IAEA-INIS-2(Rev.7, Amend.1)
(Jan. 2000)

INIS: SAMPLES FOR

BIBLIOGRAPHIC DESCRIPTION

INTERNATIONAL ATOMIC ENERGY AGENCY

VIENNA, AUSTRIA

PREFACE

This is the **Amendment 1** of the **7th** Revision of the **IAEA-INIS-2: Samples for Bibliographic Description** which is available in electronic form only. This manual is a companion volume to *IAEA-INIS-1(Rev.8,Amend.1, Dec.1999): Guide to Bibliographic Description*, and reflects the changes to bibliographic and indexing rules since 1995.

Most samples were taken over from Revision 7 and contain all the parts required for submitting records to INIS, i.e. the bibliographic and indexing parts as well as the abstract. However, the comments following each sample relate mainly to aspects of the bibliographic description. In each case the sample is accompanied by a reproduction of the pertinent title page(s) or pages containing relevant information for the cataloguer.

The publication has three parts: the samples in first part have only one bibliographic level: the monographic; in the second part, the samples represented are journal articles with two bibliographic levels, analytic and serial, while in the third part the samples shown are multilevel records with corresponding "Lead Records".

The experience gained by INIS in almost thirty years of operation has shown that there is sometimes more than one way of cataloguing a piece of literature. The samples in this volume have been chosen to demonstrate the simplest and most concise way of cataloguing the documents without losing any important information.

The samples are presented in the FIBRE format as this software is widely used throughout the INIS community. Slight modifications and additions have been carried out to the original samples used earlier to be able to reflect the latest bibliographic rule changes. To assist users in identifying the names of the Tags, copies of the INIS worksheets are included at the end of the document as Attachments 1 and 2.

This publication has been revised by Ms. Seyda Rieder and prepared by Ms. Nora Dreihann-Holenia of the Bibliographic Control Unit of the INIS Section. Subject analysis matters have been reviewed by the Subject Control Unit. Any comments and suggestions for corrections concerning the content of this edition should be communicated to:

Bibliographic Control Unit, INIS Section
Division of Scientific and Technical Information
International Atomic Energy Agency
Wagramerstrasse 5
P.O. Box 100
A-1400 Vienna, Austria
e-mail: S.Rieder@iaea.org

CONTENTS

PART 1

Non-conventional measurement techniques for the determination of some long-lived radionuclides produced in nuclear fuel

Literature survey

R.J. Rosenberg (*)
Reactor Laboratory

(*) Author can be contacted via e-mail:
rosenberg@xxxxx.fi

ISBN 951-38-4170-7
ISSN 1235-0605

TECHNICAL RESEARCH CENTRE OF FINLAND
ESPOO 1992

Sample 1

001 FI9300038
008 S37;S11/01/R/M/N

009 M
100 Rosenberg, R.J. (Reactor Laboratory, Technical Research Centre of Finland, Espoo (FI))
110 Technical Research Centre of Finland, Espoo (Finland)
200 Non-conventional measurement techniques for the determination of some long-lived radionuclides produced in nuclear fuel. Literature survey
300 VTT-TIED--1357
320 ISBN 951-38-4170-7; ISSN 1235-0605
403 Apr 1992
500 35 p.
600 (EN)
610 87 refs., 8 tabs.

009 9
800 CESIUM 135; COMPARATIVE EVALUATIONS; FISSION PRODUCTS; IODINE 129; MASS SPECTROSCOPY; NEPTUNIUM 237; NEUTRON ACTIVATION ANALYSIS; NUCLEAR FUELS; PLUTONIUM ISOTOPES; REVIEWS; SENSITIVITY; SPENT FUELS; TECHNETIUM 99; EXPERIMENTAL DATA; YEARS LIVING RADIOISOTOPES

009 X/EN
860 The results of a literature survey on non-radiometric analytical techniques for the determination of long-lived radionuclides are described. The methods which have been considered are accelerator mass spectrometry, inductively coupled plasma mass spectrometry, thermal ionization mass spectrometry, resonance ionization spectrometry, resonance ionization mass spectrometry and neutron activation analysis. Neutron activation analysis has been commonly used for the determination of "1"2"9I and "2"3"7Np in environmental samples. Inductively coupled mass spectrometry seems likely to become the method of choice for the determination of "9"9Tc, "2"3"7Np and Pu-isotopes. The methods are discussed and the chemical separation methods described. (author).

- **Type of record: R (Report)**
- **Bibliographic level: M (Monographic)**
- **Literary Indicator: N (Numerical data)**

Note the following:

- **In Tag 008: Primary and secondary subject categories are entered. They are separated with a semicolon but no space.**
- **In Tag 100: The author's forename(s) can be entered as initials or in full. The affiliation is entered in free form. Entry of the country name or country code according to the ISO Standard is mandatory and has to be entered in parentheses.**
- **In Tag 300: The report number is entered with one hyphen in the prefix part and two hyphens separating the prefix from the suffix.**
- **In Tag 320: ISBN and ISSN have been assigned to the document. Both can be entered at level M, separated by a semicolon and a space.**
- **In Tag 610: The number of references and tables are entered at this tag.**
- **In Tag 800: The document is a review publication. Therefore, the descriptor "REVIEWS" has to be entered. In this case the number of references should always be entered at Tag 610. The document contains significant numerical data, therefore the descriptor "EXPERIMENTAL DATA" has been assigned (and the literary indicator N added in Tag 008).**
- **In Tag 860: The encoding of superscript characters is carried out by using the special character ". They will be shown in certain INIS output products as ^{129}I, ^{237}Np, ^{99}Tc.**

ISSN 0915-6364

NIFS-DATA—20

BIBLIOGRAPHY ON ELECTRON TRANSFER PROCESSES IN ION-ION/ATOM/MOLECULE COLLISIONS

-UPDATED 1993-

H. Tawara

(Received April 1993)

NIFS-DATA-20 April 1993

National Institute for Fusion Science

Nagoya 464-01, Japan

Sample 2

001 JP9306187
008 S74/01/R/M/NZ

009 M
100 Tawara, Hiro
110 National Inst. for Fusion Science, Nagoya (Japan)
200 Bibliography on electron transfer processes in ion-ion/atom/molecule collisions (Updated 1993)
300 NIFS-DATA--20(rev.1993)
320 ISSN 0915-6364
403 Apr 1993
500 275 p.
600 (EN)
610 1542 refs.

009 9
800 BIBLIOGRAPHIES; COMPILED DATA; CHARGE EXCHANGE; ION-ATOM COLLISIONS; ION-ION COLLISIONS; ION-MOLECULE COLLISIONS; TOTAL CROSS SECTIONS

009 X/EN
860 Following our previous compilations (IPPJ-AM-45 (1986), NIFS-DATA-7 (1990), bibliographic information on experimental and theoretical studies on electron transfer processes in ion-ion/atom/molecule collisions is updated. The references published through 1980-1992 are included. For easy finding references for particular combination of collision partners, a simple list is also provided. (author).

