TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

April 26, 1973

Miss Elizabeth K. Ralph
Associate Director
MASCA
University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Miss Ralph:

We would be interested in publishing a book relating to instruments used for archaeological prospecting. Since you are quite an expert in this field, we wonder if you would be interested in preparing such a manuscript for publication.

Sincerely yours,

Robert Noyes

Robert Noyes
Publisher

RN:ee

2 BLOOMSBURY PLACE, LONDON WC1A 2QA, ENGLAND

N.J.

May 4, 1973

Mr. Robert Noyes
Noyes Press
Mill Road at Grand Ave.
Park Ridge, New Jersey
07656

Dear Mr. Noyes:

In regard to writing a manuscript on the subject of instruments for archaeological prospecting, I am flattered that you have asked me.

However, the M.I.T. Press has recently (1971) published our book entitled Dating Techniques for the Archaeologist. We consider this book to be the first in a series of handbooks on techniques, and I think that M.I.T. is interested in publishing our next one which will include the instruments for archaeological prospecting.

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

May 7, 1973

Miss Elizabeth K. Ralph
Associate Director
MASCA
University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Miss Ralph:

Thank you for your response to my letter of April 26th, regarding the proposed book on the subject of instruments for archaeological prospecting. If M.I.T. Press decides not to publish this book, I would appreciate it very much if you would consider our firm.

Incidentally, I hope to see Mr. E.T. Hall at Oxford in early June, although I doubt that they will have anything to publish in this area. M.S. Tite's book "Methods of Physical Examination in Archaeology" has just been published; and M.J. Aitken's "Physics in Archaeology" is now being rewritten for a new edition for OUP.

Sincerely yours,

Robert Noyes
Publisher

RN:ee

2 BLOOMSBURY PLACE, LONDONWC1A 2QA, ENGLAND

September 13th, 1973

Mr. Robert Noyes
Noyes Press
Mill Road at Grand Avenue
Park Ridge, N.J. 07656

Dear Mr. Noyes,

We have just learned that the M.I.T. Press is not especially interested in publishing a book on the subject of instruments for archaeological prospecting at this time. This seems somewhat surprising since our book entitled Dating Techniques for the Archaeologist is being reprinted (3000 copies were printed originally).

However, you may now feel also that too many books are being published on these subjects. I am sure that Martin Aitken's new edition of Physics in Archaeology will contain a good chapter on magnetometers, etc.

If you are still interested in spite of this, please let me know what sort of timing, etc. you have in mind.

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

September 25, 1973

Ms. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Ms. Ralph:

Thank you for your letter of September 13th regarding the subject of instruments for archaeological projects.

I am not really surprised that MIT Press has turned down the project, since all university presses are in pretty bad financial shape and they are all cutting back.

What I would really like to see is a good practical book on this subject rather than a book going into details of theoretical physics. For example, your article in the Winter 1965 edition of EXPEDITION was very interesting and contained a lot of practical information. In fact, I thought your article was quite humorous.

Possibly you could give me an outline of what could be done in this area, then, if we are both mutually interested, I would make a trip to Philadelphia to discuss it with you personally.

Sincerely yours,

Robert Noyes
Publisher

RN:ee

September 28th, 1973

Mr. Robert Noyes
Noyes Press
Mill Road at Grand Avenue
Park Ridge, N.J. 07656

Dear Mr. Noyes,

In regard to the book about instruments for archaeological prospecting, I have enclosed a chapter that I wrote in 1967. This was solicited by someone at the Oriental Institute and his book never materialized.

This chapter is quite dull, not well-organized, and is now obsolete. In a new book, however, perhaps some of this technical information could be included or put in appendices. In addition, there could be some chapters on actual surveys such as the one reported in Expedition (1965) including amusing incidents.

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

October 2, 1973

Ms. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Ms. Ralph:

Thank you for your letter of September 28th, and I think your Table of Contents would be excellent, the only thing that should be added is actual field experience, as you suggested. We really have no timing on this manuscript, and we would publish it whenever you would have it ready. We pay a royalty of 12% of the list price of the book.

If you would be interested in preparing such a book based on the above, I would appreciate a general indication of when you would have it available. Maybe there is no point in coming to Philadelphia at this time. If you will be in St. Louis in December, possibly we could discuss it at that time.

Sincerely yours,

Robert Noyes

RN:ee
Encl.

Robert Noyes
Publisher

P.S. We have made a photocopy of the Table of Contents, and are returning the rest of the manuscript herewith.

Oct. 5, 1973

Mr. Robert Noyes, Publisher
Noyes Press
Mill Road at Grand Ave.
Park Ridge, New Jersey
07656

Dear Mr. Noyes:

In regard to writing the book on archaeological prospecting, I think probably that I should be most likely to complete it (except for preparation of some of the figures) during the summer of 1974. I hope that this does not have to be a firm commitment since I can never anticipate what crises may arise here.

I plan to apply for a summer travel grant to return briefly to Sybaris in June to see how all of the structures which the Italians have now excavated tie in with our magnetometer anomalies. As far as I know, they have not found any archaic buildings so Sybaris may still be "up in the air".

About St. Louis, I have not yet decided, mostly because I had planned to be in Egypt then, but that trip has been delayed for one year.

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

October 15, 1973

Ms. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Ms. Ralph:

Thank you for your letter of October 5th. We would like to publish the proposed book, and I realize that you do not wish to make a firm committment at this time. Therefore, it would not be sensible to send you a royalty contract at this time.

I will await your news sometime early next year as to when you can give us a more definitive schedule.

Best regards.

Sincerely yours,

Robert Noyes

Robert Noyes
Publisher

RN:ee

December 11th, 1973

Mr. Robert Noyes, Publisher
Noyes Press
Mill Road at Grand Avenue
Park Ridge, New Jersey 07656

Dear Mr. Noyes,

This is a short note to let you know that I have decided not to attend the AIA meetings in St. Louis. After travelling to Dallas in mid-November on planes which were completely filled and behind schedule, I think that this is not the winter for junkets.

Hopefully, during the holidays, I shall find time to write some parts of the book. However, I know from experience that I am more likely to do more serious writing during the summer.

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

December 19, 1973

Ms. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Ms. Ralph:

Thank you for your letter of December 11th. I am still going to attempt to make St. Louis, particularly since TWA will probably be back on schedule.

I look forward to working with you on the proposed book. Would you like a contract at this time?

Sincerely yours,

Robert Noyes

Robert Noyes
Publisher

RN:ee

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

February 11, 1974

Ms. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Ms. Ralph:

I note in the December 1973 issue of MASCA Newsletter there are interesting articles regarding magnetometer surveys in Italy and in Egypt. Both of these articles give good practical information.

This is the type of thing we are looking for for the proposed book, rather than theoretical information which has already been well covered in other publications.

Sincerely yours,

Robert Noyes

RN:ee
Encl.

Robert Noyes
Publisher

February 13th, 1974

Mr. Robert Noyes, Publisher
Noyes Press
Mill Road at Grand Avenue
Park Ridge, N.J. 07656

Dear Mr. Noyes,

Thank you for your reminder of February 11th. We were glad to learn that you liked our articles in the MASCA Newsletter, vol. 9,no. 2.

Except for gathering together some of my minor articles and field reports (unpublished) I have not yet worked on the book. We have just finished a lengthy article on C^{14} matters for American Scientist. Now, I have to write two grant proposals. Another complication is that we may sponsor an international radiocarbon conference in 1976, which will also be time-consuming.

My present field plans call for work in Iran starting in September followed by Egypt again through the early Winter.

In the summer, however, I am likely to have more freedom from work in our laboratories because our graduate students then work full-time. Also, the hot weather makes me write faster.

Could we hold off on the contract until I see how things go in the early summer?

Sincerely yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

February 22, 1974

Mrs. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Mrs. Ralph:

In regard to your letter of February 13th, we would be happy to send you a contract at any time that would suit your convenience.

