



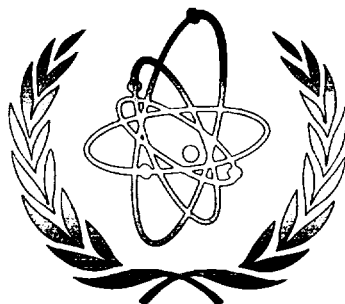
VIENNA INTERNATIONAL CENTRE LIBRARY

& FILM & VIDEO CATALOGUE

PEACEFUL APPLICATIONS OF NUCLEAR ENERGY
1928 – 1998

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INTERNATIONAL
ATOMIC ENERGY AGENCY
Vienna, Austria 1998

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PEACEFUL APPLICATIONS OF NUCLEAR ENERGY
1928-1998
IAEA, VIENNA, 1998
VIC/FC/1998

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September 1998

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INFORMATION FOR BORROWERS

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Much of the material listed has been donated to the IAEA by the Governments of Member States. The IAEA accepts responsibility for the contents of films/videos that it has itself produced or commissioned, but the IAEA and the VIC Library do not accept responsibility for the contents of films/videos that have been received from others.

The items in this catalogue are arranged by number. The numerical sequence is followed by a TITLE INDEX and a SUBJECT INDEX.

PERIODIC SUPPLEMENTS TO THIS CATALOGUE

Supplements to this catalogue listing new acquisitions are issued annually. Please contact the AV Collection, VIC Library, if you want to receive a copy.

COPYRIGHT INFORMATION

Copyright information is given when available. In most other cases, information can be obtained from the national Atomic Energy Commission or from the producers of the film. Brackets indicate the most likely copyright holder if no precise information could be found.

AUDIENCE

Information as to whether the material is suitable for GENERAL, SEMI-TECHNICAL or TECHNICAL audiences and/or RESEARCHERS is given. The HISTORICAL nature of a film is indicated by the phrase 'Of historical interest only'.

FILM DEPOSITS

The Vienna International Centre Library is willing to act as a depository for all films dealing with all aspects of the use of nuclear energy. We would also appreciate being informed about any new productions in this field.

CONDITIONS FOR LOAN

- (1) Loan period: 4 weeks - European requests; 6 weeks - elsewhere. Special arrangements can be made for an extended loan period if necessary.
- (2) No more than three films at a time are lent to one institution.
- (3) Films must be returned within the time limit set when the loan is made.
Return postage is to be paid by the borrower.
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- (7) The Vienna International Centre Library must be reimbursed for the loss of a film or damage beyond normal wear and tear. The reimbursement must cover the costs for replacing the lost or damaged item.
- (8) Under no circumstances may footage be removed from films on loan.
- (9) Films should be rewound before return.

A film loan record accompanies each shipment. The borrower is requested to complete the statistical portion of the loan record, sign it and attach it to the return shipment. For any questions regarding loan conditions, please contact the AV clerk, Vienna International Centre Library.

HOW TO REQUEST LOANS

Requests should include both the Catalogue NUMBER and the TITLE of the film, e.g. AVN 0660, Nuclear Accident Dosimetry. They should be addressed by letter, fax or e-mail to:

Audiovisual Collection
Vienna International Centre Library
P.O. Box 100
A-1400 Vienna
AUSTRIA

Telephone: 43 1 2060 ext.: 22620
Fax: 43 1 2060 29584
e-mail: E.Moedlhammer@iaea.org

The VIC Library may have only ONE copy of the film with which to fulfil several requests. Therefore,

- (a) Requests should be made as far IN ADVANCE as possible.
- (b) Requests should include ALTERNATIVE titles and/or dates where possible.
- (c) Borrowers are requested to strictly observe the TIME LIMITS set when loans are made.
- (d) Please indicate which video system you use (PAL, SECAM or NTSC) and check in the Catalogue its availability. Please note that several films are ONLY available in 16 mm format.

HOW TO READ ENTRIES

Whenever the information is available, each entry is composed of the following:

Film number	AVN 0680
Title	Better bananas
Country of Production	Austria
Producer	Joint FAO/IAEA Division
Date of production	1986
Language(s)	English, Spanish, German
Running time	13 min.
Format	sd., col. (sound, colour) or sd., b&w (sound, black and white): 16 mm film and/or 35 mm film and/or video Please note that the films are ONLY available in the indicated formats
Audience	general; semi-technical; technical etc.
Copyright	when known; brackets indicate the most likely copyright holder when no precise information is available.
Television clearance	given when available.
Subject(s)	key words which give information about the contents.
Abstract	a brief synopsis of the film

FILMS BY NUMBER

AVN 0002 Fuel element burning experiment.

U.S. - U.S. Department of Agriculture, Motion Picture Service - 1959.

English - 20 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Fuel burnup (Nuclear engineering)

Describes a two-part experiment to simulate the crash of a nuclear powered aircraft and the effects of the resulting fire on a fuel element.

AVN 0003 Naval research laboratory reactor.

U.S. - United States Navy - 1958.

English, French - 25 min. - sd., col. + 1 English script - 16 mm.

Target audience: technical, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Research reactors -- United States -- History.

The film presents a guided tour through the Naval Research Laboratory's research reactor facility in Washington. All visible components are pictured and described; composition of fuel elements, core assembly, and methods of exposing samples are explained by animation.

AVN 0004 Oak Ridge Research Reactor.

U.S. - U.S. Atomic Energy Commission - 1958.

English - 20 min. - sd., col. - 16 mm + 1 English script.

Target audience: general, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Research reactors -- United States -- History.

The film summarizes the components, facilities, uses, and operation of the Holifield research reactor.

AVN 0005 Experimental Breeder Reactor-I core disassembly after meltdown.

U.S. - Argonne National Laboratory - 1958.

English, French - 13 min.- sd., col. - 16 mm + 1 English script.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Breeder reactors -- Accidents; Nuclear reactors -- Accidents.

The film presents some major aspects of the removal and subsequent disassembly of the core of Experimental Breeder Reactor-I, Mark II, following meltdown. It illustrates the hot-laboratory remote-control techniques used to separate and recover enriched fuel from the blanket material.

AVN 0006 Experimental Breeder Reactor I, Mark III

U.S. - Argonne National Laboratory - 1958.

English, French - 13 min.- sd., col. + 1 English script - 16 mm.

Target audience: general; researchers. Of historical interest only.

Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Breeder reactors -- United States -- History.

This film presents some major aspects of the fabrication, installation and operation of a new core (Mark III) for the Experimental Breeder Reactor I.

AVN 0007 Zero power reactor III.

U.S. - U.S. Atomic Energy Commission - 1958.

English, French - 10 min.- sd., col. + 1 English script - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear reactors -- United States -- History; Fast reactors -- United States -- History.

This film presents the Zero Power Reactor III (ZPR III), its operation and current application in Argonne National Laboratory's fast reactor programme.

AVN 0010 Vallecitos boiling water reactor.

U.S. - Atomic Power Equipment Department, General Electric Company - 1958.

English French - 8 min. - sd., col. + 1 English script - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- United States -- History; Boiling water reactors -- United States -- History.

Shows operation of the General Electric Vallecitos boiling water reactor, including views of the loading of the reactor, interior of the reactor containment vessel, and the turbine generator installation. Reactor start-up procedures and actual operating sequences, including close-ups of control and instrumentation, are demonstrated.

AVN 0011 Dresden nuclear power station.

U.S. - General Electric Co. - 1958.

English - 15 min. - sd., col. + 1 English script - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- United States -- History; Boiling water reactors -- United States -- History.

Shows the design and construction of the 180,000-kW Dresden Nuclear Power Station near Chicago, including views of the fabrication of the reactor pressure vessel and close-ups of the containment sphere.

AVN 0015 Plutonium fuel fabrication for MTR.

U.S. Richland - G.E. Hanford Atomic Products Operation for USAEC - 1958.

English, French - 10 min. - sd., col.- 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- Materials -- Thermal properties; Nuclear fuel elements; Materials testing reactors -- United States -- History; Plutonium.

The Materials Testing Reactor (MTR) at USAEC's National Reactor Testing Station, Idaho, has been operated utilizing plutonium as the entire fissionable fuel charge. This film details the fabrication of this fuel charge in the plutonium metallurgy laboratories at Hanford, Washington. These fuel elements were used successfully at a power of 30 Mw(t) in the MTR to demonstrate, for the first time, the operation of a thermal reactor fueled with plutonium.

AVN 0016 Plutonium metal preparation

[New Mexico] - United States Atomic Energy Commission - 1958.

English - French - 13 min. - sd., b&w. + 1 script - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. National Regulatory Commission)

Subject(s): Nuclear fuel elements; Plutonium.

Depicts the process and equipment designed and used at the Los Alamos Scientific Laboratory in converting plutonium from a nitrate solution to elemental metal. The isolated plutonium is used for metallurgical and pyrometallurgical research, for fuel alloy development, and for reactor and critical assembly elements.

AVN 0027 Industrial applications of nuclear explosives.

U.S. - U.S. Atomic Energy - 1958.

English, French - 10 min. - sd., col. + 1 English script - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Peaceful nuclear explosions -- United States; Underground nuclear explosions -- United States.

A description of an experimental underground nuclear explosion, and an exploration of potential uses of this technique.

AVN 0032 High energy particle accelerators.

U.S. - Audio Productions for United States Atomic Energy Commission - 1958.

English, French - 30 min. - sd., col. + 1 English script - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Particle accelerators -- United States -- History; Elementary particles.

Surveys the work of particle accelerators in high-energy physics. Shows the major accelerator installations in the United States, major accelerators under construction, and a series of typical experiments with high-energy particles. Explains - with both live action and animation - the components and operations of various types of accelerators, and gives a description of bubble chambers.

AVN 0039 Engineering test reactor.

U.S. - USAF'S Lookout Mountain Air Force Station for United States Atomic Energy Commission - 1958.

English, French - 22 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- United States -- History.

Discusses the design, construction, operations, and some of the uses of this large nuclear test facility in Idaho. Among other uses, the ETR acts as a research tool in the development of economic nuclear power by testing the effects of intense neutron and gamma-ray bombardment on the engineering components of reactors under design.

AVN 0044 Medical research reactor.

U.S. - Audio Productions for USAEC's Brookhaven National Laboratory - 1958.

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; medical, engineers, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Research reactors -- United States -- History; Nuclear medicine -- History.

Describes the design of the Brookhaven National Laboratory's Medical Research Reactor (MRR), including shielding and radiation effects.

AVN 0045 Radioisotopes.

India - Films Division, Government of India - 1962.

English - 10 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radioisotopes in medicine; Radioisotopes in agriculture; Radioisotopes in industry.

Reviews briefly the application of radioisotopes in medicine, agriculture and industry in India.

AVN 0046 Power reactors - U.S.A.

U.S. - Lytle Corp. for United States Atomic Energy Commission - 1958.

English, French - 15 min. - sd., col. - 16 mm and video.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear reactors -- United States -- History.

Comprehensive survey of the U.S. power reactor programme - covering technical planning, construction and operational experience associated with the Shipping port pressurized water reactor, the Army Package power reactor, the Indian Point and Yankee projects, Argonne Laboratory's experimental boiling water reactor, the Pleasanton, Dresden, and Monroe projects, the Idaho organic moderated reactor experiment, experimental breeder reactor 1, and homogenous reactor experiments 1 and 2.

AVN 0048 Construction of Calder Hall.

U.K. - an Ace Film Production for United Kingdom Atomic Energy Authority - 1957.

English - 40 min. - sd., b&w - 16 mm.

Target audience: technical; engineers, researchers. Of historical interest only.

Subject(s): Nuclear reactors -- United Kingdom -- History.

Technical survey of the civil engineering aspects of the construction of the Calder Hall reactor.

AVN 0049 Engineering at Calder Hall : the pressure vessel.

U.K - Ace Film Productions for United Kingdom Atomic Energy Authority - 1957.

English - 38 min. - sd., b&w + 1 English script and 1 Russian script - 16 mm.

Target audience: technical; engineers, researchers. Of historical interest only.

(Copyright: UKAEA)

Subject(s): Nuclear pressure vessels -- United Kingdom -- History; Nuclear reactors -- United Kingdom -- History.

Technical description of the building of the first pressure vessel at Calder Hall, including lifting the sections into position, welding, cutting the holes for the charge tube stubs, stress relieving, testing, lagging, and preparations for installing the graphite core.

AVN 0052 The Dounreay sphere : design and construction.

U.K. - Ace Film Productions for United Kingdom Atomic Energy Authority - 1957.
English (separate magnetic tape with soundtrack in English, French, Russian and Spanish) -
35 min. - sd., b&w - 16 mm.
Target audience: technical; researchers. Of historical interest only.
Copyright: U.K.A.E.A.
Subject(s): Breeder reactors -- United Kingdom -- History.

Covers design and construction details of the 135-foot diameter containment sphere for the Dounreay fast breeder reactor.

AVN 0055 The day tomorrow began : CP-1, the first atomic pile.

U.S. - National Audio-Visual Center, U.S. Atomic Energy Commission - 1967.
English - 30 min. - sd., col. - 16 mm and video.
Target audience: general; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Nuclear energy -- History; Atomic bomb -- History; Fermi, Enrico, 1901-1954.

This historical film tells the story of the building and testing of CP-1 (Chicago Pile-1), the first atomic pile, and the work of the brilliant scientific team led by Dr. Enrico Fermi. By interview (J. Wheeler, Mrs. L. Fermi, G. Seaborg et al.), historical footage, paintings etc., the film takes us on a step-by-step re-enactment of the famous event - beginning with the arrival of the first refugee scientists in 1939, to the dramatic hours on December 2, 1942 when control rods were pulled out of CP-1 to achieve the first sustained chain reaction.

AVN 0059 Conquest of the atom.

U.K. - Realist Film Unit for Mullard Ltd. and the Educational Foundation for Visual Aids - 1958.
English - 20 min. - sd., col. - 16 mm and video.
Target audience: general; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear energy -- United Kingdom -- History.

Describes the early work of J. J. Thompson with the electron and with positive particles, Rutherford's experiments on the structure of the atom, Cockcroft-Walton's experiments in splitting the lithium atom by proton bombardment, and Chadwick's work in discovering

the neutron. Also describes the splitting of the uranium atom and its application to the atomic pile, and looks at power from atomic fission and fusion.

AVN 0060 Exercise Mermaid.

U.K. - A.E.R.E. Film Unit Production for United Kingdom Atomic Energy Authority - 1957.

English - 10 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Radioactive waste management -- United Kingdom -- History.

Describes the work of Harwell survey teams carrying out investigations into the dispersal of radioactive substances off the Dorset coast, in preparation for the laying of a pipeline from the atomic energy establishment at Winfrith with emphasis on safety of local fishing industries and prevention of shore contamination.

AVN 0068 Vers l'age atomique.

France - CEA (Andre Gillet) - no date.

French - 32 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- France -- History.

A visit to the principal installations at the nuclear centre at Marcoule. Describes the different phases in the construction of the G.2 and G.3 power reactors (natural uranium, graphite) in the centre as well as safety precautions and research activities undertaken.

AVN 0071 The big Z.

Canada - Showcase Film Productions for the Ontario Department of Mines - 1959.

English - 35 min. - sd., col. - 16 mm.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Uranium mines and mining -- Canada.

Concerns the geological transformation that led to the exposure of vast deposits of uranium-bearing conglomerates in the Algoma district of Ontario. Shows the prospecting and discovery of these rich deposits, continues with the steps necessary for construction of huge uranium plants, and describes different mining methods applied on a large scale.

AVN 0072 Atomic energy in Canada.

Canada - Crawley Films - 1958.

English, French - 25 min - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear energy -- Canada -- History; Nuclear reactors -- Canada -- History.

A description of the Atomic Research Centre at Chalk River, showing the uranium production process, followed by a description of the NRX Reactor. Includes an illustration of the principal applications for radioisotopes in industry and science.

AVN 0076 A share in the future.

South Africa - Cineunion for New Consolidated Gold Fields - 1957.

English - 25 min - sd., b & w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Uranium mines and mining -- South Africa; Gold mines -- South Africa.

Deals with the mining and processing of gold and uranium in South Africa. Shows in detail how uranium slurries are extracted at the Joint Uranium Plant at West Driefontein, South Africa.

AVN 0078 The first in the world.

USSR - Moscow Popular Science Film Studio - 1959.

English, Russian - 30 min. - sd., col. - 35 mm and video.

Target audience: technical; engineers, researchers. Of historical interest only.

Subject(s): Nuclear power plants -- USSR -- History.

Describes design, construction and operation of the world's first atomic power station in Obninsk, near Moscow, which started operation in 1954.

AVN 0088 Full speed ahead.

U.S. - Orleans Film Production for USAEC and the U.S. Maritime Administration - 1958.

English - 15 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear ships -- United States -- History; Savannah (nuclear ship)

Depicts the initial stages in the development of the United States' first nuclear powered merchant ship, the N.S. Savannah. Industrial and scientific procedures in building and testing the reactor, surveying of harbours, and laying the keel are shown.

AVN 0091 The atom - peace and friendship.

U.S.S.R. - 1959.

English, Russian - 120 min. - sd., col. +1 Russian script - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear scientists.

Describes the progress in nuclear science and technology in the USSR and the co-operation of soviet scientists with their colleagues in different countries of the world.

AVN 0092 Argonne fast source reactor.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1960.

English - 9 min. - sd., col. + 1 English script - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Neutron sources; Nuclear reactors -- United States -- History.

The fast source reactor is a laboratory source of neutrons not an experimental reactor with a power level of 1.000 watts. The film describes the reactor assembly and its usefulness as a readily available source of neutrons in a wide range of flux levels and flux spectra. By animation and live action, information is given on the core and its positioning, two methods of changing reactivity, the cooling system, the thermal column and the various access-beam holes.

AVN 0093 Fabrication of plutonium disks.

U.S. - Los Alamos Scientific Laboratory, U.S. Atomic Energy Commission - 1958.

English - 13 min - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Plutonium -- Safety measures; Glove boxes (Safety devices)

Describes glove-box work used at Los Alamos Scientific Laboratory in shaping toxic material for criticality studies in reactor development. Two different methods are demonstrated, and safety aspects of personnel exposure and area contamination are discussed.

AVN 0094 Under way.

U.S. - National Audiovisual Center for USAEC and the U.S. Maritime Administration - 1960.

English - 20 min. - sd., col., - 16 mm.

Target audience: general, technical; engineers, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear ships -- United States -- History.

Traces the design and construction of the world's first nuclear-powered merchant ship, the N.S. Savannah. Covers hull design and assembly design for the fabrication, testing and erection of the reactor system's containment vessel and its position in the hull. Safety features are also shown.

AVN 0097 Sincrotrone.

Italy - Comitato Nazionale per le Ricerche Nucleari - 1975.

English - 15 min. - sd., col. - 16 mm.

Target audience: technical; physicists, researchers. Of historical interest only.

Subject(s): Particle accelerators -- Italy -- History; Particles (Nuclear physics); Synchrotrons.

A study of the high-energy particle accelerator in Italy and methods by which it enables Italian scientists to study atomic particles.

AVN 0104 Atoms at work.

U.K. - C.O.I. Film production - 1962?

English - 10 min. - sd., b&w. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: C.O.I. Film)

Subject(s): Nuclear energy -- United Kingdom -- History; Nuclear energy -- Research -- England -- Harwell; United Kingdom Atomic Energy Authority.

Describes efforts in the U.K. to utilize atomic energy in the fields of medicine, agriculture,

industry and research. Also introduces the U.K.A.E.A.'s research establishment at Harwell.

AVN 0105 Atomic achievement.

U.K. - Rayant - 1959?

English - 20 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Copyright: Rayant.

Subject(s): Nuclear power plants -- United Kingdom -- History.

Covers Britain's work in harnessing atomic power and shows the development of the national nuclear power programme. Introduces the first nuclear power plants in the U.K. (Harwell, Springfield, Winscale, Calder Hall, Capenhurst, and Dounreay - still under construction). Briefly covers isotope, uranium ore and plutonium production and mentions the new experimental reactors (Dido, Zeus).

AVN 0107 Restoration of the NRX reactor.

U.S. - Motion Picture Service, U.S.D.A., for United States Atomic Energy Commission - 1959.

English - 23 min. - sd., b&w - 16 mm and video.

Target audience: technical; engineers, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- Accidents -- United States.

Discusses the 14-month repair and restoration of the NRX reactor at Chalk River, Ontario, following a rapid superoperational power level excursion (the first nuclear reactor runaway in history), and discusses the current (1959) safety system of the 40-megawatt reactor. The film has a particular value to reactor technology for assessing safety system failure and associated problems and hazards of returning a reactor to operation.

AVN 0113 Reactor fuel processing.

U.S.- United States Atomic Energy Commission - 1958.

English, French - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Reactor fuel reprocessing -- United States -- History; Waste disposal -- United States -- History.

Describes the principal steps - distillation, solvent extraction and ion exchange - of the direct-maintenance radiochemical processing facilities for the recovery of uranium and plutonium and waste disposal operations at the pilot plant facilities at Oak Ridge National Laboratory, production facilities at the national reactor testing station (Idaho), Hanford Works, Savannah River Plant, and process research activities at Argonne National Laboratory and Oak Ridge National Laboratory.

AVN 0116 Fire fighting in the nuclear age.

U.S. - Calvin Productions for United States Atomic Energy Commission - 1960.

English, Dutch - 14 min. - sd., col. - 16 mm.

Target audience: general. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Fire extinction; Radiation protection; Radiation monitoring; Shielding (Radiation)

Using a mock fire at the National Reactor Testing Station in Idaho as an example, the film illustrates techniques and procedures employed by firemen to meet problems of fighting fires where release of radiation might be involved. It shows the use of protective clothing and film badge dosimeters as well as monitoring, decontamination, and time-distance shielding plan.

AVN 0117 SNAP-3 operational tests.

U.S. - Martin Company, Nuclear Division, for United States Atomic Energy Commission - 1960.

English - 18 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear power -- United States -- History; Spacecraft propulsion; Project SNAP.

Describes operational tests (vibration, shock, acceleration, fire, explosion, land and sea impact, effects of salt water aerodynamic heating, etc.) on the 4-Poundsnap-3 (systems for nuclear auxiliary power) isotopic-power unit, which uses polonium-210 to generate more than 3 watts as a source of auxiliary power for space vehicles. Conclusion - SNAP-3 will operate effectively on launch and in orbit.

AVN 0120 First miles.

USSR - 1959.

Russian - 40 min. - sd., col. - 35 mm.

Target audience: general, technical; researchers. Of historical interest only.

Subject(s): Nuclear ships -- USSR -- History.

Describes the final stages of the construction of the world's first nuclear-powered icebreaker "Lenin", in Leningrad. By animation and live action, information is given on the nuclear reactor, shielding system, control deck, radiation control post, etc. The maiden trip on the icebreaker in the Baltic is shown.

AVN 0126 Remote repair and modification of the HRE-2 core vessel.

U.S. - United States Atomic Energy Commission - 1961.

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- United States -- History.

Illustrates the remote repair and modification of the HRE-2 core vessel, following the formation of two holes which permitted transfer of fuel to the blanket side of the reactor. Shows how special equipment had to be designed for repairing the HRE-2, and the problems involved in working with the reactor where the radiation level in the vessel was greater than 100,000 Roentgen per hour.

AVN 0130 The Winfrith pipeline.

U.K. - 1960.

English - 40 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Radioactive waste management -- United Kingdom -- History.

Documentary coverage of the construction of a pipeline from the atomic energy establishment, Winfrith, to the coast and its extension two miles out to sea. It includes a number of under-water sequences showing the towing-out of the sea pipe.

AVN 0139 Atomkraftwerk Kahl.

Germany, Fed. Rep. of - Filmdienst, AEG Frankfurt/Main - 1960.

English - 26 min. - sd., col. - 16 mm.

Target audience: technical; engineers, researchers. Of historical interest only.

Subject(s): Nuclear power plants -- Germany -- History.

A technical account of the construction of the first atomic power station in the Federal Republic of Germany at Kahl.

AVN 0141 Analysis of nucleon-nucleon scattering experiments.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1961.

English - 50 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Scattering (Physics); Elementary particles.

A highly technical attempt to give an overall picture of the route followed in passing from single-, double-, and triple scattering experiments to a unique description of the scattering matrix in terms of phase shifts. Although the formal mathematics introduced is kept to a minimum, it presupposes a knowledge of wave functions, how probability current is computed from a wave function, and what is meant by a quantum-mechanical state.

AVN 0142 Nuclear power reactors.

U.K. - G. Buckland Smith in association with the Film Producers Guild - 1961.

English - 35 min. - sd., col. - 16 mm.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Nuclear reactors -- United Kingdom -- History.

Covers a number of power reactor systems, largely by means of animation. Traces the development of reactors from Fermi's first self-sustaining chain reaction in Chicago to the development of Calder Hall. Explains briefly the principles of nuclear fission and the need for a moderator, and discusses the suitability of graphite, heavy water and ordinary water as moderators. Also illustrates more advanced types of reactors and reactor planning.

