

## LABORATORIES

\* Inactive Laboratories.

- <sup>1</sup> The H<sup>3</sup>-Laboratorium of this institute (directed by Klaus Fröhlich) should be addressed separately.
- <sup>2</sup> This designation Gif supersedes both Sa (Saclay) and Gsy (Gif-sur-Yvette). The only Gsy date list to be published is Gsy I (Coursaget and Le Run, RADIOCARBON, v. 8).
- <sup>3</sup> From January 1, 1961 the Gro numbers have been replaced by GrN numbers. "New" dates are referred to the NBS oxalic-acid standard.
- <sup>4</sup> Early dates from this laboratory were given a code designation that represents the name of the sponsoring institution, e.g. I ((AGS) for American Geographical Society (Heusser, RADIOCARBON SUPPLEMENT, v. 1).
- <sup>5</sup> Formerly Hazleton Nuclear; code designation HNS has been dropped.
- <sup>6</sup> Some dates from this laboratory were published with the code designation S (Pringle and others, 1957, Science, v. 125, p. 69-70).
- <sup>7</sup> See SM.
- <sup>8</sup> See Gif.
- <sup>9</sup> Some dates from this laboratory have been published with the code designation RC (Flint and Gale, 1958, AM. JOUR. SCI., v. 256, p. 698-714). The code designation MP published in volume 1 of the RADIOCARBON SUPPLEMENT (1959, p. 216) has been changed to SM in conformity with the wishes of the laboratory, and is explained by the change of the company's name from Magnolia Petroleum Company to Socony Mobil Oil Company, Inc.
- <sup>10</sup> Formerly Texas-Bio-Nuclear, then Kaman Instruments. The laboratory is no longer operating.

A ARIZONA

Dr. Paul E. Damon  
Laboratory of Geochemistry  
Geochronology Department  
Tucson, Arizona 85721

ANL ARGONNE NATIONAL LABORATORY

Dr. F. T. Hageman  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, Illinois

ANU AUSTRALIAN NATIONAL UNIVERSITY

Mr. H. A. Polach or Dr. J. F. Lovering  
Department of Geophysics and Geochemistry  
Australian National University  
Canberra A.C.T., Australia

B BERN

Prof. H. Oeschger  
Physikalisches Institut  
Universität Bern  
Siderstrasse 5  
Bern, Switzerland

Birm BIRMINGHAM

Prof. F. W. Shotton, F.R.S.  
Department of Geology, P.O. Box 363  
University of Birmingham  
Birmingham 15, England

Bln BERLIN

Ing. Günther Kohl  
Deutsche Akademie der Wissenschaften zu Berlin  
Institut für Ur-und Frühgeschichte  
1199 Berlin, Rudower Chaussee 6  
Germany

- BM**     **BRITISH MUSEUM**  
Mr. Harold Barker and Mr. Richard Burleigh  
Research Laboratory  
The British Museum  
London, W.C.1, England
- BONN**   **BONN**  
Dr. H. W. Scharpenseel and F. Pietig  
Institut für Bodenkunde  
Universität Bonn  
Bonn, Germany
- \*C**     **CHICAGO**  
Dr. W. F. Libby  
Institute of Geophysics  
University of California  
Los Angeles, California 90024
- \*CT**    **CALTECH**  
Dr. Don M. Yost  
Gates and Crellin Laboratories of Chemistry  
California Institute of Technology  
Pasadena, California 91109
- \*D**     **DUBLIN**  
Dr. William A. Watts  
Department of Botany  
Trinity College  
Dublin, Ireland
- Dak**    **DAKAR**  
Dr. Cheikh Anta Diop  
Directeur du Laboratoire de  
Radiocarbone I.F.A.N.  
Université de Dakar  
République du Sénégal
- Fr<sup>1</sup>**    **FREIBERG**  
Hajo Stechemesser  
C-14 Laboratorium  
II. Physikalisches Institut  
der Bergakademie Freiberg  
Leipziger Strasse 17  
Freiberg/Sachsen  
Germany
- FSU**    **FLORIDA STATE**  
James R. Martin, H. G. Goodell, and D. S. Phelps  
Radiocarbon Dating Laboratory  
Department of Geology  
Florida State University  
Tallahassee, Florida 32306
- \*G**     **GÖTEBORG**  
Dr. E. Ehn  
Laboratory of Nuclear Chemistry  
Chalmers Tekniska Högskola  
Göteborg, Sweden
- GaK**    **GAKUSHUIN UNIVERSITY**  
Prof. K. Kigoshi  
Gakushuin University  
Mejiro, Toshima-ku  
Tokyo, Japan