Sincerely yours,

Robert Noyes
Publisher

RN:ee

April 2, 1976

Mr. Robert Noyes, Publisher
Noyes Press Publishers
Mill Road at Grand Avenue
Park Ridge, New Jersey 07656

Dear Mr. Noyes:

Here is our abbreviated proposal.

Outline of book to be considered for publication by Noyes Press

Chapter I. ^{14}Carbon Dates for Samples of Known Age.

The samples of known age are tree-ring dated sequoias and bristlecone pines. The results as of August 1973 are described in the enclosed MASCA Newsletter, vol. 9, no. 1. We have also enclosed an article published in American Scientist. In this chapter, we plan to include additional dates for bristlecone pines, especially, in the early ranges and more sophistocated computer plots of the results. Also, a little more is now known about the causes of the atmospheric deviations in the ^{14}C inventory.

Our continuing search for older bristlecone pine wood in the White Mountains of California will be described. This includes surficial searches, collaboration with Stanford Research Institute (SRI) and their soil-penetrating radar to detect older wood buried in alluvial fans, excavations with a back-hoe, and various other incidents that occur in the course of field-work. We have many good photographs of the areas and activities.

The correction factors for ^{14}C dates based on 700 samples of known-age wood will lead logically to their application to radiocarbon dates of samples from Egypt, and the Eastern Aegean in the chapters that follow.

Chapter II. Radiocarbon Dates and Egyptian Chronology.

The examination and comparative analysis of radiocarbon dates from Dynastic Egypt is of vital importance to archaeologists and historians of this era, since, if the corrected dates prove confirmation in large measure to the carefully documented Egyptian chronology, it will enable the establishment of radiocarbon chronologies for areas in which the archaeological or historical chronology is unknown or poorly documented.

This chapter will be a comparative study of about 230 radiocarbon dates - to our knowledge the largest number assembled thus far.

Chapter III. Thermoluminescence and Egypt.

Eleven samples of Egyptian ceramics, which could be closely dated by context, from the University Museum collections were dated by thermoluminescence.

The range of the archaeological and historical dates for the objects reached from the prehistoric period to Dynasty XXVI. Some of the results agreed with with the traditional Egyptian chronology, while others which did not, may prove to be valuable in interpreting later events which may not be indicated archaeologically (egg. repairs, intrusions, etc.).

Chapter IV. Aegean Radiocarbon Dates and Aegean Chronology.

Radiocarbon dates from the Aegean are allowing archaeologists to gain a better understanding of the chronology of the Aegean Bronze Age (3000-1200 B.C.) Seventy-two radiocarbon dates are examined here and compared with the archaeological evidence from several sites on the Greek mainland and on Crete. These include fifteen new dates from the island of Thera in the Mediterranean Sea and appear to suggest that the beginning of the Late Bronze Age began some two hundred years earlier than previously thought. Since Aegean chronology up to this point has been so dependent upon that of Egypt, the new radiocarbon dates are even more important for developing an independent chronology for the Aegean world.

The chapters are by the following authors:

Chapter I. Dr. Elizabeth K. Ralph

Chapter II. Dr. Henry N. Michael and Dr. James M. Weinstein

Chapter III. Mr. Mark Han and Dr. David O'Connor

Chapter IV. Dr. Philip Betancourt and Gail Weinstein.

Editor: Henry N. Michael

Sincerely Yours,

Elizabeth K. Ralph

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

April 9, 1976

Mrs. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum — University of Pennsylvania
33rd and Spruce Streets
Philadelphia, Pennsylvania 19104

Title?

Dear Mrs. Ralph:

Thank you for your outline of April 2nd with supporting material for a book which we would tentatively entitle, "Radiocarbon Dates for Aegean and Egyptian Chronology."

I think this would be an interesting book and one which would be of great value to Aegean and related scholars. We would be interested in publishing it.

The difficulty we would find with a book of this nature is the excessive costs of composition due to the presence of considerable tabular, graphical and mathematical material. If both the tabular and graphical material could be presented to us in "ready for camera" form, it would make the project much more feasible. I would appreciate your comments on this.

If it looks feasible we could then get together personally to discuss it, so that your tabular material will be presented in a form consistent with the projected format of the book. Would it be possible for you to come to New Jersey at any time, or to our New York office at 24 East 84th Street? If this is not possible, I may be able to get to Philadelphia. Please let me know when you will be taking off for your summer excursions.

Sincerely yours,

Robert Noyes

Robert Noyes
Publisher

RN:ee

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

May 10, 1976

Mrs. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum — Univ. of Pennsylvania
33rd and Spruce Streets
Philadelphia, Pennsylvania 19104

Dear Mrs. Ralph:

I enjoyed our meeting with you and your associates last week. Please find our contract enclosed for the book in question. Please sign both copies and return one to us for our files.

Sincerely yours,

Robert Noyes

RN:ee
Encl.

Robert Noyes
Publisher

PUBLISHER-AUTHOR CONTRACT

dated May 10, 1976 , between Noyes Data Corporation and/or Noyes Press, a division thereof, Park Ridge, New Jersey (hereinafter called the "Publisher") and

Elizabeth K. Ralph

(hereinafter called the "Author" whether singly or collectively), for the publication of a certain book (hereinafter referred to as the "Work") bearing the provisional title of:

AEGEAN AND EGYPTIAN CHRONOLOGY BASED ON NEW TECHNOLOGY

The said Work shall comprise a typewritten, double-spaced manuscript suitable for use as a printer's copy, and acceptable to the Publisher in content and form, together with reproducible illustrations as may mutually be deemed desirable, and index. The manuscript shall be delivered to the Publisher on or before June 1, 1977.

The Author does hereby grant and convey to the Publisher the sole right to: publish and sell the said Work throughout the world, including all revisions and future editions thereof; translate, and publish and sell the work in foreign languages; sell all subsidiary rights throughout the world to the said Work; copyright throughout the world in the name of the Author the Work or any revision thereof; and to renew any such copyright.

The Publisher, in consideration thereof, agrees to publish said book at his own expense, in suitable style in his discretion as to paper, printing and binding, upon terms as follows:

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If there be more than one Author participating in the Work under this contract and any one of such Authors shall decline to participate in the revision requested by the Publisher, the Publisher may, without his consent, replace such non-participating Author, after consultation with the remaining Author or Authors, and thereafter such non-participating Author shall have no right to receive royalties or other sums hereunder with respect to such revised Work.

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(10) OPTION: The Author grants to the Publisher the option to publish his next two books upon the same terms provided herein, except for this paragraph (10). For that purpose the Author agrees to submit to the Publisher the manuscript of such new books before submitting the same to any other publisher. Such option of the Publisher shall expire at the end of ninety (90) days from the date of the delivery of such manuscripts. EKR

This agreement shall be binding upon the parties hereto, their heirs, successors, assigns and personal representatives.

IN WITNESS THEREOF the parties hereto affix their hands and seals on the respective dates following their signatures.

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Elizabeth K. Ralph	Hamish A. Forbes	5/26/76
Author	Witness	Date
Robert Noyes	Eric Eberhardt	5/10/76
Publisher	Witness	Date

TELEPHONE: (201) 391-8484
CABLE: NOYES

NOYES PRESS
Publishers

MILL ROAD AT GRAND AVENUE
PARK RIDGE, NEW JERSEY 07656, U.S.A.

July 19, 1977

Mrs. Elizabeth K. Ralph
Museum Applied Science Center for Archaeology
The University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pa. 19104

Dear Mrs. Ralph:

You called recently and mentioned you would have your manuscript to us by the end of August. However, the editor who will handle this book, Mrs. Martha Gillies, will be away on an extended autumn vacation in Europe. Therefore, she could not possibly work on this book until mid-November.

I hope this will give you more time, as there is no point in rushing to meet your August 31st deadline with this new development. Incidentally, you may be interested to know that Mrs. Gillies is a graduate of the University of Pennsylvania.