AVN 0143 Fuel for nuclear power - fuel element manufacture.

U.K. - 1962.

English - 27 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: United Kingdom Nuclear Energy Authority)

Subject(s): Nuclear fuel elements -- United Kingdom -- History.

Shows the processes at the Springfield works by which uranium concentrates are converted to uranium metal and made into fuel elements for nuclear power stations. Also describes the facilities at Windscale for the post-irradiation examination of fuel elements.

AVN 0149 Plutonium fuel fabrication, EBR-I Mark IV.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1961.

English - 10 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear fuels; Breeder reactors -- United States -- History; Plutonium.

Describes techniques and precautions observed in manufacturing fuel for the Experimental Breeder Reactor I (EBR-I) Mark IV. Throughout the production line, plutonium is exposed only in the filtered, recirculating helium atmosphere under a slightly negative pressure. Entrance or exit from the line is accomplished through multiple air locks and sealed bags. Although the EBR-I Mark IV fuel is experimental in nature, the handling techniques and precautions are generally applicable to plutonium fabrication.

AVN 0151 Our nearest star.

Short version of AVN 0155 Nuclear reactors for space.

U.S.- Martin Company, Nuclear Division - 1961.

English - 12 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power -- United States -- History; Spacecraft propulsion; Project SNAP.

A SNAP (Systems for Nuclear Auxiliary Power, an isotopic power system) has been placed in orbit aboard a Transit Four-A navigation satellite. This simple, powerful device is the first application of nuclear power in space. It powers two of Transit's four

navigational radio transmitters. The film covers events at the gantry at Cape Canaveral as the SNAP unit is mounted on Transit, and launching of the system.

AVN 0152 Introduction to high vacuum.

U.S. - Brookhaven National Laboratory and Audio Productions for the USAEC and the American Vacuum Society - 1961.

English - 18 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Vacuum technology.

For engineers, scientists, technicians, students and personnel of industrial, chemical and processing plants. Defines high vacuum and shows how it is produced and measured.

AVN 0153 Roundup.

U.S. - U.S. Department of Agriculture, Motion Picture Service - 1960.

English - 18 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Insect pests -- Control -- History -- United States; Sterile insect release; Screwworm -- Control -- United States.

Covers an important application of atomic energy - the use of radiation to eradicate harmful insects, in this case the screwworm fly in the southeastern United States.

Entomologists suggested that, since screwworm flies mate only once in their life cycle, eradication would be possible by sterilizing them. Radioactive cobalt-60 was selected for this task. The sterilization and subsequent release of sterile insects proved very effective and eventually, the insect pest was brought under full control and the screwworm fly largely eradicated.

AVN 0154 Atomic weatherman : strontium 90 isotopic applications.

U.S. - Martin Company - 1961.

English - 18 min - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Strontium; Thermoelectric generators.

Describes the world's first radioisotope-powered weather station, which is operating unattended at a remote site in the Canadian Arctic. The "atomic" weather station is powered by a thermoelectric unit in which the heat from the decay of Strontium-90 (90 Sr.) is directly converted into electricity.

AVN 0155 Nuclear reactors for space.

U.S. - Atomics International for United States Atomic Energy Commission - 1961.

English - 17 min. - sd., col. - 16 mm.

Target audience: general, semi-technical.; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power -- United States -- History; Spacecraft propulsion; Project SNAP.

The SNAP programme ("System for Nuclear Auxiliary Power") is an American programme to develop long-lived auxiliary power from nuclear energy for use in satellites. Space SNAP systems are shown, safety characteristics of the SNAP reactor described, and some beneficial uses of SNAP in the U.S. national space programme are illustrated.

AVN 0157 Dispersion theory approach to nucleon-nucleon scattering.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1961.

English - 45 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Scattering (Physics); Elementary particles.

Outlines some of the main ideas and techniques used in the calculation of the nucleon-nucleon scattering matrix from its analytic properties and unitarity. Topics discussed are: (1) Solution of the S-wave Schroedinger equation for a superposition of exponential or Yukawa potentials by conversion to a Volterra equation, using the method of Andre Martin. (2) Solution of the same equation by partial-wave-dispersion relations using the N/D method; construction of the potential from the discontinuity in the partial-wave amplitude. (3) The Mandelstam representation for potential scattering and construction of the double-spectral function. (4) Relationship between the field-theoretic amplitude and the nonrelativistic scattering amplitude. (5) Relation of nucleon-nucleon scattering to the nucleon-antinucleon amplitude, pion-nucleon scattering, pion-pion scattering, and nucleon electromagnetic structure.

AVN 0162 Alpha, beta and gamma.

U.S. - Educational Broadcasting Corporation - 1962.

English - 44 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radiation.

Provides insight to the origin and nature of alpha, beta and gamma radiation. The lecturer presents various nuclear concepts and discusses neutron absorption. The transformation of excess neutrons into negative beta radiation and the return to stability are considered in some detail.

AVN 0163 Radiation and matter.

Understanding the atom series no.2

U.S. - U.S. Atomic Energy Commission - 1962.

English - 44 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear physics; Radiation; Nuclear excitation; Compton effect.

This film considers the interaction of radiation with matter and develops the various processes by which alpha, beta and gamma radiation give up energy to their surroundings. Four possibilities of gamma ray absorption (excitation, photoelectric effect, Compton effect and pair production) are discussed in detail.

AVN 0164 The international atom.

Honors: 'Blue Ribbon Award' at the American Film Festival, New York, 1961 - best film in the popular science group.

U.S. - United Nations Office of Public Information and the International Atomic Energy Agency for the United Nations Visual Information Board - 1961.

English - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Copyright: with International Atomic Energy Agency.

Subject(s): Nuclear energy -- Industrial applications; Nuclear energy -- Medical applications; Nuclear energy -- Agricultural applications.

The film explains in basic terms nuclear fission, the use of nuclear power (propulsion of

ships), the production and use of radioisotopes (medicine-radioactive tracers, sterilization of instruments; agriculture-fertilizers, screw-worm elimination, irradiation of food; industry). Demonstrates international co-operation and research in the nuclear field.

AVN 0165 Control of radiation hazards in the surroundings.

Japan - 1960.

Japanese - 18 min. - sd., b&w - 16 mm.

Target audience: semi-technical; students, researchers. Of historical interest only.

Subject(s): Radiation -- Safety measures.; Radiation protection.

Explains the principle of control of radiation hazards in the surroundings of man, showing various steps and methods of prevention of hazards, explaining monitoring and survey of radiation and methods of hazards evaluation.

AVN 0166 Radiation in biology - an introduction.

U.S. - Coronet Instructional Films - 1962.

English, Dutch - 14 min. - sd., col. - 16 mm.

Target audience: semi-technical; students, trainees, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiobiology; Radioisotopes in biology.

Explains the meaning of high-energy radiation and shows how this radiation is used in biological research. Briefly reviews light from the sun (wave radiation), radio waves, x-rays. Also touches on the various sources of radiation (nuclear reactors, cosmic rays, the sun, etc.). Radioisotopes are defined, and their life is traced from production through their use as tools in the study of radiation damage. The effect of radiation on living cells is demonstrated by comparisons of plants grown from irradiated and non-irradiated seeds and of irradiated and non-irradiated mice. The effects of radiation on bone-marrow, on the protective lining of the intestine, and on chromosomes (mutations) are shown. The use of radioisotopes to trace chemical processes in plants (the absorption of nutrients) is also covered. Autoradiographs are explained, and the function of a Geiger counter is outlined.

AVN 0167 The SL-1 accident, phases 1 and 2.

U.S. - U.S. Atomic Energy Commission - 1962.

English (separate magnetic tape for German sound) - 40 min. - sd., col. - 16 mm and video.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear reactors -- Accidents -- United States.

This semi-technical film on the SL-1 accident at the National Reactor Testing Station, Idaho, was produced primarily for studying and improving the methods and techniques of handling nuclear emergencies. A combination of actual and reenacted scenes, the film presents a concise resume of what happened and how the USAEC and its operating contractors reacted to the situation, i.e., the activities associated with phases 1 and 2 of the postaccidental operations. Phase 1 involved the location, rescue, and recovery of the three personnel and the determination of how much contamination had been released to the environment. Phase 2 involved determining whether the reactor was safe. Results of the investigation of the accident indicate a need for readily available high-range survey instruments, careful use of health physicists, preplanning, etc.; in addition, important information on reactor technology and the administrative procedures governing reactor development has resulted. Brief information is given on the start of phase 3 work, involving the decontamination and disassembly of the reactor to determine what destroyed it. This is detailed in AVN 0188 The SL-1 accident, phase 3.

AVN 0175 Naissance du plutonium.

France - Societe d'Editions Photomecaniques for Commissariat a l'Energie Atomique - 1959.

French - 20 min. - sd., col - 16 mm.

Target audience: technical; engineers, researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Reactor fuel reprocessing; Plutonium; Breeder reactors -- France -- History.

Describes the reprocessing plant for plutonium at Marcoule. The main subject is engineering, and the plant is shown with considerable detail, enabling an informed audience to understand the industrial concept of plutonium reprocessing.

AVN 0176 Saclay 1960.

France - Roger Leenhardt Films for Commissariat a l'Energie Atomique - 1960.

French - 25 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear energy -- France -- History.

A description of the different research activities at the French atomic energy centre at Saclay. Of general interest to all those who are acquainted with atomic energy. In addition, it gives specialists an idea of the capabilities of the centre in the different fields of atomic research.

AVN 0179 Carbone-14 ou Le temps retrouve.

France - Les Films du Cypres for CEA - 1961.

French, German (on separate tape) - 14 min - sd., col. - 16 mm and video.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Radiocarbon dating; Archaeological dating.

Describes, in layman's language, the possibility of dating volcanic eruptions or archaeological findings by means of carbon-14, taking as an example the volcano Puy de la Vache in the Auvergne and the famous caves of Lascaux with their animal drawings. The film explains how measurements with carbon-14 are carried out.

AVN 0180 Xenon tetrafluoride.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1962.

English - 6 min. - sd., col. + 1 English script - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Gases, Rare; Chemical bonds.

Shows how chemists at Argonne National Laboratory succeeded in making xenon combine chemically with fluorine - a chemical reaction previously thought to be impossible - which has opened up a new area for the study of chemical bonding. Shows preparation of the compound in the laboratory under special conditions of temperature and pressure. Tests to substantiate the exact nature of the compound are illustrated and future experiments on forming compounds with rare gases are discussed.

AVN 0182 New methods of controlling nuclear reactors.

CSSR - Kratky Film - 1961.

English, Russian - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Copyright: Kratky Film; Studio Propagfilm.

Subject(s): Nuclear reactors -- Czechoslovakia -- History; Nuclear reactors -- Control -- History.

Describes the reactor control system which was developed experimentally at the research reactor at Rez near Prague. This system measures neutron fluxes and power levels over a long period of time using a single moving ionization chamber. The film shows, also with

the help of animated sequences, various measurements and the consequences for future developments.

AVN 0183 Project Sedan.

U.S. - Lawrence Radiation Laboratory, University of California - 1962.

English - 8 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Underground nuclear explosions -- United States; Nuclear excavation; Plowshare program.

This film reports on the July 6, 1962 nuclear cratering detonation at the Nevada test site. It was the first of a series of experiments under the Atomic Energy Commission's Plowshare program to determine the feasibility of nuclear excavations. The specific objective was to determine the cratering and radioactivity entrapment effects of detonating a 100 kiloton nuclear device buried 635 feet in desert alluvium. The film discusses the relationships between depth of explosion and crater size, and depth of explosion and containment of radioactivity. It shows the location, slow motion shots of the detonation, the area covered by the base surge, the crater (1200 ft in diameter, 320 ft in depth), the fallout pattern, and relates the experiment to possible large-scale excavation projects such as harbours and canals.

AVN 0184 The safe handling of radioisotopes.

Handle with care series no. 1.

Austria - International Atomic Energy Agency - 1963.

English, French, Spanish - 20 min. - sd., b&w + 1 English script - 16 mm and video.

Target audience: general; trainees, researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Radioisotopes -- Safety measures; Radioactive substances -- Safety measures.

A narrative account of a minor contamination accident in a laboratory is used to demonstrate the important role of radiation protection measures in radioisotope work and the necessity of giving proper regard to such measures. It is primarily directed towards the research scientists and medical workers using radioisotopes on a relatively small scale.

AVN 0185 Grenoble et la recherche nucleaire.

France - Commissariat a l'Energie Atomique - 1962.

French - 15 min. - sd., col. + 1 French script - 16 mm.
Target audience: general; researchers. Of historical interest only.
Subject(s): Nuclear energy -- France -- History.

The film introduces the Centre of Nuclear Studies at Grenoble and shows the reactor Melusine, the laboratories and the research facilities at the disposal of the young engineers.

AVN 0188 The SL-1 accident, phase 3.

Continues: AVN 0167 The SL-1 accident, phases 1 and 2.
U.S. - the Idaho Operations Office for United States Atomic Energy Commission - 1962.
English, German (on separate magnetic tape) - 57 min. - sd., col. + 1 English script - 16 mm and video.
Target audience: general, semi-technical; students, researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear reactors -- Accidents -- United States.

A semi-technical sequel to AVN 0167 The SL-1 accident, phases 1 and 2, this audiovisual work presents a factual and historic documentary on what was done with the SL-1 reactor and building, beginning with a period four months after the fatal accident occurred. (The first four months following the accident are described in AVN 0167). Features a step-by-step re-enactment of the accident, animation of the events believed to have taken place during and immediately following the explosion, and a postulation of the cause. Reports on the recovery operations carried out, including gathering evidence pertaining to the accident, preparing the facility for core removal, recovery of the reactor core for remote examination, demolition of the reactor building, decontamination of the SL -1 site and restoration to habitable status, and presentation of an accident analysis.

AVN 0194 Time - the surest poison.

Challenge series.
U.S. - Ross-McElroy Productions for the National Educational Television and Radio Center, under a grant from USAEC'S Argonne National Laboratory - 1962.
English - 29 min. - b&w - 16 mm.
Target audience: general; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Aging; Radiobiology.

Longevity and the aging process, difference in life span among species and various factors affecting longevity are discussed, as are comparative theories of the natural process of aging, and methods used in its study. Since radiation is a form of toxicology, radiation

injury resembles natural aging in many ways and constitutes perhaps the best way to study the aging process in the laboratory.

AVN 0195 The immune response.

Challenge series.

U.S. - Ross-McElroy Productions for the National Educational Television and Radio Center, under a grant from USAEC'S Argonne National Laboratory - 1962.

English - 29 min. - b&w - 16 mm.

Target audience: general; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Immunology; Radiobiology.

Deals with the mechanism by which the body builds antibodies against disease and other foreign substances and with the effects of radiation on this immunizing response. In an experiment, the procedures of the irradiation of rabbits with x-rays and their examination for the presence of antibodies is shown, and conclusions are discussed.

AVN 0196 Building blocks of life.

Challenge series

U.S. - Ross-McElroy Productions for the National Educational Television and Radio Center, under a grant from USAEC's Argonne National Laboratory - 1962.

English - 29 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiobiology.

Discusses free radicals - unique fragments of molecules caused by radiation in living systems - which either seriously damage or kill living cells, and 'scavengers' which inactivate free radicals. Demonstrates an experiment producing free radicals in bacterial spores, and explains how the knowledge gained from these experiments can help to produce protective compounds.

AVN 0197 The living solid.

Challenge series

U.S. - Ross-McElroy Productions for the National Educational Television and Radio Center, under a grant from USAEC's Argonne National Laboratory - 1962.

English - 29 min. - sd., b&w - 16 mm.

Target audience: general; medical, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Bones; Radiobiology.

The film presents bone as an active, living substance, emphasizing its role in calcium production for the entire body. Illustrates the systems by which calcium is transferred between bone and blood. Photographs of bone cross-sections illustrate the effects of radiation.

AVN 0200 The art of separation.

Challenge series.

U.S. - Ross-McElroy Productions for the National Educational Television and Radio Center, under a grant from USAEC's Argonne National Laboratory - 1962.

English - 29 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Separation (Technology); Chromatographic analysis.

Deals with the separation of chemical compounds into basic substances in the purest possible form by the process known as chromatography, and with the importance of this process for chemistry research. Shows how radiation enables the chemist to work in this field with greater speed and efficiency, demonstrates the basic principles and various methods of chromatography, e.g. separation by crystallization, separation by electrochromatography.

AVN 0203 Nuclear power demonstration (NPD).

Canada - Crawley Films Canada - 1962.

English, French - 25 min - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- Canada -- History; Heavy water reactors -- Canada -- History.

The story of "NPD", explaining with the help of animated diagrams the principles used in Canada to convert nuclear energy into low-cost electricity. The film introduces the 20,000 kw heavy-water power reactor at Rolphton, Ontario, operated by the Ontario Hydroelectric Commission and constructed in collaboration with Atomic Energy of Canada and Canadian General Electric. Reports the events from planning, through blueprints, to "criticality" on April 1, 1962, including the construction, 200-mile transportation to site, installation, automatic fuel-bundle reloading, and description of other systems.

AVN 0208 PM-3A nuclear power plant Antarctica.

U.S. - Martin Company for United States Atomic Energy Commission - 1963.

English - 20 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear power plants -- United States -- History.

Story of the 1,500-kw nuclear power station built for operation by the US Navy at McMurdo Station, Antarctic Headquarters, for the joint Navy-National Science Foundation Antarctica Research Project. PM-3A, the first atomic power station in the Antarctic, supplies electric power and space heating for the isolated station. Use of nuclear power reduces the massive amounts of fuel oil for generating electricity that must be brought 11,000 miles by American tankers. PM-3A was designed, fabricated and tested in 14 months. Details are given on the plant's pressure vessel, coolant, nuclear equipment, turbogenerator, and many other major components. The film presents shots of the erection and testing of the reactor in the United States, site preparation by Seabees in the Antarctic, erection and testing of the reactor at McMurdo, safety aspects, and achievement of criticality.

AVN 0211 Atoms in everyday life.

Sweden - Nordisk Tonefilm for the Swedish State Power Board - 1963.

English - 18 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- Sweden -- History; Heavy water reactors -- Sweden.

The story of Sweden's first heavy water power reactor, Agosta, which provides electricity and space heating to a suburb of Stockholm. In an animated and original form of presentation, the film describes the design and various phases of construction.

AVN 0213 Story of energy.

India - Films Division, Govt. of India; Documentary Films of India - 1958.

English - 17 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: Films Division, Govt. of India)

Subject(s): Nuclear energy -- India-- History; Power resources -- India-- History.

Reviews the history of power sources - energy generated by the sun, photosynthesis and

the production of fuel, evolution and discovery of fossil fuel, the ensuing development of machinery and industry, atomic power as related to India's rich thorium supply, and the hopes of controlling hydrogen fusion as the ultimate power resource.

AVN 0214 Canada-India reactor.

India - Films Division, Government of India - 1958?

English - 17 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- India. -- History

Discusses in general terms the reactor's design, emphasizing the differences to the Chalk River reactor in Canada.

AVN 0216 Search into space.

India - Films Division, Government of India - 1961.

English - 9 min. - sd., b&w - 16 mm.

Target audience: general; researchers. Of historical interest only.

Copyright: Films Division, Government of India.

Subject(s): Meteorology; Weather prediction; Upper atmosphere -- Research.

Shows India's meteorological experiments with polyethylene balloons to study the upper atmosphere.

AVN 0217 Atomic fuel.

India - Films Division, Government of India - 1962?

English - 23 min - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Copyright: Films Division, Govt. of India.

Subject(s): Nuclear fuel elements; Rare earth metals.

Shows the manufacturing of uranium fuel for reactors from monazite sand found in southern India. The different stages of the mining and refining process are shown in detail.

AVN 0234 Beta ray spectrometer.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1963.

English - 7 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Beta ray spectrometry.

By animation and live action, this film explains the principles and working of the Coincidence Beta Ray Spectrometer, a device used to measure the intensity and direction of electron emissions known as beta particles. Components of the device are shown and assembled; a source is introduced; masking for beam direction and size is demonstrated; detectors are shown and explained.

AVN 0235 Principles of thermal, fast and breeder reactors.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1963.

English - 9 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Thermal reactors -- United States -- History; Fast reactors -- United States -- History; Breeder reactors -- United States -- History.

This film presents an animated explanation of nuclear fission, of the chain reaction and of its control in three basic types of reactors. It describes the principles of fast and thermal reactors as well as the breeder principle, introduces the concepts of the moderator and reflector, and presents the plutonium and thorium cycles.

AVN 0236 The high energy people.

U.S. - Argonne National Laboratory - 1963.

English - 5 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers.

Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Particles (Nuclear physics); Synchrotrons.

A brief description of the problems and tools of high energy physics, illustrated by some of the work being done with the Zero gradient synchrotron. Scientists and technicians working with the synchrotron describe various phases of their work. The spark chamber and the automatic cameras which photograph the tracks of sub-atomic particles are also described.

AVN 0237 Project gnome.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1963.

English - 29 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Peaceful nuclear explosions -- United States; Nuclear excavation; Plowshare program.

Project Gnome is the first nuclear detonation conducted under the USAEC's Plowshare program for development of peaceful uses of nuclear explosives. The film uses animation to explain its integrated scientific and technical programs. Being one of the most heavily instrumented nuclear detonations ever conducted (a 3.1 kiloton nuclear explosive was detonated in the Salado Salt Basin, New Mexico), Project Gnome was designed to provide scientific and technical information on several topics: (1) to determine characteristics and physical effects of underground detonations in a salt medium, (2) to explore the feasibility of converting energy into electricity, (3) to conduct neutron cross-measurements which would contribute to scientific knowledge, (4) to provide information on the design of nuclear explosives for peaceful purposes, and (5) to investigate the practicability of recovering useful radioisotopes. Dr. Edward Teller discusses the objectives of the Plowshare program and the preliminary results of Project Gnome in the opening and closing scenes.

AVN 0242 Nuclear power for space - SNAP-9A.

U.S. - The Martin Company - 1963.

English - 14 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power -- Peaceful uses; Spacecraft propulsion; Project SNAP.

After showing the launching of a new satellite which is wholly powered by a nuclear generator, animation is used to explain the use of its isotopic generator to create power to run electronic and recording equipment, and transmit data back to earth for analysis. Principles of power generation by isotopic decay are explained, showing how thermocouples convert the decaying isotopes' heat directly to electricity. A comparison of the isotopes plutonium-238 and curium-242, both used in SNAP isotope power systems, is made. Safety tests of the isotope capsules are shown, including explosion-, fire-, impact-, and re-entry tests.

AVN 0245 Radiological safety.

Understanding the atom series.

U.S. - Educational Broadcasting Corporation - 1963.

English - 30 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiation protection; Nuclear safety.

Examines the field of radiological safety (health physics), and gives a basis for perspectives on potential biological radiation damage.

AVN 0247 Mass-rearing of fruit flies.

U.S. - 1963.

English - 12 min. - sd., col. - 16 mm.

Target audience: technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Insect control -- United States; Insect sterilization -- United States.

Depicts the techniques used in rearing and sterilization by radiation of three species of fruit flies found in Hawaii. Also deals with the diets and manipulations of adults, pupae, larvae and eggs on a multimillion weekly production.

AVN 0259 Neutron activation analysis.

U.S. - General Atomic Division, General Dynamics, for United States Atomic Energy Commission - 1964.

English - 40 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactivation analysis.

Deals with the nature, potentialities and applications of neutron activation analysis.

Explains the techniques employed, and shows examples of applications in various fields.

AVN 0261 The atomic fingerprint.

U.S. - The Handel Film Corporation - 1964.
English, Dutch - 13 min. - sd., col. - 16 mm.
Target audience: general. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Radioactivation analysis.

Explains in non-technical language neutron activation analysis, a sensitive analytical technique with wide applications in the basic and applied sciences.

AVN 0266 Fabrication of SNAP-7D fuel sources.

U.S. - Oak Ridge National Laboratory, United States Atomic Commission - 1964.
English - 12 min. - sd., col. - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Nuclear fuel elements; Strontium -- Isotopes; Project SNAP.

This semi-technical film describes the fabrication of strontium-90 fuel capsules for the SNAP-7D generator which powers an unmanned weather station in the Gulf of Mexico.

AVN 0270 EBR-2 fuel facility.

U.S. - Aronne National Laboratory, United States Atomic Energy Commission - 1964.
English, French, Russian, Spanish - 13 min. - sd., col. - 16 mm.
Target audience: technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear reactors -- United States -- History; Breeder reactors -- United States - History; Fast reactors -- United States -- History; Sodium graphite reactors -- United States -- History.

In this facility, highly radioactive fuel from the EBR-2 reactor is disassembled, reprocessed and fabricated, without prior time-consuming radioactive cooling periods.

AVN 0271 Plutonium recycle.