- **Type of record: R (Report)**
- **Bibliographic level: M (Monographic)**
- **Literary indicators: N (Numerical data) and Z (Bibliography)**

Note the following:

- **In Tag 100: The forenames of Japanese authors are entered in full as given on the publication.**
- **In Tag 110: Full name of corporate organization is entered in free form. Country name or country code has to be entered according to ISO Standard and included in parentheses.**
- **In Tag 610: The information about the number of references is entered at this tag.**
- **In Tag 800: The subject descriptor(s) indicating the type of data present in the publication, for example COMPILED DATA, EXPERIMENTAL DATA, etc., is mandatory when literary indicator "N" is assigned. The subject descriptor "BIBLIOGRAPHIES" is mandatory when literary indicator "Z" is assigned.**

UCRL-MA--110662-Pt.4
DE93 007118

EQ6, A Computer Program for Reaction Path Modeling of Aqueous Geochemical Systems: Theoretical Manual, User's Guide, and Related Documentation (Version 7.0)

Thomas J. Wolery,

Stephanie A. Daveler

Work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

LAWRENCE LIVERMORE NATIONAL LABORATORY
University of California • Livermore, California • 94550

Sample 3

001 US9310139
008 S12;S54;S99/01/R/M/V

009 M
100 Wolery, T.J.; Daveler, S.A.
109 USDOE, Washington, DC (US)
110 Lawrence Livermore National Lab., CA (US)
200 EQ6, a computer program for reaction path modeling of aqueous geochemical systems: Theoretical manual, user's guide, and related documentation (Version 7.0)
300 UCRL-MA--110662(pt.4)
330 Contract W-7405-ENG-48
403 9 Oct 1992
500 349 p.
600 (English)
610 In FORTRAN IV FOR IBM 370 computer
611 Also available from OSTI as DE93007118; NTIS (documentation only); ESTSC (complete software package), P.O. Box 1020, Oak Ridge, TN 37831-1020; US Govt. Printing Office Dep.

009 9
800 CHEMICAL REACTIONS; COMPUTER PROGRAM DOCUMENTATION; DISSOLUTION; E CODES; GEOCHEMISTRY; MINERALS; PH VALUE; RADIOACTIVE WASTE DISPOSAL; RADIONUCLIDE MIGRATION; ROCK-FLUID INTERACTIONS; WASTE-ROCK INTERACTIONS; WATER

009 X/EN
860 EQ6 is a FORTRAN computer program in the EQ3/6 software package (Wolery, 1979). It calculates reaction paths (chemical evolution) in reacting water-rock and water-rock-waste systems. Speciation in aqueous solution is an integral part of these calculations. EQ6 computes models of titration processes (including fluid mixing), irreversible reaction in closed systems, irreversible reaction in some simple kinds of open systems, and heating or cooling processes, as well as solve ''single-point'' thermodynamic equilibrium problems. A reaction path calculation normally involves a sequence of thermodynamic equilibrium calculations. Chemical evolution is driven by a set of irreversible reactions (i.e., reactions out of equilibrium) and/or changes in temperature and/or pressure. These irreversible reactions usually represent the dissolution or precipitation of minerals or other solids. The code computes the appearance and disappearance of phases in solubility equilibrium with the water. It finds the identities of these phases automatically. The user may specify which potential phases are allowed to form and which are not. There is an option to fix the fugacities of specified gas species, simulating contact with a large external reservoir. Rate laws for irreversible reactions may be either relative rates or actual rates. If any actual rates are used, the calculation has a time frame. Several forms for actual rate laws are programmed into the code. EQ6 is presently able to model both mineral dissolution and growth kinetics.

- **Type of record: R (Report)**
- **Bibliographic level: M (Monographic)**
- **Literary indicator: V (Computer Program Description)**

Note the following:

- **In Tag 109: The full name of the Funding Organization has been entered here.**
- **In Tag 110: The full name of the Corporate Organization has been entered here.**
- **In Tag 610: The programming language has to be entered in this tag when literary indicator "V" is assigned.**
- **In Tag 611: Complete information about the availability of the program, software package is entered at this tag.**
- **In Tag 800: The subject descriptor ''COMPUTER PROGRAM DOCUMENTATION" has to be entered when literary indicator "V" is assigned.**

BARC/1993/P/002

GOVERNMENT OF INDIA
ATOMIC ENERGY COMMISSION

NUCLEAR PHYSICS DIVISION : ANNUAL REPORT 1991

Edited by:
M.G. Betigeri
Nuclear Physics Division

BHABHA ATOMIC RESEARCH CENTRE
BOMBAY, INDIA
1993

Sample 4

001 IN9301046
008 S73/01/R/M/Y

009 M
100 Betigeri, M.G. (ed.) (Bhabha Atomic Research Centre, Bombay (India). Nuclear Physics Div.)
110 Bhabha Atomic Research Centre, Bombay (India)
200 Nuclear Physics Division: Annual Report 1991
300 BARC--1993/P/002
403 1993
500 72 p.
600 (English)
610 figs., tabs.

009 9
800 ACCELERATOR FACILITIES; BARC; NUCLEAR PHYSICS; NUCLEAR REACTIONS; PELLETRON ACCELERATORS; PROGRESS REPORT; RADIATION DETECTORS; RESEARCH PROGRAMS

009 X/EN
860 A brief account of the research and development activities carried out by the Nuclear Physics Division. Bhabha Atomic Research Centre, Bombay during the period January 1991 to December 1991 is presented. These R and D activities are reported under the headings: 1) Accelerator Facilities, 2) Research Activities, and 3) Instrumentation. At the end, a list of publications by the staff scientists of the Division is given. The list includes papers published in journals, papers presented at conferences, symposia etc., and technical reports. (author).

- **Type of record: R (Report)**
- **Bibliographic level: M (Monographic)**
- **Literary indicator: Y (Progress Report)**

Note the following:

- **In Tag 100: The abbreviation "ed." has been entered to indicate the relationship of the responsible person.**
- **In Tag 800: The subject descriptor "PROGRESS REPORT" has to be entered when literary indicator "Y" is assigned.**

NOT MEASUREMENT SENSITIVE

DOE-STD-1054-93
March 1993

DOE STANDARD

GUIDELINE TO GOOD PRACTICES FOR CONTROL AND CALIBRATION OF MEASURING AND TEST EQUIPMENT (M&TE) AT DOE NUCLEAR FACILITIES

U.S. Department of Energy
Washington, D.C. 20585

AREA MNTY

Sample 5

001 US9312044
008 S99/01/R/M/W

009 M
110 USDOE, Washington, DC (United States)
200 Guideline to good practices for control and calibration of measuring and test equipment (M and TE) at DOE nuclear facilities
300 DOE-STD--1054-93
403 Mar 1993
500 34 p.
600 (English)
611 Also available from OSTI as DE93013952; NTIS; US Govt. Printing Office Dep.

009 9
800 MAINTENANCE; MANAGEMENT; NUCLEAR FACILITIES; OPERATON; PERFORMANCE; STANDARDS; STANDARDS DOCUMENT; US DOE

009 X/EN
860 The purpose of the Guideline to Good Practices for Control and Calibration of Measuring and Test Equipment (M and TE) at DOE Nuclear Facilities is to provide contractor maintenance organizations with information that may be used for the development and implementation of a rigorously controlled maintenance program directed at controlling and calibrating M and TE used for maintenance tasks at DOE nuclear facilities. This document is intended to be an example guideline for the implementation of DOE Order 4330.4 A, Maintenance Management Program, Chapter II, Element 11, DOE contractors should not feel obligated to adopt all parts of this guide. Rather, they should use the information contained herein as a guide for developing an M and TE program applicable to their facility.