Sincerely yours,

Robert Noyes

Robert Noyes
Publisher

RN:ee

Xerox copy

Ralph

Figure Captions

Noyes

Figure 1 - Block diagram of CO_2 combustion and purification train. For organic samples, the vycor combustion tube surrounded by furnace No. 1 (middle left of diagram) is used; for inorganic, flask A (upper left) is used.

Noyes

Figure 2 - Block diagram of final purification stage (CaO and furnace 4, lower left) sample cylinder (storage) stations, and high vacuum system.

Noyes

Figure 3 - Photograph of CO_2 combustion and purification train with slight modifications from Figure 1. Glass CO_2 storage flasks (upper left) have been replaced with stainless steel cylinders, one of which is shown in Figure 2.

Noyes

Figure 4 - Block diagram of shielding, counters, and electronic circuits for counting and registering natural ^{14}C.

N

Figure 5 - Electronic test of CO_2 purity. The line drawn through the open circles represents counting rates (c/m) versus increasing high voltages (Kv) of pulses between 5 and 30 volts (as determined by two discrimator channels); the line drawn through the X's, all pulses greater than 30 volts. The height and width of the 5-30 volt curve and the cross-over of the two curves provide a measure of the CO_2 purity. The operating voltage for each CO_2 counter filling is set at the cross-over.

Figure 6 - Illustration of tree-ring dating. Distinctive patterns of narrow and wide rings are matched and, thus, cross-dated.

Figure 7 - Sequoia gigantea, the General Sherman tree, from Sequoia National Forest, California. This is the largest tree in the world.

Figure 8 - Bristlecone pines (Pinus aristata) from Methusaleh Walk in Schulman Grove, White Mountains, California.

Figure 9 - Cross-section of bristlecone pine with preliminary dating by ^{14}C. One block (lower left) was still alive at time of cutting. Other surfaces are eroded almost to missing center of the tree.

106e

H 12-1

Antenna

Figure 10 - Angenna of soil-penetrating radar system.

H 13-14

Figure 11 - Crawler-type back hoe used in search for buried bristlecone pines.

Noyes

Figure 12 - Plot of raw data for over 600 ^{14}C dates taken at approximately 10-year intervals from sequoias and bristlecone pines. Data were obtained by three laboratories as specified by the symbols.

6

Note that the ^{14}C calculated dates are

tree-ring - dated

Figure 13 - Solid black curve represents the best fit on the average of ^{14}C versus dendro-dates. It is a sixth order polynomial least squares fit to the logarithm of the dendro-ages.

The circles (with associated one-sigma uncertainties) represent nine-sample floating, or regression, averages. These retain the characteristics of the shorter-term oscillations that have been smoothed out by the polynomial.

Figure 14 - Block diagram of thermoluminescence components for the measurement of Nat-TL, Art-TL and background.

Figure 15 - Typical glow curves for Nat-(N-TL) and Art-(A-TL) plus background curves. The significant peaks occur at approximately 350°C.

Figure 16 - Block diagram of one set of alpha detection and counting apparatus. Detail (upper right) of top of photomultiplier with sample holder (plexiglas) and coating of ZnS are shown.

Figure 17 - Thermoluminescence calibration curve. Specific thermoluminescence (y-axis) is defined in equation . Samples of known age are as follows:

NO.	PROVENIENCE	KNOWN AGE
22	Pecos, New Mexico, U.S.A.	AD 1300-1375
14	Torre Mordillo, Calabria, Italy	AD 3000
20	Le Muraglie, Calabria, Italy	AD 125
12 & 13	Torre Mordillo, Calabria, Italy	330 BC
7	Plain of Sybaris, Calabria, Italy	330 BC
6	Plain of Sybaris, Calabria, Italy	550 BC

The straight line is drawn through the average TL readings for these samples. The slope of this line provides the constant "C".

The ages of the earlier samples were determined by associated ^{14}C dates.

Fig. 1 Block Diag. of CO_2 purif.

" 2 " " " "

" 3 Photo of CO_2 train.

" 4. Block Diag. of Ctr. circuits

need 5 Cross-over

~~need 6 1975 Radar antenna~~ Raw data

✓ 7 ~~(Fig. 1) MASCA~~ 6th poly

✓ 8 2 (Fig. 1 MASCA)

✓ 9 3

✓ 10 4

✓ 11 5

✓ 12 6

✓ ~~13 6th order poly, log~~

= Acknow- -- see p. 11

FIG. 6. The deviation of the ^{14}C date from the tree-ring date for approximately 700 ^{14}C samples dated at three labs. Note that the ^{14}C dates were calculated with the 5730 half-life.

Fig. 7.

Plot of nine-sample moving average and sixth order polynomial fit to logarithm of age

Plot illustrating the long

In a similar to fashion fig 6., the sixth order polynomial showing the general long term average trend,

the nine-sample moving average showing short-period oscillations is superimpose over the? Again all dates were calculated with the 5730 half-life. The final point, at 6000 B.C. is the average of the five separate measurements in fig. 6. The dotted line represents a linear interpolation from the last point in the nine sample average at ____, to the point at 6,000 B.C. The deviation of the dashed line from the polynomial represents the remaining uncertainty in ^{14}C-dates in the period spanned by the dash line. The thickness of the line representing the polynomial is the average uncertainty remaining in the regression, the error bars on the individual averages in the nine-sample average, the average error for these averages.