- GD**      **GDANSK**  
Dr. Wi. Mościcki  
Polska Akademia Nauk  
Instytut Badan Jadrowych  
Pracownia Geochronologii Bezwzględnej  
Gdansk-Wrzeszcz, ul. Sobieskiego 18  
Poland
- Gif<sup>a</sup>**      **GIF-SUR-YVETTE**  
Dr. J. Labeyrie or Mme. G. Delibrias  
Laboratoire du Radiocarbone  
Centre National de la Recherche Scientifique  
9—Gif-sur-Yvette, France
- \*GL**      **GEOCHRONOLOGICAL LABORATORY**  
Institute of Archaeology  
31-34 Gordon Square  
London, W.C.1, England
- Gro<sup>a</sup>**  
**GrN**      **GRONINGEN**  
Dr. J. C. Vogel  
Natuurkundig Laboratorium der Rijks-Universiteit  
Westersingel 34  
Groningen, Netherlands
- GSC**      **OTTAWA**  
Mr. J. A. Lowdon  
Radiocarbon Dating Laboratory  
Geological Survey of Canada  
601 Booth Street  
Ottawa, Ontario, Canada
- \*Gsy<sup>2</sup>**      **GIF-SUR-YVETTE**
- GU**      **GLASGOW UNIVERSITY**  
Dr. A. Walton  
Department of Chemistry  
The University  
Glasgow W.2, Scotland
- GX**      **GEOCHRON LABORATORIES INC.**  
Mr. Harold W. Krueger  
Geochron Laboratories Inc.  
24 Blackstone Street  
Cambridge, Mass. 02139
- H**      **HEIDELBERG**  
Mr. D. Berdau and Dr. K. O. Münnich  
C-14 Laboratorium  
II Physikalisches Institut der Universität  
Heidelberg, Philosophenweg 12  
West Germany
- Hv**      **HANNOVER**  
Dr. M. A. Geyh  
Niedersächsisches Landesamt  
für Bodenforschung  
Hannover-Buchholz, Alfred-Bentz-Haus  
West Germany
- I<sup>a</sup>**      **ISOTOPES — A TELEDYNE COMPANY**  
Dr. Eric H. Willis  
Isotopes — A Teledyne Company  
50 Van Buren Avenue  
Westwood, New Jersey 07675

- II<sup>s</sup> ISOTOPES, INC.  
Palo Alto Laboratories  
W. R. Schell  
Isotopes, Inc., A Teledyne Company  
4062 Fabian Street  
Palo Alto, California 94303
- IRPA INSTITUT ROYAL DU PATRIMOINE ARTISTIQUE  
Anne Nicole Schreurs  
Institut Royal du Patrimoine Artistique  
1 Parc du Cinquantenaire  
Brussels 4, Belgium
- ISGS ILLINOIS STATE GEOLOGICAL SURVEY  
Mr. Stephen M. Kim  
Section of Analytical Chemistry  
Illinois State Geological Survey  
Natural Resources Building  
Urbana, Illinois 61801
- IVIC CARACAS  
Dr. M. A. Tamers  
Instituto Venezolano de Investigaciones Científicas  
Departamento de Química  
Apartado 1827  
Caracas, Venezuela
- K COPENHAGEN  
Dr. Henrik Tauber  
Department of Natural Sciences  
National Museum  
Copenhagen K, Denmark
- KI KIEL  
Dr. H. Willkomm and Mr. H. Erlenkeuser  
Institut für Reine und Angewandte Kernphysik  
Universität Kiel  
23 Kiel,  
Olshausenstrasse 40-60  
Germany
- KN KÖLN  
Dr. J. Freundlich, Mr. H. H. Eipper  
Institut für Ur-und Frühgeschichte der Universität  
C<sup>14</sup>-Laboratorium  
Köln (Cologne), Weyertal 125, W. Germany
- L LAMONT  
Dr. D. L. Thurber  
Lamont Geological Observatory  
Columbia University  
Palisades, New York 10964
- Le LENINGRAD  
Radiocarbon Laboratory  
Institute of Archaeology  
Universitetskaya Naberezhnaya #5  
Leningrad, USSR
- LJ UNIVERSITY OF CALIFORNIA, SAN DIEGO  
Dr. H. E. Suess  
Scripps Institution of Oceanography  
University of California, San Diego  
La Jolla, California 92037

