
Descriptive Summary

Creator: Booker, Henry G.

Title: Henry G. Booker Papers,

Date (inclusive): 1936 - 1988

Extent: 20.00 linear feet(50 archives boxes, 12 oversize folders)

Abstract: Professional papers of Henry G. Booker, mathematician and physicist trained at Cambridge University in the 1930s. His research focused on radio wave propagation, during a long teaching career first at Cambridge University (1936-1947) and, subsequently, at Cornell University (1948-1964), and the University of California, San Diego where he founded the Department of Electrical Engineering and Computer Science (1965-1988). Booker wrote four books: AN APPROACH TO ELECTRICAL SCIENCE (1959), A VECTOR APPROACH TO OSCILLATIONS (1965), ENERGY IN ELECTROMAGNETISM (1982), and COLD PLASMA WAVES (1984, also translated into Chinese). The bulk of the material dates from 1970-1988. Correspondence, lecture notes, examinations, reprints, notebooks and loose research notes, reports, grants and contracts comprise the collection with teaching materials representing the greatest quantity. Teaching materials are in some cases simultaneously manuscript drafts for text books. Of particular interest is correspondence between Booker and Kenneth Budden debating the interpretation of the QL/QT phenomenon. Other correspondence between Booker and historians discusses the work of Nobelist E.V. Appleton and his lack of acknowledgement of a contributor to his prize winning work. Also of note are files on the career of a student who later became a prize winning science fiction author, Glen David Brin, and Booker's files documenting student concerns during the Vietnam era.

Repository: University of California, San Diego. Geisel Library. Mandeville Special Collections Library.
La Jolla, California 92093-0175

Collection number: MSS 0093

Language of Material: Collection materials in English

Access

Collection is open for research.

Acquisition Information

Not Available

Preferred Citation

Henry G. Booker Papers, MSS 0093. Mandeville Special Collections Library, UCSD.

Publication Rights

Publication rights are held by the creator of the collection.

Biography

Henry George Booker was born in England in 1910 and became a U.S. citizen in 1952. He earned his degrees from Cambridge University (B.A. 1933, pure and applied mathematics; Ph.D. 1936, ionospheric physics). Booker became a Fellow of Christ's College in 1935, where he studied radio wave propagation. He later took a leave of absence to continue this research as a Visiting Scientist at the Carnegie Institution's Department of Terrestrial Magnetism.

During World War II, Booker conducted theoretical research for the Royal Air Force that led to developments in the understanding of antennas and radio wave propagation. After the war he returned to Christ's College to teach until 1948 when he became a professor of electrical engineering and engineering physics at Cornell University. After serving as director of Cornell's School of Electrical Engineering and associate director of the Cornell Center for Radiophysics and Space Research, he moved on to the University of California, San Diego to start the Department of Electrical Engineering and Computer Sciences in 1965. He became emeritus professor of applied physics in 1978 and died in 1988.

His research throughout his years at UCSD was concerned with electromagnetism, cold plasma waves, and radio waves. Booker had a great interest in the quality of both undergraduate teaching of physics and in the graduate curriculum. He also advised many graduate students. He was equally active in his own theoretical research, receiving grants from the Office of Naval Research, the National Science Foundation and the Los Alamos National Laboratory.

Among his many honors, Booker was elected a Fellow of the Institute of Electrical and Electronics Engineers in 1954 and made a member of the National Academy of Sciences in 1960. In 1978 the Union of Radio Science elected Booker honorary president. He was named an honorary professor at Wuhan University in China in 1981. Booker authored four books: AN APPROACH TO ELECTRICAL SCIENCE (1959), A VECTOR APPROACH TO OSCILLATIONS (1965), ENERGY IN ELECTROMAGNETISM (1982), and COLD PLASMA WAVES (1984, also translated into Chinese).

Scope and Content of Collection

This collection documents Henry Booker's professional career as a scientist and instructor at Cambridge University (1936-1947), Cornell University (1948-1964), and the University of California, San Diego (1965-1988). The materials date from 1936 through 1988, with the bulk dating from 1970 through 1988, a time representing Booker's tenure as a professor in the Department of Engineering at UCSD. The papers are arranged in nine series: 1. Biographical Material, 2. Correspondence, 3. Teaching, 4. Writings, 5. Contracts and Grants, 6. Subject Files, 7. Organizations, 8. Travel, and 9. Originals of Preservation Photocopies.

1. BIOGRAPHICAL MATERIAL

This series contains miscellaneous biographical material such as curriculum vitae, a nomination for the Marconi Fellowship, and documentation from the Institute for Science Information identifying "A Theory of Radio Scattering in the Troposphere" by Booker as one of the most cited papers in its field.

2. CORRESPONDENCE

The CORRESPONDENCE series is divided into two subseries: 2A. General and 2B. Reviews. The General correspondence subseries spans the dates 1974-1988 and is arranged alphabetically by correspondent's name. Correspondents include Jack Ratcliffe, Barry Uscinski, Dallas K. Lankford, and Kenneth Budden. The Budden correspondence is notable for describing how Booker came to be interested in radio propagation as an undergraduate student at Cambridge. The letters describe Booker's first meeting and early tutelage under Jack Ratcliffe at Cambridge, Booker's early career, and some of his radio wave propagation research with Ratcliffe. Also notable in this series is a letter to Edward Stern discussing some of the problems encountered with setting up the UCSD engineering department.

The Reviews subseries contains copies of formal reviews conducted by Booker of others' papers and proposals.

3. TEACHING

This is the largest series in the Booker papers. It is divided into four subseries: 3A. Cornell, 3B. UCSD, 3C. Examinations, and 3D. Course and Professor Evaluations. The Cornell subseries is arranged in alphabetical order with material from 1957-1966. This subseries contains lecture notes and course texts for several undergraduate mathematics and calculus courses taught by Booker at Cornell. Included here are course notes later published as a textbook, "A Vector Approach to Oscillations" (1965).

The UCSD subseries contains items that relate to undergraduate and graduate courses taught by Booker at UCSD from 1973 to 1988. The series is arranged alphabetically by course and contains lecture notes, texts, syllabi, and other miscellaneous materials for the various courses that Booker taught. Included in this subseries are course notes which were later published as textbooks, ENERGY IN ELECTROMAGNETISM (1982) and COLD PLASMA WAVES (1984).

It is important to note that during Booker's tenure at UCSD, the Physics Department was renamed twice. The materials in this subseries reflect these changes. Within the files, the department and course titles will variously be labeled "APIS" (Applied Physics and Information Science) 1964-1979, "EECS" (Electrical Engineering and Computer Science) 1980-1986, and "ECE" (Electrical and Computer Engineering) 1987-1988. Booker's file headings do not always reflect the changes. Course materials from a later year may be filed under an earlier heading, and vice versa (i.e. materials for EECS 131 may be filed under the file heading, and with materials, for ECE 131). This has been simplified on the container list by leaving department initials off altogether and organizing material according to course description (i.e. Electromagnetic fields in free space 131A).

The Examinations subseries consists of midterm and final examinations for UCSD science and physics courses taught by Booker from 1970-1988. Exams are arranged by course number and filed chronologically. Some examinations include solutions to the problems.

The Course and Professor Evaluations subseries contains student evaluations for course number 131 from Fall 1985 to Spring 1987. These files offer some interesting insight into students' perceptions of Booker's teaching ability and style.

4. WRITINGS

The WRITINGS series is divided into three subseries: 4A. Published, 4B. Unpublished, and 4C. Notebooks. The Published writings subseries is arranged chronologically by year of publication, from 1938-1987. Included in this subseries are books, journal articles and reprints written by Booker. This subseries contains primarily original or photocopies of typescripts with some drafts and edits included. Some files also contain correspondence with publishers, proofs, and originals of diagrams.

The Unpublished writings subseries contains a variety of unpublished materials such as lecture notes, reports, notations, and calculations generated in Booker's career as an instructor and theorist. The material is organized chronologically with the undated material following in alphabetical order by title. The subseries includes handwritten and typed manuscripts and notes, transparencies, calculations, equations, and miscellaneous research data.