U.S. Argonne National Laboratory, United States Atomic Energy Commission, 1964.

English, French, Russian, Spanish - 17 min. - sd., col. + 1 English script. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear reactors -- United States -- History; Thermal reactors -- United States -
- History; Fast reactors -- United States -- History.

The film presents various aspects of the development of plutonium recycle for both thermal and fast reactors, with particular emphasis on the fuel element technology, reactor use, and chemical reprocessing associated with mixed oxides of plutonium and uranium in thermal reactors.

AVN 0279 Advanced test reactor.

U.S. - Ebasco Services, Inc., Babcock and Wilcox Co., and Philipps Petroleum Co. - 1964.

English, French, Russian, Spanish - 9 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Materials testing reactors -- United States -- History.

Shows how the AEC's 250 Mw(t) Advanced Test Reactor design utilizes multiple flux traps to achieve exceptionally high neutron density in nine independent test loop positions.

AVN 0280 The nuclear ship 'Savannah'.

U.S. - Babcock and Wilcox Co. - 1964.

English, French, Russian, Spanish - 10 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers.

Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear ships -- History -- United States; Savannah (nuclear ship)

An account of the experience with the design, construction and operation of the nuclear power plant for the N.S. Savannah, the world's first nuclear-powered cargo passenger ship. Includes scenes of critical experiments, fuel loading, sea trials and visits to some major U.S. ports.

AVN 0284 Diagnosis and therapy with radiation.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1964.
English, French, Russian, Spanish, German (sep. tapes each language) - 32 min. - sd., col.
- 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Radiotherapy; Diagnosis.

Describes current techniques of radiation therapy through doses of radioactive chemicals, implanting techniques, and these of external beams. Areas covered are the use of radioactive iodine for thyroid studies, other metabolic measurements and the development of techniques to study kidney functions and blood diseases.

AVN 0285 Radiation effects in chemistry.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1964.
Russian, Spanish, Dutch - 13 min. - sd., col.- 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radiochemistry.

Radiation initiates a wide variety of chemical reactions. But fundamental mechanisms which produce these effects are still under investigation. Instantly after irradiation, a variety of chemical substances are produced which are then available to participate in subsequent reactions. The experimental study of this process requires extremely sensitive and high-speed techniques - spectrometry, electron spin resonance techniques, etc.

AVN 0287 Neutron activation.

U.S.- Argonne National Laboratory, United States Atomic Energy Commission - 1964.
English, French, Russian, Spanish - 9 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactivation analysis.

When a substance is irradiated with neutrons, minute quantities of radioactive elements are produced. By measuring the quantity and energy spectrum of the radiation produced,

we can obtain an extremely precise measurement of the elements present. The film describes the general techniques and applications of this powerful analytical tool.

AVN 0288 Civilian applications of nuclear explosives.

U.S. - Lawrence Radiation Laboratory, U.S. Atomic Energy Commission - 1964.
French, Russian, Spanish - 12 min. - sd., col. + 1 English script - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Peaceful nuclear explosions -- United States.

Outlines the technical progress made in developing scientific and industrial applications for nuclear explosives. Studies of 42 nuclear explosions in a variety of media and at varying depths of burial have resulted in two general modes of application which are analyzed in some detail in the film.

AVN 0289 Counting whole-body radioactivity.

U.S. - Donner Laboratory and the USAEC'S Lawrence Radiation Laboratory at the University of California - 1964.
English, French, Russian, Spanish - 10 min. - sd., col. - 16 mm.
Target audience: general, semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Nuclear counters; Nuclear medicine -- History.

This film shows the Donner Laboratory Whole Body Counter, and outlines its program of use, with special reference to studies concerned with iron metabolism of red blood cells and with calcium turnover in various diseases.

AVN 0290 The scintillation camera.

U.S. - Donner Laboratory and the USAEC'S Lawrence Radiation Laboratory - 1964.
English, French, Russian - 10 min. - sd., col. -16 mm.
Target audience: technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Radioisotope scanning; Nuclear medicine -- History.

In order to visualize the location of gamma-emitting isotopes within the human body for medical diagnostic purposes, the scintillation camera was developed at the Donner

Laboratory. This equipment is described, and the application of the method for studying thyroid and kidney function disorders is explained.

AVN 0291 Heavy particle beams in medicine.

U.S. - Donner Laboratory and the USAEC'S Lawrence Radiation Laboratory - 1964.

English, French, Russian, Spanish - 10 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Radiotherapy; Cyclotrons.

Gives a brief historical development of the medical uses of cyclotrons and shows the unique properties of accelerator-produced heavy particles both in investigative studies and in radiation therapy.

AVN 0293 Fabrication du modele de cuve sous pression pour la premiere centrale electrique nucleaire en Tchecoslovaquie.

CSSR - Film du Court Metrage - 1964.

French, Spanish - 35 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear pressure vessels -- Czechoslovakia -- History; Heavy water reactors -- Czechoslovakia -- History.

At the Skoda works, a full-size model for the pressure vessel to be used in the first Czechoslovak power station (heavy water reactor with a CO₂ coolant) has been constructed. The film gives a detailed description.

AVN 0294 Windscale A.G.R.

U.K. - ACE Film Productions for United Kingdom Atomic Energy Authority - 1963.

English, French - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear reactors -- United Kingdom -- History; Gas cooled reactors -- United Kingdom -- History; Nuclear fuel elements -- United Kingdom -- History.

Covers the whole of the construction of the advanced gas-cooled reactor at Windscale, including a brief section on fuel manufacture and assembly.

AVN 0295 Power from fusion.

U.K. - G. Buckland Smith in association with the Film Producers Guild - 1965.

English - 64 min. - sd., col. - 16 mm (2 reels).

Pt.1. The principle (29 min.) - pt.2. The problem of containment (35 min.)

Target audience: semi-technical, technical; researchers. Of historical interest only.

(Copyright: United Kingdom Atomic Energy Agency)

Subject(s): Nuclear fusion; Plasma physics; Magnetic fields.

Part 1 explains the principles of fusion and the problems to be solved before power from fusion can be mastered. Part 2 surveys the experiments in the field of plasma containment carried out by the United Kingdom Atomic Energy Authority at Culham laboratory. Plasma containment is the key problem in achieving controlled fusion reactions. Magnetic fields are used to confine a fuel plasma. A series of experiments with these magnetic fields is described, all of which are aimed at overcoming interchange instabilities in plasma. Explained in some detail are (1) various pinch effects, (2) thetatron experiments, (3) magnetic mirror traps, (4) cusp fields and cusp trap, and (5) the 'Humbug Field' created by combining the magnetic mirror field and the cusp field. The combined cusp-mirror system proved to be the most stable and promising for future fusion research.

AVN 0297 Eye for isotopes.

U.K. - Worldwide Pictures Ltd. for United Kingdom Atomic Energy Authority - 1964.

English, French - 27 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Radioisotopes in industry.

This film shows well-established techniques in the use of radioisotopes for measuring, tracing and control; it starts by describing properties of radioisotopes which make them useful, demonstrates how radioisotopes are made in a reactor, and shows their uses in detail.

AVN 0298 Radioisotope application in medicine.

U.S. - Educational Broadcasting Corporation - 1964.

English - 26 min. - sd., b&w - 16 mm.

audience: semi-technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes in medicine; Nuclear medicine -- History.

Traces the development of the use of radioisotopes and radiation in the field of medicine from the early work by Hevesy to the present. The film is in the form of a lecture-discussion by Dr. John Cooper of Northwestern University.

AVN 0299 The atom in physical science.

U.S. - Educational Broadcasting Corporation - 1964.

English - 26 min. - sd., b&w - 16 mm.

Target audience: semi-technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Transuranium elements.

A lecture-discussion by Dr. Glenn T. Seaborg, chairman of the Atomic Energy Commission, with particular emphasis on the techniques used in the discovery of the transuranium elements, and their application in the future.

AVN 0300 Radioisotopes in biology and agriculture.

Understanding the atom series.

U.S. - Educational Broadcasting Corporation - 1964.

English - 26 min. - b&w - 16 mm.

Target audience: semi-technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes in biology; Radioisotopes in agriculture; Radioactive tracers.

This film lecture deals with some of the up-to-date applications of atomic energy to biology and agriculture. Reference is particularly made to the importance of radioisotopic tracers in the determination of the structure and role of nuclear acids and other cellular components.

AVN 0302 Reprocessing nuclear fuel.

U.K. - Ace Film Productions for United Kingdom Atomic Energy Authority - 1964.

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Reactor fuel reprocessing -- United Kingdom -- History; Plutonium.

This film is a report on the chemical separation plant at Windscale, used for commercial reprocessing of power reactor fuels, notably the extraction of plutonium from spent fuel. The film describes both the separation process for irradiated fuel, and the conversion to plutonium oxide of the plutonium nitrate extracted for use in mixed plutonium/uranium oxide fuel assemblies for advanced thermal reactors. Instrumentation for process control and safety is also described.

AVN 0304 La concentration des effluents radioactifs par évaporation naturelle.

France - DF Office de Documentation par le Film - 1964.

French - 10 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radioactive waste management -- France -- History.

Describes the processing of highly radioactive wastes by evaporation at the Grenoble Nuclear Center. Liquid effluents are concentrated in a simple, economical evaporation plant, details of which are shown.

AVN 0305 Les ateliers de traitement de l'uranium enrichi.

France - Regie Francaise de Cinema for Commissariat a l'Energie Atomique - 1964.

French - 10 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Uranium enrichment -- France -- History.

This technical film describes the methods used to enrich uranium - from uranium hexafluoride to uranium metal - in a special laboratory at Cadarache, France. The techniques are illustrated by short animated sequences.

AVN 0308 Siloe.

France - Neyrfilm for Commissariat a l'Energie Atomique - 1964.

French - 10 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- France -- History.

Siloe is a 15 mw pool-type reactor, used primarily for research on irradiation of materials. The film pictures successive stages of its construction.

AVN 0311 The nature of things : atoms and molecules.

U.K. - Philip Daly for The Royal Institution and the BBC - 1959.

English - 15 min. - sd., b&w - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- History.

A lecture by Sir Lawrence Bragg on the nature of atoms and molecules. Illustrated by simple, striking experiments. The film was a BBC television program, first transmitted in 1959.

AVN 0312 Project Dugout.

U.S. - Lawrence Radiation Laboratory - 1964.

English - 8 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Peaceful nuclear explosions -- United States.

This semi-technical film reports on Project Dugout, a chemical high explosive experiment conducted June 24, 1964 at the AEC Nevada test site. The experiment involved the simultaneous detonation of five 20-ton charges of nitromethane placed underground in a row.

AVN 0313 Current methods in plutonium fuel fabrication.

U.S. - General Electric Company for United States Atomic Energy Commission - 1965.

English - 30 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Plutonium; Uranium; Nuclear fuel elements.

A technical film depicting the steps in the fabrication of plutonium-uranium ceramic fuel elements for the PRTR and EBWR at Hanford's Plutonium Fabrication Pilot Plant. Processes for the fabrication of the fuel are described in detail, including swaging and a newer process, vibrational compaction.

AVN 0314 Power for propulsion.

U.S. - Aerojet-General Corporation - 1965.

English - 15 min. - sd., col.- 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power -- United States -- History; Spacecraft propulsion.

Traces the history of power sources for propulsion from Watt's tea kettle to atomic rocket engines. The film covers Goddard's 1926 rocket engine, the German V-2's, early U.S. rockets, the Soviet 1957 Sputnik, and reactor power for ships. It concludes with NERVA, an experimental rocket with nuclear engine.

AVN 0316 Atomic physics.

U.K. - G.B. Instructional Film, Ltd. - 1948.

English - 90 min. - sd., b&w + 1 teacher's handbook in 5 parts - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- History.

An educational film which presents atomic physics from the historical point of view. It consists of five parts and introduces the most famous physicists of the time (Thomson, Rutherford, Cockcroft, Frisch).

AVN 0317 Lord Rutherford on 'The atom'.

U.K. - 1935.

English - 10 min. - sd., b&w. - 16 mm and video.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Nuclear energy -- History; Atoms; Rutherford, Ernest, 1871-1937.

In this film which was made in December, 1935, Lord Rutherford explains the nature and structure of the atom.

AVN 0319 Carbon-14.

U.S. - Encyclopaedia Britannica Films Inc. - 1952.

English - 12 min. - sd., b&w - 16 mm and video.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Radiocarbon dating; Archaeological dating.

The film explains the use of radiocarbon (carbon-14) for determining the age of ancient objects. As all organic material contains atmospheric carbon dioxide in fixed concentrations, one can obtain an estimate of its age by measuring the proportion of the decaying carbon -14 to the stable carbon-12. Briefly discussed are also photosynthesis and the use of carbon-14 as a tracer element.

AVN 0320 Atomic radiation.

U.S. - Encyclopedia Britannica Films Ltd. in collaboration with the Division of the Physical Sciences, Univ. of Chicago - 1953.

English - 12 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- History; Radiation.

Explains fundamentals of atomic radiation - the dramatic story of its discovery, what it is and does. Describes how it has been possible to reproduce in the laboratory some of the forms of radiation found in nature. Explains the roles of alpha-, beta-, gamma-, and neutron particles in radioisotope research.

AVN 0322 SPERT destructive test - 1.

U.S. - Phillips Petroleum Company for United States Atomic Energy Authority - 1965.

English - 17 min. - sd., col. - 16 mm.

Target audience: semi-technical, students. Of historical interest only.

Subject(s): Nuclear reactors -- United States -- History; Materials -- Testing.

Portrays - with analytical comment - the destructive test program of a highly enriched, aluminium plate-type core in the SPERT-1 reactor. The experiment was performed at the National Reactor Testing Station in Idaho in November, 1962, as part of the United States Atomic Energy Commission's Reactor Safety Programme of studies of the fast transient behaviour of water-moderated reactors.

AVN 0323 Hot laboratory for testing materials.

U.S.S.R. - 1964.

Russian - 10 min. - b&w - 35 mm.

Target audience: technical; students, researchers. Of historical interest only.

Subject(s): Nuclear reactors -- U.S.S.R. -- History; Materials -- Testing; Radioactivity; Radiation protection.

A detailed description of the "hot" laboratory in the U.S.S.R., where the radiation-stability of reactor materials and reactor fuel elements are tested. Glove boxes, facilities for remote manipulation and other safeguarded work areas are shown. Emphasis is given to the measures to protect workers from radiation contamination.

AVN 0324 Research reactor SM-2.

USSR - 1964.

English, Russian - 10 min. - sd., col. - 35 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- USSR -- History.

This film describes the SM-2, a research reactor at the USSR Reactor Centre (Melekes). The SM-2, a high neutron flux reactor, operates with a 90 percent enriched uranium core cooled with ordinary water. Animated sequences detail the design and operation of the reactor which is used for testing and irradiating materials.

AVN 0325 Pulsed neutron-neutron logging.

USSR - 1964.

English, Russian - 15 min. - sd., col. - 35 mm.

Target audience: technical; engineers, researchers. Of historical interest only.

Subject(s): Radioisotopes in industry.

A new method of neutron-neutron logging was suggested by the Soviet scientist Georgi Flyorov in 1956. The film shows how the method has been applied to the industry of extracting oil in the Soviet Union. Animation and diagrams are used to describe the use of pulsed neutron-neutron logging to control the water levels in oil extraction from the ground.

AVN 0326 Fast neutron pulsed reactor.

USSR - 1964.

English, Russian - 10 min. - sd., b&w - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Research reactors -- USSR -- History; Pulsed reactors -- USSR -- History.

Shows the principles and operation of the fast neutron pulsed reactor, which has been

developed in the laboratory of the Joint Institute for Nuclear Research in the Soviet Union (Dubna).

AVN 0327 Element 102 produced at the Joint Institute for Nuclear Research.

USSR - 1964.

English, Russian - 10 min - sd., b& w - 35 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): *Particle accelerators -- USSR -- History; Transuranium elements.*

The film describes the accelerator at the Joint Institute for Nuclear Research in the USSR (Dubna) where beams of multi-charged ions are used to produce the transuranium element 102. Chemical processing to isolate element 102 and its properties is also discussed.

AVN 0328 The discovery of proton radioactivity.

USSR - 1964.

English, Russian - 10 min. - sd., b&w - 35 mm.

Target audience: technical; physicists, students, researchers. Of historical interest only.

Subject(s): Protons; Radioactivity.

An explanation, with animated sequences, of the achievement of Soviet scientists in discovering proton radioactivity. Adding to the work done by researchers in other lands, Soviet physicists succeeded in bringing about proton emission by bombardment of nickel by neons. The film shows the technique in detail.

AVN 0329 Propane bubble chambers.

USSR - 1964.

English, Russian - 10 min. - sd., b & w - 35 mm.

Target audience: technical; physicists, students, researchers. Of historical interest only.

Subject(s): Bubble chambers.

At the Joint Institute for Nuclear Research in the USSR (Dubna), research is carried out on nuclear matter and atomic particles by means of propane bubble chambers. The film chronicles the construction and field of operation of the newest large propane chamber (200 liter), by which bubble chamber techniques will be greatly enhanced. Details concerning investigation and study in the chamber are shown.

AVN 0330 Plasma diagnostics.

USSR - 1964.

English, Russian - 20 min. - sd., col. - 35 mm.

Target audience: technical; physicists, researchers. Of historical interest only.

Subject(s): Nuclear medicine -- History; Plasma diagnostics.

Describes a series of diagnostic techniques which have been devised at a research institute of the USSR State Committee on the use of atomic energy, to produce and analyse plasma. The various machines and devices currently in use for the study of plasma at this institute are discussed in the course of the film.

AVN 0331 Packaged atomic power plant 'Arbus'.

USSR - 1964.

English, Russian - 10 min. - sd., col. - 35 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- USSR -- History; Organic cooled reactors -- USSR -- History

The film describes a "packaged " atomic power plant - prefabricated - for use in remote and outlying regions of the Soviet Union. The nuclear reactor which supplies the power for the package plant has a thermal capacity of 5000 kw and electric power of 750 kw. The fuel, uranium, with an organic coolant, is sufficient for a period of 2 years. The reactor operation is described by animated sequences.

AVN 0333 Plasma poses.

USSR - 1964.

English, Russian - 10 min. - sd., col. - 35 mm.

Target audience: technical; physicists, researchers. Of historical interest only.

Subject(s): Plasma confinement; Pinch effect (Physics)

The film shows plasma experiments carried out at the Suchumi Chemical and Physical Institute of the USSR State Committee on the use of atomic energy. Discussed are (1) the devices and machines for controlling the plasma, and (2) methods of registering plasma.

AVN 0334 Direct conversion reactor 'Romashka'.

USSR - Sovexportfilm - 1964.

English, Russian - 20 min. - sd., col. - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- USSR -- History; Breeder reactors -- USSR -- History.

An experimental energetic set-up, named 'Romashka', at the Kurchatov Atomic Energy Institute in the USSR is described in this film. The set-up, a small direct conversion reactor with a uranium carbide fuel assembly, is shown in photography and by means of animation.

AVN 0336 New research nuclear centre of the USSR.

USSR - 1964

English, Russian - 17 min. - sd., col.- 35 mm.

Target audience: general, semi-technical; engineers, researchers. Of historical interest only.

Subject(s): Research reactors -- USSR -- History.

The new research center depicted in the film has been built in Melikes near Ulyanovsk, where Soviet scientists, using a new SM-2 research reactor, are studying the effects of neutron irradiation on materials. The Hot Laboratory and equipment for studying irradiated materials are shown.

AVN 0337 Siberian nuclear research centre.

USSR, 1964.

English, Russian - 20 min. - sd., col. - 35 mm.

Target audience: general; students, researchers. Of historical interest only.

Subject(s): Nuclear research -- USSR -- History; Nuclear fusion; Plasma physics.

A description of the Institute of Nuclear Physics at Novosibirsk, where Soviet scientists are studying plasma in the search for control of thermonuclear reactions. The film shows not only the various equipment and laboratories currently in use for this research, but also the seminars and training courses for young Soviet scientists. The film presents a comprehensive survey of the work of the Novosibirsk Centre.

AVN 0338 The aim is life.

USSR -1964.

English, Russian - 10 min. - sd., col. - 35 mm.

Target audience: general; medical, researchers. Of historical interest only.

Subject(s): Radiotherapy; Nuclear medicine -- History.

The film shows how radioactive sources are used in the Soviet Union in the fight against malignant tumors.

AVN 0339 Transportable nuclear power station TES-3.

USSR - 1964.

English, Russian - 10 min. - sd., col. - 35 mm.

Target audience: general, semi-technical.; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- USSR -- History.

A film description of a power station at Obninsk in the Soviet Union composed of four vehicles with caterpillar-like tracks. One of the vehicles carries the reactor itself for this movable nuclear power plant. The reactor uses enriched uranium fuel and, because of heavy lead shielding, can be transported without unloading the fuel elements. Other operational features and safety measures of this power plant are discussed.

AVN 0340 Beloyarsk Atomic Power Plant.

USSR - 1964.

English, Russian - 20 min. - sd., col. - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- USSR -- History.

As part of the program in the Soviet Union to develop the use of nuclear energy for electrical power, the first unit of a 100,000 kW atomic power plant was completed in 1964 in the Urals, near Beloyarsk. The film describes the construction and operation of this atomic power plant by photography and animation.

AVN 0341 On the upper reaches of the Don river.

USSR - 1964.

English, Russian - 20 min. - sd., col. - 35 mm.
Target audience: general; researchers. Of historical interest only.
Subject(s): Nuclear power plants -- USSR -- History.

This film describes the construction and operation of a 120,000 kw nuclear power station in the vicinity of Nowo-Wononezhsk on the upper reaches of the Don.

AVN 0342 Radiation chemistry.

USSR - 1964.
English, Russian - 20 min. - sd., col. - 35 mm.
Target audience: semi-technical; students, researchers. Of historical interest only.
Subject(s): Radiochemistry.

In simple and clear explanations, with the aid of animation, the film describes how structural changes in substances caused by radiation can be used in plastic production. The various sources of radiation for radiation chemistry are introduced.

AVN 0344 Pax atomis : SNAP-7 terrestrial isotopic power systems.

U.S. - Martin Company for United States Atomic Energy Commission - 1965.
English - 25 min. - sd., col. - 16 mm.
Target audience: general, technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Thermoelectric generators; Strontium -- Isotopes; Project SNAP.

The film summarizes the development of a family of fully shielded, strontium-90 fueled thermoelectric power converters of the SNAP-7 programme. These thermoelectric generators produce heat by decay of radioisotopes and have been put into operation at remote outposts from north of the arctic circle to the south pole.

AVN 0348 Down on the farm.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1964.
English - 29 min. - sd., b&w - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Radioisotopes in agriculture; Photosynthesis.

Algae are grown in heavy water in an unique 'farm' at Argonne to obtain organic compounds in which the atoms of ordinary hydrogen are replaced by atoms of deuterium. Scientists show how these deuterated compounds are employed in studies of photosynthesis and other metabolic processes.

AVN 0350 The fuel of the future.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1965.
English - 29 min. - b&w - 16 mm.

Target audience: general; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear fuel elements; Plutonium.

Special precautions and techniques employed in working with plutonium are shown in a unique engineering laboratory, the Argonne Fuel Fabrication Facility, where work is performed within sealed glove boxes under an inert atmosphere. The manufacture of experimental reactor fuel pins containing plutonium is illustrated step-by-step.

AVN 0351 A breeder in the desert.

Challenge Series.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1965.
English - 29 min. - b&w - 16 mm.

Target audience: semi-technical; students. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Breeder reactors -- United States -- History; Fast reactors -- United States -- History; Reactor fuel reprocessing -- United States -- History.

Argonne's Experimental Breeder Reactor 2 is shown in detail, and many of the features and operating characteristics of a large-scale fast breeder reactor are described. The EBR-2 fuel cycle facility, the first nuclear fuel reprocessing plant completely integrated with a reactor, is shown in operation.

AVN 0354 Dragon.

U.K. - G. Buckland-Smith in association with The Film Producers Guild - 1964.

English, French - 48 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Research reactors -- U.K. -- History; High temperature reactors -- U.K. -- History; Dragon project.

The 'Dragon' project at Winfrith, Dorset, is a joint undertaking under the sponsorship of the European Nuclear Energy Agency of OECD, in which 12 European countries participate. It was set up to conduct research and development in high temperature gas-cooled reactors and to design, construct and operate a reactor experiment. The reactor under this project went critical in August, 1964. The film was shot in Britain, France, Germany, Switzerland, Denmark and Sweden and shows some of the research and development work that made this project possible.

AVN 0355 Transcurium elements : synthesis, separation and research.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1965.
English - 31 min. - sd., col. - 16 mm.

Target audience: technical; students, chemists, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes; Isotope separation.