- LP LA PLATA  
Dr. Horacio Cazeneuve  
Museo de La Plata  
Padeo del Bosque  
La Plata, Argentina
- Lu LUND  
Dr. Tage Nilsson and Mr. Sören Håkansson  
Radiocarbon Dating Laboratory  
University of Lund  
Tunavägen 29  
Lund, Sweden
- Lv HÉVERLÉ LOUVAIN  
Prof. P. C. Capron and Mr. E. Gilot  
Centre de Physique Nucléaire  
Avenue Cardinal Mercier  
Héverlé Louvain, Belgium
- Ly UNIVERSITY OF LYON  
Mr. J. Evin  
Laboratoire de Radiocarbone  
Institut de Physique Nucléaire  
43, Boulevard du 11 Novembre 1918  
69, Villeurbanne-Lyon, France
- M MICHIGAN  
Dr. James B. Griffin  
University Museums Building  
The University of Michigan  
Ann Arbor, Michigan 48104
- \*Ma<sup>6</sup> MANITOBA
- MC MONACO  
Dr. J. Thommeret or Mr. J. L. Rapaire  
Laboratoire de Radioactivité Appliquée  
Centre Scientifique de Monaco  
Avenue Saint Martin  
Monaco
- ML MIAMI  
Dr. H. G. Östlund  
Institute of Marine Science  
University of Miami  
Miami, Florida 33149
- Mo VERNADSKI INSTITUTE OF GEOCHEMISTRY  
Vernadski Institute of Geochemistry  
Academy of Sciences of the USSR  
Moscow, USSR  
Address: Academician A. P. Vinogradov  
Vorobeyskoye shosse, d.47-A  
Moscow, USSR
- MP<sup>7</sup> MAGNOLIA PETROLEUM
- N RIKEN (TOKYO)  
Dr. F. Yamasaki  
The Institute of Physical and Chemical Research  
Bunkyo-ku, Tokyo, Japan
- NPL NATIONAL PHYSICAL LABORATORY  
Mr. W. J. Callow and Miss G. I. Hassall  
Division of Radiation Science  
National Physical Laboratory  
Teddington, Middlesex, England

- NSW NEW SOUTH WALES  
Dr. D. J. Carswell  
Department of Nuclear and Radiation Chemistry  
University of New South Wales  
P.O. Box 1  
Kensington, New South Wales, 2033, Australia
- Ny NANCY  
Pr. René Coppens  
Centre de Recherches Radiogéologiques  
Université de Nancy  
B.P. 452  
Nancy 54, France
- NZ NEW ZEALAND  
Mr. T. A. Rafter  
Institute of Nuclear Sciences  
Lower Hutt, New Zealand D.S.I.R.
- O HUMBLE  
Dr. H. R. Brannon  
Esso Production Research Company  
Affiliate of Humble Oil & Refining Co.  
P.O. Box 2189  
Houston, Texas 77001
- ORINS OAK RIDGE ASSOCIATED UNIVERSITIES  
Dr. John E. Noakes, Director  
Radiocarbon Dating Laboratory  
Oak Ridge, Tennessee 37830
- OWU OHIO WESLEYAN UNIVERSITY  
Dr. J. Gordon Ogden, III  
Department of Botany and Bacteriology  
Ohio Wesleyan University  
Delaware, Ohio 43015
- OX U.S. DEPARTMENT OF AGRICULTURE  
L. L. McDowell  
Agricultural Research Service  
Soil and Water Conservation Research Division  
Sedimentation Laboratory  
P.O. Box 30  
Oxford, Mississippi 38655
- P PENNSYLVANIA  
Miss Elizabeth K. Ralph and Robert Stuckenrath, Jr.  
Department of Physics  
University of Pennsylvania  
Philadelphia, Pennsylvania 19104
- Pi PISA  
Prof. E. Tongiorgi  
Laboratorio di Geologia Nucleare dell'Università  
Via S. Maria, 22  
Pisa, Italy
- PIC PACKARD  
Dr. Ariel G. Schrodt  
Low Level Counting Laboratory  
Packard Instrument Co., Inc.  
2200 Warrenville Road  
Downers Grove, Illinois 60515

- Pr** PRAGUE  
Alois Dubanský  
Laboratory for Isotopes  
Geochemistry and Geochronology  
Geological Institute  
Czechoslovak Academy of Sciences  
Prague-8  
Na Hrazi 26
- Q** CAMBRIDGE  
Dr. R. G. West or Dr. V. R. Switsur  
University Sub-Department of Quaternary Research  
Botany School  
Downing Street  
Cambridge, England
- R** ROME  
Dr. F. Bella, Istituto di Fisica  
and  
Dr. C. Cortesi, Istituto di Geochimica  
Radiocarbon Dating Laboratory  
University of Rome  
Citta Universitaria  
Rome, Italy
- RI** RADIOCHEMISTRY, INC.  
F. M. Sweets  
Radiochemistry, Inc., Subsidiary of  
The Martin Sweets Co., Inc.  
3131 West Market Street  
Louisville, Kentucky 40212
- S** SASKATCHEWAN  
Dr. K. J. McCallum  
Department of Chemistry  
University of Saskatchewan  
Saskatoon, Saskatchewan, Canada
- \*Sa<sup>8</sup>** SACLAY
- Sh** SHELL  
Dr. E. L. Martin  
Shell Development Company  
P.O. Box 481  
Houston, Texas 77002
- SI** SMITHSONIAN INSTITUTION  
Dr. W. H. Klein, Director  
Radiation Biology Laboratory  
Smithsonian Institution  
Washington, D.C. 20560
- \*SL** SHARP LABORATORIES
- SM<sup>9</sup>** MOBIL OIL CORPORATION  
Dr. H. F. Nelson  
Mobil Oil Research and Development Corp.  
Field Research Laboratory  
P.O. Box 900  
Dallas, Texas 75221
- SR** SALISBURY, RHODESIA  
Dr. E. R. Swart or Dr. J. G. Sheppard  
Gulbenkian Radiocarbon Dating Laboratory  
Department of Chemistry  
University of Rhodesia  
P. Bag 167H  
Salisbury, Rhodesia