The Notebooks subseries contains notebooks compiled by Booker which have been left intact. They house a variety of material including lecture notes, topical files, and bibliographies. Notebooks are arranged alphabetically by title.

5. CONTRACTS AND GRANTS

This series contains materials that relate to Booker's association with outside agencies for funding. The files are organized alphabetically by agency name and name of project. In most cases the files include a copy of the grant proposal or contract, correspondence, and some budgetary or accounting materials. The CONTRACTS AND GRANTS series primarily contains documentation of research funded by the Los Alamos National Laboratory in New Mexico from 1983 to 1987, the National Science Foundation from 1978 through 1988, and the Office of Naval Research, which funded Booker's research on extremely low frequency wave propagation from 1975-1980.

6. SUBJECT FILES

This series is arranged alphabetically by title and includes material pertaining to such subjects as a debate Booker had with Kenneth Budden of Cambridge University regarding approximations of QL/QT. The controversy arose from Budden's review of Booker's manuscript for COLD PLASMA WAVES. Also of note is Booker's file on Jacov Al'pert, a Soviet "refusnik" wishing to emigrate. Booker corresponded with Al'pert from 1977 through 1988 and was successful in getting the UCSD physics department to offer Al'pert a position should he be given permission to leave the Soviet Union.

Other topics in the SUBJECT FILE series are found in the files "History of electromagnetic theory" and "History of ionosphere." These files contain materials that relate to Booker's correspondence with historians regarding the history of electromagnetic and ionospheric theory. Of special interest is his correspondence with Stewart Gillmor and others, regarding an unpublished 1926 manuscript by Austrian physicist Wilhelm Altar. Gillmor contends that the manuscript, along with correspondence between Altar and Nobel Prize winner E.V. Appleton, seems to suggest that Appleton and Altar had a significant collaboration that was never acknowledged by Appleton. Correspondence between Gillmor, Booker, Jack Ratcliffe and others debate this suggestion and its implication for the history of magneto-ionic theory.

The file "Student victimization" explores the quality of undergraduate teaching in a research-oriented institution like UCSD by chronicling the 1973 student accusations of negligent teaching against physics Professor Keith Brueckner. Also of interest are the files which document turbulent events at UCSD during the Vietnam War era. Booker was particularly interested in the kind of education received by engineering students. This interest is evident in the subject files which contain collected articles pertaining to the quality and purpose of teaching university level physics and engineering.

7. ORGANIZATIONS

This series contains materials relating to two of the organizations in which Booker was an active member: The National Academy of Science (NAS) and the International Union of Radio Science (URSI). Of historical interest is the file "URSI Reorganization" which contains documents that relate to a formal reorganization of the Union in 1970-1971. The URSI materials contain copies of minutes, routine memos, group correspondence, and lecture notes for an assembly talk in 1981. The NAS material contains nomination and election correspondence for 1986-1988, regarding NAS Section 16 - the Atmospheric Group.

8. TRAVEL

The TRAVEL series contains materials on Booker's trip to China in 1981 and proposed trips to China, England, India and Israel. The proposed trips were canceled due to Booker's illness. The 1981 trip to China includes travel plans, itineraries, notes for lectures delivered by Booker, correspondence with Chinese colleagues and associates, reprints of Chinese scientists, and names and addresses of Chinese colleagues. Also included in this series is material related to a seminar in India commemorating S.K. Mitra which Booker did not actually attend, but he did contribute a paper.

9. ORIGINALS OF PRESERVATION PHOTOCOPIES

Indexing Terms

The following terms have been used to index the description of this collection in the library's online public access catalog.

Subjects

Booker, Henry G. -- Archives

University of California, San Diego -- Faculty -- Archives

University of California, San Diego -- History -- Archives

International Union of Radio Science

University of California, San Diego. -- Dept. of Electrical and Computer Engineering -- Archives

University of California, San Diego. -- Dept. of Applied Physics and Information Science -- Archives

University of California, San Diego. -- Electrical Engineering & Computer Sciences Dept. -- Archives

Electric engineering -- Study and teaching

Radio wave propagation
Electromagnetism
Low temperature plasmas

Contributors

Ratcliffe, J.A. -- (John Ashworth), -- correspondent
Uscinski, B.J., -- correspondent
Lankford, Dallas K., -- correspondent
Budden, Kenneth G., -- correspondent

BIOGRAPHICAL MATERIAL

| | |
|-----------------|--|
| box 1, folder 1 | Biographies and curriculum vitae |
| box 1, folder 2 | Current Contents - history of Booker's most cited publication |
| box 1, folder 3 | Marconi Fellowship - nomination for ninth annual award 1982 |

CORRESPONDENCE

General

| | |
|------------------|---|
| box 1, folder 4 | Abelson, Philip H. - Bertram, Sidney |
| box 1, folder 5 | Bertram, Sidney 1985 |
| box 1, folder 6 | Benyon, Granville - Budden, Kenneth |
| box 1, folder 7 | Budden, Kenneth - Kirby, Richard |
| box 1, folder 8, | Ferguson, Jerry A 1977 - 1985 |
| oversize FB04211 | |
| box 1, folder 9 | Klostermeyer, J. - Lankford, Dallas |
| box 1, folder 10 | Le, Gioi - Morrison, P.R. |
| box 1, folder 11 | Polk, Charles 1980 |
| box 2, folder 1 | Ratcliffe, Jack - Ticoles, Gus |
| box 2, folder 2 | Uscinski, Barry 1981 - 1983 |
| box 2, folder 3 | Von Biel, H. Andreas - Young, Worchester |

Reviews

| | |
|-----------------|----------------------------|
| box 2, folder 4 | Reviews 1973 - 1979 |
| box 2, folder 5 | Reviews 1980 |
| box 2, folder 6 | Reviews 1981 - 1984 |
| box 2, folder 7 | Reviews 1985 - 1988 |

Note

Also contains 1 undated item

| | |
|-----------------|---|
| box 2, folder 8 | C. Hines' Lorentz correction manuscript, 1 of 2 folders 1976 |
| box 2, folder 9 | C. Hines' Lorentz correction manuscript, 2 of 2 folders 1976 |

TEACHING

Cornell

| | |
|--|--|
| box 2, folder 10 | Basic Electrical Engin.: An Approach to Theory of Alternating Current Networks 1957 |
| | Note |
| | Course 4111 |
| box 3, folder 1, oversize FB04206 | Calculations for systems course - diagrams and computations, 1 of 8 folders 1962 - 1964 |
| | Note |
| | 26 leaves from this folder were placed in an oversize flat box |
| box 3, folder 2, oversize FB04207 | Calculations for systems course - diagrams and computations, 2 of 8 folders 1962 - 1964 |
| | Note |
| | 10 leaves from this folder were placed in an oversize flat box |
| box 3, folder 3, oversize FB04208 | Calculations for systems course - diagrams and computations, 3 of 8 folders 1962 - 1964 |
| | Note |
| | 16 leaves from this folder were placed in an oversize flat box |
| box 3, folder 4 box 3, folder 5, oversize FB04209 | Calculations for systems course - diagrams and computations, 4 of 8 folders 1962 - 1964 Calculations for systems course - diagrams and computations, 5 of 8 folders 1962 - 1964 |
| | Note |
| | 19 leaves from this folder were placed in an oversize flat box |
| box 3, folder 6 box 3, folder 7 box 3, folder 8, oversize FB04210 | Calculations for systems course - diagrams and computations, 6 of 8 folders 1962 - 1964 Calculations for systems course - diagrams and computations, 7 of 8 folders 1962 - 1964 Calculations for systems course - diagrams and computations, 8 of 8 folders 1962 - 1964 |
| | Note |
| | 13 leaves from this folder were placed in an oversize flat box |
| box 3, folder 9 | Complex numbers, n.d., 1 of 3 folders |
| box 3, folder 10 | Complex numbers, n.d., 2 of 3 folders |
| box 3, folder 11 | Complex numbers, n.d., 3 of 3 folders |
| box 3, folder 12 | Mathematical methods, n.d., 1 of 2 folders |
| box 4, folder 1 | Mathematical methods, n.d., 2 of 2 folders |
| box 4, folder 2 | Unified Field Theory of Electric Machines by R.N. Sudan, n.d. |
| box 4, folder 3 | Vector Calculus for Oscillations - solutions to problems, 1 of 2 folders 1960 |
| box 4, folder 4 | Vector Calculus for Oscillations - solutions to problems, 2 of 2 folders 1960 |
| box 4, folder 5 | Vector Calculus for Oscillations, preface - chapter 2 1962 |
| box 4, folder 6 | Vector Calculus for Oscillations, chapters 3 - 6 1962 |
| box 4, folder 7 | Vector Calculus for Oscillations, chapters 7 - 9 1962 |
| box 4, folder 8 | Vector Calculus for Oscillations, chapters 10 - 12 1962 |
| box 5, folder 1 | Vector Calculus for Oscillations, chapters 13 - 14, 1 of 2 folders 1962 |
| box 5, folder 2 | Vector Calculus for Oscillations, chapters 13 - 14, 2 of 2 folders 1962 |
| box 5, folder 3 | Vector Calculus for Oscillations - summarizing exercises 1962 |
| box 5, folder 4 | Vector Calculus for Oscillations, chapters 4 - 6, 1 of 2 folders 1966 |