- **Type of record: R (Report)**
- **Bibliographic level: M (Monographic)**
- **Literary indicator: W (Standard)**

Note the following:

- **In Tag 200: The character & in the word combination in parentheses (M & TE) has to be entered as (M and TE)**
- **In Tag 800: The subject descriptor "STANDARDS DOCUMENT" has to be entered when literary indicator "W" is assigned.**

Universidad Complutense de Madrid

Facultad de Ciencias Físicas

Dpto. Física Atómica, Molecular y Nuclear

MEDIDAS DE PROBABILIDADES DE TRANSICION EN EL MARGEN DEL ULTRAVIOLETA DE VACIO AL INFRARROJO

Memoria que presenta

Mª Carmen Peraza Fernández

Para optar al grado de doctora en Ciencias Físicas

Directores:

José Campos Gutiérrez

Catedrático de Física Atómica Experimental

Mª Piedad Martín Martínez

Investigadora del CIEMAT

Madrid 1992

Sample 6

001 ES9300006
008 S74;S46/01/I/M/NU

009 M
100 Peraza Fernandez, M.C.
110 Universidad Complutense de Madrid, Dept. de Fisica Atomica, Molecular y Nuclear (Spain)
111 Thesis (Ph.D.)
200 Measurements of transition probabilities in the range from vacuum ultraviolet to infrared
230 Medidas de probabilidades de transicion en el margen del ultravioleta de vacio al infrarrojo
300 INIS-ES--001
403 1992
500 309 p.
600 (ES)
610 83 refs.

009 9
800 ALUMINIUM; CALIBRATION; DESIGN; FAR ULTRAVIOLET RADIATION; GALLIUM; INDIUM; INFRARED SPECTRA; PHOTODIODES; SPECTROMETERS; TESTING; XENON IODIDES; KRYPTON COMPOUNDS; EXPERIMENTAL DATA

009 X/EN
860 In this thesis we describe the design, testing and calibration of different spectrometers to measure transition probabilities from the vacuum ultraviolet to the infrared spectral region. For the infrared measurements we have designed and performed a phase sensitive detection system, using an InGaAs photoiodide-like detector. With this system we have determined the transition probabilities of infrared lines of KrI and XeI. For these lines we have not found previous measurements. In the vacuum ultraviolet spectral region we have designed a 3 m normal incidence monochromator where we have installed an optical multichannel analyzer. We have tested its accurate working, obtaining the absorption of KrI. In the visible region we have obtained the emission spectrum of Al using a: hallow-cathode lamp and Nd: YAG laser produced Al plasma. With these spectra we have determined different atomic parameters like transition probabilities and electron temperature. (author).

- **Type of record: I (Miscellaneous)**
- **Bibligraphic level: M (Monographic)**
- **Literary indicator: U (Thesis), N (Numerical Data)**

Note the following:

- **In Tag 110: Name of the academic institution granting the degree is entered in free form. Only the country name or country code is standardized, according to ISO Standard and is included in parentheses.**
- **In Tag 111: Entry in this Tag is mandatory when Literary Indicator "U" is assigned. It should contain the academic degree of the dissertation or thesis.**
- **In Tag 300: This document has no identification number assigned to it by the issuing organization. However, it will be sent to INIS for inclusion in the NCL database on CD-ROM and for electronic distribution. In this case the input center should assign the next available number to the publication from its own block of INIS Prefix Numbers. The prefix should start with the word INIS, followed by a hyphen, followed by the two-digit country code of the centre, followed by two hyphens and the sequential number.**
- **In Tag 800: The document contains significant numerical data, therefore the descriptor "EXPERIMENTAL DATA" has been assigned (and the literary indicator N added in Tag 008).**

United Nations
Department of Political Affairs

Status of Multilateral Arms Regulation and Disarmament Agreements

Fourth Edition: 1992
Volume 2

United Nations
New York, 1993

UNITED NATIONS PUBLICATION
Sales No. E.93.IX.11 (Vol. 2)

ISBN 92-1-142196-9
(Set: not to be sold separately)

Sample 7

001 XU9300344
008 S98/01/B/M/Q

009 M
110 United Nations, Dept. of Political Affairs , New York, NY (US)
200 Status of multilateral arms regulation and disarmament agreements. V. 2
250 4. ed.
320 ISBN 92-1-142196-9
401 New York, NY (US)
402 UN
403 1993
500 293 p.
600 (EN)

009 9
800 ARMS CONTROL; INTERNATIONAL AGREEMENTS; LEGISLATIVE TEXT; NATIONAL DEFENSE; NON-PROLIFERATION TREATY; NUCLEAR DISARMAMENT; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RAROTONGA TREATY; TLATELOLCO TREATY

009 X/EN
860 The present publication, the fourth edition, reproduces in two volumes texts of agreements, in particular, those concerning nuclear disarmament and non-proliferation, and the status of those agreements as of 31 December 1992

- **Type of record: B (Book)**
- **Bibliographic level: M (Monographic)**
- **Literary indicator: Q (Legislative Material)**

Note the following:

- **In Tag 200: The book is published in two volumes. The identification of the volume number is entered as part of the title.**
- **In Tag 800: The subject descriptor "LEGISLATIVE TEXT" has to be entered when literary indicator "Q" is assigned.**

(19) RÉPUBLIQUE FRANÇAISE

INSTITUT NATIONAL
DE LA PROPRIÉTÉ INDUSTRIELLE

PARIS

(11) N° de publication : **2 682 215**
(à n'utiliser que pour les commandes de reproduction)

(21) N° d'enregistrement national : **91 12321**

(51) Int Cl' : G 21 D 1/02, G 21 C 17/013, 17/017

(12) BREVET D'INVENTION B1

(54) DISPOSITIF PORTEUR MOBILE POUR REALISER DES INTERVENTIONS DANS LA PARTIE SECONDAIRE D'UN GENERATEUR DE VAPEUR D'UN REACTEUR NUCLEAIRE A EAU SOUS PRESSION.

(22) Date de dépôt : 07.10.91.

(30) Priorité :

(43) Date de la mise à disposition du public de la demande : 09.04.93 Bulletin 93/14.

(45) Date de la mise à disposition du public du brevet d'invention : 07.01.94 Bulletin 94/01.

(56) Liste des documents cités dans le rapport de recherche :

Se reporter à la fin du présent fascicule

(60) Références à d'autres documents nationaux apparentés :

(71) Demandeur(s) : SOCIETE DITE : FRAMATOME. -FR.

(72) Inventeur(s) : CACCIUTTOLA ANTOINE

(73) Titulaire(s) :

(74) Mandataire(s) : CABINET LAVOIX

FR 2 682 215 - B1

Sample 8

001 FR9302909
008 S21/01/P/M/X

009 M
100 Cacciuttola, Alberto
110 Societe Franco-Americaine de Constructions Atomiques (FRAMATOME), 92 - Paris-La-Defense (France)
200 Mobile carrier device for inspecting secondary fluid side of PWR steam generator
230 Dispositif porteur mobile pour realiser des interventions dans la partie secondaire d'un generateur de vapeur d'un reacteur nucleaire a eau sous pression
300 FR patent document 2682215/B1/
310 FR patent application 9112321
320 Int. Cl. G21d1/02; G21c17/013; G21c17/017
403 7 Jan 1994; 7 Oct 1991
500 27 p.
600 (French)
611 Available from Institut National de la Propriete Industrielle, Paris (France)

009 9
800 PWR TYPE REACTORS; REMOTE HANDLING EQUIPMENT; REMOTE VIEWING EQUIPMENT; REPAIR; SECONDARY COOLANT CIRCUITS; STEAM GENERATORS