PRINTS

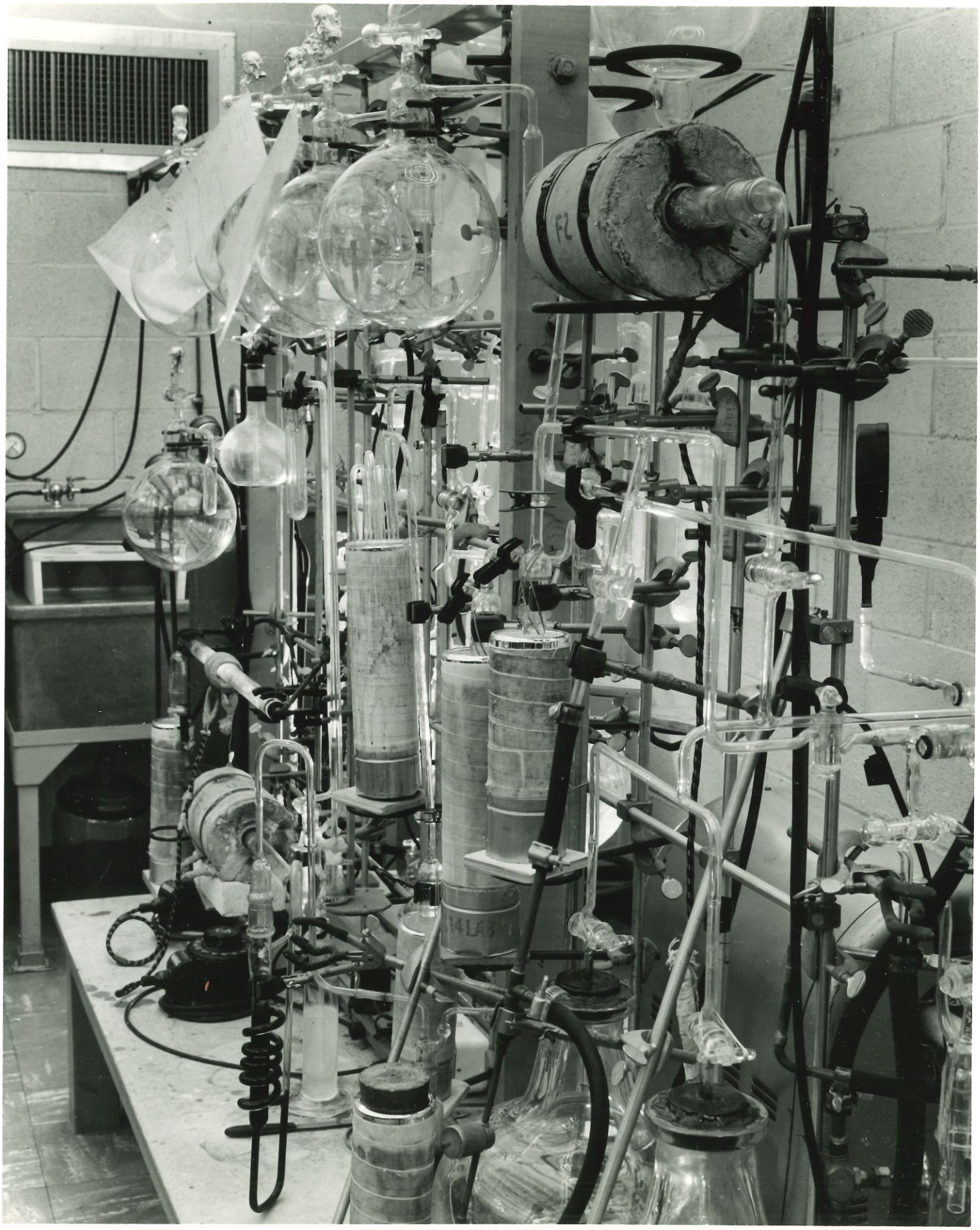


Fig. 3 Noyes

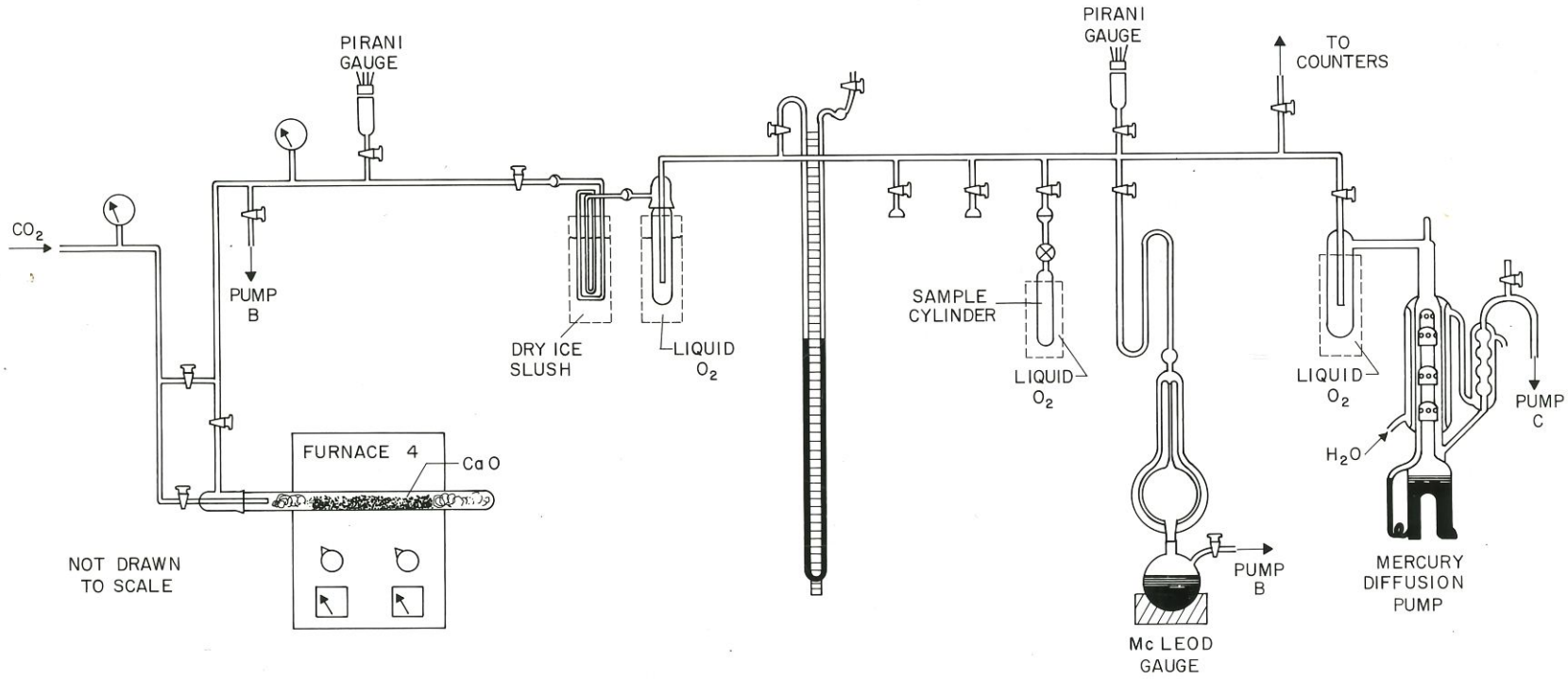

PIRANI GAUGE
PIRANI GAUGE
TO COUNTERS
CO_2
PUMP B
DRY ICE SLUSH
LIQUID O_2
SAMPLE CYLINDER
LIQUID O_2
LIQUID O_2
H_2O
PUMP C
FURNACE 4
CaO
NOT DRAWN TO SCALE
PUMP B
Mc LEOD GAUGE
MERCURY DIFFUSION PUMP

Fig. 2 Noyes

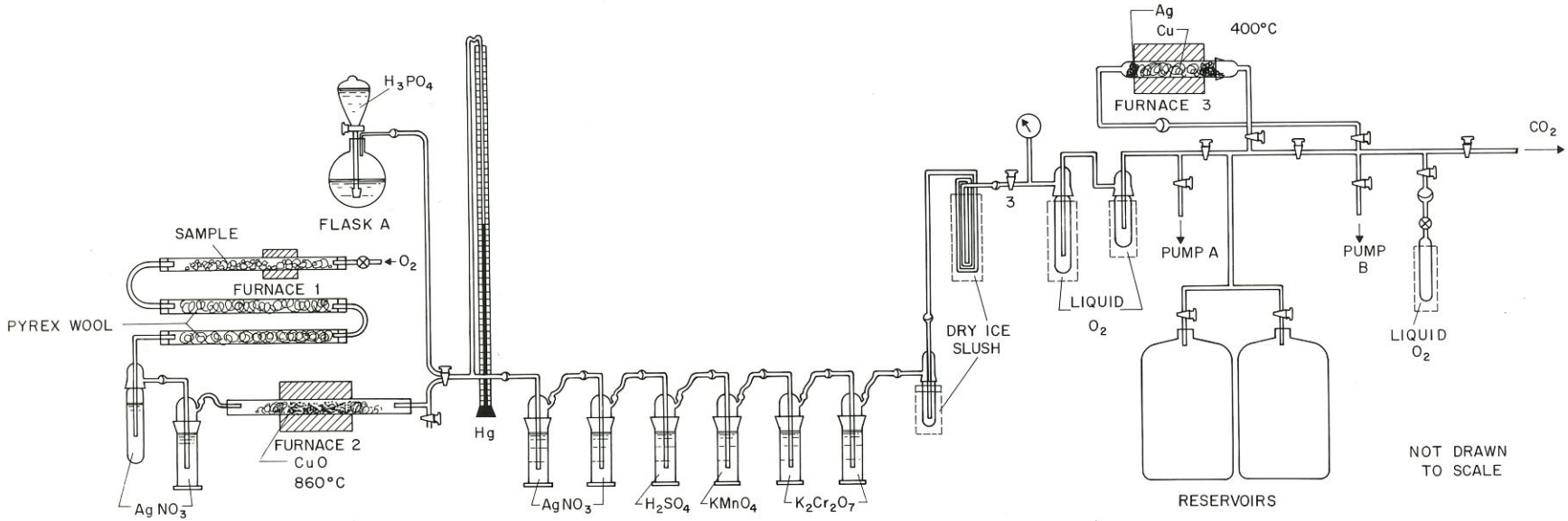

Ag
Cu
400°C
FURNACE 3
H_3PO_4
FLASK A
SAMPLE
O_2
FURNACE 1
PYREX WOOL
FURNACE 2
CuO
860°C
Hg
3
DRY ICE
SLUSH
LIQUID
O_2
PUMP A
PUMP
B
LIQUID
O_2
CO_2
$AgNO_3$
$AgNO_3$
H_2SO_4
$KMnO_4$
$K_2Cr_2O_7$
RESERVOIRS
NOT DRAWN
TO SCALE