TEACHING**Cornell**

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| box 5, folder 5 | Vector Calculus for Oscillations, chapters 4 - 6, 2 of 2 folders 1966 |
| box 5, folder 6 | Vector Calculus for Oscillations, chapters 7 - 8 1966 |
| box 5, folder 7 | Vector Calculus for Oscillations, chapters 9 - 11 and appendices 1966 |
| box 5, folder 8 | Vector Calculus for Oscillations, part 3 - Energy Flow in Linear Systems, n.d. |

Note

1 of 2 folders

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| box 5, folder 9 | Vector Calculus for Oscillations, part 3 - Energy Flow in Linear Systems, n.d. |
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Note

2 of 2 folders

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| box 6, folder 1 | Vector Calculus for Oscillations, part 4 - Transform Analysis of Linear Systems |
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Note

n.d., 1 of 2 folders

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| box 6, folder 2 | Vector Calculus for Oscillations, part 4 - Transform Analysis of Linear Systems |
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Note

n.d., 2 of 2 folders

| | |
|-----------------|---|
| box 6, folder 3 | Vector Calculus for Oscillations - problems part 1 and 2, n.d., 1 of 2 folders |
| box 6, folder 4 | Vector Calculus for Oscillations - problems part 1 and 2, n.d., 2 of 2 folders |
| box 6, folder 5 | Vector Calculus for Oscillations - problems part 3 and 4, n.d., 1 of 2 folders |
| box 6, folder 6 | Vector Calculus for Oscillations - problems part 3 and 4, n.d., 2 of 2 folders |
| box 6, folder 7 | Vector Calculus for Oscillations - solutions to miscellaneous problems, n.d. |

Note

1 of 2 folders

| | |
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| box 6, folder 8 | Vector Calculus for Oscillations - solutions to miscellaneous problems, n.d. |
|-----------------|---|

Note

2 of 2 folders

University of California, San Diego

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|-----------------|---|
| box 6, folder 9 | Cold Plasma Waves - lecture notes, reprints, etc., 1 of 5 folders 1972 - 1978 |
| box 7, folder 1 | Cold Plasma Waves - lecture notes, reprints, etc., 2 of 5 folders 1972 - 1978 |
| box 7, folder 2 | Cold Plasma Waves - lecture notes, reprints, etc., 3 of 5 folders 1972 - 1978 |
| box 7, folder 3 | Cold Plasma Waves - lecture notes, reprints, etc., 4 of 5 folders 1972 - 1978 |
| box 7, folder 4 | Cold Plasma Waves - lecture notes, reprints, etc., 5 of 5 folders 1972 - 1978 |
| box 7, folder 5 | Cold Plasma Waves - typescript chapters 1 - 11, 1 of 2 folders 1983 |
| box 7, folder 6 | Cold Plasma Waves - typescript chapters 1 - 11, 2 of 2 folders 1983 |
| box 7, folder 7 | Cold Plasma Waves - typescript chapters 12 - 18, 1 of 2 folders 1983 |
| box 8, folder 1 | Cold Plasma Waves - typescript chapters 12 - 18, 2 of 2 folders 1983 |
| box 8, folder 2 | Cold Plasma Waves 248 - lecture notes written for China trip I, 1 of 3 folders 1981 |
| box 8, folder 3 | Cold Plasma Waves 248 - lecture notes written for China trip I, 2 of 3 folders 1981 |
| box 8, folder 4 | Cold Plasma Waves 248 - lecture notes written for China trip I, 3 of 3 folders 1981 |
| box 8, folder 5 | Cold Plasma Waves 248 - lecture notes written for China trip II, 1 of 2 folders 1981 |
| box 8, folder 6 | Cold Plasma Waves 248 - lecture notes written for China trip II, 2 of 2 folders 1981 |
| box 8, folder 7 | Cold Plasma Waves 248 - term paper topics, syllabi, correspondence, etc. 1977 - 1985 |

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| box 8, folder 8 | Cold Plasma Waves 248A - lecture notes 1977 |
| box 9, folder 1 | Cold Plasma Waves 248A - lecture notes, 1 of 2 folders 1984 - 1987 |
| box 9, folder 2 | Cold Plasma Waves 248A - lecture notes, 2 of 2 folders 1984 - 1987 |
| box 9, folder 3 | Cold Plasma Waves 248B - class notes, chapters 1 - 3 1984 |
| box 9, folder 4 | Cold Plasma Waves 248B - class notes, chapters 4 - 6 1984 |
| box 9, folder 5 | Cold Plasma Waves 248B - class notes, chapters 5 - 8 1984 |
| box 9, folder 6 | Cold Plasma Waves 248B - class notes, chapters 9 - 11 1984 |
| box 9, folder 7 | Cold Plasma Waves 248B - class notes, chapters 12 - 13 1984 |
| box 9, folder 8 | Cold Plasma Waves 248B - class notes, chapters 14 - 15 1984 |
| box 10, folder 1 | Cold Plasma Waves 248B - class notes, chapters 16 - 17 1984 |
| box 10, folder 2 | Cold Plasma Waves 248B - class notes, chapter 18 and symbols 1984 |
| box 10, folder 3 | Cold Plasma Waves 248B - lecture notes 1983 |
| box 10, folder 4 | Cold Plasma Waves 248B - lecture notes, 1 of 2 folders 1987 |
| box 10, folder 5 | Cold Plasma Waves 248B - lecture notes, 2 of 2 folders 1987 |
| box 10, folder 6 | Cold Plasma Waves 248B - lecture notes, n.d. |
| box 11, folder 1 | Cold Plasma Waves 248C - exact wave solutions, n.d. |
| box 11, folder 2 | Cold Plasma Waves 248C - lecture notes 1982 |
| box 11, folder 3 | Cold Plasma Waves 248C - lecture notes, 1 of 3 folders 1983 |
| box 11, folder 4 | Cold Plasma Waves 248C - lecture notes, 2 of 3 folders 1983 |
| box 11, folder 5 | Cold Plasma Waves 248C - lecture notes, 3 of 3 folders 1983 |
| box 11, folder 6 | Electromagnetic Fields in Free Space 131A - diagrams for book 1 1980 |
| box 11, folder 7 | Electromagnetic Fields in Free Space 131A - class notes, preface - chapter 1 1980 |
| box 11, folder 8 | Electromagnetic Fields in Free Space 131A - class notes, chapters 2 - 3 1980 |
| box 12, folder 1 | Electromagnetic Fields in Free Space 131A - class notes, chapters 4 - 6 1980 |
| box 12, folder 2 | Electromagnetic Fields in Free Space 131A - class notes, chapters 7 - 9 1980 |
| box 12, folder 3 | Electromagnetic Fields in Free Space 131A - class notes, chapters 10 - 11 1980 |
| box 12, folder 4 | Electromagnetic Fields in Free Space 131A - class notes, chapters 12 - 13 1980 |
| box 12, folder 5 | Electromagnetic Fields in Free Space 131A - lecture notes, 1 of 3 folders |
| | Note |
| | 1983; 1986-1987 |
| box 12, folder 6 | Electromagnetic Fields in Free Space 131A - lecture notes, 2 of 3 folders |
| | Note |
| | 1983; 1986-1987 |
| box 12, folder 7 | Electromagnetic Fields in Free Space 131A - lecture notes, 3 of 3 folders |
| | Note |
| | 1983; 1986-1987 |
| box 12, folder 8 | Electromagnetic Fields in Free Space 131A - lecture notes, "PA" 1987 |
| box 13, folder 1 | Electromagnetic Fields in Free Space 131A - problems, chapters 1 - 6 1979 |
| box 13, folder 2 | Electromagnetic Fields in Free Space 131A - problems, chapters 7 - 10 1979 |
| box 13, folder 3 | Electromagnetic Fields in Free Space 131A - problems, chapters 11 - 13 1979 |
| box 13, folder 4 | Electromagnetic Fields in Materials 131B - diagrams for book 2 1980 |
| box 13, folder 5 | Electromagnetic Fields in Materials 131B - lecture notes, syllabi, CAPE 1986 - 1988 |
| | Note |
| | 1 of 2 folders |
| box 13, folder 6 | Electromagnetic Fields in Materials 131B - lecture notes, syllabi, CAPE 1986 - 1988 |
| | Note |
| | 2 of 2 folders |

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|-------------------|--|
| box 13, folder 7 | Electromagnetic Fields in Materials 131B - lecture notes and syllabi 1988 |
| | Note |
| | 1 of 2 folders |
| box 13, folder 8 | Electromagnetic Fields in Materials 131B - lecture notes and syllabi 1988 |
| | Note |
| | 2 of 2 folders |
| box 14, folder 1 | Electromagnetic Fields in Materials 131B - lecture notes, "PB", n.d. |
| box 14, folder 2 | Electromagnetic Fields in Materials 131B - problems, 1 of 6 folders 1979 |
| box 14, folder 3 | Electromagnetic Fields in Materials 131B - problems, 2 of 6 folders 1979 |
| box 14, folder 4 | Electromagnetic Fields in Materials 131B - problems, 3 of 6 folders 1979 |
| box 14, folder 5 | Electromagnetic Fields in Materials 131B - problems, 4 of 6 folders 1979 |
| box 14, folder 6 | Electromagnetic Fields in Materials 131B - problems, 5 of 6 folders 1979 |
| box 14, folder 6 | Electromagnetic Fields in Materials 131B - problems, 5 of 6 folders 1979 |
| box 14, folder 7 | Electromagnetic Fields in Materials 131B - problems, 6 of 6 folders 1979 |
| box 14, folder 8 | Electromagnetic Fields in Materials 131B - text, 1 of 8 folders 1980 |
| box 14, folder 9 | Electromagnetic Fields in Materials 131B - text, 2 of 8 folders 1980 |
| box 15, folder 1 | Electromagnetic Fields in Materials 131B - text, 3 of 8 folders 1980 |
| box 15, folder 2 | Electromagnetic Fields in Materials 131B - text, 4 of 8 folders 1980 |
| box 15, folder 3 | Electromagnetic Fields in Materials 131B - text, 5 of 8 folders 1980 |
| box 15, folder 4 | Electromagnetic Fields in Materials 131B - text, 6 of 8 folders 1980 |
| box 15, folder 5 | Electromagnetic Fields in Materials 131B - text, 7 of 8 folders 1980 |
| box 15, folder 6 | Electromagnetic Fields in Materials 131B - text, 8 of 8 folders 1980 |
| box 15, folder 7 | Electromagnetism 101, 1 of 2 folders 1973 |
| box 15, folder 8 | Electromagnetism 101, 2 of 2 folders 1973 |
| box 15, folder 9 | Energy in Electromagnetism 131C - class notes, preface - chapter 1 1981 |
| box 15, folder 10 | Energy in Electromagnetism 131C - class notes, chapters 2 - 3 1981 |
| box 16, folder 1 | Energy in Electromagnetism 131C - class notes, chapters 4 - 5 1981 |
| box 16, folder 2 | Energy in Electromagnetism 131C - class notes, chapters 6 - 7 1981 |
| box 16, folder 3 | Energy in Electromagnetism 131C - class notes, chapters 8 - 10 1981 |
| box 16, folder 4 | Energy in Electromagnetism 131C - class notes, chapters 11 - 12 1981 |
| box 16, folder 5 | Energy in Electromagnetism 131C - class notes, chapters 13 - 14 , appendices A-D 1981 |
| box 16, folder 6 | Energy in Electromagnetism 131C - lecture notes, etc., 1 of 2 folders 1980 - 1981 |
| box 16, folder 7 | Energy in Electromagnetism 131C - lecture notes, etc., 2 of 2 folders 1980 - 1981 |
| box 16, folder 8 | Energy in Electromagnetism 131C - lecture notes, etc., 1 of 4 folders 1986 |
| box 17, folder 1 | Energy in Electromagnetism 131C - lecture notes, etc., 2 of 4 folders 1986 |
| box 17, folder 2 | Energy in Electromagnetism 131C - lecture notes, etc., 3 of 4 folders 1986 |
| box 17, folder 3 | Energy in Electromagnetism 131C - lecture notes, etc., 4 of 4 folders 1986 |
| box 17, folder 4 | Energy in Electromagnetism 131C - lecture notes, etc., n.d. |
| box 17, folder 5 | Energy in Electromagnetism 131C - problems, 1 of 4 folders 1981 |
| box 17, folder 6 | Energy in Electromagnetism 131C - problems, 2 of 4 folders 1981 |
| box 17, folder 7 | Energy in Electromagnetism 131C - problems, 3 of 4 folders 1981 |
| box 17, folder 8 | Energy in Electromagnetism 131C - problems, 4 of 4 folders 1981 |
| box 18, folder 1 | Science 2 - An Outline of Electricity and Magnetism, 1 of 2 folders 1969 |
| box 18, folder 2 | Science 2 - An Outline of Electricity and Magnetism, 2 of 2 folders 1969 |
| box 18, folder 3 | Science 2 - An Outline of Electricity and Magnetism, 1 of 7 folders 1970 |
| box 18, folder 4 | Science 2 - An Outline of Electricity and Magnetism, 2 of 7 folders 1970 |
| box 19, folder 1 | Science 2 - An Outline of Electricity and Magnetism, 3 of 7 folders 1970 |
| box 19, folder 2 | Science 2 - An Outline of Electricity and Magnetism, 4 of 7 folders 1970 |
| box 19, folder 3 | Science 2 - An Outline of Electricity and Magnetism, 5 of 7 folders 1970 |
| box 19, folder 4 | Science 2 - An Outline of Electricity and Magnetism, 6 of 7 folders 1970 |
| box 20, folder 1 | Science 2 - An Outline of Electricity and Magnetism, 7 of 7 folders 1970 |
| box 20, folder 2 | Science 2B and 2C 1970 - 1971 |

TEACHING

University of California, San Diego

| | |
|------------------|---|
| box 20, folder 3 | Science 2C - An Outline of Electricity and Magnetism, chapters 15 - 32 1971 |
| box 20, folder 4 | Science 4A 1971 |
| box 20, folder 5 | Solutions to problems in Electricity and Magnetism, 1 - 14, n.d., 1 of 2 folders |
| box 21, folder 1 | Solutions to problems in Electricity and Magnetism, 1 - 14, n.d., 2 of 2 folders |
| box 21, folder 2 | Solutions to problems in Electricity and Magnetism, 15 - 32, n.d. |

