

11/6/810
Engineering
Electrical and Computer Engineering Department
Departmental Research Reports, 1924-2003

Box 1:

Notes on Transformer Design - Graduate Seminar, 1924
Preliminary Report on "Class Room Illumination" for Lincoln Hall, 1935
New Storage System for High Speed Computer, December 1947
Government Contracts, 1947-49
Research for Private and Unidentified Sponsors, 1948, 1952-53, 1959-60, 1968, 1974
Losses in Reinforcing Rods and Structural Steel caused by A-C Magnetic Fields, 1955
Radio Astronomy, 1960-70
Research in Electrical Engineering, 1966, 1967, 1970, 1972, 1977

Box 2:

Pavement Reflectance Studies, 1938-1951
Pavement Reflectance Research: References, ca. 1938-1951
Pavement Surface Reflectance: Correspondence Records, 1949-1953
Pavement Surface Reflectance Project #22: Curves Taken, 1949
Russell, Anson H.: Reflectance from Pavement Surfaces
 April(?) 1949
 November 1, 1949
 December 1949
 Collected Project Reports, 1949-50
Russell, Anson H.: Thesis: Reflectance from Pavement Surfaces, ca. 1949
Phillips, Donald R.: Progress Report: Pavement Reflectance Project, February-June 1951
Simpson, John C.: Pavement Reflectance Progress Report, June 26-August 17, 1951
Hart, Alvin L.: Pavement Reflectance Progress Report, July 1950-February 1951
Tarnoff, Norman H.: Pavement Surface Reflectance: Reports and Thesis, 1951
Pavement Brightness Measurements: Correspondence and References, 1951-52
Kraehenbuehl: How to Measure Pavement Surface Reflectance (Preprint), 1951
Envelopes Containing Data from Pavement Reflectance Studies, 1938-1954

Box 3:

Envelopes Containing Data from Pavement Reflectance Studies, 1938-1954
Research and Technical Reports, 1950, 1956, 1970, 1974-79
Status Report on Direction of Arrival of Radio Waves (1956)
Wide-Aperture Distribution of Narrow-Aperture Direction Finding Systems with Optical
 Superposition of Unit Bearing Indications (1950)
A Phase and Gain Matched Three-Channel Intermediate-Frequency Amplifier (1956)

Shipboard High-Frequency Direction Finding by Pattern Recognition (1970)
A Cross-Correlation Method for Computer-Aided Selection of CDAA Sum Patterns
(RRL 449, 1974)
A Cross-Correlation Method for Computer-Aided Selection of CDAA Sum Patterns
(RRL 450, 1974)
Space Diversity Reception from a CDAA (1975)
Space Diversity Reception from a CDAA (Final Report, 1975)
Signal Processing of HF Radio Teletype Signals (Final Report, 1975)
The Effects of Random Path Fluctuations on the Accuracy of Laser Ranging Systems
(1975)
The Effects of Atmospheric Refraction on the Accuracy of Laser Ranging Systems (1976)
Optical Matched Filter Receiver Performance in Atmospheric Turbulence (1976)
Correction of Laser Ranging Data for the Effects of Horizontal Refractivity Gradients
(1976)
VLF Signal Studies (RRL 479, ca. 1976-77)
Measurement of VLF Antenna Systems (RRL 480, ca. 1977)
VLF Antenna Systems (Ernst and Dyson, RRL 482/483, 1977)
Comparison Between the Refraction Error Covariance Model and Ray Tracing (1977)
The Determination of the Direction of Arrival of the Components of a Multimode Field
(1977)
Software for On-Line Real-Time Use of the MRFS Interferometer System (1977)
Design, Construct, and Test a Notched Omnidirectional Antenna Combiner (1977)
Multiple Aperture HF Interferometer System (1977)
Studies of a VLF Antenna System (RRL 491, 1977)
Investigation of a VLF Antenna System (1977)
Speckle Noise in Satellite Based Lidar Systems (1977)
Construction and Testing of Three Crossed-Loop Antennas and Omnidirectional
Combiner Investigations (1978)
A Technique for Remotely Measuring Surface Pressure from a Satellite Using a
Multicolor Laser Ranging System (1979)
The Determination of the Direction of Arrival of an Interference Field (1979)
An Evaluation of Coincidence Interferometry (1979)
Short Range HFDF/Oblique Sounder Data Support (Ernst, RRL 498, 1979)
Ray Calculation Analysis of High Frequency Target-of-Opportunity Data (1979)

Box 4:

Research Reports, 1946-51
First Progress Report on Wide-Range Tunable Low Power Magnetrons for Frequencies
Above 2000 Megacycles (July 27, 1946)
Interim Report No. 1 on Theory of Crystal Oscillator Circuit Design (October 15, 1946)
Interim Report 1R-2 on Development of a Photo-Cathode Sensitive to Near Infra-Red
(October 31, 1946)