This technical film describes three basic transcurium research experiments at USAEC's Lawrence Radiation Laboratory and illustrates the process of transmuting an element to the next heavier one by neutron capture. It shows the capsule containing a one-gram mixture of plutonium-242, americium-243 and curium-244 being released from the reactor after four years of irradiation. The chemical separation techniques and equipment are explained during operation tests. The first research experiment illustrates the discovery of a new isotope of fermium of mass 257. The next experiment shows the measurement of the neutron-induced fission of einsteinium-253. The final experiment explains how 70 % of the world's supply of purified berkelium was formed into a crystal to concentrate its self-luminescent light.

AVN 0360 The riddle of photosynthesis.

Magic of the atom series.

U.S. - Handel Film Corporation - 1965.

English, Dutch - 15 min. - sd., col.- 16 mm and video.

Target audience: semi-technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Photosynthesis; Carbon; Radioactive tracers.

The film describes the research in photosynthesis being carried out by the bio-organic

chemistry group at the Lawrence Radiation Laboratory. By means of radiocarbon, the path of carbon in photosynthesis can be followed. Algae are submitted to a series of different light exposures to determine chemical changes in relation to exposure time. Chromatography and radioautography aid in the determination of the newly created compounds. Final identification of the radiocarbon-tagged compounds is accomplished by radiation counting.

AVN 0361 Radioisotope scanning in medicine.

U.S. - Handel Film Corporation - 1965.

English - 16 min. - sd., col. - 16 mm.

Target audience: semi-technical; students, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Scintillation counters; Radioisotope scanning.

The development of scanning equipment in combination with new radioactive drugs has produced important advances in medical diagnosis. Certain elements concentrate in certain organs of the body. If these elements are radioactive, their presence within an organ can produce information about its size, shape and functioning. The signals emitted from these atomic tracers are registered by a scintillation detector. The film follows in detail the scanning of a lung and presents other typical examples of scanning (chest, brain, liver and kidneys). Colour animation explains the basic concepts of organ visualization.

AVN 0363 Mediterranean fruit-fly eradication project Los Alamitos, California.

U.S. - 1988?

English - 16 min. - sd., col. - video. Filmed on site; not a professional production.

Target audience: technical.

Subject(s): Sterile insect release; Mediterranean fruit-fly -- Control -- California.

Details the 1987/88 Los Angeles County sterile medfly release project - feeding, testing, packaging and dispersal of flies.

AVN 0364 Fabrication of the accelerator structure.

U S. - Stanford Linear Accelerator Centre, United States Atomic Energy Commission - 1965.

English - 40 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Particle accelerators -- United States -- History.

This film describes the methods used in the fabrication of the accelerating structure and associated components for the USAEC's two-mile linear electron accelerator at Stanford University.

AVN 0366 Ternary phase diagram.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1965.

English - 7 min. - sd., col. - 16 mm.

Target audience: technical; metallurgists, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Metallurgy; Alloys.

Primarily of interest to metallurgists, this technical film depicts the development of a new and rapid technique for preparation of ternary phase diagrams required in the search for useful alloys. The technique shown for determining ternary phase alloy diagrams makes it possible to circumvent a previously tedious and costly research procedure.

AVN 0367 The wooden overcoat.

U.S. - Sandia Corporation for United States Atomic Energy Commission - 1965.

English - 14 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactive substances -- Transportation -- History.

A description of research into the development of "accident-safe" shipping containers for radioactive materials. In particular the film shows the design and testing of a wooden outer shell for existing metal containers which will withstand a 30-foot drop, a one-hour petroleum fire, and 24-hour water immersion without the seal of the inner metal container of radioactive material being broken.

AVN 0368 A study of grain growth in beryllium-oxide using a new transmitted light hot stage.

U.S. - Atomics International for United States Atomic Energy Commission - 1965.

English - 17 min - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Metallurgy.

This film report depicts the design and operation of a new hot stage used with a polarizing microscope and transmitted light. Sequences are shown of studies of thin sections of beryllium oxide ceramics at about 1700 degrees C. in vacuum. Illustrates movement of pores and grain boundaries, grain growth, and surface evaporation. Describes the physical basis for some of the observations, and the determination of quantitative grain-growth kinetics from photographic records.

AVN 0372 Personnel Monitoring.

Handle with care series.

Austria - Documentary Films of Norway in co-operation with Institute for Atomenergi, Norway, for International Atomic Energy Agency - 1965.

English, French, Spanish - 20 min. - b&w- 16 mm and video.

Target audience: technical; students, researchers. Of historical interest only.

(Copyright: International Atomic Energy Agency)

Subject(s): Radiation dosimetry -- History.

This film stresses the need for personnel monitoring in work areas where there is a hazard of exposure to radiation. It illustrates the use of personnel monitoring devices (specially the film dosimeter), the assessment of exposure to radiation and the detailed recording of the results on personnel filing cards.

AVN 0373 Atomic energy in agriculture.

Japan - Shiniken Motion Picture Co. Ltd. under the supervision of Atomic Energy Commission - 1965?

English - 29 min - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radioisotopes in agriculture.

This film describes research on the use of radioisotopes in agriculture by various institutes in Japan. The research described includes plant irradiation for developing hardier and more resistant forms of wheat and rice as well as for breeding (tulip breeding), the use of radioisotopes in tracing (e.g. in fertiliser uptake and in insecticide utilization), radiation for food preservation, and the uses of radioisotopes in agricultural engineering.

AVN 0375 Shear-leach process for spent nuclear fuels.

U.S. - Oak Ridge National Laboratory, United States Atomic Energy Commission -1966.

English - 11 min - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Reactor fuel reprocessing -- United States -- History; Spent reactor fuels -- United States -- History.

The development at Oak Ridge National Laboratory of the Shear-Leach process, a mechanical method for reprocessing spent stainless steel or Zircaloy-2 clad power reactor fuels, is illustrated in this film. The various parts of the equipment are portrayed, as well as the operation of the Shear-Leach with unirradiated fuel.

AVN 0376 Plowshare.

U.S. - San Francisco Operations Office, United States Atomic Energy Commission - 1965.

English, Spanish - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Peaceful nuclear explosions -- United States; Plowshare program.

This film introduces the United States Atomic Energy Commission's programme for the safe use of nuclear explosives for civilian applications, such as mining and petroleum applications, massive earth-moving and excavation projects and utilization in scientific investigation.

AVN 0377 Safety in the Plowshare program.

U.S. - Nevada Operations Office, United States Atomic Energy Commission - 1966.

English - 22 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Peaceful nuclear explosions -- United States; Plowshare program; Radiation protection.

This film documents the means taken to ensure the safety of the public during experiments or projects in the United States' programme to develop peaceful uses of nuclear explosives. The film explains the effects of nuclear explosions (heat, explosive force,

radiation, ground shock, air blast, dust clouds) and demonstrates their safety implications and the precautions taken for public safety.

AVN 0378 The nuclear witness : activation analysis in crime investigation.

U.S. - U.S. Atomic Energy Commission - 1965.

English - 28 min. - sd., col. - 16 mm.

Target audience: general, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear activation analysis; Criminal investigation.

Neutron activation analysis is a method of analyzing samples for traces of various elements by bombarding them with neutrons. The film describes an application of this method, scientific crime investigation. The studies presented are based on authentic criminal cases.

AVN 0379 R-A-P Radiological assistance program.

U.S. - J.L. Feierbacher for United States Atomic Energy Commission - 1965.

English - 27 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiation protection.

This documentary film shows in detailed re-enactments the steps and measures taken by radiological assistance teams in the United States in the field of radiation protection. The R-A-P Team's effectiveness is shown to be dependent on the co-operation of other groups and individuals at different levels of government and business; this is illustrated with three main stories (the hunt for a radioactive source lost from a small industrial plant, the problem of radioactive vapour leaking from a sealed system in a research laboratory, the story of a fire in a uranium products plant).

AVN 0381 Dubna - city of friends in science.

USSR - 1966.

English - 40 min. - sd., b&w - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear research -- USSR -- History.

This film presents a pictorial survey of the history and activities of the Joint Institute for

Nuclear Research at Dubna, near Moscow. The Institute, founded in 1956, is a scientific association of 11 countries engaged in research in nuclear physics. In an informal but comprehensive fashion, the film describes the work of the laboratories of Dubna, calling attention to the experiments and research of the various working groups in each laboratory. In this connection, research with the various types of accelerators at the Dubna Centre is portrayed, as well as the development of new types of accelerators.

AVN 0387 Twenty years of nuclear energy in France.

France - CEA - 1965.

English - 20 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Nuclear energy -- France -- History.

Made on the occasion of the 20th anniversary of the Commissariat a L'Energie Atomique (CEA), the film traces the successive stages in France's progress over the past two decades to her present status as a nuclear power. The film stresses the CEA'S future prospects.

AVN 0392 Lucas heights.

Australia - Perier Film Productions for the Information Section of the Australian Atomic Energy Commission - 1966.

English - 22 min. - sd., col. - 16 mm.

Target audience: semi-technical; researches. Of historical interest only.

(Copyright: Australian Atomic Energy Commission)

Subject(s): Nuclear energy -- Australia -- History.

The film gives an account of the Australian Atomic Energy Commission's contribution to the peaceful uses of nuclear energy. It shows the different programmes and experiments carried out at the Lucas Heights facility (chemical analysis, fuel element production and reprocessing, neutron activation analysis and spectroscopy, radiobiology, health and safety activities, waste disposal, etc.) and introduces some of the methods and and introduces some of the methods and equipment used.

AVN 0393 Scintillation scanning of the spleen.

Series:Diagnostics in Nuclear Medicine 1.

Germany - Fritz Heydenreich, Heidelberg - 1966.

English - 15 min. - sd., col. - 16 mm.

Target audience: technical, professional. Of historical interest only.
Subject(s): Nuclear medicine -- History; Radioisotope scanning.

The film presents in detail the two methods of spleen scintigraphy: (1) using heat-altered erythrocytes labelled with Cr 51, and (2) using Hg197-BMHP, which is faster and also produces an image of the kidneys. The diagnostic possibilities of spleen scintigraphy are illustrated by examples.

AVN 0395 The fresher the better.

U.S. - Army Pictorial Center for United States Atomic Energy Commission - 1966.
English, Dutch - 14 min. - sd., col. - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Food -- Preservation; Food irradiation.

The purpose of this film is to introduce the concept of radiation preservation of food, and to explain the process and its results. It demonstrates the preservation of fresh seafoods by radiation pasteurization in order to extended shelf life up to three times. The use of energy from nuclear particles to destroy microorganisms and other food spoilage bacteria is shown.

AVN 0396 SNAP-8 - system for nuclear auxiliary power.

U.S. - Aerojet-General Corporation - 1966.
English - 10 min. - sd., col. - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear power -- United States-- History; Spacecraft propulsion; Project SNAP.

In order to travel in space, man must take his own environment with him. This requires power to maintain equipment and sustain life itself. Nuclear energy provides this source of continuous and uninterrupted power. The film shows the principal components of the SNAP-8 system and, in animation, illustrates and explains its operation. It also depicts potential missions of the system, including power for television satellites to broadcast all over the earth, orbiting space stations to support earth observation and space research, maintenance of permanent lunar bases, and manned explorations beyond the moon.

AVN 0398 Atoms on the move : the transportation of radioactive materials.

U.S. - Bennie Korzen Productions for United States Atomic Energy Commission - 1966.

English - 24 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactive substances -- Transportation -- History; Radioactivity -- Safety measures.

The non-technical film surveys the various means of transporting radioactive materials and the safety aspects underlying their packaging and handling. Using animation and live action photography, the film illustrates that by their very nature, radioactive materials are varied and so are the potential hazards associated with shipping and using them. The film also shows some aspects of safety research and development designed to limit the consequences of an accident involving these materials. An accident situation and clean-up are demonstrated.

AVN 0399 Development and fabrication of HFIR target elements.

U.S. - Oak Ridge National Laboratory, United States Atomic Energy Commission - 1976.

English - 15 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes; Transuranium elements.

The film depicts the design and development of High Flux Isotope Reactor target elements and the development of suitable manufacturing processes. It demonstrates remote manufacture of target elements at Oak Ridge National Laboratory's transuranium processing plant. The elements, after irradiation in HFIR, are returned to this facility and chemically processed for separation of the desired transuranium isotopes.

AVN 0400 Bonus for Puerto Rico.

U.S. - United States Atomic Energy Authority in co-operation with the Puerto Rico Water Resources Authority - 1967.

English, Spanish - 20 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power plants -- Puerto Rico -- History.

The film describes the construction and initial operation of a small, unique nuclear power station, the Boiling Nuclear Superheat Reactor, in the picturesque, tropical setting of Puerto Rico. Through animation, the film compares nuclear superheat reactors with other types and briefly describes the joint arrangements between the United States Atomic Energy Commission and the Puerto Rico Water Resources Authority for construction and operation of this first nuclear power plant in the tropics.

AVN 0401 Superconducting magnets.

U.S. - Argonne National Laboratory, United States Atomic Energy Authority - 1967.

English, Dutch - 13 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Superconductivity; Magnets.

Many important areas of research and development involve the use of large electromagnets. These large magnets require correspondingly large amounts of power and cooling equipment. The use of superconducting cable in the construction of these magnets permits the production of coils which require no power to operate. The film describes the basic design problems and includes pictures of Argonne National Laboratory's 67, 000 gauss magnet during fabrication and testing.

AVN 0403 The nuclear challenge.

Austria - Division of Public Information, International Atomic Energy Agency, and Kratky Film, Prague - 1967.

English, French, German, Spanish - sd., col. - 1 English script, 1 French script - 16 mm and video.

Target audience: general; researchers. Of historical interest only; material updated in: AVN 0694 'For the benefit of humanity'.

Copyright: International Atomic Energy Agency.

Subject(s): International Atomic Energy Agency -- History.

This film, made on the occasion of the 10th anniversary of the International Atomic Energy Agency, tells the story of the many aspects of the IAEA's work in nuclear power, medicine, agriculture, and in the field of technical assistance to developing countries.

AVN 0404 Waste handling for isotope users.

Handle With Care Series No. 5.

Austria - Kratky Film, Prague, for the International Atomic Energy Agency - 1967.

English - 25 min. - sd., col. - 16 mm and video.

Target audience: technical; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Radioactive waste management.

Aimed at institutes and laboratories involved in the use of radioisotopes, this film emphasises simple storage and disposal methods but also gives a background of more detailed treatment and final disposal of wastes.

AVN 0405 The watch on the sea.

Austria - International Atomic Energy Agency - 1967.

English, French - 15 min. - sd., col. + English, French, Russian, Spanish and German scripts - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): International Laboratory of Marine Radioactivity, Monaco; Marine biology; Marine radioecology.

The film introduces the International Atomic Energy Agency's Laboratory of Marine Radioactivity in Monaco. Established to conduct a special programme of research, the Monaco laboratory is maintained through the cooperation of the Monaco and the French authorities and with the participation of the United Nations Educational, Scientific and Cultural Organization (UNESCO). The work of the laboratory in surveying the radioactivity in sea water as well as the rate of absorption of radioactivity in the sea bed is described. Also shown is the laboratory's ship 'Winaretta Singer' as it trawls for specimens of sea-life from the sea bed and the method by which it obtains samples of sea water at various depths.

AVN 0406 Plutonium fuel.

Japan - Iwanami Productions, Inc. - 1967.

English - 27 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Breeder reactors -- Japan -- History; Nuclear fuel elements -- Japan -- History; Plutonium.

Lacking natural Power resources, Japan is engaged in developing fast breeder reactors and

in producing the fuel for them. The film shows research and development activities dealing with plutonium fuels in a laboratory of a governmental organization, and demonstrates full containment in the facilities for the sake of safety.

AVN 0412 Plant growth in compensated fields.

U.S. - Argonne National Laboratory, United States Atomic Energy Authority - 1967.

English - 7 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Plant regulators; Gravity.

Plant growth is controlled by an extremely sensitive mechanism. Even a brief and minute stimulation by gravity, light, water, etc. will cause the growing portions of the plant to turn toward or away from the stimulus. The film shows experiments with gravity which are of particular interest because of their implications for space research. Since the gravitational force must operate for a minimum presentation time before any effect is apparent, it is possible to neutralize the effect of the gravitational field by slowly rotating the samples. A mechanical servosystem controlled by a computer programme which can orient the plant containers in any desired direction has been developed by Argonne National Laboratory.

AVN 0419 Properties of radiation.

Radioisotopes Series.U.S. - U.S. Army Signal Corps for the Army Surgeon-general - 1949-1952.

English - 68 min. - sd., b&w - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Beta radiation; Gamma radiation.

The film shows a Geiger counter used to compare penetrations of alpha, beta, and gamma radiation and to derive their characteristic absorption curves. The beta-radiation section presents the cloud-chamber electrostatic generator and beta-ray spectrometer, as well as the concepts of ionization, electron volt, beta-ray spectrum, neutrino, scattering, nonlinear absorption, and density thickness. The gamma-radiation section explains bremsstrahlung, photo-electric effect, Compton scattering, pair production, exponential absorption coefficient, and half thickness. The final section concerns the interpretation of composite absorption curves.

AVN 0421 The radioisotope : methodology.

Radioisotopes Series.

U.S. - U.S. Army Signal Corps for the Army Surgeon-general - 1949-1952.

English - 33 min. - b&w - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radioisotopes; Radioactive tracers; Hevesy, George de.

The film contains a historical sequence showing the early work of Hevesy in studying plant metabolism with naturally occurring radio-lead. These classical experiments establish the seven criteria of tracer methodology: (1) Radiochemical purity, (2) Single chemical state, (3) Elimination of exchange error, (4) Knowledge of the degree to which the activity is distributed among other molecular species, (5) Avoidance of isotope effect, (6) Avoidance of chemical effects, and (7) Avoidance of radiation effects. The film also illustrates atypical biological tracer experiment from the formation of an idea to the final results.

AVN 0422 Radioisotopes in agricultural research.

Radioisotopes Series

U.S. - U.S. Army Signal Corps for the Army Surgeon-general - 1949-1952.

English - 41 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes in agriculture; Radioisotopes -- Safety measures.

The film explains the uses of various types of radioisotopes: (1) use of phosphorus-32 in large-scale field tests of fertilizers, (2) use of cobalt-60 in micronutrient studies with large domestic animals, and (3) use of calcium-45 in macronutrient problems.

AVN 0424 Practice of radiological safety.

U.S. - U.S. Army Signal Corps for the Army Surgeon-general - 1949-1952.

English - 33 min. - sd., b&w - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactivity -- Safety measures.

The film depicts a visit to a radioisotope laboratory and discusses various topics pertinent to health safety: handling of radioisotope shipments; preparation of therapeutic doses; need for, and function of, a local radioisotope committee; laboratory design; decontamination; use of shielding; measurement of personnel exposure.

AVN 0425 Pressure vessel for A1, the first Czechoslovak nuclear power station.

CSSR - Kratky Film, Prague - 1966.

English - 38 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- Czechoslovakia -- History; Pressure vessels.

The film presents the research and manufacture of the full-size model for the steel pressure vessel of Czechoslovakia's first nuclear power plant, A1, being constructed at Bohunice. Special machinery and new technologies had to be found to overcome difficulties in planning, building and testing parts on the unusually large scale required.

AVN 0427 La separation des isotopes de l'uranium (diffusion gazeuse)

France - Commissariat a l'Energie Atomique - 1967.

French - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Isotope separation; Uranium.

Only the very slight difference in mass between uranium-235 and uranium-238 permits the separation of these two isotopes present in natural uranium. The film explains schematically the principle of gaseous diffusion and the equipment used to perform it, and shows the uranium enrichment facility at the Pierrelatte Centre, designed to produce uranium metal enriched to more than 90 percent in the form of the fissile isotope uranium-235.

AVN 0428 Osiris.

France - Roger Leenhardt - 1967.

French - 17 min. - sd., col. (colours faded) - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Nuclear reactors -- Materials -- Testing -- France -- History.

Once installed, the materials forming the core of large power reactors must last throughout the operating life of the power station. OSIRIS is an experimental reactor for testing these materials by generating in a few months the irradiation conditions which take 20 years to attain in industrial reactors. The film shows in detail the various parts of the reactor and its auxiliary installations. The originality of its design, its performance and its 168 experimental positions make OSIRIS the most powerful irradiating installation at the Saclay Centre.

AVN 0429 Isotopes, rayonnements, agriculture (radio-agronomie).

France - Commissariat a l'Energie Atomique? - 1967.

French - 17 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Radioisotopes in agriculture.

Leaf photosynthesis, fertilizer assimilation, soil humidity measurements, the destruction of harmful insects and radio-induced mutations are fields of study and research in which nuclear techniques can offer valuable assistance. The film shows various aspects of work performed in these fields at the Radioagronomy Station of the Cadarache Centre, together with the equipment used and the results obtained.

AVN 0430 Desalting the seas.

U.S. - Oak Ridge National Laboratory, United States Atomic Energy Commission - 1967.

English, French, Spanish, Arabic - 17 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioisotopes in industry; Saline water conversion.

Describes the various methods of purifying saline waters through the use of nuclear energy (the crystallization or freezing process, the membrane or squeezing process, the distillation or boiling process), with particular emphasis on large scale dual-purpose nuclear-electric desalting plants which will not only purify water but will also produce large amounts of electric power simultaneously.

AVN 0431 Inside the Yankee core.

U.S. - Westinghouse Electric Corporation for United States Atomic Energy Corporation - 1967.

English - 32 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear fuel elements -- Testing -- History.

The film describes in detail the most extensive and complete post-irradiation programme ever performed on an expended commercial power-reactor core. It explains the procedure used to select fuel assemblies and individual fuel rods so that, with inherent core symmetries taken into account, a three-dimensional map of measured burn up and isotopic content could be constructed and compared against predictions. Also shown is how volatile fission-produced gases are drawn from sealed fuel rods to be measured, and how rods are selected to obtain cladding samples for metallography.

AVN 0432 Penetration logging methods in engineering and construction work.

USSR - 1965.

Russian - 10 min. - sd., col. - 35 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Radioisotopes in geology; Geophysical well logging.

Modern nuclear geophysical methods are used in the Soviet Union for quickly assessing large areas of ground for engineering, construction, and hydrological evaluations. The film shows three units developed for these purposes: a self-propelled unit and a water-borne unit are capable of penetrating the ground to depths of 25 meters with a speed of 6 meters per minute by pressing in and measuring natural gamma-radiation, soil density, hydrogen content, water table, coefficient of friction and frontal resistance of soils. A third mobile water unit is capable of continuous profiling of harbour and estuary beds.

AVN 0434 Radiation and public health.

U.S. - U.S. Department of Health, Education, and Welfare for Division of Radiological Health - 1967.

English - 25 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radiation protection; Environmental engineering; Public health.

The film depicts the measurement and surveillance of environmental radiation to determine human radiation exposure. It shows the development of methodology for exposure reduction and control, research in radiobiology, epidemiology and environmental sciences, training of scientific manpower, and assistance to state and local health departments. Specific projects featured include: institutional diet sampling, radiochemical analyses of environmental samples, x-ray exposure assessment, thyrotoxicosis follow-up, training and assistance to state radioactive materials control programmes.

AVN 0435 Radioisotopes in medical diagnosis and investigation.

U.K. - 1967.

English - 30 min. - sd., col. - 16 mm.

Target audience: technical; researchers.

Of historical interest only.

Subject(s): Nuclear medicine -- History; Radioisotope scanning; Radioscopic diagnosis.

Review of the uses of radioisotopes in medical diagnosis. The film starts by describing the chief techniques for the measurement of radioactivity within the human body and in samples of blood, urine, etc. It then shows the clinical applications of these techniques in the measurement of blood volume and other fluid spaces, in tests of gastrointestinal, thyroid and kidney function and in the visualization of various organs by scanning.

AVN 0437 Solar eclipse expedition.

U.S. - Los Alamos Scientific Laboratory, United States Atomic Energy Commission - 1967.

English - 32 min. - sd., col. - 16 mm.

Target audience: technical. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Solar eclipses.

The film gives a brief discussion of solar physics, and uses animation to show what scientists look for when they study the sun's corona during an eclipse. It describes the major experiments designed and built at Los Alamos for the 1966 Solar Eclipse Expedition. Scientists with telescopic, analyzing and photographic equipment travel to Buenos Aires, Argentina, and then "chase" the moon's shadow over the South Atlantic Ocean during the actual eclipse. A full eclipse is observed and photographed.

AVN 0439 A beginning without end.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1968.
English - 30 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear energy -- History; Particle accelerators -- United States -- History.

The film is a summary of a wide variety of nuclear research and development at the Berkeley and Livermore sites of the USAEC's Lawrence Radiation Laboratory. It briefly covers the work of the late Dr. Ernest Lawrence on the invention and development of the cyclotron (particle accelerators), the post war work using particle accelerators to discover new elements, research into photosynthesis, use of high energy particles from an accelerator for medical therapy, studies in superconductivity, studies of chemical processes that occur during a nuclear explosion, work on the Plowshare programme, studies of effects of radiation on animals, man and the food cycle, studies in applied physics using chemical explosives, and development of controlled thermonuclear process for energy production.