Exams

| | |
|------------------|--|
| box 21, folder 3 | 101A examinations 1973 - 1976 |
| box 21, folder 4 | 101B examinations 1973 - 1975 |
| box 22, folder 1 | 131A examinations 1975 - 1979 |
| box 22, folder 2 | 131A examinations 1979 - 1983 |
| box 22, folder 3 | 131A examinations 1984 - 1987 |
| box 23, folder 1 | 131B examinations 1976 - 1979 |
| box 23, folder 2 | 131B examinations 1980 - 1983 |
| box 23, folder 3 | 131B examinations 1984 - 1988 |
| box 24, folder 1 | 131C examinations 1976 - 1979 |
| box 24, folder 2 | 131C examinations 1980 - 1984 |
| box 24, folder 3 | 131C examinations 1985 - 1988 |
| box 24, folder 4 | Science 2B examinations 1970 - 1971 |
| box 24, folder 5 | Science 2C examinations 1970 - 1971 |

Course and Professor Evaluations

| | |
|------------------|-------------------------------|
| box 25, folder 1 | EECS 131 - Fall 1985 |
| box 25, folder 2 | EECS 131 - Winter 1986 |
| box 25, folder 3 | EECS 131 - Spring 1986 |
| box 25, folder 4 | EECS 131 - Spring 1987 |

WRITINGS

Published

- box 25, folder 5 **Application of the magneto-ionic theory to the ionosphere 1934**
box 25, folder 6 **Oblique propagation of electromagnetic waves in a slowly-varying... 1936**
- Note**
Rest of title: ...non-isotropic medium
- box 25, folder 7 **Propagation of wave-packets incident obliquely upon a stratified doubly... 1938**
- Note**
Rest of title: ...refracting ionosphere
- box 25, folder 8 **Ionospheric investigation concerning the lorentz polarization-correction 1938**
box 25, folder 9 **Slot aerials and their relation to complementary wire aerials (Babinet's prin.) 1946**
box 25, folder 10 **Elements of wave propagation using the impedance concept 1947**
box 25, folder 11 **Mode theory of tropospheric refraction and its relation to wave-guides and diffract. 1947**
box 25, folder 12 **Radio refraction in the atmosphere 1948**
box 25, folder 13 **Some problems in radio meteorology 1948**
box 25, folder 14 **Application of the magneto-ionic theory to radio waves incident obliquely... 1949**
- Note**
Rest of title: ...upon a horizontally-stratified ionosphere
- box 25, folder 15 **Concept of an angular spectrum of plane waves, and its relation to that of... 1950**
- Note**
Rest of title: ...polar diagram and aperture distribution
- box 25, folder 16 **Relation between the sommerfeld theory of radio propagation over a flat earth... 1950**
- Note**
Rest of title: ...and the theory of diffraction at a straight edge
- box 25, folder 17 **Diffraction from an irregular screen with applications to ionospheric problems 1950**
box 25, folder 18 **Theory of radio scattering in the troposphere 1950**
box 25, folder 19 **Studies on propagation in the ionosphere: an outline of the magneto-ionic theory 1950**
box 25, folder 20 **Studies on propagation in the ionosphere: theory of magnetic storms and auroras 1950**
box 25, folder 21 **New kind of radio propatation at very high freqencies observable over... 1952**
- Note**
Rest of title: ...long distances
- box 25, folder 22 **What is wrong with engineering education? 1954**
box 25, folder 23 **Theory of radio transmission by tropospheric scattering using very narrow beams 1955**
box 25, folder 24 **Studies on propagation in the ionosphere: some practical aspects of auroral... 1955**
- Note**
Rest of title: ...propagation

WRITINGS

Published

- box 25, folder 25 **On the level at which fading is imposed on waves reflected vertically from... 1955**
- Note**
- Rest of title: ...the ionosphere
- box 25, folder 26 **Theory of scattering by nonisotropic irregularities with application to radar... 1956**
- Note**
- Rest of title: ...reflections from the aurora
- box 25, folder 27 **Turbulence in the ionosphere with applications to meteor-trails, radio-star... 1956**
- Note**
- Rest of title: ...scintillation, auroral radar echoes, and other phenomena
- box 25, folder 28 **Theory of long-duration meteor-echoes based on atmospheric turbulence with... 1956**
- Note**
- Rest of title: ...experimental confirmation
- box 25, folder 29 **Approach to the theory of alternating current networks 1957**
- box 25, folder 30 **Role of stratospheric scattering in radio communication 1957**
- box 25, folder 31 **Concerning ionospheric turbulence at the meteoric level 1958**
- box 25, folder 32 **Radar studies of the aurora 1960**
- box 25, folder 33 **Local reduction of f-region ionization due to missile transit 1961**
- box 25, folder 34 **Guidance of radio and hydromagnetic waves in the magnetosphere 1962**
- box 25, folder 35 **University education and applied science 1963**
- box 26, folder 1 **Vector approach to oscillations 1964**
- box 26, folder 2 **Academic organization in physical science 1964**
- box 26, folder 3 **Effects of ions on low frequency and very low frequency propagation in an... 1964**
- Note**
- Rest of title: ...abnormally ionized atmosphere
- box 26, folder 4 **Dispersion of waves in a cold magnetoplasma from hydromagnetic to... 1965**
- Note**
- Rest of title: ...whistler frequencies
- box 26, folder 5 **Theorem concerning reflection from a plane stratified medium 1968**
- box 26, folder 6 **Simple methods for calculating lf and vlf reflection loss in the disturbed... 1968**
- Note**
- Rest of title: ...lower ionosphere
- box 26, folder 7 **Comparative study of ionospheric measurement techniques 1970**
- box 26, folder 8 **Transmission of electromagnetic waves through normal and disturbed ionospheres 1970**
- box 26, folder 9 **Ionosphere as the secondary conductor of a transformer for elf 1973**
- box 26, folder 10 **Fifty years of the ionosphere. The early years - electromagnetic theory 1974**
- box 26, folder 11 **Radar communications antenna-siting for low-angle radiation at high frequencies 1975**
- box 26, folder 12 **Role of the magnetosphere in satellite and radio-star scintillation 1975**
- box 26, folder 13 **Electromagnetic and hydromagnetic waves in a cold magnetoplasma 1975**
- box 26, folder 14 **Developments in the theory of radio propagation, 1900-1950 1975**
-

WRITINGS**Published**

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- box 26, folder 15 **Fitting of multi-region ionospheric profiles of electron density by a single... 1976 - 1977**
- Note**
- Rest of title: ...analytic function of height
- box 26, folder 16 **Is the teaching of electricity and magnetism in need of change? 1977**
- box 26, folder 17 **Relation between ionospheric profiles and elf propagation in the... 1977**
- Note**
- Rest of title: ...earth-ionosphere transmission line
- box 26, folder 18 **Theoretical model for equatorial ionospheric spread - f echoes in hf and vhf bands 1978**
- box 26, folder 19 **Use of refractive scattering to explain shf scintillations 1979**
- box 26, folder 20 **Role of acoustic gravity waves in the generation of spread f and ionospheric... 1979**
- Note**
- Rest of title: ...scintillation
- box 26, folder 21 **Acoustic gravity waves, travelling ionospheric disturbances, spread f... 1979**
- Note**
- Rest of title: ...and ionospheric scintillation
- box 26, folder 22 **Weak scattering theory applied to equatorial ionospheric scintillation for a... 1980**
- Note**
- Rest of title: ...wide range of parametric values
- box 26, folder 23 **Application of a simplified theory of elf propagation to a simplified... 1980**
- Note**
- Rest of title: ...worldwide model of the ionosphere
- box 26, folder 24 **Intensity fluctuations due to a deep phase screen with a power-law spectrum 1981**
- box 26, folder 25 **Theory of refractive scattering in scintillation phenomena 1981**
- box 26, folder 26 **Application of refractive scintillation theory to radio transmission through... 1981**
- Note**
- Rest of title: ...the ionosphere and the solar wind, and to reflection from a rough ocean
- box 26, folder 27 **Quantitative explanation of strong multi-frequency intensity scintillation... 1981**
- Note**
- Rest of title: ...spectra using refractive scattering
- box 27, folder 1 **Energy in electromagnetism - conversion of 131C text into a book 1982**
- box 27, folder 2 **Energy in electromagnetism, 1982 - correspondence 1980 - 1981**
- box 27, folder 3 **Energy in electromagnetism - diagrams, 1 of 3 folders 1982**
- box 27, folder 4 **Energy in electromagnetism - diagrams, 2 of 3 folders 1982**
- box 27, folder 5 **Energy in electromagnetism - diagrams, 3 of 3 folders 1982**
- box 27, folder 6 **Energy in electromagnetism - draft chapters 13 - 14 1982**
- box 27, folder 7 **Energy in electromagnetism - draft chapters 15 - 16 1982**
- box 27, folder 8 **Theory of radio scattering in the troposphere 1982**
- box 27, folder 9 **Scattering theory of vhf transequatorial propagation 1983**
- box 27, folder 10 **Simplified theory of elf propagation in the earth-ionosphere transmission line 1983**
-