009 X/EN
860 The device has a central body having a first inflatable head and two jacks with an inflatable head at their extremities each. The legs of the jacks are oriented on both sides of the central body for displacement of the body by retraction and elongation of the legs

- **Type of record: P (Patent)**
- **Bibliographic level: M (Monographic)**
- **Literary indicator X (Microfiche not available from INIS)**

Note the following:

- **Tag 300: The Patent Number is entered with the appropriate WIPO Letter Code which identifies the special types of patent documents (e.g. /B1/). If the letter code is not given on the patent document use the list in Appendix 4 of IAEA-INIS-1 to choose the correct letter.**
- **Tag 310: The Patent Application Number was available in the document and therefore, has been entered in this Tag.**
- **Tag 320: Multiple International Classification Codes have been entered. They are preceded by the abbreviation "Int.Cl." followed by a space. The codes are separated by a semicolon and a space. The term "Int.Cl." is only entered once at the beginning of the tag.**
- **Tag 403: The first date refers to the date when the patent was published. It is identified by INID code number 45. The second date refers to the date of the patent application. It is identified by INID code number 22. Both dates are entered and separated by a semicolon and a space.**
- **Tag 611: This patent will not be sent to INIS for inclusion in the NCL database on CD-ROM or electronic distribution and consequently will not be available through the INIS Clearinghouse. In this case the literary indicator X has to be assigned at Tag 008 and an availability statement has to be entered in this Tag.**

IAEA-0751 INTERNATIONAL CHERNOBYL PROJECT

Vienna, Austria - Division of Public Information, International Atomic Energy Agency - 1991
English - 29 mins. - colour - video (VHS/PAL) - G
Audience: General. Cleared for television

The film documents tha work of the radiation experts of 8 international organizations in the area around the damaged Chernobyl nuclear power plant. During this evaluation, radiation measurements and medical examinations of the population were carried out and samples of soil, water, plants and food taken.

INTERNATIONAL ATOMIC ENERGY AGENCY
VIENNA, 1991

Sample 9

001 XA9230551
008 S61;S21/01/F/M

009 M
110 International Atomic Energy Agency, Vienna (Austria)
200 International Chernobyl project
401 Vienna (Austria)
402 IAEA
403 1991
500 29 min. sd. colour, video VHS/PAL
600 (EN)

009 9
800 BIOLOGICAL RADIATION EFFECTS; CHERNOBYLSK-4 REACTOR; DOSIMETRY; FOOD; HUMAN POPULATIONS; MEDICAL EXAMINATION; PLANTS; PUBLIC HEALTH; REACTOR ACCIDENTS; SOILS; WATER

009 X/EN
860 This film documents the work of the radiation experts of eight international organizations in the area around the damaged Chernobyl nuclear power plant. During this evaluation, radiation measurements and medical examinations of the population were carried out and samples of soil, water, plants and food taken

- **Type of record: F (Film)**
- **Bibliographic level: M (Monographic)**

Note the following:

- **In Tag 500: The physical description for films must provide sufficient information to indicate the requirements necessary to hear and/or view the film or tape.**

National Radiological Protection Board, Chilton, Didcot, Oxon OX11 0RQ. Telephone: (0235) 831600
Telex: 837124 RADPRO G · Fax: (0235) 833891

Information Services

Committed Equivalent Organ Doses and Committed Effective Doses from Intakes of Radionuclides

NRPB has published a software package, NRPB-SR245, which contains the most recent data on doses per unit intake of radionuclides. The data incorporates the new ICRP recommendations on tissue weighting factors and current NRPB advice on gut transfer factors.

The software package lists the committed effective doses for ingestion and inhalation of 1 μm AMAD particles of 359 nuclides by infants aged 3 months, by children aged 1, 5, 10 and 15 years and by adults, together with the highest committed equivalent organ dose. This makes readily accessible the data given in NRPB-R245, and includes the complementary data given in NRPB-M288 and NRPB-M289, including the rate at which committed effective doses build up over time.

It is expected that the data here will be used generally for research purposes. Where the control of exposures is governed by specific legislation, then effective dose equivalent calculations will still need to use the ICRP Publication 26 tissue weighting factors.

The microcomputer program enables the user to select any required radionuclide and the program immediately gives the value of radiation dose and displays, prints or saves it to disk quickly and easily. It runs on any standard IBM PC, AT, XT or true compatibles with MS-DOS 2.0 or above. It can be installed on either a hard disk or twin floppy disk machine and runs on both colour and monochrome monitors. The software automatically detects if an arithmetic co-processor or MS-DOS compatible mouse is present and uses them if they are. The package includes a program for installing the software on another machine.

The software package is available from NRPB Information Services, price £50.00 + VAT. An order form is attached.

September 1992

Sample 10

001 GB9204035
008 S61/01/T/M

009 M
110 National Radiological Protection Board, Chilton (United Kingdom)
200 Committed equivalent organ doses and committed effective doses from intakes of radionuclides
310 NRPB-SR--245
403 1992
500 5 p.
600 (EN)
610 Software package
611 Available from NRPB, Chilton, Didcot, Oxon. OX11 ORQ, price Pound 50.00

009 9
800 S CODES; DOSE EQUIVALENTS; INGESTION; INHALATION; MAN; NRPB; ORGANS; RADIONUCLIDE KINETICS; RADIOISOTOPES

009 X/EN
860 NRPB-SR245 is a software package which contains the most recent data on doses per unit intake of radionuclides. The data incorporate the new ICRP recommendations on tissue weighing factors and current NRPB advice on gut transfer factors. The software package lists the committed effective doses for ingestion and inhalation of 1 #mu#m AMAD particles of 359 nuclides by infants aged 3 months, by children aged 1, 5, 10 and 15 years and by adults, together with the highest committed equivalent organ dose

- **Type of record: T (Computer Medium)**
- **Bibliographic level: M (Monographic)**

Note the following:

- **In Tag 110: There is no personal author in the document, therefore, Tag 100 is omitted. The organization intellectually responsible for its publication is entered as corporate author in Tag 110 in free form.**
- **In Tag 310: The identification number of the software package, as mentioned in the abstract, is entered in this Tag.**
- **In Tag 611: The availability statement is not mandatory for Type of Record T, but it is highly recommended.**
- **In Tag 860: Note the encoded version of the Greek letter in the abstract.**

PART 2

ISSN 1061-8309

Vol. 28, No. 9, September, 1992

May, 1993

RUSSIAN JOURNAL OF NONDESTRUCTIVE TESTING

ENGLISH TRANSLATION OF

ДЕФЕКТОСКОПИЯ/ DEFEKTOSKOPIYA

ELECTROMAGNETIC–ACOUSTIC CONVERSION OF BULK WAVES IN THE PARA-PROCESS REGION: II. FUNCTIONAL RELATIONS IN THE VICINITY OF THE CURIE POINT

R. S. Il'yasov and V. V. Merzlyakov

The anomalous behavior of electromagnetic–acoustic (EMA) conversion in the vicinity of the Curie point, where the EMA conversion efficiency increases abruptly, was discovered experimentally some time ago [1, 2]. However, despite the pioneering stature of these and other similar studies and the subsequent practical application of their results [3], they were carried out for a limited class of experimental conditions and, in our opinion, have not been developed to the extent that they should in regard to exhibiting the physical substance of the phenomenon in its various manifestations. Noteworthy among theoretical studies is the work of Trigubovich and Domorod [4], but they also fall short of giving a complete description of the phenomenon, because they discuss only the temperature dependence of EMA conversion near the Curie point and derive expressions for the elastic displacements of a longitudinal wave propagating along the normal to the surface without any regard for surface forces.