AVN 0440 Return to Bikini.

USA - University of Washington for United States Atomic Energy Commission - 1966.
English - 23 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Peaceful nuclear explosions -- United States; Radioactive pollution -- Environmental aspects -- Bikini Atoll.

The film describes the latest scientific survey of the ecological status on the Bikini and Eniwetok atolls six years after the last test nuclear detonations. The resiliency and recovery patterns of the many links in the life cycle chain between man and the tiniest plants, fish, animals and flora are dramatically illustrated.

AVN 0441 An orange for Don Miguel.

Austria - Division of Public Information, International Atomic Energy Agency, for United Nations Development Programme - 1968.

English, Spanish - 27 min - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Mediterranean fruit-fly -- Control; Sterile insect release.

The film depicts the work of the experimental scheme conducted in Central America on the elimination of the Mediterranean fruit-fly (Medfly, *Ceratitis capitata*) using the sterile male technique.

AVN 0444 Project Gasbuggy : the resourceful atom.

U.S. - U.S. Atomic Energy Commission - 1968.

English, French, Spanish - 14 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Peaceful nuclear explosions -- United States; Project Gasbuggy.

The film demonstrates an experiment for the safe use of nuclear explosions to perform massive underground engineering tasks for more efficient recovery of natural resources. The experiment involved the detonation of a 26-kiloton nuclear explosive some 4,000 feet underground in a known area of natural gas-bearing sandstone in northern New Mexico. The film chronicles the experiment from its beginning in 1967 to the start of the post-detonation evaluation of the gas reservoir in early 1968.

AVN 0448 Fast reactors in Britain.

U.K. - Ace Distributors Limited - 1967.

English - 16 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Nuclear energy -- United Kingdom -- History; Fast reactors -- United Kingdom -- History.

Describes briefly the early development of fast reactors (including the Dounreay fast reactor) and introduces the design of a prototype fast reactor (PFR), which is explained with the help of a model. The film then illustrates the development on fuel and on sodium technology being undertaken at various United Kingdom Atomic Energy Authority establishments in support of PFR and subsequent commercial fast reactors.

AVN 0451 Atoms in the marketplace : nuclear materials safeguards and management.

U.S. - United States Atomic Energy Commission - 1968.

English - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear power - Economic aspects; Nuclear materials management; Nuclear safeguards.

The film deals with the economic nature of nuclear materials and their importance to commerce. It emphasizes the need for good materials management throughout all processes, and illustrates the safeguards inspection and control required to avoid diversion of uranium and plutonium for military purposes.

AVN 0452 Isotopes in hydrology =Izotopy v gidrologii.

USSR - 1968.

Russian - 18 min. - sd., col. - 35 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Hydrology; Radioisotopes.

The film exhibits some nuclear field and laboratory equipment now available for use in hydrology. Field equipment shown includes nuclear probes which measure in situ moisture content and density of soils by neutron-neutron, gamma transmission and gamma-gamma methods. Laboratory equipment demonstrated includes a neutron generator and a mass spectrometer which measure the chemical constituents of groundwater.

AVN 0463 Transportability.

U.K. - 1968.

English, French - 20 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radioactive substances -- Transportation -- History; Reactor fuel reprocessing -- United Kingdom -- History.

The film shows the transport of irradiated fuel from reactor in Canada, Italy and France, to the reprocessing plant in Windscale, England, for the extraction of plutonium. Techniques involved in handling and transport of the special transit flasks by road, rail and sea are detailed, together with under-water fuel loading sequences, and a look inside the reprocessing plant.

AVN 0464 The transuranium elements.

U.S. - United States Atomic Energy Commission - 1968.
English - 129 min. (pt.1: 58 min., pt.2: 71 min.) - sd., b&w - 16 mm.
Target audience: technical; researchers.
Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Transuranium elements.

This film is presented by Dr. Glenn T. Seaborg, Nobel laureate and chairman of the United States Atomic Energy Commission at the tenth anniversary summer science school at University of Sydney, Australia, in January 1967. He describes the work leading to the discovery of the known transuranium elements - from Element 93 through Element 104. The lectures are illustrated with slides explaining the production of these new, man-made elements.

AVN 0465 Response to mechanical shock.

U.S. - Sandia Laboratory, United States Atomic Energy Authority - 1968.
English - 18 min. - sd., col. - 16 mm.
Target audience: technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Shock (Mechanics)

Through animation, the film shows the parameters used to define mechanical shock - acceleration, velocity, and displacement of these three functions are explained.

AVN 0466 'A' is for atom.

U.S. - John Sutherland Productions Inc.; Audio-visual Communications Section, General Electric Company - 1964.
English - 15 min. - sd., col. - 16 mm and video.
Target audience: general.
Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear energy; Nuclear fission; Nuclear reactors; Atomic structure.

This fully animated film explains the structure of the atom using an analogy to the solar system; it discusses natural elements and artificially produced elements showing how they

are identified by number, it describes stable and unstable atoms, and tells the discovery of nuclear fission. It explains how a chain reaction is produced, describes the principles of a nuclear reactor and its application for electrical power and propulsion, and reviews some of the many benefits of atomic radiation in industry, biology, medicine, and agriculture.

AVN 0474 The mighty atom.

U.S. - CBS News - 1968.

English - 27 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear energy -- United States -- History.

The film makes a summary examination of the peaceful uses of atomic energy today and in the future. It covers the nuclear merchant ship N.S. Savannah, nuclear propulsion for space rockets, SNAP nuclear generators, etc. Dr. Glenn T. Seaborg, Dr. A.C. Weinberg, and Prof. J. Bonner speak of reactors to produce electric power.

AVN 0478 Molecular biology : an introduction.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1969.

English - 15 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Molecular biology.

The film describes the emergence of molecular biology which now dominates the life science and opens up new frontiers of biophysics and biochemical research. Technology has developed more refined research tools to measure and document the exploration into the molecular and atomic levels of the cell. These tools used with radioactive tracers, may someday contribute the basic information needed to find the cause and cure of human cancer and other diseases.

AVN 0480 The safe handling of enriched uranium.

U.S. - Nuclear Division of Union Carbide Corp. for United States Atomic Energy Commission - 1969.

English - 22 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Uranium; Radiation protection.

The film introduces new employees in nuclear production plants to the concept of nuclear fission and explains the reasons for safety procedures that are observed in the handling of enriched uranium and other fissionable materials. The difference between U-238 is explained, a brief summary of the uses of enriched uranium is given and animated sequences explain how criticality may be prevented by proper handling procedures.

AVN 0481 Atomic revolution in wood.

U.S. - Army Pictorial Center for United States Atomic Energy Commission - 1969.

English - 23 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Synthetic products; Wood.

The film shows a new, peaceful application of nuclear energy - the fusing of wood and plastic by irradiation into a combination-substance which has all the aesthetic appeal of wood, but is greatly improved in hardness, resistance and durability. The film explains the process for making this new material and describes its superior characteristics and woodworking properties in comparison to plain wood.

AVN 0482 Atoms in agriculture.

U.S. - Walter J. Klein Co. for the Dow Chemical Company, with the Technical Assistance of the USAEC - 1969.

English - 26 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radioisotopes in agriculture.

The film explores some beneficial applications of atomic energy in the field of agriculture. Agronomists, veterinarians, entomologists, nutritionists, biochemists and engineers demonstrate and explain various aspects of their work, e.g. the safe and effective use of pesticides, control of metabolic diseases of plants and animals, conservation of water, control and study of parasites including sterilization irradiation, and research on plant fibres for improved textiles.

AVN 0489 Radiation accident patients - emergency handling for hospitals and rescue squads.

U.S. - Motion Picture Service, U.S. Dept. of Agriculture, for the former AEC - 1968.

English - 17 min. - sd., col. - 16 mm and video.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiation -- Accidents; Emergency medical services.

The film points out that despite its good safety record, the expansion of the nuclear energy industry increases the possibility of incidents involving possible radioactive contamination. The film shows the techniques for proper handling of radiation accident patients. The unfounded fear of radiation contamination on the part of medical and paramedical personnel must not hinder assistance to patients.

AVN 0490 Douglas Point - nuclear power station.

Canada - Crawley Films Ltd. - 1968.

English - 26 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: crawley Films Ltd.)

Subject(s): Nuclear power plants -- Canada -- History.

This film describes the construction of the Douglas Point Reactor. Douglas point is 120 miles north-west of the city of Toronto and this CANDU (Canadian Deuterium) reactor is the first full scale nuclear power station in Canada.

AVN 0494 The Enrico Fermi awards.

U.S. - United States Atomic Energy Commission - 1966.

English - 25 min - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear scientists; Nuclear energy -- History; Fermi, Enrico, 1901-1954.

The film shows the award ceremony which took place in Vienna at the time of the 1966 General Conference. The Enrico Fermi medal was presented to Prof. Otto Hahn, Prof. Lise Meitner and Prof. Fritz Strassmann. It was the first time that this award was granted to non-American citizens, and the first time to a female scientist.

AVN 0497 Operation med-fly.

Austria - International Atomic Energy Agency - 1970.
English, French, Italian - 40 min. - sd.,col. - 16 mm and video.
Target audience: technical; researchers. Of historical interest only.
Copyright: International Atomic Energy Agency.
Subject(s): Insect sterilization; Mediterranean fruit-fly -- Control.

This is a training film on the elimination of the Mediterranean fruit-fly (Medfly, *Ceratitis capitata*), which causes great damage to fruit crops in many parts of the world. It shows experiments using the sterile insect technique which were carried out in Italy and in Central America.

AVN 0498 The atomic search.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission -1970.
English - 29 min. - sd., col. - 16 mm.
Target audience: semi-technical. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Subject(s): Nuclear energy -- United States -- History.

Medical diagnosis and treatment; food preservation and irradiation technology: Lunar rock dating by nuclear chemistry; heat generation by radioactive plutonium on the moon; an electric power isotopic nuclear generator for weather satellites; the Solar Telescope: these are a few of the applications and achievements of scientists in 1969 in the peaceful uses of atomic energy described in this film.

AVN 0499 Strangeness minus three.

Series: Horizon.
U.K. - British Broadcasting Corporation - 1968.
English - 45 min. - sd., b&w - 16 mm.
Target audience: general; researchers. Of historical interest only.
Copyright: British Broadcasting Corporation.
Subject(s): Strange particles; Particles (Nuclear physics)

Presents interviews with physicists Murray Gell-Mann, Yuval Ne'eman, Nicholas Samios, and Richard Feynman, who discuss and analyze the theory which predicted the properties of *omega-minus particles*.

AVN 0501 Criticality 1969.

U.K. - GBS Productions Limited - 1969.

English - 25 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Criticality (Nuclear engineering)

This film is a revision of the film 'Criticality' produced in 1957. It explains what is meant by criticality, when conditions of criticality can be achieved, how it can be kept under control and when it must be avoided. Contains an animated section showing the principles of nuclear fission.

AVN 0503 Nuclear fingerprinting of ancient pottery.

U.S. - Lawrence Radiation Laboratory, United States Atomic Energy Commission - 1970.

English - 20 min. - sd., col. - 16 mm and video.

Target audience: semi-technical; interested laymen, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radioactive tracers; Radioactive dating.

The nuclear 'fingerprint' of an ancient piece of pottery is an extremely precise chemical analysis of the pottery vessel's composition. The film shows how nuclear techniques are employed to produce this unique chemical profile which reveals the pottery's origin.

AVN 0505 Schooner.

U.S. - Lawrence Radiation Laboratory - 1968.

Soundtrack: music - 8 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Peaceful nuclear explosions -- United States.

This film shows the cratering phenomena (at several speeds) and the resulting crater formed as a result of detonating a 35 kt nuclear explosive in hard rock at the Nevada test site, U.S. Atomic Energy Agency.

AVN 0507 Nuclear research in agriculture.

Austria - International Atomic Energy Agency - 1970.

English, French, Spanish, Serbo-Croatian - 20 min. - b&w - 16 mm and video.

Target audience: technical; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Radioisotopes in agriculture.

The institute for the application of nuclear energy in agriculture, veterinary medicine and forestry at Zemun-Belgrade (Jugoslavia) was established with the assistance of the United Nations Special Fund through the IAEA in cooperation with the FAO in 1963. Its purpose is to improve agricultural production. The film shows some of the important experiments performed in the numerous laboratories in INEP, e.g. research work in plant nutrition, genetics, animal nutrition and immunology, and it is demonstrated how parasitic diseases can be overcome by a new radiation vaccine developed by scientists of the institute.

AVN 0508 A nuclear explosion put out a gas well blaze.

USSR - 1970?

English, Russian - 5 min - sd., col. - 16 mm and 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Peaceful nuclear explosions -- USSR.

After exhausting other possible means of stopping the uncontrolled flow of natural gas and the resulting fire in a gas well, a nuclear explosive was placed underground in the vicinity of the well bore. Upon its detonation, the compressive shock wave and resulting compaction of the geologic media at the well bore effectively sealed the well, stopped the flow of gas and extinguished the fire. As far as it is known, this project constituted the first practical application of a nuclear explosion for peaceful purposes.

AVN 0509 Underground nuclear explosion excavates artificial lakes.

U.S.S.R. - 1969.

English, Russian - 6 min. - sd., col. 16 mm and 35 mm.

Target audience: general, researchers.

Of historical interest only.

Subject(s): Peaceful nuclear explosions -- USSR.

The film demonstrates the use of nuclear explosives for water conservation in the arid regions of the USSR. It shows the excavation of a water reservoir by burying and

detonating a nuclear device. The resulting crater has a capacity of holding 6 x 10 (exp. 6) cubic meters of water.

AVN 0511 Retirement of the Hallam nuclear power facility.

U.S. - Atomics International for the former AEC - 1970.

English - 35 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power plants -- United States -- History; Radioactive waste management -- United States -- History.

This film shows the implementation of the AEC plan for decommissioning the 254 mwt sodium cooled graphite-moderated nuclear power reactor located at Nebraska public power district sheldon station. The film describes the disposal of irradiated fuel; the reaction of residual primary sodium; the disposition of contaminated material; the demolition of the reactor building, etc.

AVN 0512 Radioisotope analytical techniques in mineral processing.

Australia. - Australian Atomic Energy Commission - 1969.

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Australian Atomic Energy Commission)

Subject(s): Radioisotopes in industry.

The film deals with the applications of radioisotopic sources to on-line analysis in the mineral processing industry. Backscattered gamma-rays, gammaexcited x-rays as well as fluorescence radiation are used to provide continuous information about lead and zinc concentrations in process streams. Other applications in the mineral industry are described as well.

AVN 0513 Awakened peninsula.

Japan - The Nippon Eiga Shinsha, Ltd. - 1970.

English - 53 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- Japan -- History; Nuclear power plants -- Japan -- History.

The film summarizes the construction record of the Tsuruga Power Station from April 1966 to March 1970. While following the progressing construction of this big project, the

film shows the results of such an immense project on the undeveloped and secluded communities in an isolated region.

AVN 0514 Tokai power station.

Japan - Iwanami Productions Inc. - 1970.

English - 46 min - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- Japan -- History.

The film presents a detailed construction record of the Tokai Power Station from November 1957 until July 1966 when this station, the First Commercial Nuclear Power Station in Japan, was put into operation. The film also gives an introduction to the basic theory involved in the nuclear power generation, as well as an explanatory description of some problems encountered and solved.

AVN 0515 Endless chain.

U.S. - Tom Beemer for the Former AEC - 1971.

English - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Ecology; Arid Zones.

A poetic look at the "Endless Chain of Life" in the desert, the ceaseless transfer of the sun's energy to plants, to insects, and to animals. We see the life-death cycle, as energy passes from a plant to a beetle, to a pocket mouse, to a snake, to a hawk and the cycle is completed as bird droppings washed down by the rain become nutrients for plants. Man intrudes, threatening the environment essential to his own existence. In Washington State, project ALE (Arid Lands Ecology) is an ecological study sanctuary set aside by the U.S. Atomic Energy Commission to investigate Arid Lands representative of two-thirds of the earth's land. We watch scientists gather and store data with the ultimate objective of achieving guidelines so man can learn to project the delicate web of life around him and his irreplaceable environment.

AVN 0517 Miracle in the desert: the story of Hanford.

U.S - J.L. Feierbacher for United States Atomic Energy Commission - 1966.

English - 29 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear energy -- History; Nuclear power plants -- Washington (State) -- History.

Tells the story of the development during World War II of the Hanford Engineer Works in Southeastern Washington. The construction of the billion dollar plant was based on the discovery in 1941 of the new element 94, plutonium, in California by Dr. Glenn T. Seaborg and the demonstration of the first successful nuclear chain reaction in Chicago by Dr. Enrico Fermi in 1942. Hanford's broad research efforts in the fields of metallurgy, radiation effects, biology, aquatic biology, atmospheric physics and other peaceful uses of atomic energy are summarized.

AVN 0519 Exploring the atomic nucleus.

U.S. - Coronet Films - 1969.

English - 14 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Particles (Nuclear physics); Particle accelerators -- United States -- History.

Describes particle accelerator - the basic tools of high energy physics used to explore the atomic nucleus. Shows some of the recent discoveries physicists have made concerning nuclear structure, the basic equipment used, and how the resulting data are analyzed. Explains concepts of atomic structure, how the atomic nucleus is bombarded with other particles, how particle interactions are detected and analyzed via bubble chamber photographs.

AVN 0523 A journal of plutonium.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1969.

English - 47 min. - sd., col. - 16 mm.

Target audience: general. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear energy -- History; Nuclear fuels; Plutonium.

A chronicle of the men and events that led to the discovery, separation and large scale production of plutonium- the most important new element discovered in the last half century. Through the personal reminiscences of Dr. Glenn T. Seaborg, Dr. Emilio Segrè, Burris Cunningham and others, the personal story of the men who discovered plutonium, purified and weighed it, and eventually produced it on a large industrial scale for the Manhattan Project is told.

AVN 0526 Controlled photosynthesis.

U.S. - Lawrence Berkeley Laboratory for the former ERDA - 1971.

English - 24 min. - sd., col. - 16 mm and video.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radioactive tracers; Carbon; Photosynthesis.

Shows research with radioactive tracers on the transformation of raw chemicals into plant sugars. By injecting carbon-14 into the plant, the series of chemical compounds the plant makes before producing food sugars is determined. Some research on enzyme reactions in plants: their influence on carbohydrate, protein and fat production; and finally, the control of photosynthesis through enzymes is described.

AVN 0527 International Nuclear Information System (INIS) : a cooperative venture in world-wide nuclear information processing.

Austria - Filmove Laboratore Gottwaldov for International Atomic Energy Agency - 1972.

English, French, Russian, Spanish - 20 min. - sd., col. - 16 mm and video.

Target audience: general. Of historical interest only.

For new version, please see AVN 0821 'To get beyond there - INIS system'.

Copyright: International Atomic Energy Agency.

Subject(s): INIS (Information retrieval system)

Depicts the nature and operations of the first truly international, decentralized and computerized information processing and dissemination system (INIS), initiated by the IAEA in May 1970. The products of the system, consisting of various literature indexes issued in both printed form and on magnetic tape are described, and their utility to scientists and engineers is shown. The film is suitable for both specialized and general audiences.

AVN 0529 The atom and the environment.

U.S. - Handel Film Corporation - 1971.

English - 22 min. - sd., col. - 16 mm.

Target audience: semi-technical. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Environmental engineering; Radioactive tracers; Radioactivation analysis.

Shows how radioactive carbon is used as a tracer to judge the effectiveness of insecticides

toxic to insect pests but not to humans or livestock. Also shows the use of neutron activation analysis to sample water in coastal regions, to test the ability of flowing streams to purify themselves, to detect the dispersion and types of pollution that kill fish, predict pollution patterns and the interference of dangerous pollutants with the growing process of plants and trees, etc.

AVN 0530 The zonal ultracentrifuge.

U.S. - Argonne National Laboratory - 1971.

English - 6 min. - sd., col. - 16mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Centrifuges; Molecular biology.

Molecular biologists have begun to employ new zonal ultracentrifuges capable of rapid fractionization of large volumes of cell constituents. These centrifuges were developed at the Oak Ridge National Laboratory under the direction of Dr. Norman G. Anderson. Depicts the loading, separation and unloading operation of the new centrifuge and touches upon their role in the purification of viruses using improved operation capabilities.

AVN 0531 Environmental monitoring for nuclear power stations.

Austria - International Atomic Energy Agency, Division of Public Information - 1971.

English, Spanish, German - 15 min. - sd., b&w - 16 mm and video.

Target audience: semi-technical; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Nuclear power plants -- Environmental aspects; Radioisotopes -- Environmental aspects.

The objectives of this film are to assess man's exposure to radiation present in his environment, to investigate the behaviour of released radionuclides, and to improve public relations for the nuclear industry.

AVN 0533 The bitter and the sweet.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1971.

English - 30 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Saline water conversion.

All aspects of desalting technology, and a capsule report on the status of commercial desalting in the western hemisphere given. Blueprints the Agro-industrial complex idea: the belief that the technologies of desalting and nuclear energy must converge to prevent world poverty. Shows nuclear energy to be cheapest source of power - as opposed to coal, oil, gas - to drive conversion systems in desalting water.

AVN 0534 Doorway to diagnosis.

U.S. - Argonne National Laboratory - 1971.

English - 23 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Diagnosis; Radioscopy.

An eternal challenge in biological instrumentation has been to detect and accurately measure radiation which occurs when nuclei undergo transition. Recently revolutionary improvements in such energy resolution have been made through the development of semiconductor detectors, image intensifiers, new rare earth phosphors and refined scanning devices. These clinical advances have armed the physician with better ability to detect and accurately measure the various manifestations of disease.

AVN 0535 Isotopes in environmental control.

U.S. - Battelle Memorial Institute for the former AEC - 1971.

English - 14 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Environmental engineering; Radioactivation analysis; Radioactive tracers.

Shows the uses of radioactive atoms to preserve and restore the environment, i.e., neutron activation analysis in coastal soil sampling; radioactive tracers to detect the movement of sand under the sea causing beach erosion and clogging of harbours and channels; chemical and nuclear techniques in combination to study air pollution by sulfur oxides over cities.

AVN 0536 Nuclear innovations in process control.

U.S. - Battelle Memorial Institute for the Former AEC - 1971.

English - 17 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Non-destructive testing; Radioisotopes in industry.

Depicts the great versatility and sophistication of nuclear methods now available for control of industrial processes and nondestructive testing. The rapid response-time of these techniques makes it possible to incorporate nuclear instrumentation into a loop that provides, for example, automatic control of paper production, and into many steps of the processing of iron ore. The techniques are used in determining; moisture content and impurities in materials, alloy composition, highway road density, defects in turbine blades, and the basic crystal structure of a metal.

AVN 0539 The radioisotope-powered cardiac pacemaker.

Series: Nuclear spectrum USA.

U.S. - Argonne National Laboratory, United States Atomic Energy Commission - 1971.

English - 21 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Cardiac pacemakers.

Heart-block occurs when the natural pacemaker of the heart no longer generates the required electrical impulses to contract the ventricles. The USEEC and the National Institutes of Health have developed an isotope powered pacemaker, with a lifetime of 10 years, which eliminates the risk and the expense of frequent surgical replacement required with battery powered pacers. The entire fabrication, lifetime testing and the complete implantation of the device in a dog is shown.

AVN 0540 Short-lived radioisotopes in nuclear medicine.

U.S. - Argonne National Laboratory - 1971.

English - 27 min. - sd., col. - 16 mm and video.

Target audience: technical; medical, researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear medicine -- History; Radioisotope scanning.

Describes the development of a technetium-99m generator at Brookhaven National Laboratory and its medical applications at the Argonne Cancer Research Hospital. The film also shows methods of producing experimental short-lived radioisotopes in high flux reactors and medical cyclotrons. Refinements of radioisotope scanning techniques are

discussed, and capsule reports made about the Mark III brain scanner, the 16-inch Anger camera, and the depth perception ability of the multiplane tomographic scanner. These refinements offer the physician a better and faster diagnostic picture, with the lowest radiation burden to the patient.

AVN 0551 Safeguarding nuclear energy.

Austria - International Atomic Energy Agency, Division of Public Information - 1971.
English, French, German, Spanish - 28 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Nuclear energy -- History; Nuclear nonproliferation; International Atomic Energy Agency.

Traces the early development of nuclear power and shows the complexities of the fuel cycle and the inspection of civil nuclear installations carried out by the IAEA's safeguard inspectors, to ensure that fissionable materials are not being diverted for military purposes. It conveys that the IAEA is helping to ensure that atomic energy contributes to peace, health and prosperity throughout the world.

AVN 0552 Your place in the nuclear age.

Series: Careers in nuclear science and nuclear engineering.

U.S. - U.S. Atomic Energy Commission - 1969.

English - 26 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear industry -- Vocational guidance.