- St      **STOCKHOLM**  
Mr. Lars Engstrand  
Radioactive Dating Laboratory  
Stockholm 50, Sweden
- Su      **FINLAND**  
Prof. Esa Hyypä  
Geological Survey of Finland  
Otaniemi, Finland
- T      **TRONDHEIM**  
Mr. Reidar Nydal and Mr. Knut Lövseth  
Radiological Dating Laboratory  
The Norwegian Institute of Technology  
Trondheim, Norway
- TA      **TARTU**  
H. Simm or A. Liiva  
Geobiochemistry Laboratory  
Institute of Zoology and Botany Academy of Sciences of the Estonian SSR  
Vanemuise St. 21  
Tartu, Estonian, USSR
- TAM     **TEXAS A & M UNIVERSITY**  
Dr. Donald W. Hood  
Dept. of Oceanography and Meteorology  
Texas A & M University  
College Station, Texas 77843
- TB      **TBILISI**  
A. A. Burchuladze  
Radiocarbon Laboratory  
Tbilisi University  
1 Chavchavadze Avenue  
Tbilisi, USSR
- \*TBNC<sup>10</sup> **KAMAN NUCLEAR**  
Kaman Nuclear  
Garden of the Gods Road  
Colorado Springs, Colorado
- TF      **TATA INSTITUTE OF FUNDAMENTAL RESEARCH**  
Dr. D. Lal  
Tata Institute of Fundamental Research  
Homi Bhabha Road  
Bombay-5 BR., India
- TK      **UNIVERSITY OF TOKYO**  
Dr. Hisashi Suzuki  
Carbon Dating Laboratory  
Department of Anthropology  
Faculty of Science  
University of Tokyo  
Hongo, Bunkyo-ku, Tokyo, Japan
- Tx      **TEXAS**  
Mr. S. Valastro, Jr. or Dr. E. Mott Davis  
Radiocarbon Laboratory  
Balcones Research Center, Rt. 4, Box 189  
University of Texas at Austin  
Austin, Texas 78757
- U      **UPPSALA**  
Dr. Ingrid Olsson  
Institute of Physics  
University of Uppsala  
Uppsala, Sweden



- UCLA UNIVERSITY OF CALIFORNIA, LOS ANGELES  
Dr. Rainer Berger and Dr. W. F. Libby  
Institute of Geophysics  
University of California  
Los Angeles, California 90024
- UW UNIVERSITY OF WASHINGTON  
Dr. A. W. Fairhall  
Department of Chemistry  
University of Washington  
Seattle, Washington 98105
- V VICTORIA  
Anne Bermingham  
Radiocarbon Dating Laboratory  
Institute of Applied Science of Victoria  
304-328 Swanston Street  
Melbourne 3000, Australia
- VRI VIENNA RADIUM INSTITUTE  
Dr. H. Felber  
Institut für Radiumforschung und Kernphysik  
Boltzmannngasse 3  
A-1090 Vienna, Austria
- W U.S. GEOLOGICAL SURVEY  
Dr. Meyer Rubin  
U.S. Geological Survey  
Washington, D.C. 20242
- WIS WISCONSIN  
Dr. Margaret Bender  
Radiocarbon Laboratory of the Center for Climatic Research  
Department of Meteorology  
University of Wisconsin  
Madison, Wisconsin 53706
- WSU WASHINGTON STATE UNIVERSITY  
Dr. Roy M. Chatters  
Radioisotopes and Radiations Laboratory  
College of Engineering Research Division  
Pullman, Washington 99163
- X WHITWORTH COLLEGE  
Dr. Edwin A. Olson  
Department of Geology  
Whitworth College  
Spokane, Washington 99218
- Y YALE  
Dr. Minze Stuiver  
Radiocarbon Laboratory  
Yale University  
New Haven, Connecticut 06520