We consider the configuration $H_0 \perp q_l \parallel n$, where H_0 is the polarizing magnetic field, q_l is the wave vector, and n is the normal the surface of the ferromagnet. The model of direct EMA conversion [5] for the elastic displacements of a longitudinal wave generated along the normal to the surface gives the equation

Physicotechnical Institute, Ural Branch, Russian Academy of Sciences. Translated from Defektoskopiya, No. 9, pp. 52-60, September, 1992. Original article submitted April 18, 1991; revision submitted November 21, 1991.

1061-8309/92/2809-0557$12.50

Sample 11

001 US9310031
008 S75;S36;S71/01/J/AS/T

009 A
100 Il'yasov, R.S.; Merzlyakov, V.V.
200 Electromagnetic-acoustic conversion of bulk waves in the para-process region: 2. Functional relations in the vicinity of the Curie point
500 p. 557-563
600 (English)
610 10 refs., 6 figs. Translated from Defektoskopiya; No. 9, p. 52-60 (Sep 1992)

009 S
229 Russian Journal of Nondestructive Testing
320 ISSN 1061-8309
403 (May 1993)
500 v. 28(9)

009 9
800 CURIE POINT; FERROMAGNETIC MATERIALS; INVAR; MAGNETOSTRICTION; NICKEL BASE ALLOYS; NONDESTRUCTIVE TESTING; THERMODYNAMIC PROPERTIES; ULTRASONIC WAVES; MAGNETIZATION; TEMPERATURE DEPENDENCE; MODE CONVERSION; MAGNETIC FIELDS

009 X/EN
860 The contributions from the mechanisms of anisotropic magnetostriction and isotropic magnetostriction of the para-process to the electromagnetic-acoustic conversion of bulk waves excited both normal and at an angle relative to the surface of a ferromagnet are investigated theoretically and experimentally, along with the redistribution of these contributions as the temperature and magnetic field are varied. The characteristics of electromagnetic-acoustic conversion in the vicinity of the Curie point are analyzed in detail using a thermodynamic description of the magnetization processes near a second-order phase transition, and the limits of validity of the given approach are discussed. (author).

- **Type of record: J (Journal Article)**
- **Bibliographic levels: A (Analytical) and S (Serial)**
- **Literary indicator: T (Translation)**

Note the following:

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- **In Tag 403: Journal datas have to be enclosed in parentheses.**
- **In Tag 610 of Level A: The information about the number of references and figures is entered first, followed by the information about the original document. At the same time, the Literary Indicator "T" is assigned at Tag 008.**
- **In Tag 500 of Level S: A space must be entered after the abbreviation "v.", but no space is allowed after the number of the volume and the parentheses containing the issue number.**

NEDEA 149 (1-3) 1-474 (1994) ISSN 0029-5493

Nuclear Engineering and Design

An International Journal devoted to the Thermal, Mechanical, Materials, and Structural Aspects of Nuclear Fission Energy

Affiliated with the European Nuclear Society, ENS

Principal Editor: K. Kussmaul
Editors: T.B. Belytschko, R.T. Lahey, Jr., H. Shibata, T.G. Theofanous

Volume 149 (1994)
September (I) 1994

Selected papers from the

SIXTH INTERNATIONAL TOPICAL MEETING ON NUCLEAR REACTOR THERMAL-HYDRAULICS
October 5–8, 1993
Grenoble, France

Fluid–structure coupling between a vibrating cylinder and a narrow annular flow

L. Perotin

Electricité de France (EDF) Research and Development Division, 6 Quai Watier, F-78400 Chatou, France

Abstract

This paper presents an analytical investigation of the fluidelastic coupling between an axial annular flow and a flexible vibrating axisymmetrical structure. The model presented is suited to single-phase, incompressible, viscous fluids and to annular flows of variable cross-section, axially symmetrical when the structure is motionless.

An experimental validation of this model is presented at the end of the paper: the results obtained with the numerical model are compared with experimental data for an oscillating cylinder free to vibrate under the effect of a variable-cross-section annular flow.

Nuclear Engineering and Design 149 (1994) 279-289

Sample 12

001 NL94F0429
008 S21/01/J/AS/K

009 A
100 Perotin, Louis (Electricite de France (EDF), Research and Development Division, 6 Quai Watier, F-78400 Chatou (France))
200 Fluid-structure coupling between a vibrating cylinder and a narrow annular flow
210 6. international topical meeting on nuclear reactor thermal hydraulics (Nureth-6)
211 Grenoble (France)
213 5-8 Oct 1993
500 p. 279
600 (English)

009 S
229 Nuclear Engineering and Design
320 ISSN 0029-5493
321 NEDEAU
403 (Sep 1994)
500 v. 149(1-3)

009 9
800 PWR TYPE REACTORS; FLUID-STRUCTURE INTERACTIONS; MECHANICAL VIBRATIONS; ANNULAR SPACE; INCOMPRESSIBLE FLOW; UNSTEADY FLOW; BOUNDARY CONDITIONS; STRUCTURAL MODELS; COMPUTERIZED SIMULATION

009 X/EN
860 Full text: An analytical investigation of the fluidelastic coupling between an axial annular flow and a flexible vibrating axisymmetrical structure has been carried out. The model presented is suited to single-phase, incompressible, viscous fluids and to annular flows of variable cross-section, axially symmetrical when the structure is motionless. An experimental validation of this model is presented at the end of the paper: the results obtained with the numerical model are compared with experimental data for an oscillating cylinder free to vibrate under the effect of a variable-cross-section annular flow.

- **Type of record: J (Journal article)**
- **Bibliographic levels: A (Analytical) and S (Serial)**
- **Literary indicators: K (Conference)**

Note the following:

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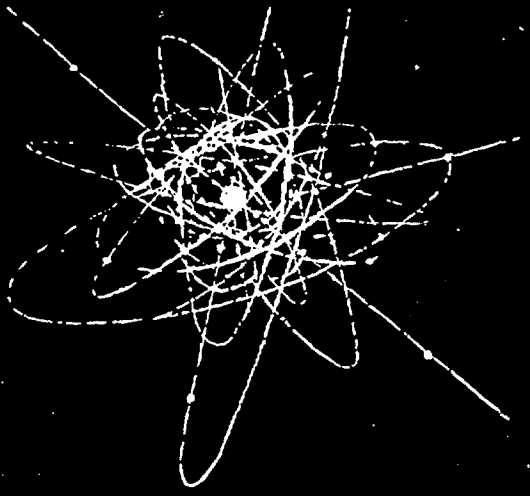
- **Tags 210, 211, and 213 have to be entered when literary indicator "K" is assigned.**
- **In Tag 500 of Level S: A space must be entered after the abbreviation 'v.', but no space is allowed between the number of the volume and the parentheses containing the issue number.**
- **In Tag 860: The full text of the abstract itself has been entered in this field following the rules established in 1997. Accordingly, if the length of the full text of the publication is less than 6000 characters and if it does not contain any tables or figures, the full text may be entered (in English) in Tag 860 following the wording Full text: unless forbidden by copyright restrictions. Alternatively, a shorter abstract should be prepared. For publications longer than 6000 characters, it is mandatory to provide an abstract.**