The basic purpose of this 3-film series is to motivate students to consider careers in the field of nuclear science and engineering. This film gives the student a picture of the professional environment in contractors' laboratories of the U.S. Atomic Energy Commission, in commercial nuclear industries, and in nuclear research in colleges and universities.

AVN 0556 In-service inspection of water-cooled nuclear reactors.

U.K. - Filmatic Laboratories Ltd., - 1972.

English - 11 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- United Kingdom -- History; Water cooled reactors -- United Kingdom -- History.

The film deals with periodic inspection of reactor vessels and reactor components to insure continued safe operation. Visual surface inspection techniques using underwater television equipment especially designed to view small and isolated locations are discussed. Volumetric inspection for metal defects using specially designed ultrasonic and eddy current equipment is also shown and described. Finally some of the test equipment for proving and calibrating the inspection equipment is shown and the techniques used are discussed.

AVN 0557 Alligator rivers uranium.

Australia -Information Service Section, Australian Atomic Energy Commission - 1972.
English - 9 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Uranium mines and mining -- Australia.

Essentially non-technical presentation of a general picture of the Alligator River area in which Australia's major uranium reserves occur. Exploration of sandstone formations is shown along with something of the folklore of the aboriginal people reflected in cave paintings.

AVN 0558 An added sense : the detection of nuclear radiation.

U.S. - Lawrence Livermore Laboratory for the Former AEC - 1972.

English - 24 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Radiation detection; Radiobiology; Radiation protection.

The film summarizes the state of the art in detector technology. Demonstrates the wide use and application of nuclear detectors, and shows various research activities at the Lawrence Livermore Laboratory: A pool-type nuclear reactor: health physics and personnel dosimetry techniques and instruments; biomedical investigations to search for sources of radioactivity in the environment and to study the effects of radiation on plant and animal life; x-ray astronomy, and many other unique applications of detectors.

AVN 0560 Nuclear power from Loviisa I.

Finland - Suomi-filmi - 1972.

English - 20 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear power plants -- Finland-- History.

This film shows the planning and construction of the first nuclear power reactor in Finland. Covers mainly the initial planning by an international team of scientists and shows the progress of the construction work up to the point of topping off.

AVN 0563 Working together.

U.S. - U.S.I.S. United States Information Service - 1957.

English - 20 min. - sd., b&w - 16 mm.

Target audience: general, researchers. Of historical interest only.

(Copyright: with International Atomic Energy Agency)

Subject(s): Nuclear energy -- History; International Atomic Energy Agency -- History.

The film summarizes international cooperation in advancing peaceful applications of atomic energy. It describes: U.S. shipments abroad of radioisotopes; formation of the European Council for Nuclear Research; former president Dwight D. Eisenhower's 'Atoms for Peace' announcement to the UN; first International Conference at the University of Michigan; first shipment abroad by AEC Libraries; UN General Assembly debate on the international agency; the Joint Norwegian-Dutch Atomic Energy Laboratory; atomic energy work of India, Brazil and others; U.S. training of foreign scientists; U.S. agreements with other nations; Geneva 1955 International Conference; approval and signing of the Charter of the International Atomic Energy Agency.

AVN 0564 The twenty-fifth anniversary of the first nuclear chain reaction.

U.S. - Argonne National Laboratory - 1968.

English - 28 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear energy -- United States -- History.

A documentary film produced on the occasion of the celebration of the 25th anniversary of the first chain reaction - the greatest experiment of the 20th century performed by Enrico Fermi and his team in the University of Chicago in 1942.

AVN 0566 Glove box fires.

U.S. - Rocky Flats Division, Dow Chemical Co., for the Former AEC - 1973.

English - 25 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Glove boxes (Safety devices); Radioisotopes; Radiation protection.

The fire properties of glove box construction materials and means for protecting High Efficiency Particulate Air (HEPA) filters from the effects of fire in the glove box system are presented. The design of radiochemical processing buildings and interaction between the design and the escape of particulate contamination are explained. Burning-rate tests of various construction materials installed on a full-scale glove box are shown.

AVN 0570 La construction d'EL-4 (Brennilis).

France - Les Films Roger Leenhardt - 1968.

French - 22 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Commissariat à l'énergie atomique)

Subject(s): Nuclear energy -- France -- History; Gas cooled reactors -- France -- History; Heavy water reactors -- France -- History.

Shows the construction of EL-4 Brennilis, a heavy water moderated, carbon dioxide gas cooled reactor, from the beginning in 1962 to reaching criticality in 1968. The film demonstrates the properties of the reactor and shows loading and unloading during reactor operation.

AVN 0571 Rapsodie.

France - Atlantic-Film - 1968.

French - 22 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: Commissariat à l'Énergie Atomique)

Subject(s): Nuclear energy -- France -- History; Fast reactors -- France -- History; Breeder reactors -- France -- History; Sodium graphite reactors -- France -- History.

Traces the different phases in the construction of the sodium cooled fast breeder reactor, Rapsodie, built from 1962 to 1967 in Cadarache, with the participation of EURATOM. Rapsodie operates at 24 mw. The cooling circuits and other safety problems were cautiously studied.

AVN 0572 A new reality.

Denmark - Statens Filmcentral - 1962.

English - 50 min. - sd., col. - 35 mm and 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- History; Quantum theory; Bohr, Niels Henrik David, 1885-1962.

The film is dedicated to Niels Bohr. It traces the developments in atomic physics as a background to introduce Bohr's Quantum Theory. With model and light experiments it describes how Bohr's principle of complementarity reconciles the two experimental truths: light from atoms emitted in quanta and in waves. Suggests the applicability of the complementarity principle to other contrasting phenomena in life, for example, thoughts and feelings, and also the possibility that the quantum theory might explain the genetic constitution and differences between the species.

AVN 0573 Marie Sklodowska Curie.

Poland - Film Polski; the Educational Film Studio, Lodz - 1967.

English - 30 min. - sd., b&w - 35 mm and video.

Target audience: general.

(Copyright: Central Board of Educational Films, Warsaw)

Subject(s): Nuclear energy -- History; Chemists -- Poland -- Biography; Curie, Marie, 1867-1934.

A documentary film, mainly biographical, showing Marie Sklodowska's childhood years in Warsaw, and later her arrival in Paris. Marriage with Pierre Curie, and their work together leading to their first Nobel Prize for the discovery of radium. She won a second Nobel Prize for her studies of radioactive radiation. After her husband was killed in a traffic accident, she took over his professorship at the Sorbonne, the first woman ever to teach there. Marie Curie died of leukemia caused by overexposure to radioactive radiation.

AVN 0574 Dubna - Joint institute for nuclear research.

USSR - Sovexport Film - 1971.

English - 50 min. - sd., b&w - 35 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- USSR -- History.

This documentary film describes in a general manner the extensive research activities in the six laboratories at Dubna. Briefly covers the foundation of the Joint Institute in 1956 by researchers and scientists from eleven socialist countries. Shows new research trends

first conceived at Dubna, e.g., relativistic nuclear physics: the idea of combining a reactor with an accelerator. Also shows advanced work being done in gas chemistry, nuclear spectroscopy, etc.

AVN 0576 Calibration of radiation monitoring instruments.

Austria - International Atomic Energy Agency - 1973.

English - 20 min. - sd., b&w - 16 mm and video.

Target audience: technical; researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Nuclear counters; Radiation monitoring.

Radiation protection is dependent on good radiation monitoring, and properly calibrated instruments are essential for this work. Simple procedures for periodically checking and recalibrating different kinds of radiation monitoring instruments are shown in this training film.

AVN 0577 Burning characteristics of liquid sodium.

Germany, Fed. Rep. of - n.d.

English - 23 min. - sd. (magnetic), col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Nuclear accidents.; Breeder reactors -- History; Fire extinction.

The film shows experiments designed to study the burning characteristics of different types of fires caused by sodium leaks in fast breeder reactors. Heat of combustion, heat of evaporation, combustion rate, aerosol release, etc. are some of the variables tested with 3 types of fires: area conflagration, spray fires, fires of insulated pipes. Results show that catching covered pans can prevent sodium leak fires.

AVN 0580 Radiotherapie a visee curative = Curative radiotherapy.

France - Les Films du Caducee - 1972.

English - 30 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radiotherapy; Nuclear medicine -- History.

The therapeutic applications of ionizing radiation came into existence at the beginning of the century, but only recently have they become a major factor in the treatment of cancer. The film begins with a review of the physical principles of radiotherapy, and shows the

effects of radiation on tumors and healthy tissues. It then describes the main sources of radiation used in radium treatment and in percutaneous radio therapy. Their characteristics and their respective fields of application, current methods of analysis in which the computer plays an increasingly important part, are also presented. The film ends with the view of a few clinical cases illustrating modern techniques in radiotherapy which, due to the progress made in this field, have now become a more effective and less dangerous weapon.

AVN 0582 Histoire de papillons.

France - Commissariat a l'Energie Atomique - 1973.

English - 22 min. - sd., col. - 16 mm.

Target audience: technical, medical; researchers.

Of historical interest only.

Subject(s): Radioactive tracers; Nuclear medicine --History; Thyroid gland.

This film shows the use of radioactive tracers in measuring the iodine metabolism in the thyroid. It demonstrates various disorders in thyroid functions (hyper- and hypothyroidism, thyroid carcinoma, goitre) and their treatment with radioactive techniques.

AVN 0585 Hidden energy.

Austria - H. Wechselberger, Comet Film - 1971.

English - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy -- Medical applications -- Austria -- History; Nuclear energy -- Agricultural applications -- Austria -- History; Nuclear energy -- Industrial applications -- Austria -- History.

This film shows nuclear research work in progress in various parts of Austria and demonstrates the application of nuclear energy in medicine, agriculture, industry and reactor technology. Geared mainly to the lay public, the film shows that this hidden source of energy can be put into various beneficial purposes to society.

AVN 0588 Signals from our water.

Munich - Gesellschaft fuer Strahlen- und Umweltforschung mbH - 1971.

English, German - 22 min. - sd., col.

Target audience: semi-technical; researchers. Of historical interest only.

Copyright: Gesellschaft fuer Strahlen- und Umweltforschung mbH.

Subject(s): Water -- Pollution; Radiocarbon dating.

This film shows how radioisotopes can be used as tracers to check on water resources and the paths of underground water and to determine the age of underground water by the amount of radioactive carbon it contains. The importance of clean water to maintain life is stressed.

AVN 0592 Power from the high temperature reactor.

U.K. - GBS Productions - 1971.

English - 35 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): High temperature reactors -- U.K. -- History; Dragon project.

The film introduces OECD's reactor "Dragon", a ceramic-fuelled, gas-cooled high temperature reactor which is a joint undertaking of 12 West European countries. The reactor experiment is considered a big success of European co-operation in power development. In full technical details the design, materials, fuels, and safety research of this experiment are presented.

AVN 0595 Microspheres for nuclear energy.

Netherlands - Deltafilm for Nuclear Reactor Development Laboratory of NUKEMA - 1969.

English - 13 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Reactor fuel reprocessing; Nuclear fuels.

The film introduces the Sol-Gel process, developed primarily for recycling thorium reactor fuels. It shows how, at the laboratory scale, this process is applied to prepare ceramic fuels for reactors, using the principle of internal alkaline gelation to form dense droplets of UO₂. These UO₂ spheres are a cheap nuclear fuel.

AVN 0596 Les radiotraceurs et le genie chimique.

France - Gerard Langlois for Commissariat a l'Energie Atomique - 1976.

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: Commissariat a l'Energie Atomique)

Subject(s): Radioactive tracers; Radioisotopes in industry.

This film shows the use of radioactive tracers in chemical engineering; how testing is done inside a circuit element, a reactor, or in more complicated assemblies. The development and application of radioactive tracer techniques in chemical industry is aimed at detecting operational anomalies, to optimize production processes, to study and design new units, and to acquire better knowledge of industrial processes to improve products.

AVN 0597 Atomschiff Otto Hahn.

Germany, Fed. Rep. of - 1968.

English - 37 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear ships -- Germany -- History.

'Otto Hahn' is the first nuclear propelled ship in Germany, which went critical in 1968. As a research vessel, it is being used to accumulate and evaluate operational experience for the development of a new, improved generation of nuclear ships. The film describes the nuclear reactor system of the ship throughout the phases of designing, testing and assembling of components, and the operation of the various reactor systems. Especial emphasis is placed on the reactor core and the control rods, the primary and secondary shielding, the safety containment, and the fuel system.

AVN 0598 St. Laurent des eaux.

France - France Sagittaire Films for Electricite de France - 1972.

English - 16 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- France-- History; Nuclear power -- France -- History.

The first unit of the St. Laurent des Eaux reactor was completed in 1969, and the second in 1971. This reactor has a natural uranium gas graphite system, and is the largest nuclear power production plant in France. The film shows the design, production and the assembling of the components on the site. It also shows the operation of the various systems: (1) the safety structures (insulation of slabs, shielding of the reactor vessel), (2) the components of the reactor core (cooling coils, lead-proof plates).

AVN 0599 La mer est bonne a boire.

France - 1976?

English - 20 min. - sd., col. -16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Saline water conversion.

The need for fresh water doubles every year. The solution of world water shortage is desalination of sea water, which contains 35 grams of salt per liter, and costs 1/4 of the price for the production of mineral water. This film describes various methods of desalination (VTE-multiple effect process; electrodialysis; reversed osmosis, etc.), with a special emphasis on evaporation by flashing in cascades which transforms sea water to steam and later condensates to fresh water. Also a brief description of the experimental ion exchange system used in Grenoble and Toulon, as well as the desalination project in Mauritania is included.

AVN 0600 HTR reactor development in Germany.

Germany - Federal Republic of - 1974.

English - 22 min. - sd., col. - 16 mm. Target audience: technical; researchers. Of historical interest only. Subject(s): Nuclear reactors -- History -- Germany; Gas cooled reactors; High temperature reactors; Uranium.

The subject of this film are the research activities for developing the gas cooled high temperature reactor (HTR) at the Juelich Nuclear research Centre (KFA). The cost of developing uranium resources is compared with the cost of developing the HTR; this comparison shows market prospects to be good for the HTR since it conserves uranium and can help stabilize uranium prices in the future. HTR is also expected to be used in chemical industry besides producing electricity. The design and the operation of the various systems of this reactor are shown in detail.

AVN 0601 Speleologie nucleaire : accident of October 17, 1969 at St. Laurent des Eaux.

France - Gaston Willems, Electricite de France - 1971.

English, French - 30 min. - sd., col. - 16 mm.

Target audience: general; researchers.

Of historical interest only.

(Copyright: Electricite de France)

Subject(s): Nuclear accidents -- France; Radioactive decontamination -- France.

During fuel loading for the St. Laurent 1 reactor, a fuel cartridge blocked a channel causing decrease in the flow of cooling material and a brutal increase in temperature, resulting in the bursting of the channel. The film shows the entire operation of cleaning the uranium debris with the use of the teledeviator under minimal exposure to irradiation. Cleaning and decontaminating the reactor took 116,000 man hours and cost 10 million francs.

AVN 0602 Securite dans les transports radioactifs.

France - Concorde Europe Films - 1976.

French - 16 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Radioactive substances -- Safety measures; Radioactive substances -- Transportation -- History.

Due to the use of nuclear energy in medicine, agriculture, industry, metallurgy, etc. rules of proper packaging are necessary to ensure the safe circulation of nuclear materials, whether in solid, liquid, or gaseous state. The film shows how a package is prepared to contain radioactive materials (inflammable, corrosive or toxic) with an extra margin of security. To transport liquid radioactive material, two metal envelopes are used, which are shock proof and incombustible to prevent accidents due to thermal exposure or excessive shock due to falling. Diagrams show the thermal and shock protection design.

AVN 0603 La radioagronomie.

France - Anafilm - 1976?

French - 18 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Radioisotopes in agriculture; Plant breeding; Insect pests -- Control.

The film shows the use of nuclear techniques to improve agronomic production in the Cadarache station of radioagronomy. Isotopes are used to detect processes, like photosynthesis, which were not possible with traditional methods. Autoradiographic measurements are made through rapid neutrons to study soil composition and chemistry; genetic mutations in plants are produced through irradiation causing the appearance of hidden characteristics. Insect male sterilization is used to exterminate the med-fly.

AVN 0604 Circuits d'essais a grande puissance de generateurs de vapeur chauffes au sodium (CGVS)

France - 1970.

French - 19 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Sodium heated steam generators -- France -- History.

The film describes the various parts of the sodium heated steam generator: the burning chamber; the heat exchange system ; the liquid sodium mixer and the coolant; the circuits

of purification, filters, electromagnetic pumps, etc. Also shown is the function of various pumps related to vapour generation, circuiting and cooling.

AVN 0607 Nuclear medicine.

Australia - Australian Atomic Energy Commission - 1974.

English - 24 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Nuclear medicine -- History; Radioisotope scanning.

This film gives an account of the work being done in the field of nuclear medicine in Australia. It demonstrates the preparation of the most important radionuclides (technetium 99m, molybdenum 98) in the High Flux Reactor at Lucas Heights. These preparations are distributed by air to hospitals all over Australia and by car to laboratories in the Sydney area. The film also illustrates the different procedures with gamma cameras and scanners to visualize the thyroid, the brain, the lungs, the skeleton, etc. A few sequences are devoted to other medical applications of radionuclides such as dynamic function studies and radioimmunoassay investigations.

AVN 0608 Am Netz: Atomstrom (Lingen nuclear power station)

Germany, Federal Republic of - Franck-Film Production - 1976?

English - 15 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear reactors -- Germany -- History.

The film shows the construction and start-up of the Lingen nuclear power reactor (KWL) in the FRG. KWL is a 250 MW(E) BWR with fossil-fired steam super heater, designed and constructed by AEG. The construction was initiated in 1964. In 1968, commercial operation started.

AVN 0609 The liquid drop model of nuclear fission.

U.K.- United Kingdom Atomic Energy Authority - 1973.

English - 13 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Atomic mass; Uranium; Nuclear fission.

A laboratory demonstration of the liquid drop model is used to explain why some heavy nuclei undergo fission. Consideration of the atomic masses of uranium and its fission

fragments shows the source of the enormous energy of fission, the basis of nuclear power production.

AVN 0611 Nuclear power and the Perry environment.

U.S. - The Cleveland Electric Illuminating Company and NUS Corporation - 1973.

English - 22 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear power plants -- United States -- History; Nuclear power plants -- Environmental aspects -- United States.

The film documents a two year comprehensive environmental study conducted by NUS Corporation in connection with the selection of a suitable site for Cleveland Electric Illuminating Company's Newperry Nuclear Power Plant on the shores of Lake Erie. The film presents a graphic checklist for people conducting or planning analysis for site selection. Although the environmental study described in this film deals with the selection of a site for a nuclear power plant, the specific procedures illustrated are applicable to all major industrial construction programs.

AVN 0613 Building an atomic accelerator.

U.S. - Lawrence Berkeley Laboratory for the former AEC - 1973.

English - 28 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Linear accelerators.

The film describes the five basic parts of the atomic accelerator (the Super Heavy Ion Linear Accelerator - Super-HILAC): the injectors, the linear accelerator, the radio frequency power supply, the vacuum system and the magnets. Some of the more important and interesting construction details are shown and explained. Animation is used to help demonstrate the theory of how accelerators work, and how parts of the accelerator function. The film concludes by describing some of the first research performed on this new machine.

AVN 0614 Nuclear spectrum.

U.S.- Argonne National Laboratory - 1973.

English - 28 min. - sd., col - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Cleared for television.

Subject(s): Nuclear research -- United States -- History.

Every day scientists work in new directions, face new problems, discover new information. The purpose of such investigations is based on the belief that most discoveries eventually benefit mankind as man continually tries to improve his understanding of life processes. 'Nuclear Spectrum' visits laboratories and documents new investigations through the voices and words of the scientists directly involved in nuclear research and development or its many spinoff applications. The cast include: Dr. Norman Anderson of AEC's Oak Ridge National Laboratory (ultracentrifuges in molecular biological studies of the human cell), Dr. George Reynolds of Princeton University (image intensification), Dr. Harold Furth, Princeton University (controlled fusion research), Dr. Fred Goulding of AEC's Lawrence Berkeley Laboratory (semi-conductor detectors), Dr. Powell Richards of AEC's Brookhaven National Laboratory (technetium-99 M as a radioactive tracer in nuclear medicine), Dr. David Kuhl of the University of Pennsylvania (clinical brain scanning), Robert Jaske and William Templeton of the Pacific Northwest Laboratory (studies of waste heat in aquatic biology), and Dr. Loren Eiseley, anthropologist.

AVN 0617 The atom and archaeology.

Magic of the atom series

U.S. - Handel Film Corporation - 1975.

English - 25 min. - sd., col. - 16 mm and video.

Target audience: semi-technical; researchers. Of historical interest only.

Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radiocarbon dating; Thermoluminescence dating; Radioactivation analysis in archaeology; Archaeological dating.

New tools of atomic energy have enabled archaeologists in recent years to perform pioneer work in research centres to reveal new data about ancient civilizations. With animation to help explain the concepts, the following applications are shown: (1) radiocarbon dating on the 20,000-year-old jawbone of a buffalo at UCLA, demonstrated by Dr. Willard F. Libby, who received the Nobel Prize for the invention of the technique, (2) thermoluminescence for testing the authenticity of a thousand-year-old statue of a T'ang dynasty horse, (3) neutron activation analysis for tracing the origin of a pottery fragment found in Cyprus, and (4) neutron radiography which reveals the internal structure of a 600-year-old Gupta Buddha.

AVN 0619 Energy - the American experience.

U.S. - Hugh Wittington for the Department of Energy, Office of Public Affairs - 1975.

English - 28 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission) Cleared for television.
Subject(s): Nuclear energy -- United States -- History; Power resources.

The film shows the development of different forms of energy under the unique conditions of the American experience. Questions about energy - how to extract it, use it, convert it, and conserve it - are universal; only the answers differ for each historical period. The film shows ERDA's efforts in planning the best use of present Power resources, and the mobilization of science and industry to develop new sources. We see new work in ancient sources (solar, geothermal, wind power) as well as new developments (coal being converted to synthetic gas and oil, oil from oil shale) while work in enhancing oil wells and developing nuclear power plants and breeder reactors goes on. The film ends with a look into the future work at fusion and solar electricity.

AVN 0623 The heart of the matter.

U.S. - Audio Productions for the former ERDA and National Science Foundation - 1975.
English - 6 min. - sd., col. - 16 mm.
Target audience: semi-technical, researchers. Of historical interest only.
Copyright: Doubleday Multimedia.
Subject(s): Particles (Nuclear physics); Particle accelerators -- United States -- History.

The Fermi National Accelerator Laboratory (FERMILAB) near Chicago offers unique facilities to qualified scientists from universities around the world. In underground tunnels and with the help of special 'microscopes', scientists study the basic nature of the atom and use atomic particles to analyze the structure of matter.

AVN 0626 The ultimate energy.

U.S. - Argonne National Laboratory for the former ERDA - 1976.
English - 28 min. - sd., col. - 16 mm.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: U.S. Nuclear Regulatory Commission)
Cleared for television.
Subject(s): Nuclear fusion.

One of the most challenging research activities that has gripped the world of physics has been the successful demonstration of controlled thermonuclear fusion in the laboratory. The film captures much of the theory and experiments. Through the use of 3-dimensional models, the film poses the severe conditions that researchers must satisfy to hold the plasma for about one full second. Visits to the five major fusion research laboratories (at Princeton, Oak Ridge, Los Alamos, Livermore, and San Diego) as well as interviews with many of the physicists who have dedicated their research lives to "imitate the sun" are included. The particular type of devices used to investigate plasmas (magnetic bottles) and

the sophisticated laser technology being employed to create fusion conditions are described.

AVN 0627 Bridge to tomorrow.

U.S. - Screenscope Production for the National Rural Electric Cooperative Association - 1977.

English - 27 min. - sd., col. - 16 mm and video.

Target audience: general.

Subject(s): Nuclear energy -- History; Power resources.

The film explains the vital role of nuclear energy in man's search for a reliable energy future.

AVN 0628 Nuclear power reactors - U.K.

U.K. - an Ace Film Production for the United Kingdom Atomic Energy Authority - 1976.

English - 22 min. - sd., col. - 16 mm.

Target audience: general; researchers.

Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear energy -- United Kingdom -- History; Nuclear fission.

The film explains the principles of nuclear fission and how it has been applied to the generation of electricity. Reactor systems developed in the UK are introduced with animated sequences.

AVN 0629 Energy for a healthy future.

Austria - Comet Film for Boehler Brothers - 1975.

English - 18 min. - sd., col. - 16 mm.

Target audience: semi-technical; researchers. Of historical interest only.

Subject(s): Breeder reactors -- History; Sodium graphite reactors -- History; Reactor fuel reprocessing.