Fig. 1 Noyes

= fig 3 in original

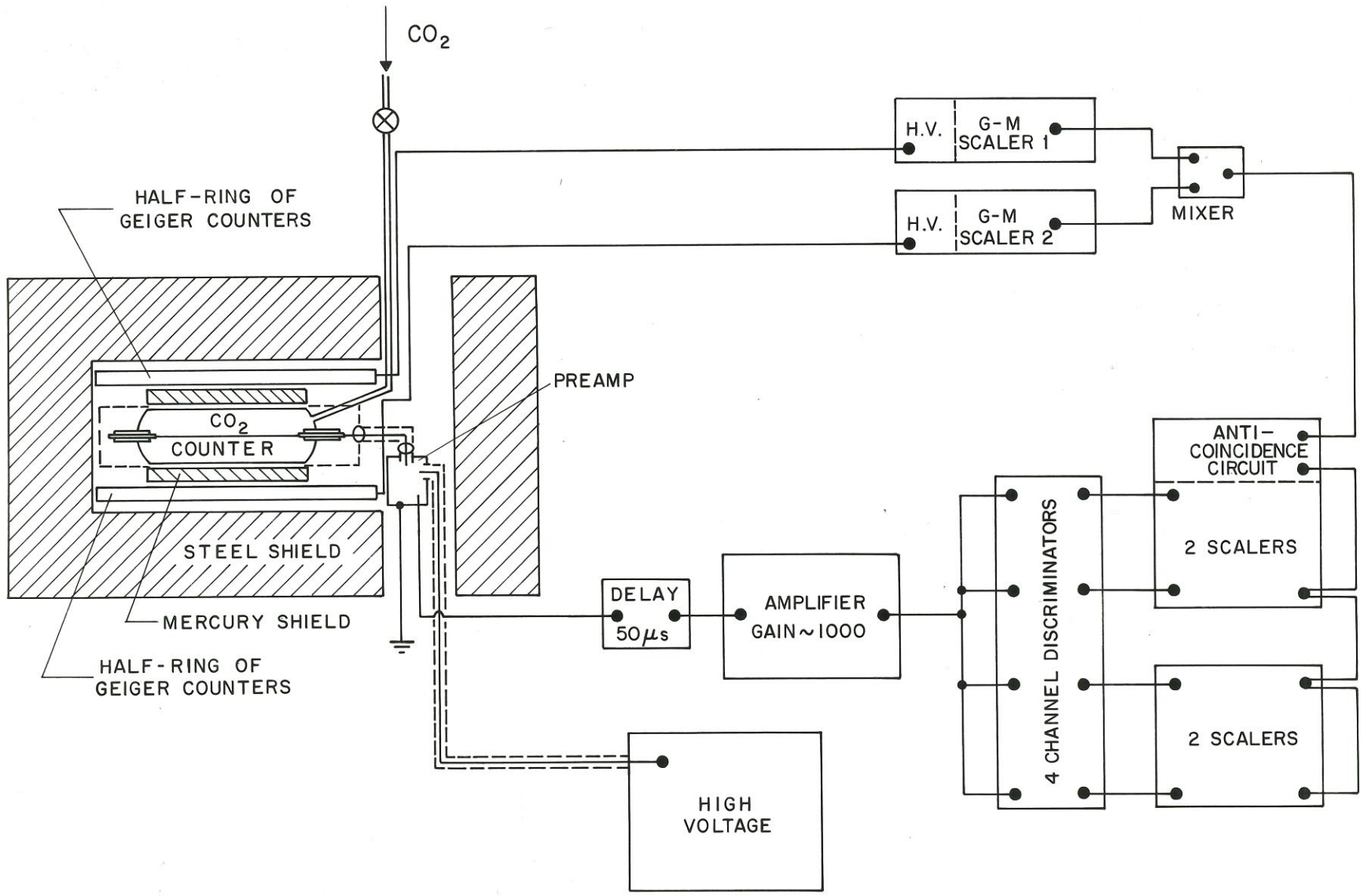
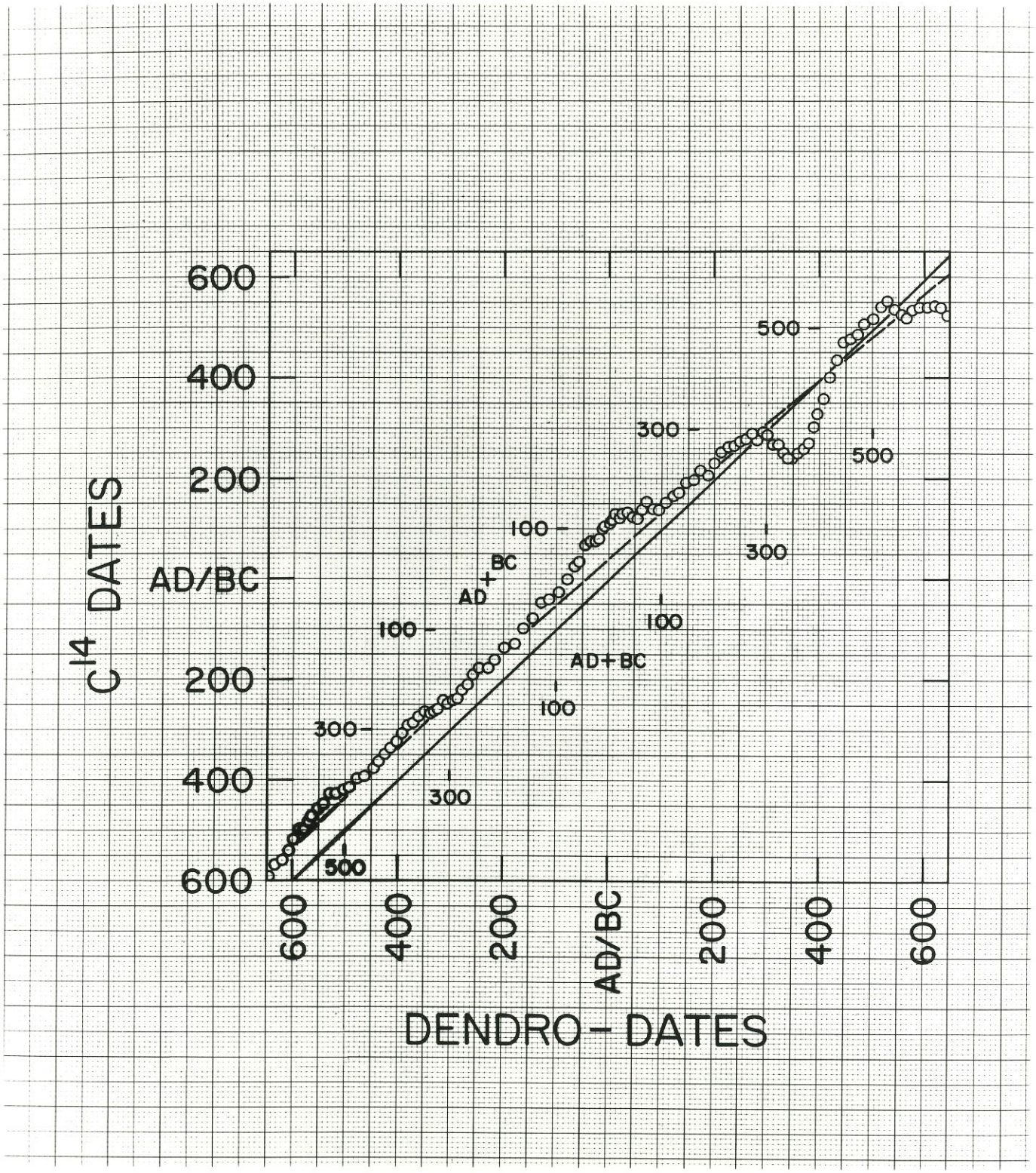