PART 3

KOLEKTIV AUTORŮ

OCHRANA PŘI PRÁCI SE ZDROJI IONIZUJÍCÍHO ZÁŘENÍ

SBORNÍK UČEBNÍCH TEXTŮ



Dům techniky Ostrava, spol. s r.o.
Mariánské nám. 5, 709 28 Ostrava - Mariánské Hory

Sample 13

001 CZ9626130
008 S61/01/I/M

009 M
110 Dum Techniky Usti s.r.o., Usti nad Labem (Czech Republic)
200 Protection during work with ionizing radiation sources
230 Ochrana pri praci se zdroji ionizujiciho zareni
300 INIS-CZ--0150
401 Ostrava (Czech Republic)
402 Dum Techniky Ostrava s.r.o.
403 1995
500 170 p.
600 (Czech)

009 9
800 IONIZING RADIATIONS; RADIATION PROTECTION; TRAINING; HEALTH HAZARDS; BIOLOGICAL RADIATION EFFECTS; PERSONNEL MONITORING; OCCUPATIONAL SAFETY; PERSONNEL DOSIMETRY; PUBLIC HEALTH; LECTURES; LEADING ABSTRACT

009 X/EN
860 The publication has been set up as a textbook for training courses dealing with health protection during work with ionizing radiation, designed for supervisory staff and persons directly responsible for activities which involve the handling of ionizing radiation sources. The book consists of a preface and the following chapters: (1) Fundamentals of ionizing radiation physics; (2) Quantities and units used in ionizing radiation dosimetry; (4) Biological effects of ionizing radiation; (5) An overview of sources of public irradiation; (6) Principles and methods of health protection against ionizing radiation; (7) Examples of technical applications of sources of ionizing radiation; (8) Personnel and working environment monitoring; (9) Documentation maintained at sites with ionizing radiation sources; (10) Methods of personnel protection against external irradiation and internal radionuclide contamination; (11) Radiation incidents and accidents; (12) Health care of personnel exposed to the ionizing radiation risk; (13) Additional radiation protection requirements in handling radioactive substances other than sealed sources; (14) Measurement and metrology. (P.A.)

- **Type of record: I (Miscellaneous)**
- **Bibliographic level: M (Monographic)**

Note the following:

- **This is the record of a conference proceedings described at the monographic level (M level). It describes the publication as a whole and is, therefore, the "LEAD RECORD". The analytics (records describing the individual chapters of this conference proceedings) have also been submitted and are shown on the next page. The subject descriptor "LEADING ABSTRACT" has also been assigned in Tag 800.**
- **Temporary Record Number (TRN) of the "LEAD RECORD" (in this case the TRN is CZ9626130) will be entered in Tag 007 of the analytics submitted from this conference proceedings (See sample 14).**

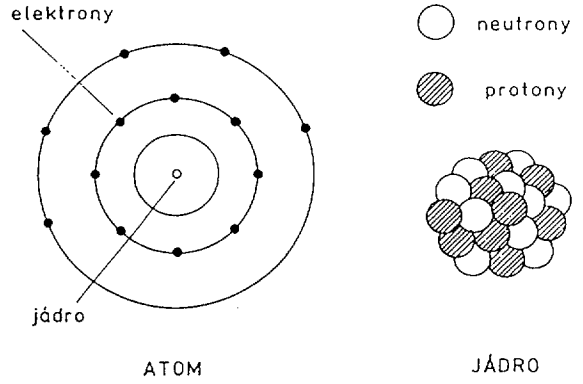
Základy fyziky ionizujícího záření

Ing. Jaroslav Vlček, Doc.Ing. Václav Hušák,CSc.

Za ionizující záření pokládáme takové, které je schopno při průchodu prostředím způsobit jeho ionizaci, tj. vytvořit z původně elektricky neutrálních atomů volné elektrony a kladné ionty. Tuto vlastnost má například rentgenové záření nebo záření radioaktivních látek. Vznik absorpce ionizujícího záření souvisí se strukturou atomů a atomových jader.

Stavba atomu

Atomy jsou nejmenší částice prvku, které se mohou účastnit chemických reakcí. Schématicky je stavba atomu a jeho jádra znázorněna na obrázku 1.



Obr.1: Schématické znázornění atomu a atomového jádra

Atom je tvořen centrálním kladně nabitým jádrem a orbitálními elektrony, které se nacházejí na přesně vymezených drahách. Atomové jádro obsahuje částice s kladným nábojem - protony a částice bez elektrického náboje - neutrony.

Sample 14

001 CZ9626131
007 CZ9626130
008 S99/00/I/AM/E

009 A
100 Vlcek, Jan; Husak, Vazlav
200 Fundamentals of ionizing radiation physics
230 Zaklady fyziky ionizujiciho zareni
500 p. 3
600 (Czech)

009 M
110 Dum Techniky Usti s.r.o., Usti nad Labem (Czech Republic)
200 Protection during work with ionizing radiation sources
230 Ochrana pri praci se zdroji ionizujiciho zareni
300 INIS-CZ--0150
401 Ostrava (Czech Republic)
402 Dum Techniky Ostrava s.r.o.
403 1995
500 170 p.

009 9
800 IONIZING RADIATIONS; ATOMIC PHYSICS; NUCLEAR PHYSICS; ALPHA DECAY; BETA DECAY; GAMMA DECAY; BREMSSTRAHLUNG; ABSORPTION; LECTURES

- **Type of record: I (Miscellaneous)**
- **Bibliographic levels: A (Analytical) and M (Monographic)**

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113 Springer Series in Solid-State Sciences
Edited by Hans-Joachim Queisser

H. Kuzmany M. Mehring
J. Fink (Eds.)

Electronic Properties of High-T_c Superconductors

The Normal and the Superconducting State of High-T_c Materials

Proceedings of the International Winter School, Kirchberg, Tyrol, March 7–14, 1992

With 286 Figures

Springer-Verlag
Berlin Heidelberg New York

ISBN 3-540-56195-1 Springer-Verlag Berlin Heidelberg New York

Sample 15

001 DE9332208
008 S36;S75/01/B/MS/KN

009 M
100 Kuzmany, H. (ed.) (Inst. fuer Festkoerperphysik, Wien Univ. (Austria)); Mehring, M. (ed.) (2. Physikalisches Inst., Stuttgart Univ. (Germany)); Fink, J. (ed.) (Kernforschungszentrum Karlsruhe, Inst. fuer Nukleare Festkoerperphysik, Karslruhe (Germany))
200 Electronic properties of high-Tc superconductors. The normal and the superconducting state of high-Tc materials. Proceedings
210 IWEPS '92: international winter school on electronic properties of high temperature superconductors
211 Kirchberg (Austria)
213 7-14 Mar 1992
320 ISBN 3-540-56195-1
401 Berlin (Germany)
402 Springer
403 1993
500 542 p.
600 (EN)

009 S
230 Springer series in solid-state sciences
500 v. 113

009 9
800 ELECTRONIC STRUCTURE; FULLERENES; HIGH-TC SUPERCONDUCTORS; INELASTIC SCATTERING; LEADING ABSTRACT; MEETINGS; NEUTRON DIFFRACTION; NUCLEAR MAGNETIC RESONANCE; OPTICAL PROPERTIES; RAMAN SPECTROSCOPY; SUPERCONDUCTIVITY; EXPERIMENTAL DATA

009 X/EN
860 The Kirchberg meetings are organized in the style of a school where experienced scientists from universities, research laboratories and industry discuss their most recent results, and when students and young scientists can learn about the present status of research and applications from eminent workers in their field. The present one focused on the electronic properties of the cuprate superconductors. Consideration was given to related compounds which are relevant to the understanding of the electronic structure of the cuprates in the normal state, to other oxide superconductors and to fulleride superconductors. Contributions dealing with their preparation, transport and thermal properties, high-energy spectroscopies, nuclear magnetic resonance, inelastic neutron scattering and optical spectroscopy are presented. 286 figs.

