William M. FAIRBANK

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PhD Theses

1) At Duke University

01- G. King Walters (1956)_"Nuclear Magnetic Resonance Experiments on ^{3}He below 1K

02 - Alexander J. Dessler (1956)_"Amplitude Dependence of Velocity of Second Sound"

03 - William D. Mc Cormick (1959)_"NMR in Solid Hydrogen Under Pressure"

04 - John N. Kidder (1959)"Critical velocities and Boundary Interactions in Isothermal Flow of Superfluid ^{4}He")

05 - Charles Frederick Kellers (1960)"The Specific Heat of Liquid Helium Near the Lambda Point"

06 - John Morton Goodkind (1960)_"Nuclear Spin Relaxation in Solid ^{3}He" (1960)

07 - Ernest Dwight Adams (1960)_"Nuclear Magnetic Susceptibility of Solid ^{3}He below 1K (1960) [thesis joint supervision with Horst Meyer]

08 - William D. Mc Cormick (1959)_"NMR in Solid Hydrogen Under Pressure"

2) At Stanford University (List supplied by Blas Cabrera)

01 - Bascom Sine Deaver (1962) - Experimental evidence for quantized magnetic flux in superconducting cylinders

02 - Morris Bol (1965) - The measurement of the London moment.

03 - Allen M. Goldman (1965) - Macroscopic quantum effects in superconducting rings interrupted by insulating junctions

04 - Fred C. Witteborn (1965) - Free fall experiments with negative ions and electrons

05 - Larry Vinson Knight (1965) - Slow ground state electrons and the anomalous magnetic moment of the free electron

06 - Herbert Daniel Cohen (1966) - Nuclear magnetic susceptibility of a dilute solid mixture of He4 in He3.

07 - Walter Joseph Trela (1967) - Superfluid helium flow through an orifice

08 - George Burns Hess (1967) - Measurements of angular momentum in superfluid helium

09 - John Morley Pierce (1967) - The microwave surface resistance of superconducting lead, trapped magnetic flux, and a new magnetometer using superconductivity

10 - Julian Pierce Webb (1968) - Critical opalescent light scattering in helium3

11 - Paul Bruce Pipes (1969) - Experiments with He3-He4 dilution refrigeration and their application to nuclear magnetic susceptibility measurements in solid He3

12 - Arthur Foster Hebard (1970) - Search for fractional charge using low temperature techniques

13 - John Michael Julius Madey (1970)- I. Emission of slow positrons from dielectric absorbers; II. Statistical variations in the electrostatic potential measured outside of a real conducting surface; III. Stimulated emission of magnetic bremsstrahlung.

14 - Donald Karl Rose (1971) - Superconducting order parameter measurements

15 - Thomas Daniel Bracken (1971) - Comparison of microwave induced constant voltage steps in weakly coupled superconductors

16 - Edmund Perry Day (1972) - I. Search for diamagnetic changes during biomolecular phase transitions; II. Detection of nuclear magnetic resonance using a Josephson junction magnetometer; III. Information content of living systems

17 - Louis Brian Holdeman (1973) - Experimental studies of thin superconducting aluminum films

18 - Kenneth Lee Verosub (1973) - The interaction of acoustic phonons with nuclear spins in solid helium three

19 - Peter M. Selzer (1974) - A study of thermally generated magnetic fields in an anisotropic crystal at low temperatures

20 - Samuel Richard Stein (1974) - The superconducting-cavity stabilized oscillator and an experiment to detect time variation of the fundamental constants.

21 - Ho Jung Paik (1974) - Analysis and development of a very sensitive low temperature gravitational radiation detector

22 - Blas Cabrera (1975) - The use of superconducting shields for generating ultra-low magnetic field regions and several related experiments

23 - Stephen Paul Boughn (1975) - .The interaction of gravitational waves with matter. II.The design and construction of a cryogenic gravitational wave detector.

24 - John Peter Wikswo (1975) - Non-invasive magnetic measurement of the electrical and mechanical activity of the heart

25 - David Earl Claridge (1976) - Nine Gigahertz impedance properties of point-contact Josephson junctions

26 - Paul Wellman Worden (1976)- A cryogenic test of the equivalence principle

27 - Edward G. Wilson (1976) - Local and nonlocal effects in the penetration of magnetic fields into superconducting tin film cylinders

28 - Philip Leslie Marston (1976) - Part I, Vortex and equilibrium surface profiles of superfluid helium-four : Part II, Tensile strength and visible ultrasonic cavitation of superfluid helium-four

29 - James Marcus Lockhart (1976) Experimental evidence for a temperature-dependent surface shielding effect inside a copper tube

30 - John Sterner Philo (1977) - Magnetic susceptibility of biomolecules : 1) kinetics of hemoglobin-carbon monoxide reactions : 2) temperature dependence of the diamagnetism of water : 3) susceptibility of phospholipid bilayer dispersions

31 - George S. LaRue (1978) - Measurement of the residual charge on superconducting niobium spheres

32 - Michael A. Taber (1978) - Spin-lattice relaxation of dilute solutions of polarized He^3 in liquid He^4 in low magnetic fields at 4 K ; an analysis of a proposed cryogenic He^3 nuclear gyroscope and its application to a nuclear electric - dipole moment experiment

33 - Christopher Allen Waters (1979) - Microwave surface impedance studies on copper at low temperature

34 - James N. Hollenhorst (1979) - Signals and noise in the RF squid ; Quantum limits in gravity wave detection

35 - Peter Michelson (1980) - Properties of superconducting weak links

36 - Glen Alan Westenskow (1981) - Confinement and thermalization of low energy electrons : the development of a low-energy ground-state electron/positron source

37 - Mark Curtis Leifer (1981) - Superconducting magnetometry for cardiovascular studies and an application of adaptive filtering

38 - Evan R. Mapole – (1981) - Development of a superconducting gravity gradiometer for a test of the inverse square law

39 - Richard Vassar (1982) - Error analysis for the Stanford relativity gyroscope experiment

40 - James D. Phillips (1983) - Residual charge of niobium spheres

41 - Bruce Evan Moskowitz (1985) - Observations on the Stanford 4800 kg gravity wave detector with a cosmic ray monitor

42 - Barbara Jo Neuhauser (1985) - Construction of an ultralow temperature laboratory ; Thermal relaxation in superfluid helium-3

43 - Massimo Bassan (1985) - Cryogenic resonant-mass gravitational wave detectors

44 - Charles Richard Fisel (1986) - A method for fractional charge search using ferromagnetic levitation

45 - Kenneth Wayne Rigby (1986) - Surface cyclotron resonance and anomalies in the surface impedance of metals at low temperature

46 - John Robert Henderson (1987) - Studies of the surface potential inside a copper tube using very low energy electrons

47 - Mark Steven Rzchowski (1988) - Electromagnetic probes of metal and ceramic surfaces at low tempeerature

Visitors

(at Duke) :

Robert Romer – Professor at Amherst College-(1957-58)