WRITINGS

Published

- box 27, folder 11 **Cold plasma waves, 1984 - correspondence 1982 - 1983**
box 27, folder 12 **Cold plasma waves, 1984 - correspondence 1984 - 1987**
box 28, folder 1 **Cold plasma waves, 1984 - correspondence with Peter Peregrinus 1980 - 1981**
box 28, folder 2 **Cold plasma waves, 1984 - correspondence with Peter Peregrinus 1982 - 1987**
box 28, folder 3 **Cold plasma waves, 1984 - deleted chapter 4**
box 28, folder 4, **Cold plasma waves, 1984 - diagrams**
oversize FB04212
- Note**
- 4 leaves from this folder were placed in an oversize flat box
- box 28, folder 5 **Cold plasma waves, 1984 - editor's notes and figure captions**
box 28, folder 6 **Cold plasma waves, 1984 - errata sheet**
box 28, folder 7 **Application of a scattering theory of vhf transequatorial propagation 1984**
box 28, folder 8 **Application of refractive scintillation theory to laser transmission through... 1985**
- Note**
- Rest of title:...the atmosphere near ground level
- box 28, folder 9 **Comparison between the extended-medium and the phase-screen scintillation theories 1985**
box 28, folder 10 **Use of scintillation theory to explain frequency-spread on f-region ionograms 1986**
box 28, folder 11 **Scintillation theory - a simplified treatment 1986**
box 28, folder 12 **Scintillation theory of the fading of hf waves returned from the f-region:... 1987**
- Note**
- Rest of title: ...receiver near transmitter
- box 28, folder 13 **Scintillation theory of fading in long distance hf ionospheric communications 1987**
-

Unpublished

- box 29, folder 1 **Wireless waves, 1 of 2 folders 1936**
box 29, folder 2 **Wireless waves, 2 of 2 folders 1936**
box 29, folder 3 **Troposphere refraction 1961**
box 29, folder 4 **Rocket-generated mechanical waves in the ionosphere 1962**
box 29, folder 5 **Cold plasma waves - lecture given in England 1964**
box 29, folder 6 **Some thoughts on the UCSD college system 1965**
box 29, folder 7 **Miscellaneous writings 1972**
box 29, folder 8 **Electromagnetic radiation from high-energy electrons coherently ejected in an... 1972**
- Note**
- Rest of title: ...atmosphere under the influence of an imposed magnetic field; 1 of 2 folders
- box 29, folder 9 **Electromagnetic radiation from high-energy electrons coherently ejected in an... 1972**
- Note**
- Rest of title: ...atmosphere under the influence of an imposed magnetic field; 2 of 2 folders
- box 29, folder 10 **Magneto-ionic theory calculations 1974**
box 29, folder 11 **M I O (magneto-ionic) theory calculations 1 1974**
box 30, folder 1 **Concept of a radio frequency camera 1974**
box 30, folder 2 **ELF (extremely low frequency) propagation, 1 of 3 folders 1974 - 1982**
box 30, folder 3 **ELF (extremely low frequency) propagation, 2 of 3 folders 1974 - 1982**
box 30, folder 4 **ELF (extremely low frequency) propagation, 3 of 3 folders 1974 - 1982**
box 30, folder 5 **Quiet ionosphere 1975**
box 30, folder 6 **Vat's observations 1975 - 1981**
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WRITINGS

Unpublished

box 30, folder 7 **Ion-acoustic waves, 1 of 2 folders 1975 - 1976**
box 30, folder 8 **Ion-acoustic waves, 2 of 2 folders 1975 - 1976**
box 30, folder 9 **ELF (extremely low frequency) calculations 1976**
box 31, folder 1 **ELF (extremely low frequency) calculations - final program 1976**
box 31, folder 2 **ELF (extremely low frequency) - Behroozi, 1 of 2 folders 1976 - 1979**
box 31, folder 3 **ELF (extremely low frequency) - Behroozi, 2 of 2 folders 1976 - 1979**
box 31, folder 4 **Flow of energy across the antipodal region of an elf transmitter 1977**
box 31, folder 5 **Label samples 1977**
box 31, folder 6 **Masters 1977**
box 31, folder 7 **Scintillation, UCSD 1977**
box 31, folder 8, **Scintillation, Naval Underwater Systems Center 1977 - 1978**
oversize FB04213

Note

29 leaves from this folder were placed in an oversize flat box

box 31, folder 9 **ELF (extremely low frequency), 1 of 2 folders 1979**
box 32, folder 1 **ELF (extremely low frequency), 2 of 2 folders 1979**
box 32, folder 2 **ELF (extremely low frequency) reflection heights, 1 of 3 folders 1979**
box 32, folder 3 **ELF (extremely low frequency) reflection heights, 2 of 3 folders 1979**
box 32, folder 4 **ELF (extremely low frequency) reflection heights, 3 of 3 folders 1979**
box 32, folder 5 **Majidi-Ahy calculations, 1 of 6 folders 1979 - 1980**
box 32, folder 6 **Majidi-Ahy calculations, 2 of 6 folders 1979 - 1980**
box 32, folder 7, **Majidi-Ahy calculations, 3 of 6 folders 1979 - 1980**
oversize FB04214

Note

20 leaves from this folder were placed in an oversize flat box

box 32, folder 8 **Majidi-Ahy calculations, 4 of 6 folders 1979 - 1980**
box 32, folder 9 **Majidi-Ahy calculations, 5 of 6 folders 1979 - 1980**
box 33, folder 1 **Majidi-Ahy calculations, 6 of 6 folders 1979 - 1980**
box 33, folder 2 **Original diagrams 1980**
box 33, folder 3 **Thick scintillating layer calculations 1980**
box 33, folder 4 **Radiation of plasma waves 1 1981**
box 33, folder 5 **Radiation of plasma waves 2, 1 of 2 folders 1981**
box 33, folder 6 **Radiation of plasma waves 2, 2 of 2 folders 1981**
box 33, folder 7 **Cold plasma wave calculations 1982**
box 33, folder 8 **Comments on spaceborne ELF systems 1982**
box 33, folder 9 **Fourth moment equation 1983**
box 33, folder 10 **Laser calculations 1984**
box 34, folder 1 **Spread f calculations, 1 of 2 folders 1984**
box 34, folder 2 **Spread f calculations, 2 of 2 folders 1984**
box 34, folder 3 **Frequency spread and single-layer program for hf ionospheric scintillation... 1987**

Note

Rest of title: ...incorporating earth's curvature

box 34, folder 4 **Advanced network theory, n.d., 1 of 2 folders**
box 34, folder 5 **Advanced network theory, n.d., 2 of 2 folders**
box 34, folder 6 **Antennas, n.d., 1 of 2 folders**
box 34, folder 7 **Antennas, n.d., 2 of 2 folders**
box 34, folder 8 **Booker paper, unused transparencies, n.d.**
box 34, folder 9 **Booker paper, used transparencies, n.d.**
box 34, folder 10 **Branch points in complex w plane, n.d. (post 1982)**
box 35, folder 1, **Calculations for 131, n.d. (post 1977)**
oversize FB04215

Note

6 leaves from this folder were placed in an oversize flat box

WRITINGS

Unpublished

| | |
|-------------------|--|
| box 35, folder 2 | Calculations - miscellaneous, n.d. (post 1974) |
| box 35, folder 3 | Calculations - miscellaneous, n.d. (post 1976) |
| box 35, folder 4 | Curves for two ion species, n.d. |
| box 35, folder 5 | E. M. (electo-magnetic) theory, n.d. |
| box 35, folder 6 | Graphs - miscellaneous, n.d. |
| box 35, folder 7 | Heights of reflection - preliminary version, n.d. |
| box 35, folder 8 | Horizontal structure in ionosphere, n.d. |
| box 35, folder 9 | Hydromagnetic waves B and Dyce originals, n.d. |
| box 35, folder 10 | Ionospheric refraction, n.d., 1 of 3 folders |
| box 35, folder 11 | Ionospheric refraction, n.d., 2 of 3 folders |
| box 35, folder 12 | Ionospheric refraction, n.d., 3 of 3 folders |
| box 35, folder 13 | M I O (magneto-ionic) calculations 2, n.d. |
| box 36, folder 1 | Notes, n.d., 1 of 2 folders |
| box 36, folder 2 | Notes, n.d., 2 of 2 folders |
| box 36, folder 3 | Plasma waves talk, n.d. |
| box 36, folder 4 | Preliminary calculations, n.d. |
| box 36, folder 5 | Profiles, n.d. |
| box 36, folder 6 | Radio waves, n.d., 1 of 3 folders |
| box 36, folder 7 | Radio waves, n.d., 2 of 3 folders |
| box 36, folder 8 | Radio waves, n.d., 3 of 3 folders |
| box 36, folder 9 | Slides - miscellaneous, n.d. |
| box 36, folder 10 | Stanford and Kwajalein, n.d., 1 of 2 folders |
| box 36, folder 11 | Stanford and Kwajalein, n.d., 2 of 2 folders |
| box 37, folder 1 | Surface propagation, n.d., 1 of 3 folders |
| box 37, folder 2 | Surface propagation, n.d., 2 of 3 folders |
| box 37, folder 3 | Surface propagation, n.d., 3 of 3 folders |
| box 37, folder 4 | Transmission lines, n.d. |
| box 37, folder 5 | Turbulent scattering, n.d., 1 of 2 folders |
| box 37, folder 6 | Turbulent scattering, n.d., 2 of 2 folders |
| box 37, folder 7 | Untitled, n.d., 1 of 2 folders |
| box 37, folder 8 | Untitled, n.d., 2 of 2 folders |
| box 37, folder 9, | Vat's (Hati Om) scintillation, n.d. |
| oversize FB04216 | |
| | Note |
| | 13 leaves from this folder were placed in an oversize flat box |

Notebooks

| | |
|------------------|---|
| box 38, folder 1 | Differential equations, Courant 1945 |
| box 38, folder 2 | Elasticity, Mr. Dean, n.d. |
| box 38, folder 3 | Occasional lectures, 1 of 2 folders 1937 - 1948 |
| box 38, folder 4 | Occasional lectures, 2 of 2 folders 1937 - 1948 |
| box 38, folder 5 | Original graphs for hydromagnetic waves 1963 |
| box 38, folder 6 | References 1900 - 1946 |
| box 38, folder 7 | References 1947 - 1957 |
| box 39, folder 1 | Reflections of waves from a stratified non-conducting medium, n.d. |
| box 39, folder 2 | Sound propagation |
| box 39, folder 3 | Stanford notebooks 1 and 2 1960 |
| box 39, folder 4 | Theory of ionospheric radio propagation 1952 |

CONTRACTS AND GRANTS

- box 39, folder 5 **Computer Sciences Corporation - hf ray and attenuation calculations 1978**
box 39, folder 6 **Instructional Improvement Grant - to publish class notes for "Cold Plasma Waves" 1982**
box 39, folder 7 **Los Alamos Nat'l. Lab - an investigation into theoretical explanation of... 1984**
- Note**
Rest of title: ...f-spread data taken at Jicamarca, Peru; 1 of 2 folders
- box 39, folder 8 **Los Alamos Nat'l. Lab - an investigation into theoretical explanation of... 1984**
- Note**
Rest of title: ...f-spread data taken at Jicamarca, Peru; 2 of 2 folders
- box 40, folder 1 **Los Alamos Nat'l. Lab - Investigation of correlation scales, fading rates,... 1986**
- Note**
Rest of title: ...directions of arrival and bandwidths for hf reflection from the ionospheric f region
- box 40, folder 2 **Los Alamos Nat'l. Lab - Theory of ionospheric spread f in the hf band 1983**
box 40, folder 3 **Los Alamos Nat'l. Lab - World-wide fading characteristics for hf radio... 1987**
- Note**
Rest of title: ...propagation using multi-layer ionosphere
- box 40, folder 4 **Nat'l. Science Foundation - Effect of ionospheric fluctuations on f region... 1984 - 1985**
- Note**
Rest of title: ...ionograms and on radio communications in the hf band; 1 of 2 folders
- box 40, folder 5 **Nat'l. Science Foundation - Effect of ionospheric fluctuations on f region... 1984 - 1985**
- Note**
Rest of title: ...ionograms and on radio communications in the hf band; 2 of 2 folders
- box 40, folder 6 **Nat'l. Science Foundation - Fourth moment partial differential equation of... 1981**
- Note**
Rest of title: ...scintillation theory, with applications to the troposphere, the ionosphere and the solar wind
- box 40, folder 7 **Nat'l. Science Foundation - Fourth moment partial differential equation of... 1982**
- Note**
Rest of title: ...scintillation theory, with applications to the troposphere, the ionosphere and the solar wind
- box 40, folder 8 **Nat'l. Science Foundation - Fourth moment partial differential equation of... 1983**
- Note**
Rest of title: ...scintillation theory, with applications to the troposphere, the ionosphere and the solar wind
- box 40, folder 9 **Nat'l. Science Foundation - New theory of ionospheric spread f echoes 1978**

- box 40, folder 10 **Nat'l. Science Foundation - New theory of ionospheric spread f echoes, renewal 1979**
Note
1 of 2 folders
- box 41, folder 1 **Nat'l. Science Foundation - New theory of ionospheric spread f echoes, renewal 1979**
Note
2 of 2 folders
- box 41, folder 2 **Nat'l. Science Foundation - New theory of ionospheric spread f echoes, renewal 1980**
box 41, folder 3 **Nat'l. Science Foundation - Quantitative world-wide study of fading in... 1985 - 1986**
Note
Rest of title: ...ionospheric radio communications in the hf band based on scintillation theory
- box 41, folder 4 **Nat'l. Science Foundation - Quantitative world-wide study of fading in... 1986 - 1987**
Note
Rest of title: ...ionospheric radio communications in the hf band based on scintillation theory
- box 41, folder 5 **Nat'l. Science Foundation - Quantitative world-wide study of fading in... 1987 - 1988**
Note
Rest of title: ...ionospheric radio communications in the hf band based on scintillation theory II; proposal
- box 41, folder 6 **Office of Naval Research - accounts 1975 - 1978**
box 41, folder 7 **Office of Naval Research - ELF (extremely low freq.) propagation involving... 1978**
Note
Rest of title: ...simultaneous reflexion from the d and e regions; 1 of 2 folders
- box 41, folder 8 **Office of Naval Research - ELF (extremely low freq.) propagation involving... 1978**
Note
Rest of title: ...simultaneous reflexion from the d and e regions; 2 of 2 folders
- box 41, folder 9 **Office of Naval Research - ELF (extremely low freq.) propagation in and below... 1975**
Note
Rest of title: ...the ionosphere; 1 of 2 folders
- box 41, folder 10 **Office of Naval Research - ELF (extremely low freq.) propagation in and below... 1975**
Note
Rest of title: ...the ionosphere; 2 of 2 folders
- box 42, folder 1 **Office of Naval Research - Relation between ionospheric profiles and ELF... 1976**
Note
Rest of title: ...propagation in the earth-ionosphere transmission line

box 42, folder 2 **Office of Naval Research - Relation between ionospheric profiles and ELF... 1977**

Note

Rest of title: ...propagation in the earth-ionosphere transmission line; 1 of 2 folders

box 42, folder 3 **Office of Naval Research - Relation between ionospheric profiles and ELF... 1977**

Note

Rest of title: ...propagation in the earth-ionosphere transmission line; 2 of 2 folders

box 42, folder 4 **Office of Naval Research - Simplified theory of ELF propagation in the... 1980**

Note

Rest of title: ...earth-ionosphere; 1 of 2 folders

box 42, folder 5 **Office of Naval Research - Simplified theory of ELF propagation in the... 1980**

Note

Rest of title: ...earth-ionosphere; 2 of 2 folders

SUBJECT FILES

box 42, folder 6 **Alpert, Jacov 1977 - 1979**
 box 42, folder 7 **Alpert, Jacov 1980 - 1988**
 box 42, folder 8 **Articles for quotation, 1 of 4 folders 1956 - 1973**
 box 42, folder 9 **Articles for quotation, 2 of 4 folders 1956 - 1973**
 box 43, folder 1 **Articles for quotation, 3 of 4 folders 1956 - 1973**
 box 43, folder 2 **Articles for quotation, 4 of 4 folders 1956 - 1973**
 box 43, folder 3 **Budden, Kenneth and Jack Ratcliffe, 1 of 2 folders**
 box 43, folder 4 **Budden, Kenneth and Jack Ratcliffe, 2 of 2 folders**
 box 43, folder 5 **Disturbances on campus - correspondence, clippings, reports; 1 of 2 folders 1969 - 1971**
 box 43, folder 6 **Disturbances on campus - correspondence, clippings, reports; 2 of 2 folders 1969 - 1971**
 box 43, folder 7 **Energy conservation 1965 - 1974**
 box 43, folder 8 **History of the electromagnetic theory, 1 of 2 folders 1977;1979-1983;1986**
 box 43, folder 9 **History of the electromagnetic theory, 2 of 2 folders 1977;1979-1983;1986**
 box 44, folder 1 **History of the ionosphere, 1 of 2 folders, 1972; 1974-1983; 1985-1986**
 box 44, folder 2 **History of the ionosphere, 2 of 2 folders, 1972; 1974-1983; 1985-1986**
 box 44, folder 3 **Incoherent scatter, 1 of 2 folders, 1949-1951; 1956; 1959-1963;1969**
 box 44, folder 4 **Incoherent scatter, 2 of 2 folders, 1949-1951; 1956; 1959-1963;1969**
 box 44, folder 5 **Incoherent scattering, 1 of 2 folders, 1961; 1963-1964**
 box 44, folder 6 **Incoherent scattering, 2 of 2 folders, 1961; 1963-1964**
 box 44, folder 7 **International reference ionosphere project 1969 - 1979**
 box 44, folder 8 **Panel to investigate use of Dept. of Defense funds by UCSD faculty 1970**
 box 45, folder 1 **Principle of relativity, n.d.**
 box 45, folder 2 **Protests, 1970; 1972-1973; 1976**
 box 45, folder 3 **QL/QT controversy with K. Budden - Angular approximations for waves in a... 1983 - 1984**

Note

Rest of title: ...cold magnetoplasma

box 45, folder 4 **QL/QT controversy with K. Budden - Budden 1983**
 box 45, folder 5 **QL/QT controversy with K. Budden - Heading, John 1983 - 1984**
 box 45, folder 6 **QL/QT controversy with K. Budden - QL and QT approximations 1983 - 1984**
 box 45, folder 7 **QL/QT controversy with K. Budden - QL/QT manuscript 1983 - 1984**
 box 45, folder 8 **Ratcliffe, Jack 1987**
 box 45, folder 9 **Security, 1984-1985; 1987**
 box 45, folder 10 **S. I. - International System Units 1974**
 box 45, folder 11 **Student victimization 1973 - 1975**
 box 45, folder 12 **Student victimization 1975 - 1976**
 box 46, folder 1 **Systems explorations, 1 of 2 folders, 1962; 1966; 1969; 1976-78**
 box 46, folder 2 **Systems explorations, 2 of 2 folders, 1962; 1966; 1969; 1976-78**
 box 46, folder 3 **Transequatorial propagation, 1 of 3 folder 1980**
 box 46, folder 4 **Transequatorial propagation, 2 of 3 folder 1980**
 box 46, folder 5, **Transequatorial propagation, 3 of 3 folder 1980**
 oversize FB04217

Note

23 leaves from this folder were placed in an oversize flat box

box 46, folder 6 **Tropospheric reprints; 1973; 1976**

ORGANIZATIONS

box 46, folder 7 **National Academy of Sciences 1979 - 1987**
box 46, folder 8 **National Academy of Sciences 1988**
box 46, folder 9 **Int'l. Union of Radio Sci. (URSI) - assembly talk 1981**
box 46, folder 10 **Int'l. Union of Radio Sci. (URSI) - post Florence 1984 - 1985**
box 46, folder 11 **Int'l. Union of Radio Sci. (URSI) - post Florence 1986**
box 46, folder 12 **Int'l. Union of Radio Sci. (URSI) - post Florence 1987 - 1988**
box 47, folder 1 **Int'l. Union of Radio Sci. (URSI) - reorganization, 1 of 2 folders 1970 - 1972**
box 47, folder 2 **Int'l. Union of Radio Sci. (URSI) - reorganization, 2 of 2 folders 1970 - 1972**

TRAVEL

box 47, folder 3 **China - Chengdu Institute of Radio Engineering 1981**
box 47, folder 4 **China - Wuhan University 1 1981**
box 47, folder 5 **China - Wuhan University 2; correspondence, itineraries, etc. 1981**
box 47, folder 6 **China - Wuhan University 2; course at university 1981**
box 47, folder 7 **China - Wuhan University 2; lectures at university 1981**
box 47, folder 8 **China - Wuhan University 2; Radio wave propagation and ionosphere studies 1981**
box 47, folder 9 **China - Tianjin University 1987**
box 48, folder 1 **Chinese colleagues - Huang, Zhong hao (Guangxi University) 1985 - 1986**
box 48, folder 2 **Chinese colleagues - Lee, Fong 1987**
box 48, folder 3 **Chinese colleagues - Qing, Han 1981 - 1983**
box 48, folder 4 **Chinese colleagues - Song, Xiao-ting 1981 - 1983**
box 48, folder 5 **Chinese colleagues - Tiecheng, Li 1985**
box 48, folder 6 **Chinese colleagues - Tschu, Kang-Sun (re: Chang Man) 1988**
box 48, folder 7 **Chinese colleagues - Zhang, Zun-Jie 1981 - 1982**
box 48, folder 8 **Chinese desirous of visiting the U.S. - correspondence 1981 - 1986**
box 48, folder 9 **Chinese names and addresses, n.d.**
box 48, folder 10 **Chinese reprints, 1 of 2 folders**
box 48, folder 11 **Chinese reprints, 2 of 2 folders**
box 48, folder 12 **India - S.K. Mitra Commemoration Seminar, Calcutta 1985**
box 48, folder 13 **India visit 1986 - 1987**

ORIGINALS OF PRESERVATION PHOTOCOPIES

box 49, folder 1 **All folders in this box contain originals of preservation photocopies**
box 50, folder 1 **All folders in this box contain originals of preservation photocopies**