Third Progress Report on Wide-Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megacycles (November 27, 1946)
Range Circuits (December 17, 1946)
Interim Progress Report on Wide-Range Tunable Local Oscillator Tubes (January 31, 1947)
Fourth Progress Report on Wide-Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megacycles (January 27, 1947)
Department of Electrical Engineering Calibration Laboratory Report (January 31, 1947)
Interim Report IR-4 on Development of a Photo-Cathode Sensitive to Near Infra-Red (February 28, 1947)
Fifth Progress Report on Wide Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megabytes (March 27, 1947)
Sixth Progress Report on Wide Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megabytes (May 27, 1947)
Seventh Progress Report on Wide Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megabytes (July 27, 1947)
Eighth Progress Report on Wide Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megabytes (September 27, 1947)
Ninth Progress Report on Wide Range Tunable Low Power Magnetrons for Frequencies Above 2000 Megabytes (November 27, 1947)
The Development of a High Power Wide Frequency Range Generator and its Use in Biological Studies (January 14, 1948)
Progress Report on VHF Field Intensity Measurements (July 1, 1950)
Technical Report on the Measured Impedances of Center-Fed Slots (July 1, 1950)
Technical Report on the Measured Impedances of Complementary Antennas (July 1, 1950)
Progress Report on VHF Field Intensity Measurements (August 1, 1950)
Microwave Oscillators 7900 to 13,400 MC (August 3, 1950)
Microwave Oscillators Magnetrons Above 2600 MC (August 27, 1950)
Progress Report on VHF Field Intensity Measurements (September 1, 1950)
Status Report on the Direction of Arrival of Radio Waves (September 30, 1950)
Antennas for High-Speed Aircraft (September 30, 1950)
Progress Report on VHF Field Intensity Measurements (October 1, 1950)
Thermodynamics and Statistics of the Electron Gas (October 1950)
Microwave Oscillators Magnetrons Above 2000 MC (October 27, 1950)
Interim Engineering Report on Streamlined Airborne Antennas (October 6, 1950)
Electrical Network Analog for Antennas (August 15, 1950, October 15, 1950)
Microwave Oscillators 7900 to 13,400 MC (November 1, 1950)
Interim Report on Millimeter Wave Research (November 1, 1950)
Progress Report on General Problems of Broadband Amplification in the Microwave Frequency Range (November 12, 1950)
Theory of Oscillator Circuits (November 15, 1950)
Radio Direction Finder System Analyzer (December 1, 1950)

Infra-Red Sources (December 1, 1950)
Status Report on Direction of Arrival of Radio Waves (December 31, 1950)
Thermodynamics and Statistics of the Electron Gas (January 1951)
Theory of Oscillator Circuits (May 15, 1951)
Microwave Oscillators Magnetrons Above 2000 MC (January 27, 1951)
Streamlined Airborne Antennas (January 31, 1951)
Microwave Oscillators 7900 to 13,400 MC (February 1, 1951)
Interim Report on Millimeter Wave Research (February 1, 1951)
Progress Report on General Problems of Broadband Amplification in the Microwave
Frequency Range (February 12, 1951)
Theory of Oscillator Circuits (February 15, 1951)
Basic and Applied Research on Semiconductors (March 18, 1951)
Status Report on Direction of Arrival of Radio Waves (March 31, 1951)
Synchronization in Almost Linear Systems (April 27, 1951)
Metal-to-Ceramic Seals (April 27, 1951)
Interim Report on Millimeter Wave Research (April 31, 1951)
Progress Report on General Problems of Broadband Amplification in the Microwave
Frequency Range (May 12, 1951)
Microwave Oscillators 7900 to 13,400 MC (May 1, 1951)
Ford Foundation, 1959-1963

Box 5:

Insulation Research Project, 1947-48

Box 6:

Technical Reports and Contracts, 1979-1986, 1990-1994
Operating Manual for the RRL 8 Channel Data Logger (1979)
Construction and Testing of Three Crossed Loop Antennas and Omnidirectional
Combiner Investigations (1979)
Signal Processing of Sodium Lidar Photocount Data (1979)
Analysis of Target Signatures for Laser Altimeters (1981)
Remote Sensing of Sea State by Laser Altimeters (1981)
Intersymbol Interference in a Graded Index Fiberoptic Communication System (1982)
Evaluation of a Thermal Imaging Technique for Measuring Welding Travel Speed (1982)
The Calibration and Cataloging of Spectral Emissions from Gas Metal Arc Welding of
Steel from 4100 A to 7450 A (1983)
An Image Correction Technique for Measuring Weld Travel Speed (1983)
Analysis of Short-Pulse Laser Altimetry Data Obtained Over Horizontal Path (1983)
Spectroscopic Measurement of Hydrogen Contamination in Weld Arc Plasmas (1984)
Theoretical and Experimental Analysis of Laser Altimeters for Barometric Measurements
Over the Ocean (1984)
Electronic Transport in III Semiconductors and Their Lattice-Matched Heterojunctions

(1986)

Research on a New Type of Negative Ion Source (1981)

Bede Double Axis X-Ray Diffractometer System and Related Components (1981)

CBE/MOMBE Growth of Phosphorous Based III-V Compounds, Alloys, and
Heterostructures (1990)

III-V Detector Technology (1993-94)

Grainger Center for Electric Machinery and Electromechanics Annual Report, 2002-03