- **Type of record: B (Book)**
- **Bibliographic levels: M (Monographic) and S (Serial)**
- **Literary indicator: K (Conference), N (Numerical data)**

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- **In Tag 800: The subject descriptor "LEADING ABSTRACT" is mandatory for the "LEAD RECORD". The subject descriptor "MEETINGS" is entered for a monograph and a lead record when literary indicator "K" is assigned. The document contains significant numerical data, therefore the descriptor "EXPERIMENTAL DATA" has been assigned (and the literary indicator N added in Tag 008).**

One- and Two-Particle Excitations in Doped Mott-Hubbard Insulators

P. Horsch[1] *and W. Stephan*[2]

[1]Max-Planck-Institut für Festkörperforschung,
Heisenbergstr. 1, W-7000 Stuttgart 80, Fed. Rep. of Germany
[2]King's College London, Strand, London WC2R 2LS, UK

Abstract. Recent analytical and numerical results for the single-particle spectral function and the optical conductivity of two-dimensional Hubbard and t-J models are reviewed. These models are considered relevant for the copper-oxide superconductors which are usually classified as doped charge-transfer insulators. We shall (1) briefly discuss based on a study of the 3-band Hubbard model why the charge-transfer gap and the low-lying excitations of the doped systems may be described by the more simple 1-band Hubbard model, which reduces in the strong coupling limit to the t-J model. The subsequent discussion covers the following topics: (2) the Green's function for a single hole in the $t-J$ model, (3) the suppression of staggered magnetization at small doping concentration as a result of the motion of the holes, (4) the spectral function and Fermi surface at moderate doping, i.e in the spin liquid phase, and (5) the doping dependence of the optical conductivity.

1 Introduction

Shortly after the discovery of superconductivity in the copper oxides by Bednorz and Müller [1] it was suggested by Anderson [2] that the phenomenon of high temperature superconductivity must be explained in the framework of doped Mott-Hubbard insulators. This prompted a renaissance in the study of the Hubbard model and its strong coupling limit, the $t-J$ model, which are now widely accepted to be relevant models that describe the low energy physics in these compounds. In spite of the huge efforts made, there is still no consensus on the mechanism of high temperature superconductivity (HTSC'y)[3, 4]. These models have a long history, dominated until recently by applications to the study of magnetism and correlation effects in transition metals and their compounds [5, 6].

Given these models a natural strategy is to ask the question:' To which extent are these models able to describe the peculiar normal state properties of these compounds?' This is the strategy we will follow, yet we will limit ourselves to the discussion of the single-particle Green's function

Springer Series in Solid-State Sciences, Vol. 113 Electronic Properties of High-T_c Superconductors
Editors: H. Kuzmany, M. Mehring, J. Fink

Sample 16

001 DE9332209
007 DE9332208
008 S75/01/B/AMS/K

009 A
100 Horsch, P. (Max-Planck-Inst. fuer Festkoerperforschung, Stuttgart (Germany)); Stephan, W. (King's Coll., London (United Kingdom))
200 One- and two-particle excitations in doped Mott-Hubbard insulators
210 IWEPS '92: international winter school on electronic properties of high temperature superconductors
211 Kirchberg (Austria)
213 7-14 Mar 1992
500 p. 351-367
600 (English)

009 M
100 Kuzmany, H. (ed.) (Inst. fuer Festkoerperphysik, Wien Univ. (Austria)); Mehring, M. (ed.) (2. Physikalisches Inst., Stuttgart Univ. (Germany)); Fink, J. (ed.) (Kernforschungszentrum Karlsruhe, Inst. fuer Nukleare Festkoerperphysik, Karlsruhe (Germany))
200 Electronic properties of high-Tc superconductors. The normal and the superconducting state of high-Tc materials. Proceedings
320 ISBN 3-540-56195-1
401 Berlin (Germany)
402 Springer
403 1993
500 542 p.

009 S
230 Springer series in solid-state sciences
500 v. 113
009 9
800 CARRIER MOBILITY; DISPERSION RELATIONS; DOPED MATERIALS; EXCITATION; FERMI LEVEL; GREEN FUNCTION; HIGH-TC SUPERCONDUCTORS; HUBBARD MODEL; MAGNETIZATION; NUMERICAL ANALYSIS; PHOTOEMISSION; POLARONS; REVIEWS; SPECTRAL FUNCTIONS; SPIN WAVES; TEMPERATURE DEPENDENCE

009 X/EN
860 Based on a study of the 3-band Hubbard model, we shall briefly discuss in this paper why the charge-transfer gap and the low-lying excitations of the doped systems may be described by the more simple 1-band Hubbard model; (2) the Green's function for a single hole in the t-J model, (3) the suppression of staggered magnetization at small doping concentration as a result of the motion of the holes, (4) the spectral function and Fermi surface at moderate doping, and (5) the doping dependence of the optical conductivity

- **Type of record: B (Book)**
- **Bibliographic levels: A (Analytical), M (Monographic) and Serial (S)**
- **Literary indicator: K (Conference)**

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Handbook of
Plasma Physics

Volume 3

General editors

M.N. Rosenbluth

University of California, SD
La Jolla, CA, USA

R.Z. Sagdeev

Space Research Institute, Academy of Sciences of the USSR
Moscow, USSR
and
University of Maryland
College Park, MD, USA

Physics of Laser Plasma

ISBN: 0 444 87426 7

Editors

A. Rubenchik

Institute of Automation and Electrometry
Novosibirsk 630090, USSR

S. Witkowski

Max-Planck Institut für Quantenoptik
D-8046 Garching, GERMANY

1991

NORTH-HOLLAND
AMSTERDAM·LONDON·NEW YORK·TOKYO

Sample 17

001 NL92C0788
008 S70/01/B/MC/N

009 M
100 Rubenchik, A. (ed.) (AN SSSR, Novosibirsk (Russian Federation). Inst. Avtomatiki i Ehlektrometrii); Witkowski, S. (ed.) (Max-Planck-Institut fuer Quantenoptik, Garching (Germany))
200 Physics of laser plasma
320 ISBN 0 444 87426 7
401 Amsterdam (Netherlands)
402 North-Holland
403 1991
500 663 p.
600 (English)
611 Available from Elsevier Science Publication, P.O. Box 211, 1000 AE Amsterdam (NL); also available URL: http://www.elsevier.com/books/12345.htm

009 C
100 Rosenbluth, M.N. (ed.) (California Univ., La Jolla, CA (United States)); Sagdeev, R.Z. (ed.) (AN SSSR, Moscow (Russian Federation). Inst. Kosmicheskikh Issledovanij; Maryland Univ., College Park, MD (US))
200 Handbook of Plasma Physics
500 v. 3