Energy is the basis of modern society and must be produced in non-polluting form. This film shows Boehler research activities at Austria's Seibersdorf Laboratory aimed at developing high temperature alkali metal technology products to be used for fuel recycling components of breeder reactors. Also shown are the sodium cooling test units at the universities of Karlsruhe and Berlin, and the sodium cooling loop at Seibersdorf. Research on sodium cooling problems is described, visualizing the possibility of saving the present

99% natural uranium waste by conversion into fissile element through neutron capture in the breeder reactor of the future.

AVN 0630 Energy : the nuclear option.

UK - Robert Kruger in association with United Kingdom Atomic Energy Authority - 1977.

English - 11 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: United Kingdom Atomic Energy Agency)

Subject(s): Nuclear energy -- United Kingdom -- History; Power resources.

The film describes the importance of energy to our way of life and the contribution which nuclear power has made so far and may make in the future. If we are to conserve our fossil fuels for transport and chemical feedstocks it will become increasingly necessary to consider the nuclear option.

AVN 0631 Safe transport of radioactive materials.

U.K. - Ace Film Productions for International Atomic Energy Agency - 1977.

English - 22 min. - sd., col. - 16 mm and video.

Target audience: general; researchers. Of historical interest only; superseded by: AVN 0787, 1994.

Copyright: International Atomic Energy Agency.

Subject(s): Radioactive substances -- Transportation -- History.

The film shows the widespread use of radioactive materials in industry, medicine and research and explains the need for transporting nuclear material from producer to user. It shows the way in which packages containing radioactive materials are handled during transport and explains the most important provisions of the IAEA transport regulations, safety series no. 6, such as packaging design criteria and testing requirements, illustrated by various tests carried out, specimen packages, and package and freight container labelling. Also illustrated are practical measures to be taken in case of an accident.

AVN 0632 The MIS - in - service inspection machine.

France - Les Films Roger Leenhardt - 1977.

English - 15 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Nuclear pressure vessels; Ultrasonic testing.

The film describes the operating possibilities of equipment developed in France for in-service inspection of reactor pressure vessels. Presenting some fundamental information about ultrasonic inspection techniques, the film illustrates how the best possible results in locating defects could be achieved.

AVN 0633 Nuclear risks: emergency organization.

Sweden - Svensk Tonfilm for the Swedish State Power Board - 1977.

English - 30 min. - sd., col. (magn. soundtrack) - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear safety; Nuclear accidents -- Prevention; Radiation dosimetry --

History; Radioactive decontamination.

This film gives an overview of the precautions and emergency procedures taken in the event of a nuclear accident in Sweden. Using animation, it first shows how a reactor can regulate itself and shut down automatically to control small pipe leakages. In the more serious case of a pressure vessel rupture, which involves the release of fission products into the environment, an emergency plan is put into action. There is a description of how residual external radiation dose is measured. If necessary, the population is evacuated and the site decontaminated. The film concludes by stressing the improbability of nuclear accidents.

AVN 0635 Nitrogen fixation in Lucerne.

U.K. - British Film Institute - 1977.

English - 33 min. - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

Subject(s): Fertilizers; Nitrogen -- Fixation.

Nitrogen fixation in lucerne is of great importance for agricultural fertility. The film illustrates in detail research work on the quantitative determination of nitrogen in lucerne cultivated under varying conditions. The effect of fertilizers and particularly that of bacteria on the nitrogen fixation process is demonstrated.

AVN 0636 Safe handling of plutonium in research laboratories.

Austria - International Atomic Energy Agency, Division of Nuclear Safety and Environmental Protection - 1976.

English - 24 min. - sd., col. - 16 mm and video.

Target audience: technical; staff involved in plutonium research, researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Plutonium -- Safety measures.

This training film illustrates the main basic requirements for the safe handling of small amounts of plutonium. The film is intended not only for people setting up plutonium research laboratories but also for all those who work in existing plutonium research laboratories. It was awarded the first prize in the category "Protection of Workers" at the international film festival organized at the 4th World Congress of the International Radiation Protection Association (IRPA) in Paris in April 1977.

AVN 0638 Einstein : the story of the man by his friends.

U.K. - British Broadcasting Corporation Television Enterprises - 1975.

English - 55 min. - sd., b&w. - 16 mm and video.

Target audience: general; students.

(Copyright: British Broadcasting Corporation)

Subject(s): Einstein, Albert, 1879-1955; General relativity (physics).

The film presents Albert Einstein's life, related by friends and with original footage. His youth, his education, his achievements are discussed, his theory of relativity presented. Einstein's letter to President Roosevelt concerning the atomic bomb documents the tragedy of an outstanding life.

AVN 0639 The chemical processing of irradiated fuel.

France - Publi-Cine and Promincom for Eurochemic - 1965.

English - 30 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

Subject(s): Reactor fuel reprocessing.

The Eurochemic company, a joint undertaking of the European Nuclear Energy Agency, was created by 13 member countries of the OECD. Eurochemic has as its objective the processing of fuel elements after irradiation in nuclear reactors for recovering the newly formed plutonium and the remaining uranium. For this purpose, a chemical plant, a testing station, hot and cold laboratories have been built at Mol, Belgium, for the processing of the whole range of nuclear fuels. The first part of the film shows the construction of this reprocessing plant, the second part describes various stages of the operation - dissolution of fuel, first extraction cycle (using pulsed columns) to separate uranium and plutonium from fission products, second cycle to separate uranium from plutonium, and the purification cycle of plutonium using mixer-settlers. The pool for the storage of irradiated fuel elements to be reprocessed is also described.

AVN 0639 The fast reactor.

U.K. - Ace Film Productions for United Kingdom Atomic Energy Authority - 1979.

English - 24 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers.

Of historical interest only.

(Copyright: U.K.A.E.A.)

Subject(s): Thermal reactors -- United Kingdom; Fast reactors -- United Kingdom.

Directed mainly to a British audience, the film discusses thermal and fast reactors and the basic principles of operation of each. The history of fast reactor R+D at the UKAEA's Dounreay establishment is described and particular aspects of this R+D programme discussed. The 250 MWE prototype fast reactor and some safety features are discussed in some detail, reprocessing and transport are briefly described; the advantages of fast reactor systems are pointed out.

AVN 0640 Using radioactivity.

U.K. - World Wide Pictures Ltd - 1980.

English - 20 min. - sd., col. - 16 mm and video.

Target audience: general.

Subject(s): Radioactivity; Radioisotopes.

After a general discussion of radioactivity, its natural occurrence and production by man, various uses of radioactive materials are described using examples from agriculture, hydrology, environmental monitoring, archaeology, industry, and medicine.

AVN 0641 Radioactive waste processing and storing facility in Puspiokszilagy, Hungary.

Hungary - Vt. Idegenforgalmi Film Studio - 1978.

English - 15 min. - sd., col. - 16 mm.

Target audience: semi-technical; schools.

Subject(s): Radioactive waste management -- Hungary.

The film outlines activities which produce radioactive waste, and gives details of chemical processing and intermediate storage at the new central waste depository in Hungary.

AVN 0642 Energy from the atom.

Canada - Crawley Films Ltd. - 1978.

English, French - 12 min. - sd., col. - 16 mm.

Target audience: general. Of historical interest only.

Subject(s): Nuclear fission; Heavy water reactors -- Canada -- History; Nuclear power industry -- Canada -- History.

Explanation of nuclear electricity generation, of fission and how a nuclear reactor works, including production of nuclear fuel and heavy water and need for feeding nuclear electricity into the Canadian grid, giving figures until 1990.

AVN 0643 This nuclear age.

Canada - Crawley Films Ltd. - 1974.

English, French - 29 min. - sd., col. - 16 mm.

Target audience: general, semi-technical; researchers. Of historical interest only.

Copyright: National Film Board of Canada.

Subject(s): Nuclear power plants -- Canada -- History; Nuclear energy -- Canada -- History; Nuclear power industry -- Canada -- History.

Takes a look at atomic energy in Canada with emphasis on the CANDU System for generating electric power. These reactors use natural uranium fuel and heavy water as a moderator, thus enabling Canada to use plentiful uranium resources and to export by-products of nuclear research, such as heavy water and radioactive isotopes. Some of Canada's nuclear power stations and nuclear research institutes are introduced (Chalk River, Whiteshell, Pickering, Gentilly).

AVN 0644 Africa and the tsetse fly.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1985.

English - 52 min. (pt. 1: 23 min., pt. 2 : 29 min.) - sd., col. + 1 script - 16 mm and video.

Target audience: semi-technical, technical.

Copyright: International Atomic Energy Agency.

Subject(s): Insect sterilization -- Africa; Tsetse-flies -- Control -- Africa.

Trypanosomiasis, an infection transmitted by the tsetse fly and causing sleeping sickness in man and Nagana disease in animals, is widespread in Africa. It affects 37 countries (an area as large as the United States) and leads to great losses in the national economy. It can be fought effectively by programmes to eradicate the tsetse fly with the sterile insect technique. The film shows the tsetse habitats and biology and demonstrates how its

reproduction circle can be interrupted by sterilization of male flies with gamma rays. This method has proven an effective alternative to the use of pesticides, because its efficiency increases with each generation and it causes no environmental pollution problems.

AVN 0647 Medical management of radiation accidents.

Austria - Division of Nuclear Safety, International Atomic Energy Agency - 1981.

English - 20 min. - sd., col. + 1 English script - 16 mm and video.

Target audience: technical; health physicists, medical doctors.

Copyright: International Atomic Energy Agency.

Subject(s): Radiation -- Accidents; Radiation injuries -- Treatment.

The film gives advice on actions to be taken in case of a radiation accident. It addresses accidents involving external irradiation of the whole and partial body, very localized exposure, uptake of radioiodine, inhalation of transuranium elements and a wound of a finger. The film is intended to illustrate the Agency's Safety Series No. 47 entitled "Manual on Early Medical Treatment of Possible Radiation Injury" published in 1978.

AVN 0648 Energy for all.

U.K. - Anthony Barrier Productions for Nuclear Power Information Group - 1981.

English - 33 min. - sd., col. - 16 mm.

Target audience: general.

Subject(s): Nuclear energy -- United Kingdom; Power resources -- United Kingdom.

Examines present Power resources and considers the options available now and for the future, showing that nuclear power can answer some of the problems in the supply of electrical energy.

AVN 0649 Power from the atom.

U.K. - United Motion Pictures for United Kingdom Atomic Energy Authority - 1981.

English - 25 min. - sd., col. - 16 mm.

Target audience: general.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear power; Nuclear reactors.

The film shows the development of nuclear power. Using simplified models, it demonstrates how nuclear power reactors generate electricity, and presents the main types of reactors in use.

AVN 0650 Sludge disposal: a new option.

U.S. - Sandia Laboratories - 1981.

English - 18 min. - sd., col. - 16 mm.

Target audience: semi-technical.

Subject(s): Sewage sludge; Radioisotopes in agriculture.

This film shows how a nuclear by-product such as Cs-137 could be used to render sewage sludge for agricultural uses. Untreated sewage sludge still contains pathogenic microorganisms, viruses and parasites which, under certain circumstances, can be dangerous to human beings and animals. A demonstration sludge irradiator using Cs137 as radiation source has been built at Sandia National Laboratory in Albuquerque, New Mexico. Large scale experiments conducted at this facility in co-operation with New Mexico State University show that municipal sludge irradiated at a dose of 1 mrad is safe for immediate release to the environment. The treated sludge has exceptional value as a soil amendment and fertilizer, as well as being an excellent range supplement for ruminant animals.

AVN 0651 Spent reactor fuel storage in granite.

U.S. - Lawrence Radiation Laboratory - 1981.

English - 13 min. - sd., col. - 16 mm and video.

Target audience: general, semi-technical.

Subject(s): Radioactive waste disposal in the ground; Spent reactor fuels -- Storage.

The film outlines a concept for underground storage of spent reactor fuel that is being explored on an experimental scale at the Nevada test site in the USA as part of a large potential nuclear fuel storage plant. The film illustrates the design of the storage facility, operation of the facility, including remote control of fuel emplacement in storage positions and surveillance measurements, and transport of fuel casks.

AVN 0652 Man and radiation.

Canada - Vue Touristique Filmstudio, Budapest, for AECL Commercial Products - 1981?

English - 20 min. - sd., col. - 16 mm.

Target audience: technical; students, prospective customers for CANDU products.

(Copyright: Atomic Energy of Canada Ltd.)

Subject(s): Radioisotopes in medicine; Radioisotopes in industry.

The film reviews production aspects and application of various radiation sources that were developed in Canada for use in medicine (gamma cells, x-ray treatment facilities, electron

linear accelerator) and in industry (mobile and static Co60 gamma irradiation units for sterilization purposes, Slowpoke nuclear reactor for uranium analysis). In addition, facilities for irradiation of blood and equipment for mapping the blood flow in the human brain with the Kr-85 method are shown, and manufacturing and transport of Co-60 sources are demonstrated.

AVN 0653 The atom, a closer look.

U.S. - Walt Disney Corporation - 1980.

English - 29 min. - sd., col. - 16 mm and video.

Target audience: general; students, schools.

Subject(s): Nuclear structure; Nuclear reactors; Nuclear energy; Ionizing radiation; Radioactive waste disposal.

The film describes the fundamental atomic structure and explains nuclear energy generation and functioning of a nuclear power reactor. The history of related major discoveries is outlined. The mechanism of a chain reaction (demonstrated with mouse traps) and a nuclear reactor core melt (animation) are illustrated. The various types of ionizing radiation are described. The film also addresses natural radiation exposure and waste management aspects of nuclear energy generation.

AVN 0654 Principles of fission.

U.K. - United Motion Pictures - 1985.

English - 10 min. - sd., col. - 16 mm and video.

Target audience: general; schools.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Nuclear fission.

Explains in basic terms how nuclear fission is used for electricity production, demonstrates the structure of atoms and gives a definition of isotopes. It then describes the basic principles of chain reaction and the role of a moderator. The breeding process for plutonium and the principles of fast reactors are explained as well. A brief comparison is made between the energy content of uranium and coal.

AVN 0656 Single photon emission tomography of brain and liver with a rotating gamma camera and clinical data processing system.

France - Centre Audiovisuel du CEA - 1980?

English - 12 min. - sd., col. - 16 mm.

Target audience: technical, medical students, radiologists, radiotherapists; researchers. Of historical interest only.

Subject(s): Nuclear medicine -- History; Tomography; Diagnosis.

Gamma-tomography is a diagnostic method used to visualize some lesions, particularly tumours, in organs and tissues where other methods offer limited possibilities. Some cases of brain tumours and liver metastases are presented and comparisons of gamma-tomography, ecography and scintigraphy made.

AVN 0657 Utilisation des techniques nucleaires en sedimentologie dynamique.

Belgium - Service Cinematographique du Ministere des Travaux Publics Belges - 1981.

French - 12 min. - sd., col. - 16 mm.

Target audience: technical.

Subject(s): Radioactive tracers; Sedimentation and deposition.

Using the construction of the new outer harbour at Zeebrugge (Belgium) as its setting, the film brings out the role and importance of making measurements of sediment dispersion and migration in the sea by the radioactive tracer method. The film mentions the part played by hydraulic models and the need for their adjustment and goes on to describe the techniques by which full-scale data on the dynamics of sediments can be obtained. The operation of immersing the labelled sediments, the techniques for detecting them and the methods adopted for logging and tracing them are shown and explained by short animated sequences.

AVN 0658 Fusion: the ultimate fire.

U.S. - Jim Veilleux, Film Operations - 1976.

English - 14 min. - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Nuclear fusion; Plasma confinement; Lasers.

Explains in basic terms how electricity is generated in centralized power stations, and points out the scarcity of Power resources. The basic principles of fusion and the problems of confining the plasma are described, pointing out that water will ultimately be an abundantly available fuel. Experiments in various research centres are reviewed, including application of laser technology.

AVN 0659 The management of nuclear waste.

U.K. - United Motion Pictures for United Kingdom Atomic Energy Authority - 1982.

English - 24 min. - sd., col. - 16 mm and video.

Target audience: general, semi-technical.

(Copyright: U.K.A.E.A.)

Subject(s): Radioactive waste disposal; Radiation, Background; Radiation -- Measurement.

The film illustrates the various types of radioactive waste with emphasis on waste production arising at the different stages of the nuclear fuel cycle. It addresses the different methods of treatment (dilution, incineration, filtration, storage, burial) for the low-, intermediate- and high level wastes and gives examples of scientific studies underway in different countries on solidification of high level waste. In addition, some background information is given on natural radiation, types of ionizing radiation, radioactive decay, nuclear power generation and radiation monitoring.

AVN 0660 Nuclear accident dosimetry.

Austria - Division of Nuclear Safety, International Atomic Energy Agency - 1982.

English - 10 min. - sd., col. - 16 mm and video.

Target audience: technical; dosimetrists, health physicists, students, researchers. Of historical interest only.

Copyright: International Atomic Energy Agency.

Subject(s): Radiation dosimetry -- History; Criticality (Nuclear engineering) -- Accidents.

The film presents statistical data on criticality accidents. It outlines past IAEA activities on criticality accident dosimetry and the technical documents that resulted from this work. The film furthermore illustrates an international intercomparison study on nuclear accident dosimetry conducted at the Atomic Energy Research Establishment, Harwell, United Kingdom.

AVN 0661 I work in atomic energy.

UK - World Wide Pictures Ltd. - 1983.

English - 21 min. - sd., col. - 16 mm.

Target audience: general.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Radiation workers; Nuclear physicists.

This film portrays the different skills and outside interests of a cross-section of UKAEA

personnel: a nuclear physicist who plays the flute and saxophone, a metal storekeeper and shop steward who is active in the local football club and community work, a mechanical engineer who rides a motorbike and plays squash, and a senior technician who plays in the local town band. Shows that people who work in atomic energy are 'normal' human beings.

AVN 0662 To reap a rich harvest.

Pakistan - Pakistan Atomic Energy Commission - 1981.

English - 12 min - sd., col. - 16 mm.

Target audience: general; researchers. Of historical interest only.

Subject(s): Nuclear energy in agriculture -- Pakistan; Food irradiation.

The film gives an overview of the research being carried out by the Pakistan Atomic Energy Commission's Nuclear Institute for Agriculture and Biology. Principal research fields cover the use of plant irradiation for the development of hardier and more resistant crops of wheat, cotton and rice; nuclear techniques are used for food preservation and the control of pests.

AVN 0664 Controlling the medfly.

Austria - International Atomic Energy Agency and Kratky Film, Prague - 1983.

English, Arabic - 27 min. - sd., col. + 1 English script and 1 French script. - 16 mm and video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Insect pests -- Control; Insect sterilization; Mediterranean fruit-fly -- Control.

The film shows the International Atomic Energy Agency's activities in the field of insect pest control. It describes, using the example of the Mediterranean Fruit Fly (Medfly, *Ceratitis capitata*), the damage caused by these flies. The sterile insect technique to eradicate these medflies is then explained by showing the research facilities of the IAEA in the Seibersdorf Laboratory as well as the field project 'Moscamed' in Mexico. The film ends with an outlook on the IAEA's project to eradicate the Medfly from Egypt which started in 1983.

AVN 0665 Nuclear fusion : energy for the 21st century.

U.K. - Live Action Communications for United Kingdom Atomic Energy Authority - 1983.

English - 25 min. - sd.,col. - 16 mm and video.

Target audience: general.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear fusion; Plasma confinement; Tokamaks.

The film addresses present efforts to develop fusion as a future energy source. It illustrates European activities, in particular the construction of JET, the Joint European Torus, a fusion facility (Tokamak) set-up at Culham laboratory in the United Kingdom.

Experiments of other laboratories in the USA (PLT, TFTR) and in the USSR are shown as well. The fundamental fusion process, magnetic plasma confinement (Torus) and neutron energy recovery are explained in animation scenes.

AVN 0666 The energy problem : the nuclear solution.

U.K. - Anthony Barrier Productions for United Kingdom Atomic Energy Authority - 1984.
English - 15 min. - sd., col. - 16 mm and video.

Target audience: general.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Power resources; Nuclear energy -- United Kingdom.

Energy generation and population growth are shown in perspective to each other. The potential of various energy sources - including fossil (wood, coal, oil), wind, tidal, solar and nuclear energy (fission and fusion) - is outlined, in particular the role of nuclear energy in the United Kingdom.

AVN 0667 All around us radiation.

U.K. - Gerald Holdsworth Productions for United Kingdom Atomic Energy Authority - 1983.

English - 25 min. - sd., col. - 16 mm and video.

Target audience: general.

Subject(s): Radiation, Background; Radiation -- Safety measures.

In its first part, the film illustrates the discovery of X-rays, radioactivity and alpha-, beta- and gamma rays. Characteristics of alpha-, beta- and gamma radiation, particularly in respect to shielding, are demonstrated. 'Half-life' (of a radionuclide) and the decay of radium and its daughter products are explained in animation scenes. The second part of the film is devoted to a concise description of man's exposure to natural radiation. The film concludes with a brief introduction to the three guiding principles of radiation protection as advocated by the International Commission on Radiological Protection.

AVN 0668 Einstein's universe.

UK - BBC Enterprises - 1979.

English - 113 min. - sd., col. - 16 mm and video.

Target audience: general; students.

Copyright: BBC Enterprises.

Subject(s): Relativity; Space and time.

In this film Peter Ustinov is the layman who is taken on a journey through relativity. He introduces and narrates the programme and speaks Einstein's own words. His tutors include distinguished British and American scientists all of whom are following, in their different ways, the trails of discovery that Einstein blazed. They include Prof. Roger Penrose, pioneer of the 'black hole' theory, Prof. John Wheeler, who knew Einstein personally, and Irwin Shapier, who devised some of the most precise experiments to test the theory of relativity. The programme also includes film from the McDonald observatory in Texas, which is involved in a major way in research into relativity, and from other research centres. Elaborate animation, visual effects and reconstructions are used to help make ideas like 'warped space' and 'mismatched clocks' as clear as possible.

AVN 0669 Mediterranean fruit fly.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1982.

English, Spanish, Arabic - 55 min. - sd., col. - 16 mm and video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Insect control; Sterile insect release; Mediterranean fruit-fly -- Control.

The Mediterranean Fruit Fly (Medfly, *Ceratitis capitata*), widespread in most tropical and subtropical areas, lays eggs under the skin of fruit. Its larvae feed on the pulp, causing tremendous losses for agriculture. Insecticides, besides being hazardous for the environment, have proven too slow for effective pest control (eradication in 20 generations). This training film demonstrates in 7 detailed steps how the Sterile Insect Technique (SIT) can lead to elimination of the insect population within 6 generations. It shows different stages of breeding and describes the sterilization of pupae by exposure to gamma rays provided by a cobalt 60 source.

AVN 0670 Headquarters Vienna.

France - Les Films de Saturne for International Atomic Energy Agency - 1985.

English - 18 min. - sd., col. - 16 mm and video.

Target audience: general.

Copyright: Equipe Arcady.

Subject(s): Nuclear nonproliferation; International Atomic Energy Agency.

The film presents the IAEA safeguards system showing six inspectors at their work in the nuclear power plants Kozloduy (Bulgaria), Mihama (Japan) as well as in the reprocessing plant La Hague (France). The results of inspections are checked at the IAEA Headquarters in Vienna. The film shows all modern techniques applied in the IAEA safeguards system.

AVN 0671 Reactor safety.

Canada - Ontario Hydro Motion Picture and Television Services - 1982.

English - 15 min. - sd., col. - 16 mm.

Target audience: general.

(Copyright: Ontario Hydro)

Subject(s): Nuclear safety; Heavy water reactors -- Canada; Pressurized water reactors -- Canada.

The film presents an in-depth study of CANDU reactors: reactor safety programme, physical barriers involved and shutdown systems are demonstrated, and an employee training plan is introduced.

AVN 0672 Energy for the future.

Canada - Ontario Hydro Motion Picture and Television Services - 1982.

English - 15 min. - sd., col. - 16 mm.

Target audience: general.

Copyright: Ontario Hydro.

Subject(s): Nuclear energy -- Canada.; Power resources -- Canada.

The film looks at the history of electrical energy production in Canada and the surge of energy needs; water, coal and nuclear power are discussed and the fission process is explained. A view of CRNL, NPD, Pickering A and Bruce B stations is presented.

AVN 0673 Handle with care.

Canada - Ontario Hydro Motion Picture and Television Services - 1981.

English - 12 min. - sd., col. - 16 mm.

Target audience: general.

(Copyright: Ontario Hydro)

Subject(s): Radioactive waste disposal in the ground -- Canada; Spent reactor fuels -- Canada; Nuclear safety.

Depicts the operation of a nuclear power station and discusses the handling, transportation and underground storage of spent nuclear fuel.

AVN 0674 Developing tomorrow's energy.

Canada - Crawley Films Ltd. - 1980.

English - 25 min. - sd., col. - 16 mm.

Target audience: general.

(Copyright: Crawley Films Canada)

Subject(s): Nuclear fission; Nuclear fuels; Heavy water reactors -- Canada -- History;

Radioactive waste disposal in the ground -- Canada.

The film looks at the manufacturing of CANDU fuel and explains the fission process, the fueling of reactors and the management of radioactive waste.