CO_2
H.V.
G-M SCALER 1
H.V.
G-M SCALER 2
MIXER
HALF-RING OF GEIGER COUNTERS
PREAMP
CO_2 COUNTER
STEEL SHIELD
MERCURY SHIELD
HALF-RING OF GEIGER COUNTERS
DELAY 50 μs
AMPLIFIER GAIN ~ 1000
4 CHANNEL DISCRIMINATORS
ANTI-COINCIDENCE CIRCUIT
2 SCALERS
2 SCALERS
HIGH VOLTAGE

Fig. 4. Noyes

= fig. 5 in proposal


600
400
200
AD/BC
200
400
600
C14 DATES
500 –
300 –
100 –
AD + BC
100 –
300 –
500
300
100
AD+BC
100
300
500
600
400
200
AD/BC
200
400
600
DENDRO - DATES

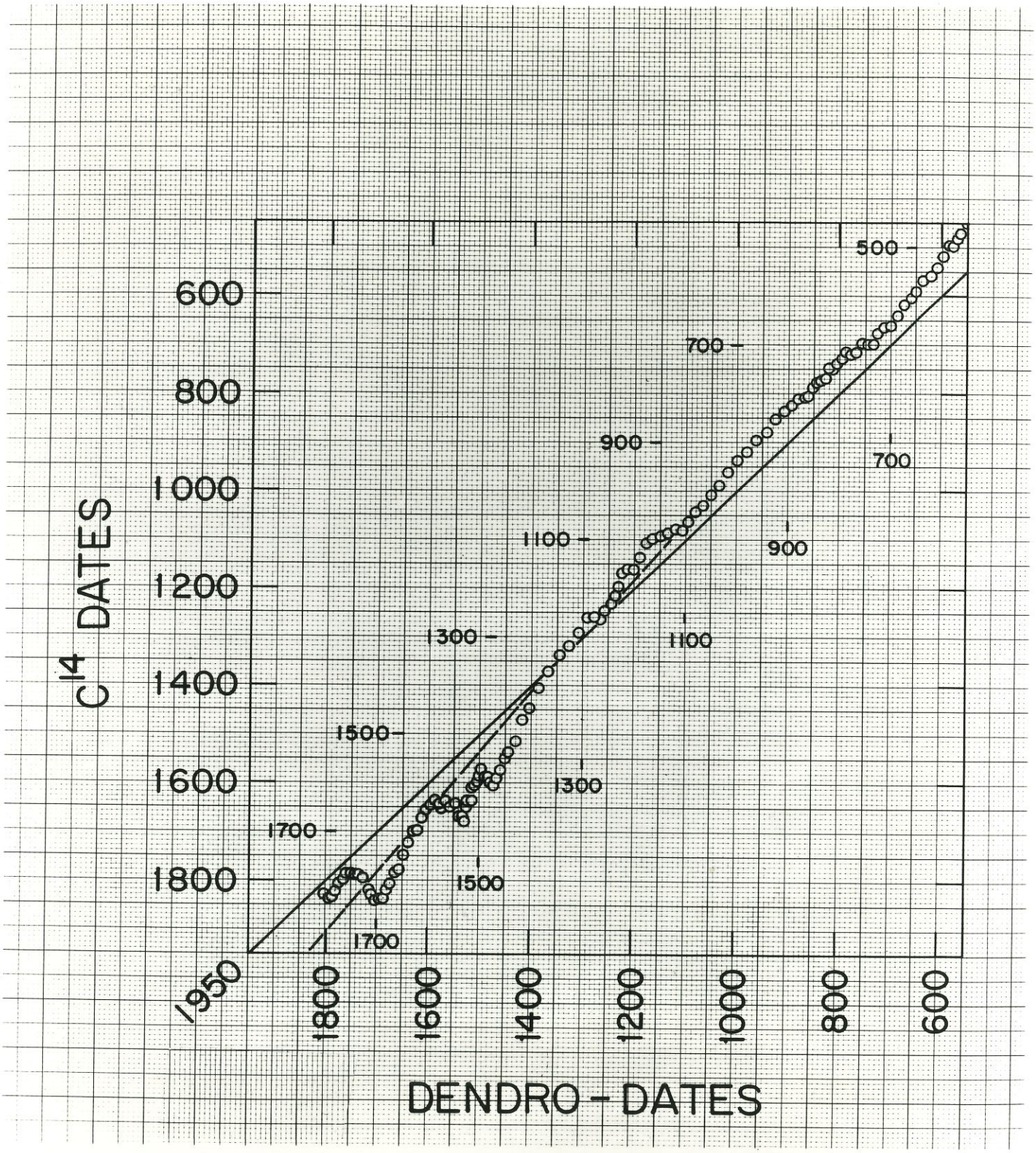
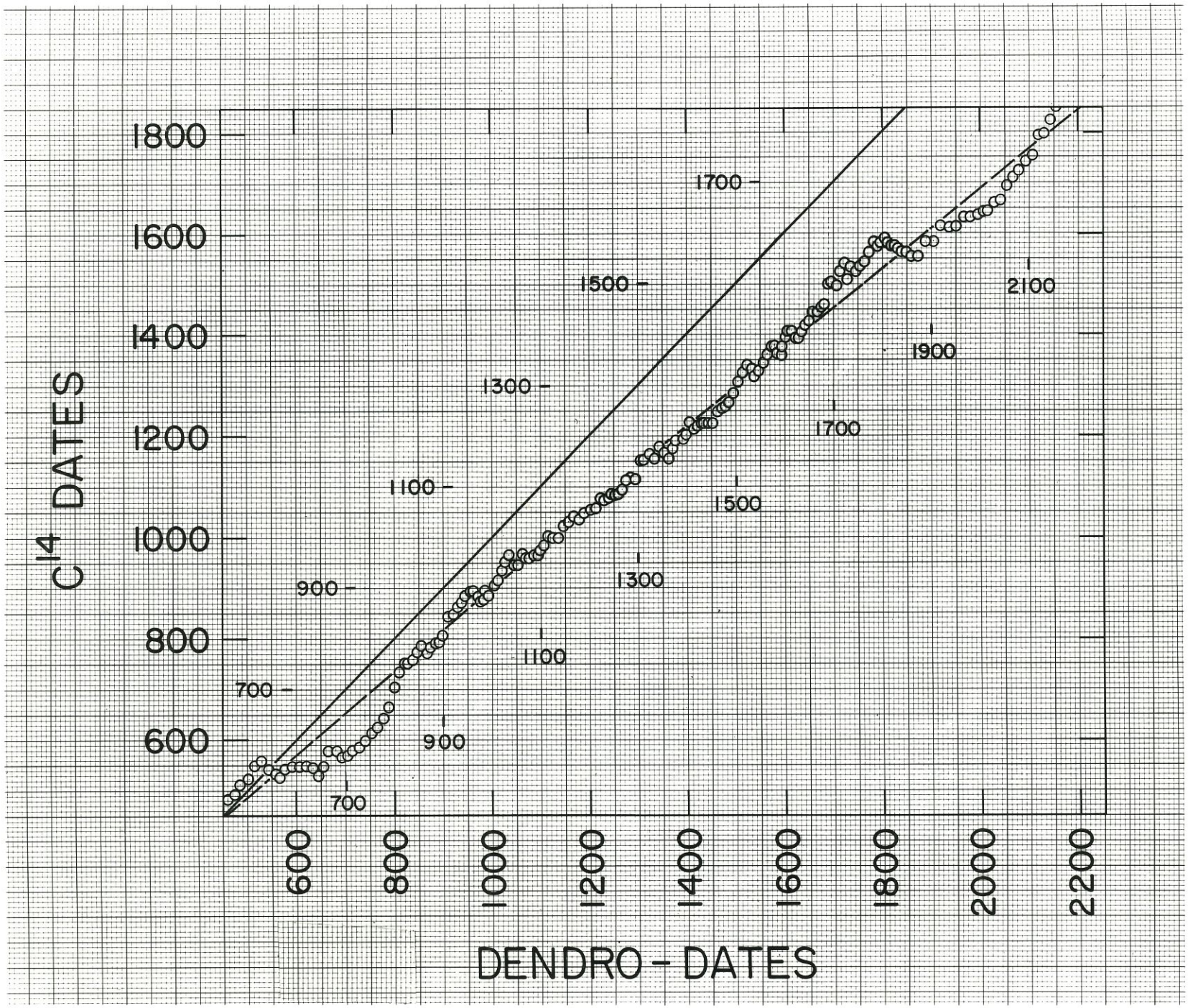
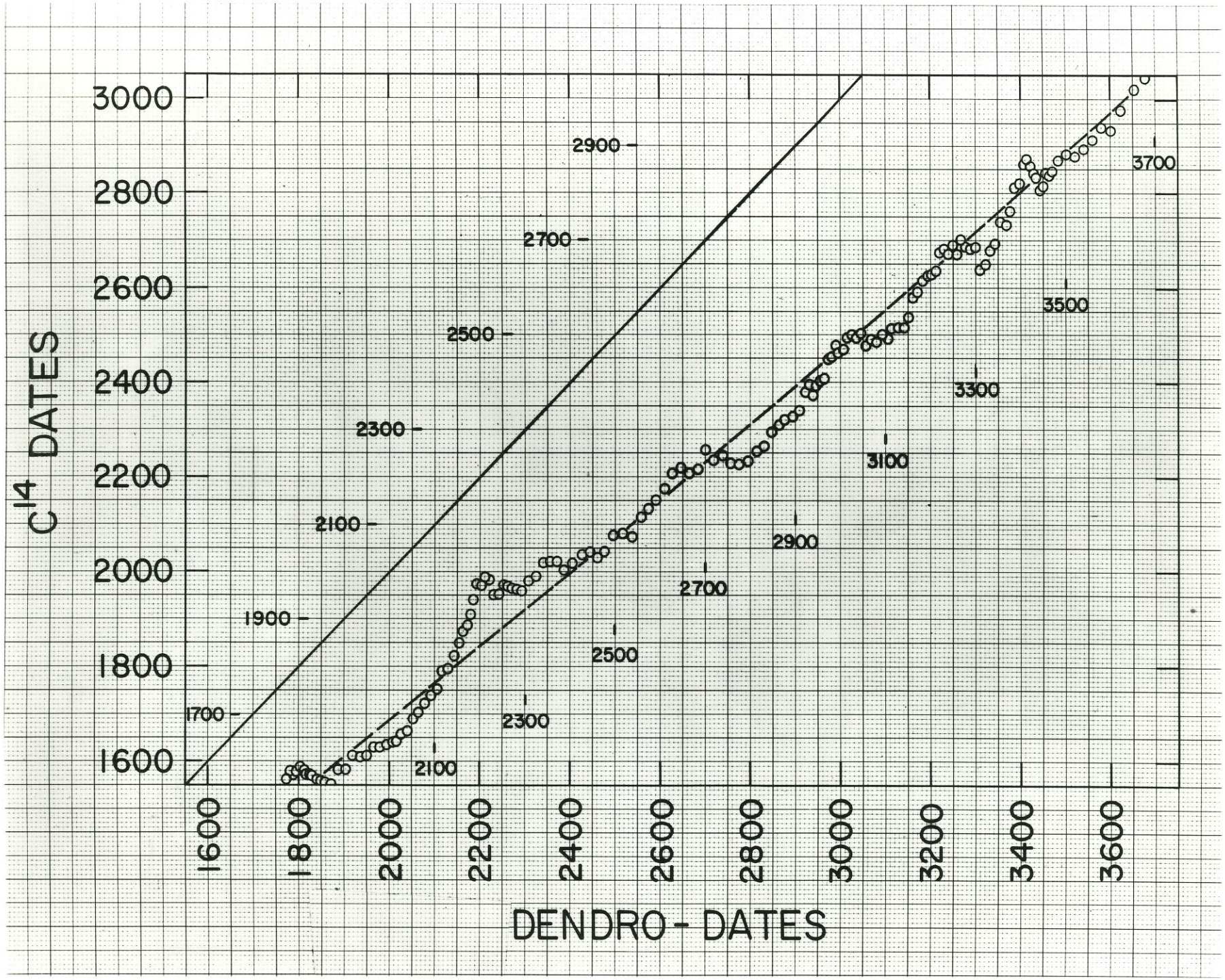
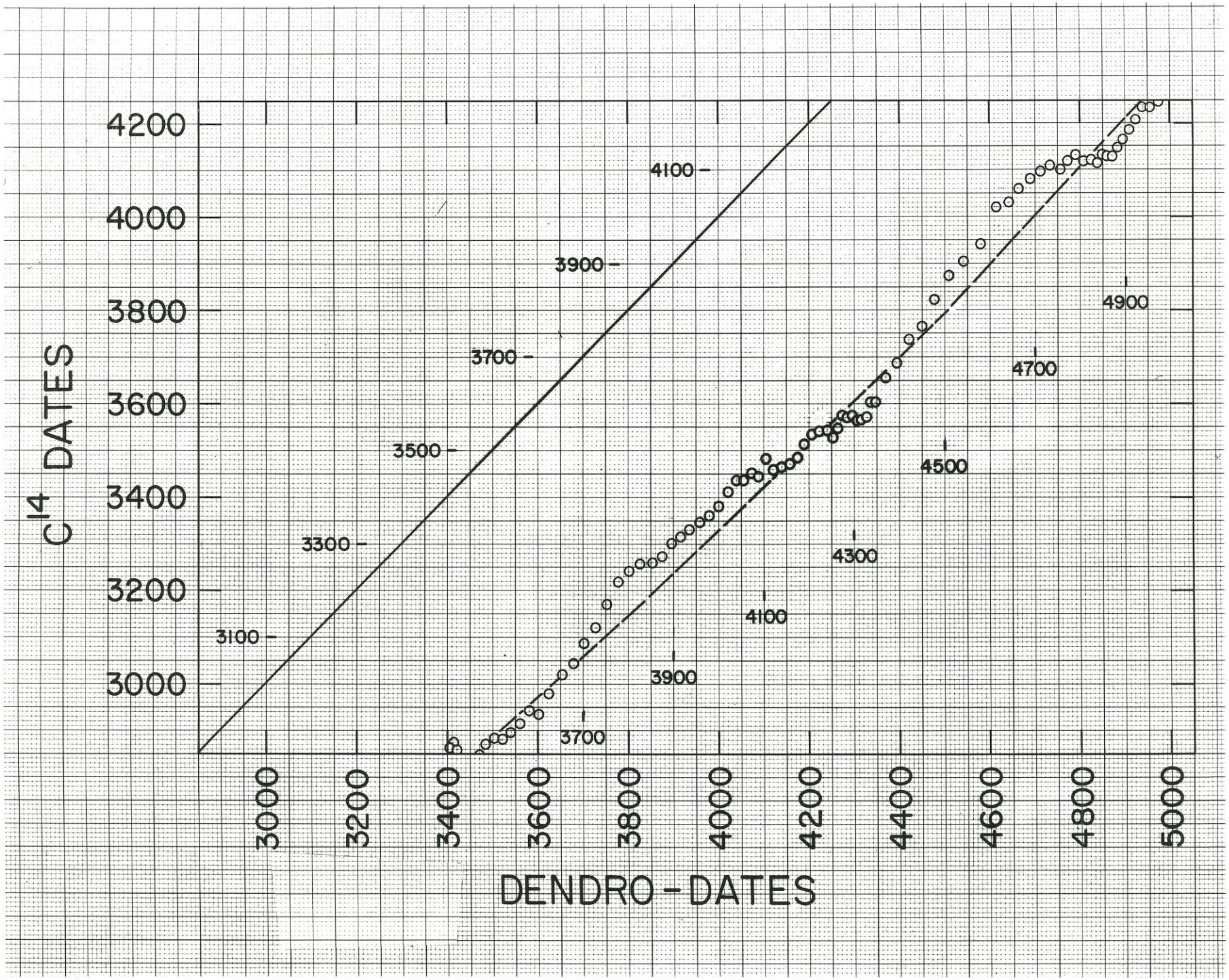