009 9
800 BLACKBODY RADIATION; DIRECT-DRIVE LASER IMPLOSION; LASER RADIATION; LASER TARGETS; LASER-PRODUCED PLASMA; LEADING ABSTRACT; EXPERIMENTAL DATA; PLASMA ACCELERATION; PONDEROMOTIVE FORCE; RAYLEIGH-TAYLOR INSTABILITY; RESONANCE ABSORPTION; INERTIAL CONFINEMENT; TURBULENCE; PLASMA DIAGNOSTICS; LASER-RADIATION HEATING; CHARGED-PARTICLE TRANSPORT; TOTAL CROSS SECTIONS; EQUATIONS OF STATE; SOFT X RADIATION; THEORETICAL DATA

009 X/EN
860 This volume provides a comprehensive review of laser fusion plasma physics and contains very up-to-date information on high density plasma physics and radiation transport, useful for astrophysicists and high density physicists. Two chapters (3 and 4) deal with soft X-rays emitted by the plasmas, their use as diagnostic tool and the production of black-body radiation in this spectral range. Chapters 5 and 6 put main emphasis on the hydrodynamics of compression and heating of spherically symmetric targets, the problems of Rayleigh-Taylor instabilities and the requirements imposed on the homogeneity of the laser radiation. The numerous phenomena occurring in the low-density corona region through interaction of the intense electromagnetic radiation with a plasma are treated in chapters 7-10. The theoretical treatment of plasma turbulence excited in the corona and the description of the main linear and nonlinear interaction phenomena with emphasis on the experiments is followed by a special article on resonance absorption and ponderomotive action. The acceleration of electrons by plasma waves (an effect adverse to the fusion researcher) and its controlled use for advanced accelerators is dealt with in chapter 11

- **Type of record: B (Book)**
- **Bibliographic levels: M (Monographic) and C (Collective)**
- **Literary indicator: N (Numerical Data)**

Note the following:

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- **In Tag 611: Availability information about the publication from the publishing house as well as the URL address on the web is cited in this field.**
- **In Tag 800: The subject descriptor "LEADING ABSTRACT" is mandatory for the "LEAD RECORD". The subject descriptor(s) indicating the type of data present in the publication (EXPERIMENTAL DATA, THEORETICAL DATA), is mandatory when literary indicator "N" is assigned.**

Chapter 5

Direct Drive Fusion Studies

M.C. Richardson*

Center for X-ray Optics, Accelerator and Fusion Research Division
Lawrence Berkeley Laboratory, University of California
Berkeley, CA 94720, USA

Contents

* Present address: Center for Research in Electro-Optics & Lasers, University of Central Florida, Orlando, FL 32826, USA. The author was previously a Senior Scientist at the Laboratory for Laser Energetics, University of Rochester, NY, USA.

Handbook of Plasma Physics, Eds M.N. Rosenbluth and R.Z. Sagdeev
Vol. 3: Physics of Laser Plasma, edited by A.M. Rubenchik and S. Witkowski

Sample 18

001 NL9200791
007 NL92C0788
008 S70/01/B/AMC

009 A
100 Richardson, Thomas (Lawrence Berkeley Lab., CA (United States))
200 Direct drive fusion studies. Chapter 5
500 p. 199-246
600 (English)
610 234 refs., 17 figs.

009 M
100 Rubenchik, A. (ed.) (AN SSSR, Novosibirsk (Russian Federation). Inst. Avtomatiki i Ehlektrometrii); Witkowski, S. (ed.) (Max-Planck-Institut fuer Quantenoptik, Garching (Germany))
200 Physics of laser plasma
320 ISBN 0 444 87426 7
401 Amsterdam (Netherlands)
402 North-Holland
403 1991
500 663 p.
611 Available from Elsevier Science Publication, P.O. Box 211, 1000 AE Amsterdam (NL); also available URL: http://www.elsevier.com/books/12345.htm

009 C
100 Rosenbluth, M.N. (ed.) (California Univ., La Jolla, CA (United States)); Sagdeev, R.Z. (ed.) (AN SSSR, Moscow (Russian Federation). Inst. Kosmicheskikh Issledovanij; Maryland Univ., College Park, MD (US))
200 Handbook of Plasma Physics
500 v. 3

009 9
800 ICF DEVICES; INERTIAL CONFINEMENT; LASER RADIATION; LASER-PRODUCED PLASMA; PLASMA PRODUCTION; REVIEWS; SOFT X RADIATION; DIRECT DRIVE LASER IMPLOSION; RESONANCE ABSORPTION; ENERGY DEPOSITON; DECAY INSTABILITY; CHARGED-PARTICLE TRANSPORT; PLASMA; DIAGNOSTICS; FUSION YIELD; RAYLEIGH-TAYLOR INSTABILITY; LASER TARGETS

009 X/EN
860 Direct-drive fusion demands severe constraints on laser irradiation uniformity that do not apply to indirect drive. The intent of this chapter is to review the primary physics issues currently considered relevant to the successful demonstration of directly driven high-density implosions. Not all aspects of the direct-drive fusion problem are discussed in equal depth. The review of topics described in detail in other articles of this volume is limited to discussion of their immediate relevance to direct-drive fusion.

- **Type of record: Book**
- **Bibliographic levels: A (Analytical), M (Monographic) and C (Collective)**

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- **This is the record of a chapter in the book described at the analytical level (A level). It is one of the analytics submitted from this book.**
- **The bibliographic data of the monographic and collective levels in which this paper has been published are repeated in each record of the analytics submitted from that publication.**
- **In Tag 007: The Temporary Record Number (TRN) of the "LEAD RECORD" (in this case it is NL92C0788) has to be entered in Tag 007 of all analytics submitted from this publication to ensure the relationship to the "LEAD RECORD".**
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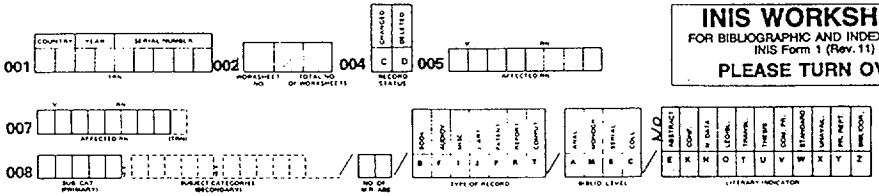
ATTACHMENT 1

INIS WORKSHEET

FOR BIBLIOGRAPHIC AND INDEXING DATA
INIS Form 1 (Rev. 11)

PLEASE TURN OVER



1 009 [ ] Level

(Use a separate Worksheet for each level circled in the Bibliographic Level box starting with the left-most level and enter code in box 009. For serial entries use section 2 of this Worksheet. Use Abstracts Worksheet for abstracts.)

	Tag	Data (enter by typewriter only)
Personal Author(s) Inventor(s) Editor(s) (Affiliation(s))	100	
Collaboration	107	
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2 009 [S] Level

(enter by typewriter only)

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ISSN	320	
Coden	321	
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A-14/Rev.18 (Apr. 95)

009 [9] Level 800 Descriptors

	Descriptors	
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810 Proposed Descriptors

	Definition or Intended Meaning and Suggested Associated Terms

001 COUNTRY | YEAR | SERIAL NUMBER — TAN

002 WORKSHEET NO. / TOTAL NO. OF WORKSHEETS

INIS WORKSHEET
ABSTRACTS

4 009 [X] / [ ] (Use a separate Worksheet for each language version of the abstract)
Lang Ref Code

	Tag	Data (enter by typewriter only)
Abstract	860	

Abstracter: Puncher:

Proofreader: Date Completed: