, page 17) were first published in a *Physical Review B* article by me and Masahiho Inui[1] in 1990—well before the 1995 article cited by Levi.

Our article was based on the idea that the lowering of the superconducting transition temperature, T_c, in these underdoped materials is caused by quantum fluctuations of the phase of the superconducting order parameter. Furthermore, based on a quantum generalization of the Ginzburg–Landau phenomenological description of superconductivity, we made an important physical prediction. We showed that, as a result of this "phase winding" mechanism for lowering T_c in the underdoped regime, one should be able to observe infrared-active "phason bands" inside the Bardeen–Cooper–Schrieffer gap for