C14 DATES
600
800
1000
1200
1400
1600
1800
1950
DENDRO-DATES
1800
1600
1400
1200
1000
800
600
500
700
900
1100
1300
1500
1700

Fig. 8 Noyes


C14 DATES
1800
1600
1400
1200
1000
800
600
1700
1500
1300
1100
900
700
2100
1900
1700
1500
1300
1100
900
700
600
800
1000
1200
1400
1600
1800
2000
2200
DENDRO-DATES


C14 DATES
3000
2800
2600
2400
2200
2000
1800
1600
2900
2700
2500
2300
2100
1900
1700
3700
3500
3300
3100
2900
2700
2500
2300
2100
1600
1800
2000
2200
2400
2600
2800
3000
3200
3400
3600
DENDRO-DATES


C14 DATES
4200
4000
3800
3600
3400
3200
3000
4100 –
3900 –
3700 –
3500 –
3300 –
3100 –
4900
4700
4500
4300
4100
3900
3700
3000
3200
3400
3600
3800
4000
4200
4400
4600
4800
5000
DENDRO-DATES

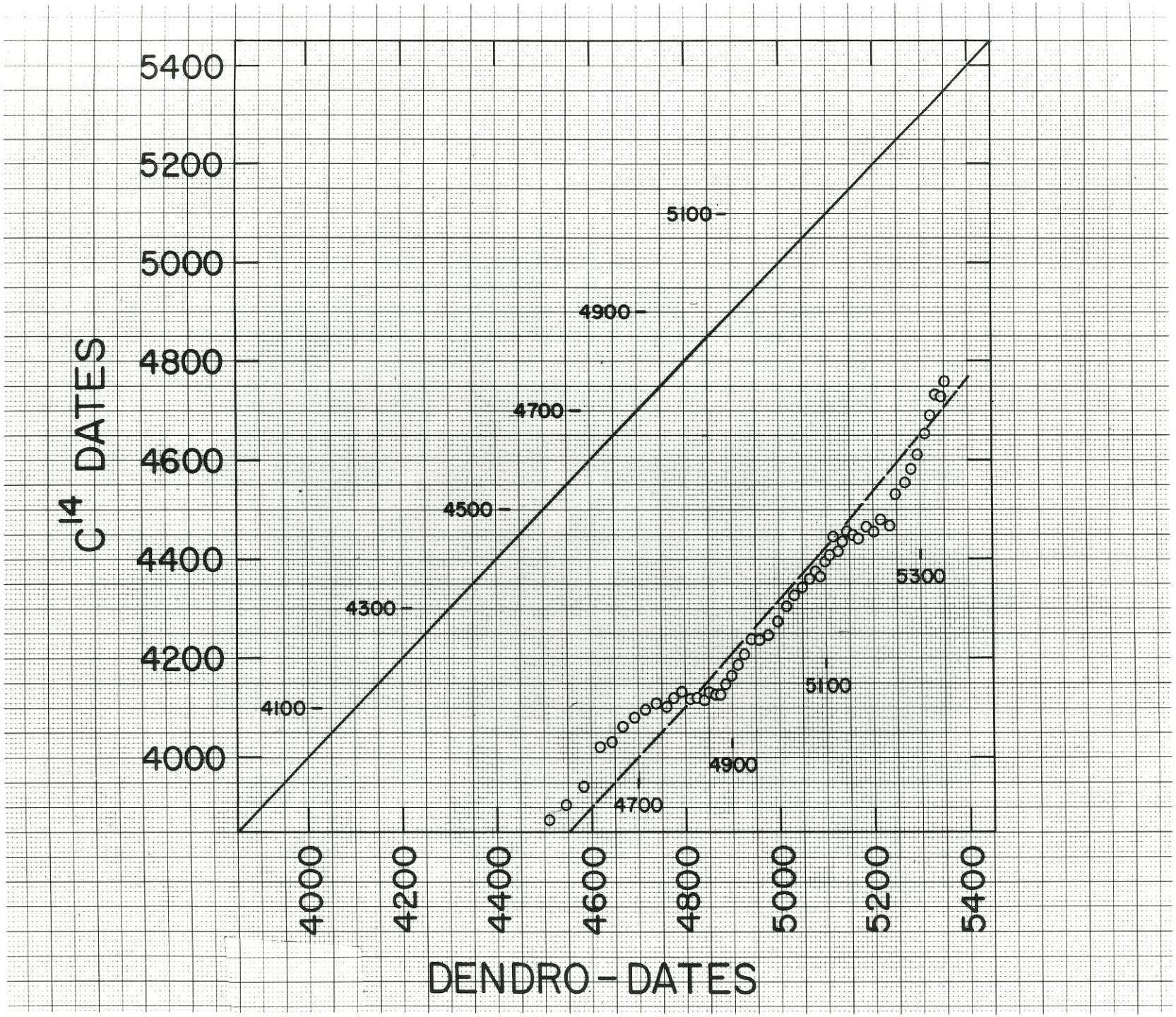

C14 DATES
5400
5200
5000
4800
4600
4400
4200
4000
5100
4900
4700
4500
4300
4100
5300
5100
4900
4700
4000
4200
4400
4600
4800
5000
5200
5400
DENDRO-DATES

Fig. 8. Part of the A.D. range of ^{14}C dates versus dendro-dates. The small open circles represent nine-cell regression averaging; the straight line, 1:1 correspondence of ^{14}C and dendro-dates; the dashed curve (barely visible), a third order polynomial fit ~~to~~ the average of all dates. ^{14}C dates are calculated with the 5730 half-life.

Geophysical prospecting with our MASCA cesium magnetometer ~~was carried~~ & general inspections of the Park were carried out on four days in October, 1977. Grid #1 (62 × 100 meters) was located along Outer Line Drive (See Map A).

Various pronounced magnetic anomalies were detected (see Fig. _). which showed isolated regions of higher than normal magnetic intensity & associated with each, an anti-magnetic reaction. The most pronounced one, aligned more or less North-South, centered at line 12, 68 meters, (See J. Hall report, p.), was tested by excavation on November 10, 1977. An extremely magnetic grounding rod was found. This rod had an iron core & was copperclad. It measured 2.44 meters (8 feet) by 1.6 cm (5/8 inch) in diameter, and was in a vertical position except that the uppermost end was bent, probably by lawn mowers or rollers since it was only a few centimeters below the present ground level.

A less pronounced but more nomal magnetic anomaly, centered at line 30, 90 meters, was also excavated (See J. Hall report, p.). Nothing was found that would account for this anomaly.

As seen on Map B, there was an electric line (1964) nearby, and it is possible that this rod was used for that. More likely, it was a grounding rod for a transmitting tower, the existence of which was reported to us verbally. If so, the date of emplacement of this rod might be close to A.D. 1920.

(36 x

Grid #2 was made in the so-called Burial Grounds (see Map A).
A magnetic disturbance from a metal sign was detected. In the upper southeast section of the grid, there is a region of closely spaced contours that ~~are~~ were probably caused by ~~the~~ tree roots since this ~~part~~ part of the edge of the grid was in the woods. A small oval-shaped anomaly (line 30, 38 meters) is the only one which seems to be characteristic of a grave, but this has not yet been excavated.

~~For~~ This "pre-grant" work ~~was~~ was conducted by MASCA employees & volunteers.

345-1004