THE HISTORY OF RADIO ASTRONOMY

A BIBLIOGRAPHY
1898-1983

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## INTRODUCTION

The history of radio astronomy - whether one begins with Hertz's experiments, or Lodge's, or Jansky's - is one of fascination and serendipity. The development of the science has been fun and frustrating, often with the theorists two steps behind the observers, but with the former occasionally waiting around the bend of the next revelation smirking "I told you so." It is hoped that the bibliography that follows will give some of the essence of the early days and that the reader will be able to share some of the excitment, both of the early engineers who quickly realized they were onto something theretofore unknown and the later radio astronomers who continued in their footsteps. The attempt has been made to include most of the early engineering papers as well as a sampling of the theoretical ones that tried to explain what the engineers were revealing. In addition, there are included discovery papers for some of radio astronomy's "main events," a sampling of papers that reveal the development of the science in various countries, and books and papers that summarize the history of radio astronomy, or particular aspects of $1 t$, up to a certain point.

There are, of course, omissions. Some are deliberate. In order to keep the listing to a manageable size (<350), some things are covered only briefly, such as the numerous radio source catalogs, just to provide examples of the kind of work being done. Other omissions are through ignorance or a biased selectivity. When talking to a scientist knowledgeable in the history of the field, one finds a certain bias toward that individual's own work. When this bias was confirmed through further study, it was included; when not, it was not. But if one had talked to a dffferent subset of scientists, the results would probably have been skewed another way. If what you consider the most important paper in the history of radio astronomy has been omitted, please accept my apologies and let me know what the paper is, so that perhaps a later edition can be better rounded.

FORMAT

The bibliography is divided into two parts. First, there is a chronological list that begins with Wilsing and Scheiner's attempt to detect solar radiation in the late nineteenth century and continues through the discovery of the millisecond pulsar in 1982. The list is alphabetical, by first author, within a particular year. The second part is an alphabetical, by first author, list of all of the papers and books listed in the first part, with SEE references from secondary authors. Numbers to the left of each entry indicate that the item is either a monograph (B) or an articie (A, or $S$ if included in Sullivan's Classics in Radio Astronomy (1982)). The format for each item is:
no. Author (s)
"Title"
(publication year) place: publisher (for monographs) or journal title, volume, and inclusive pagination (for articles)

You are invited to peruse the bibliography and encouraged to go back and read the originals. The bibliography gives some of the essence of the history of radio astronomy, but to enjoy the full flavor you must read the papers for yourself. Many are contained in Sullivan's Classics and the majority of the others are likely available in your own library or on interlibrary loan from the National Radio Astronomy Observatory library.

AJ

Amer. Scientist

Ann. d'Astrophys.
Ann. Physik u. Chemie
Annals N.Y. Acad. Sci.
Astr. Tsirk. Astronomicheskii Tsirkuliar
Astr. Zh.
Astrophys. J.
Aust. J. Phys.
Aust. J. Sci. Res.

BAN
Be11 Lab. Rec.
Comp. Rendus Acad. Sci. (Paris) Comptes Rendus Hèbdomadaires des Séancés de l'Académie des Sciences
Astronomical Journal
Anerican Scientist
Annales d'Astrophysique
Annalen der Physik und Chemie
Annals of the New York Academy of Sciences

Astronomicheskii Zhurnal
Astrophysical Journal
Australian Journal of Physics
Australian Journal of Scientific Research
Bulletin of the Astronomical Institutes of the Netherlands

Bell Laboratories Record

Dok1. Akad. nauk SSSR
Ergebn. Exakt. Naturwiss. Hochfreq. Electroakustik

Hung. Phys. Acta
IAU Symp.
ICC '79
IRE Trans. Ant. Prop.
J. Frankiln Inst.
J. Phys., USSR

JGR

JRASC

MARAS

Naturwiss.

Doklady Akademiia nauk SSSR
Ergebnisse der exakten Naturwissenschaften Hochfrequenztechnik und Elektroakustik Hungarica Physica Acta

International Astronomical Union Symposium
1979 International Conference on Communications (IEEE)

Institute of Radio Engineers Transactions on Antennas and Propagation

Journal of the Franklin Institute
Journal of Physics (Akademiia nauk SSSR)
Journal of Geophysical Research
Journal of the Royal Astronomical Society of Canada
Monthly Notices of the Royal Astronomical Society
Naturwissenschaften

NBS TN
Ned. Tijdschr. Natuurk.

## PASP

Phil. Mag.

Phys. Rev.
Phys. Rev. Lett.
Phys. Today
Proc. IEEE

Proc. IRE
Proc. IRE Australia

Proc. NAS
Proc. Phys. Soc.
Proc. Roy. Soc.
QJRAS
Rep. Radio Res. Japan
Rev. Astron. (Argentina)
Rev. Mod. Phys.
Rev. Sci. Instrum.
Sci. Amer.
Sci. Dimension (Canada)
Sci. Monthly
Sky Telesc.
Sov. Astron. AJ
Sterne
Teleconmun. J.

National Bureau of Standards Technical Note Nederlandsch Tijdschrift voor Natuurkunde Pub1ications of the Astronomical Society of the Pacific

Philosophical Magazine; a journal of theoretical, experimental and applied physics

Physical Review
Physical Review Letters
Physics Today
Proceedings of the Institute of Electrical and Electronics Engineers

Proceedings of the Institute of Radio Engineers
Proceedings of the Institution of Radio Engineers of Australia

Proceedings of the National Academy of Sciences
Proceedings of the Physical Society
Proceedings of the Royal Society
Quarterly Journal of the Royal Astronomical Society
Report of Radio Research in Japan
Revista Astronomica (Argentina)
Reviews of Modern Physics
Review of Scientific Instruments
Scientific American
Science Dimension (Canada)
Scientific Monthly
Sky and Telescope
Soviet Astronomy--AJ
Die Sterne
Telecommunication Journa1 (ITU)

Trudy Fiz. Inst. im. P.N. Lebedeva. Trudy Fizicheskogo Instituta imeni P.N. Lebedeva.

Trudy Sovesch. Vop. Kosmog. Trudy Soveshchanila po Voprosam Kosmogonii
URSI Spec. Rep. Union Radio Scientifique Internationale Special Report
Vistas Astron. Vistas in Astronomy
Z. Astrophys.

Zh. Eksp. Teor. Fiz.
Zeitschrift fUr Astrophysik
Zhurnal Eksperimentalnoi i Teoreticheskoi Fiziki
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"On an attempt to detect electrodynamic solar radiation
and on the change in contact resistance when illuminating
tuo conductors by electric radiation $=$ ueber einen
Versuch, eine electrodynamische Sonnenstrahlung
nachzeweisen, und ueber die Aederung des
Uebergangswiderstandes bei Beruehrung zweier Leiter durch
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