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Fritz London's Legacy at Duke University

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When ^3He became available in small quantities after WWII Fritz London, Professor at Duke University since 1939, became very interested in its properties in the liquid and solid phases, as contrasted with those of ^4He . His influence and that of his colleague Walter Gordy led to the appointment of William Fairbank in 1952, who was able to verify experimentally the prediction on the Fermi degeneracy of liquid ^3He below 1K, a few weeks before London's death in 1954. With his students and associates, Fairbank carried out a number of important experiments which became classics, several of which will be described. At Duke he also started planning other experiments inspired by London's predictions. After W. Fairbank's departure for Stanford in 1959, further research on liquid and solid ^3He and ^3He - ^4He mixtures was carried out by his successors at Duke University and some of the results in the sixties will be briefly described.