AVN 0675 Aufgaben und Loesungen : nukleare Entsorgung

Germany, Fed. Rep. of - Deutsche Industrie- und Dokumentarfilm GmbH. - 1987?

German - 28 min. - sd., col. - 16 mm.

Target audience: semi-technical.

(Copyright: DIDO)

Subject(s): Radioactive waste disposal in the ground -- Germany.

The film deals with all aspects of nuclear waste management in Germany. It introduces burial sites (Gorleben) and reprocessing plants (Wackersdorf) as well as reprocessing procedures (PUREX-process) and precautions for safe disposal of low -, medium- and high level radioactive waste (cask testing, burial in salt mines etc.).

AVN 0676 Bananas and plantains.

Pt.1. Botany and crop history (11 min.) - pt.2. Propagation and breeding (29 min.)

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1986.

English, Spanish - 40 min. - bsd, col. - video.

Target audience: semi-technical.

(Copyright: International Atomic Energy Agency)

Subject(s): Bananas.; Plant micropropagation; Biotechnology.

The film shows the germplasm diversity within the genus *Musa* and the evolution of cultivated forms of bananas and plantains. It depicts cultivation history and geographical distribution and demonstrates features of plant morphology and the floral biology. Economic and nutritional impact and importance of bananas and plantains for developing countries are briefly discussed. The second part of the film surveys problems in the

propagation and genetic improvement of bananas and plantains: fruits of these vegetatively propagated plants are usually seedless, which complicates the application of conventional plant breeding methods. In-vitro techniques are shown to be useful for plant propagation and germplasm conservation. Cross breeding with some semi-sterile clones of bananas has not led so far to lines which are resistant to the most harmful diseases, e.g. Panama disease, Black sigatoka, etc. The Joint FAO/IAEA Division has initiated an in-vitro mutation breeding programme to improve disease resistance in bananas.

AVN 0677 In vitro techniques for crop improvement.

Austria. - Joint FAO/IAEA Division and Kratky Film, Prague - 1985.

English, Spanish - 65 min. - sd., col. - video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Plant tissue culture; Plant cell culture; Plant micropropagation; Hybridization, Vegetable.

The film refers to principles of plant tissue culture - laboratory requirements, media preparation, explant establishment and subculturing method. In vitro growth and development of crop plants are demonstrated and the application of in vitro techniques in plant breeding is discussed. The second part of the film shows the application of cell, tissue and organ culture in plants. Micropropagation and virus eradication are important technologies for the improvement of vegetatively propagated plants; zygotic embryo rescue techniques are used for distant hybridization, especially in cereals. Plant biotechnology offers a potent means for the in vitro generation of enhanced genetic variability - somaclonal and mutagen induced variation. Principles of the isolation and culture of plant protoplasts are explained and their potential for somatic hybridization in higher plants is demonstrated.

AVN 0678 Mutation induction in plants by ionizing radiation.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1985.

English, Spanish - 24 min. - sd., col. - video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Plant mutation breeding.; Plants, Effect of radiation on; Mutagenesis.

This training film deals with the use of X-rays, gamma rays and fast neutrons for mutation induction in plants. Specific features of different types of ionizing radiation and of biological materials are outlined and methods demonstrated which control modifying factors and warrant an efficient physical mutagenesis. The first step of mutation breeding aims at an enhanced level of genetic variation which forms the basis for mutant selection and use in plant breeding.

AVN 0679 Chemical mutagenesis for crop improvement.

Austria - Joint FAO/IAEA Division - 1986.

English, Spanish - 24 min. - sd., col. - video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Chemical mutagenesis; Plant mutation breeding.

Focuses on methodological aspects for the efficient induction of mutations in crop plants by chemomutagens. Mutagen treatment of barley seeds with ethylmethane sulfonate (EMS) is documented in detail to exemplify procedural phases. Reference is made to safe handling and the prevention of biohazards. Induced biological and genetic effects at various plant generations are documented and the use of mutants for crop improvement is discussed.

AVN 0680 Better bananas.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1987.

English, Spanish, German - 13 min. - sd., col. - video.

Target audience: general.

(Copyright: International Atomic Energy Agency)

Subject(s): Bananas; Plant micropropagation; Biotechnology.

This is a public relations film describing problems associated with the genetic improvement of bananas and plantains. These fruit and food crops have a large economic and nutritional value for tropical regions. The vulnerability of bananas, to disease epidemics urgently requires breeding for resistance to black sigatoka (leaf spot disease). The Joint FAO/IAEA Division has initiated a programme and developed a biotechnological strategy for genetic improvement of bananas and plantains.

AVN 0681 Radiological emergencies - planning and preparedness.

U.S. - Film and Video Group, Argonne National Laboratory, for International Atomic Energy Agency - 1985.

English - 55 min. - sd., col. + 1 discussion guide and 1 English script - 16 mm and video.

Pt.1. The radiological emergency (19 min.) - pt.2. Planning for the emergency (18 min.) - pt.3. Preparing for the emergency (18 min.).

Target audience: general, semi-technical.

Copyright: Argonne Film and Video Group.

Subject(s): Nuclear power plants -- Accidents; Emergency management.

This information and training film in three parts deals with the technical background for emergency planning, emergency planning concepts, and emergency preparedness. It describes the technical characteristics of radiological emergencies on which important emergency planning concepts are based, and the purpose of those concepts. The film also demonstrates how emergency organizations must work together to ensure adequate preparedness. The programme reflects the standards, guidance and recommendations of the International Atomic Energy Agency.

AVN 0682 The IAEA laboratories at Seibersdorf.

Austria - International Atomic Energy Agency and Kratky Film, Prague - 1987.

English - 32 min. - sd., col. - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): International Atomic Energy Agency. Seibersdorf Laboratory.

The film shows the history, development and activities at the IAEA's laboratories in Seibersdorf near Vienna. Recent developments in plant breeding and insect pest control (sterile insect technique) and training facilities for fellows from member states are presented.

AVN 0683 INIS : the International Nuclear Information System.

Hungary - OMIKK - 1987.

English, French, Spanish, Chinese, Japanese - 17 min. - sd., col. + 1 English script - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): INIS (Information retrieval system)

Depicts the nature and operations of the first truly international, decentralized and computerized information processing and dissemination system, INIS. The products of the system, consisting of various literature indexes issued in both printed form and on magnetic tapes are described and their utility to scientists is demonstrated.

AVN 0684 Planning for tomorrow : nuclear fuel waste disposal.

Canada - Westminster Films Limited for Atomic Energy of Canada Ltd. - 1982.

English, French - 20 min. - sd., col. - 16 mm.

Target audience: general.

(Copyright: Atomic Energy of Canada Ltd.)

Subject(s): Radioactive waste disposal in the ground -- Canada.

This film deals with nuclear fuel waste management in Canada, where research is concentrating on land based geological disposal of wastes rather than on reprocessing of fuel. The waste management programme is based on co-operation of the AECL, various universities and Ontario Hydro. Findings of research institutes in other countries are taken into account as well. The long-term effects of buried radioactive wastes on humans (ground water, food chain etc.) are carefully studied with the help of computer models. Animated sequences illustrate the behaviour of radionuclides and explain the idea of a multiple barrier system to minimize the danger of radiation hazards.

AVN 0686 Record for tomorrow.

Japan - NHK Service Center -1978.

English - 35 min. - sd., col. (magnetic sound) - 16 mm.

Target audience: semi-technical; medical, researchers. Of historical interest only.

(Copyright: Nihon Hoso Kyokai)

Subject(s): Radiography, Medical -- Complications -- Germany; Radiography, Medical -- Complications -- Japan..

The film, based on a study of the medical records of World War II veterans, sheds light on the toxicity and long-term effects of Thorotrast, a contrast medium largely used in Germany and in Japan for radiographic examinations thirty to sixty years ago. It has now been discovered that internal microirradiation emitted by Thorotrast causes the destruction of surrounding cells and leads to liver cancer and other disorders.

AVN 0687 Food irradiation - a new way to process food.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague, for International Consultative Group on Food Irradiation - 1987.

English, Spanish - 23 min. - sd., col. + 1 English script - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): Food -- Preservation; Radiation preservation of food.

The film shows how irradiation of food by ionizing energy (gamma rays or beams of electrons) can help cut down post-harvest losses of food such as cereals, meat, fish and shellfish and fresh or dried fruits and vegetables. One quarter to one third of the total world food production is lost due to sprouting, destruction by insects and parasites, spoilage by micro-organisms such as bacteria and fungi, and premature ripening. Food contamination not only leads to economic problems but can also cause diseases such as trichinosis, toxoplasmosis, etc. The new technique of food irradiation has been studied by independent groups of experts whose evaluations without exception have been favourable.

One of the main advantages is that there are no chemical residues. On the long run , food irradiation will help to assure world-wide food security.

AVN 0689 Waste in the rock.

Sweden - Len Waernberg, Video Center Sweden, for Swedish Nuclear Fuel Company - 1984.

Swedish - 20 min. - sd., col. - video.

Target audience: general.

Subject(s): Radioactive waste disposal in the ground -- Sweden; Radiation -- Physiological effect.

The film focusses on the safe disposal of radioactive waste in Sweden, in particular on studies being undertaken in connection with underground disposal, e.g. at a site near Siljan in Dalarna. Examples illustrate the radiation exposure from natural radiation sources in comparison with radiation exposure from a reactor.

AVN 0690 Klart Forsmark = Forsmark is ready.

Sweden - Forsgren Produktion - 1984?

English - 14 min. - sd., col. - video.

Target audience: general.

(Copyright: Forsgren Produktion)

Subject(s): Nuclear power plants -- Sweden.

The video illustrates the construction of the nuclear power plant at Forsmark in Sweden. It shows how the plant looks in side (reactor hall, system and components, control room), its preparation for operation, and the plant's environment (including a biotest lake).

AVN 0691 A warmer Life : a film about fish, plants and seals at Forsmark.

Sweden - Forsgren Production AB - 1984?

English - 21 min. - sd., col. - video.

Target audience: general.

Subject(s): Nuclear power plants -- Environmental aspects -- Sweden; Biosphere -- Sweden.

The video gives an insight into a major research project under which various studies are undertaken to find out how cooling water of a nuclear power plant affects the biosphere. The research programme shown comprises effects of temperature-rise in an enclosed

biotest lake on fish and algae. Also included in the tests is a breeding programme for grey seals.

AVN 0692 The IAEA's activities in implementing the conventions on early notification and emergency assistance.

Austria - Argonne Film and Video Group for International Atomic Energy Agency - 1987.

English - 14 min. - sd., col. + 1 script - video.

Target audience: semi-technical.

Copyright: *International Atomic Energy Agency.*

Subject(s): Nuclear accidents; Public information; Radioactive pollution -- Law and legislation; International Atomic Energy Agency.

Shows the efforts undertaken by the IAEA and its member states to implement an effective early notification and emergency assistance program for the case of nuclear emergencies.

AVN 0693 Animals and atoms.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1988.

English, French, Spanish - 16 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: *International Atomic Energy Agency.*

Subject(s): Radioimmunoassay; Radioisotopes in animal culture; Radioisotopes in animal nutrition; Rinderpest.

This is a public relations film describing the Joint FAO/IAEA Division programme in animal production and health. In addition to illustrating the activities of Headquarters and Seibersdorf staff, the film describes how nuclear and related methods are being used to study and solve problems in relation to animal reproduction, nutrition and disease diagnosis in developing countries. Emphasis is placed on the role of radioimmunoassay (RIA) methods for measuring reproductive hormones and isotopes for studying the fermentation of animal feeds in the rumen. As far as disease diagnosis is concerned, the emphasis is on enzyme linked immunosorbent assay diagnostic kits for major diseases such as rinderpest, and on the use of radioactively labelled DNA probes.

AVN 0694 For the benefit of humanity : the International Atomic Energy Agency.

Austria - Division of Public Information, International Atomic Energy Agency, and Kratky Film, Prague - 1988.

English, German - 21 min. - sd., col. - 16 mm and video.

Target audience: general.

Copyright: International Atomic Energy Agency and Kratky Film, Prague.

Subject(s): International Atomic Energy Agency.

This film, produced for the IAEA'S 30th anniversary, gives a general overview of the IAEA's activities and all aspects of the peaceful uses of nuclear energy. It shows the applications of radiation and isotopes - industry, medicine, agriculture and hydrology. It discusses the production of electricity by nuclear power plants and presents the IAEA's activities for nuclear safety, the IAEA safeguards system and the International Nuclear Information System (INIS).

AVN 0695 Headstart on tomorrow.

U.S. - Public Relations Department, Consumers Power Company - 1962.

English.- 12 min. - sd., col. - video.

Target audience: general; researchers. Of historical interest only.

Copyright: Consumers Power Company.

Subject(s): Nuclear power plants -- United States -- History.

This Consumers Power Company public relations film, narrated by Ronald Reagan, presents several nuclear power stations in the United States, particularly concentrating on CP's Big Rock Point nuclear plant, Michigan. It shows various stages of the construction of the plant, its fuelling and operation and its reaching criticality on September 27, 1962.

AVN 0696 Accident testing.

U.S. - Motion Pictures-Video Services Division, Sandia National Laboratories, for U.S. Department of Energy - n.d.

English - 12 min - sd., col. - 16 mm.

Target audience: technical; researchers. Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radioactive substances -- Transportation -- History.

Shows a series of tests predicting and verifying the ability of nuclear fuel shipping casks to survive extreme accidents (collision, puncture, fire, immersion in water) without release of radioactivity to the environment. The use of computers to analyze impact on transportation casks is demonstrated as well as computer simulation tests, scale model tests and full scale tests at various speeds.

AVN 0697 TVO studies the bedrock.

Finland - Photovision Videoteam for TVO Industrial Power Company - 1988.

English - 15 min.- sd., col. - video.

Target audience: general, semi-technical.

Copyright: Photovision Videoteam.

Subject(s): Radioactive waste disposal in the ground -- Finland.

Describes the work that the TVO Industrial Power Company, under a program of the government, is carrying out in order to locate a suitable site for the underground disposal of radioactive waste in Finland. This long-term investigation, checking various sites for waste burial at a depth of 500 m, is collecting and comparing data with the help of computers to ensure safe management of spent nuclear fuel.

AVN 0698 Chernobyl - a chronicle of difficult weeks.

For Russian version with English subtitles, please see AVN 0841.

German - 55 min. - sd., col. - video.

Target audience: general.

Copyright: Ukrainian Documentary Film Studios.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986.

The film demonstrates how authorities and volunteers dealt with the accident at the nuclear power plant at Chernobyl in the Ukraine. The efforts to get the fire under control, to take care of patients with radiation injuries, and to evacuate about 100 000 inhabitants of the area, are shown.

AVN 0699 The dosimetry programme of the IAEA.

Vienna - Dosimetry Section, Division of LifeSciences, International Atomic Energy Agency and Kratky Film, Prague - 1987.

English - 20 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: International Atomic Energy Agency.

Subject(s): Radiation dosimetry -- Standards; Calibration.

Describes the activities of the IAEA's Dosimetry Laboratory which provides calibration and comparison services for secondary standard dosimetry laboratories (SSDLs) of Member States. In addition, a joint IAEA/WHO postal dosimetry service has been established for radiotherapy centers. The International Measurement System and the calibration "chain" from measurement standard instruments of the International Bureau of

Weights and Measurements (BIPM) through the primary and secondary standards to the dosimeters of the users are presented as well.

AVN 0700 N-15 analysis by emission spectrometry.

Austria - International Atomic Energy Agency, in collaboration with the Food and Agriculture Organization of the United Nations - 1983.

English, Spanish - 30 min. - sd., col.- video.

Copyright: International Atomic Energy Agency.

Subject(s): Nitrogen -- Isotopes -- Analysis; Emission spectroscopy.

The stable isotope of nitrogen, N-15, has become widely used as tracer in agriculture, medicine and biology research. The film gives an overview of the sample preparation and analytical procedures followed in the analysis of the nitrogen isotopic composition ($^{14}\text{N}/^{15}\text{N}$ ratio) by optical emission spectrometry at the Seibersdorf Laboratory. The subsampling of plant material and the several steps of chemical pretreatment such as Kjeldahl digestion, distillation, titration and adjustment of the proper N concentration in the extract are demonstrated. The preparation of the discharge tubes is shown in detail. Final measurement of the $^{14}\text{N}/^{15}\text{N}$ ratio is carried out with the NOI-5 and JASCO emission spectrometers.

AVN 0702 Nuclear power - the next generation.

U.K. - Quanta for Central Electricity Generating Board - 1987.

English - 23 min. - sd., col. - video.

Target audience: general; intended for secondary schools.

Copyright: Central Electricity Generating Board.

Subject(s): Nuclear power plants -- United Kingdom; Pressurized water reactors -- United Kingdom.

The film introduces Britain's first pressurized water reactor (PWR) at Sizewell in Suffolk. It explains how a PWR works, how it differs from other types of nuclear power station and the role it can play in meeting a nation's increasing demand for electricity. It looks at the years of detailed planning, research and development that have gone into ensuring that the British PWR will be safe, economic and reliable.

AVN 0703 Chernobyl - could it happen here?

U.K. - MCC for Central Electricity Generating Board - 1986.

English - 14 min. - sd., col. - video.

Target audience: general.

Copyright: Central Electricity Generating Board.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Nuclear reactors -- Safety measures; Nuclear power plants -- United Kingdom.

Following the accident at the Soviet nuclear power station at Chernobyl in April 1986, the CEGB produced this videofilm which has now been updated in the light of the information provided by the Soviets at the International Atomic Energy Agency Conference in Vienna. At this conference it was made clear that the Chernobyl accident would have been impossible in any nuclear reactor operational outside the USSR. This video explains why. It examines the main reasons for the failure of the reactor at Chernobyl and the two fundamental design flaws which resulted in the sequence of events leading up to the accident. It shows how British reactors have built-in protection to compensate for failure in any part of the system, and how the reactors are tolerant to operator error. The programme also explains the safety standards and regulations which are enforced in CEGB nuclear power stations and the rigorous training that reactor operators have to undergo.

AVN 0704 Energy - the nuclear option.

U.K. - Software Production Enterprises for Central Electricity Generating Board - 1987.

English - 29 min. - sd., col. - video.

Target audience: general.

Copyright: Central Electricity Generating Board.

Subject(s): Nuclear energy -- United Kingdom; Nuclear power industry - United Kingdom; Renewable energy sources.

In this film, ex-politician, TV-interviewer and journalist Brian Walden considers the growing demand for energy both in the United Kingdom and in the developing countries of the world, and examines the way in which those needs can be met. The role that alternative energy sources such as wind and tidal power can play, is considered in relation to the case for nuclear generated electricity. The programme goes on to review the risks associated with nuclear energy and the likelihood of a serious nuclear accident occurring in Britain. The Chernobyl accident in USSR and the Three Mile Island accident in the USA are examined, and the design and operation of these power stations is contrasted with the rigorous safety measures in Britain.

AVN 0705 Better plants through mutations: the Joint FAO/IAEA Division's programme in plant breeding and genetics.

Austria - Joint FAO/IAEA Division and Kratky Film, Prague - 1988.

English - 17 min. - sd., col. + 1 English script - video.

Target audience: general; semi-technical.

Copyright: International Atomic Energy Agency.

Subject(s): Plant mutation breeding.; Plant biotechnology; Plant tissue culture.

This is a public relations film describing problems associated with the genetic improvement of crop plants through induced mutations. Mutations are the ultimate source of genetic variation in plants. Mutation induction is now established as a practical tool in plant breeding. The Joint FAO/IAEA Division and the IAEA's laboratory at Seibersdorf have supported research and practical implementation of mutation breeding of both seed propagated and vegetatively propagated plants. Plant biotechnology based on in vitro culture and recombinant DNA technology will make a further significant contribution to plant breeding.

AVN 0706 Atoms for increased soil productivity.

Austria - Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture and Kratky Film, Prague - 1988.

English - 18 min. - sd., col. + 1 English script - video.

Target audience: general, semi-technical.

Copyright: International Atomic Energy Agency.

Subject(s): Soil productivity; Radioisotopes in plant nutrition; Nitrogen -- Fixation.

This public relations film describes the activities of the Soil Fertility, irrigation and Crop Production Section of the Joint FAO/IAEA Division. Soil is one of mankind's most precious natural resources, but proper management is essential to achieve maximum, sustainable crop production. Isotope and radiation techniques play an important role in solving problems concerning the most efficient use of fertilisers, biological nitrogen fixation, soil water management, and crop physiology.

AVN 0707 Operation Smash Hit.

U.K. - Central Electricity Generating Board Film and Video Branch - 1984.

English - 9 min. - sd., col. - video.

Companion to: AVN 0782 'Operation Smash Hit: fact or fake?'

Target audience: semi-technical.

(Copyright: Central Electricity Generating Board)

Subject(s): Radioactive substances -- Transportation.

Records the train crash staged by the sponsor at Old Dalby in Leicestershire in July 1984. Describes the Central Electricity Generating Board's series of tests - of which the train crash was one - held to demonstrate the strength of the flasks used to transport nuclear fuel from power stations for reprocessing.

AVN 0708 The changing face of Sellafield.

Superseded by: AVN 0721 'Sellafield: a future positive'.

U.K. - Ace Film Productions for British Nuclear Fuels Limited - 1987.

English - 11 min. - sd., col. - video.

Target audience: general.

Copyright: Ace Film Productions.

Subject(s): Nuclear energy -- United Kingdom.

Traces the development of the site throughout the three decades that have now passed since the opening of Calder Hall, with a look towards future expansion and the changing tasks of Sellafield.

AVN 0709 Nuclear fuel service.

U.K. - Sorel International for British Nuclear Fuels Limited - 1985.

English - 9 min. - sd., col. - video.

Target audience: general.

(Copyright: British Nuclear Fuels Ltd.)

Subject(s): Reactor fuel reprocessing -- United Kingdom; Spent reactor fuels -- United Kingdom; Radioactive waste management -- United Kingdom.

A public relations film showing the full range of BNFL's activities in design, enrichment, nuclear fuel manufacture, spent fuel transport, reprocessing and waste management.

AVN 0710 The technology of nuclear fuel reprocessing.

U.K. - Ace Film Productions for British Nuclear Fuels Limited - 1986.

English - 13 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: BNFL Sellafield.

Subject(s): Reactor fuel reprocessing -- United Kingdom; Spent reactor fuels -- United Kingdom.

Explores in some depth the mechanical and chemical engineering processes used in the reprocessing of spent fuel, particularly as applied in the Sellafield Uranium Metal Plant, with some references to the incomplete oxide plant THORP.

AVN 0711 Into the atom : the electric connection.

U.S. - Quantum Film Corp. for Atomic Industrial Forum and U.S. Council for Energy Awareness - 1983.

English - 10 min. - sd., col. - 16 mm and video.

Target audience: general.

Subject(s): Nuclear structure; Nuclear energy; Atoms; Nuclear power plants.

The film explains in basic terms, supported through animation, the nature of the atom and the generation of electricity in a nuclear power plant.

AVN 0712 The science of managing nuclear waste.

U.S. - The Film Group, Inc. for U.S. Committee for Energy Awareness and Atomic Industrial Forum, Inc. - 1986.

English - 18 min.- sd., col.

Target audience: general.

Copyright: Atomic Industrial Forum, Inc.

Subject(s): Radioactive waste disposal in the ground -- United States.

Shows the preparatory work (selection of suitable site, computer model testing of geologic stability and ground water movement, safe transport of waste) for the 1982 U.S. Nuclear Waste Policy Act about safe permanent disposal of high level radioactive waste. The multiple engineered barrier approach to minimize risks is presented with the example of the Nevada Climax Mine test site where the concept of underground burial of waste in deep rock formations was monitored for three years.

AVN 0713 April 6, 1986.

USSR - State Committee for Utilization of Atomic Energy of the USSR - 1986.

English, Russian - 15 min. - sd., col. - video.

Target audience: general.

Copyright: State Committee for Utilization of Atomic Energy of the USSR.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Nuclear accidents; Radioactive decontamination.

The film examines the main reasons for the failure of the reactor at Chernobyl and demonstrates the steps taken to prevent further spreading of radiation and to evacuate the population.

AVN 0714 A play half written : the energy adventure.

U.S. - Bill Stokes Associates for Atomic Industrial Forum, Inc. - 1979.

English - 28 min. - sd., col. - 16 mm and video.

Target audience: general; schools.

Copyright: Atomic Industrial Forum.

Subject(s): Power resources; Nuclear power.

This film portrays energy as the most important element in the human drama. The arts, music, technological development, and living standards are all possible because of energy. Humans have been carelessly using natural resources which has in turn damaged the environment. By looking at how energy has been used in the past, this film encourages the development of nuclear energy technology to ensure positive advancement for future generations.

AVN 0715 Fitting the pieces.

U.S. - Atomic Industrial Forum, Inc. - 1985.

English - 25 min. - sd., col. - 16 mm and video.

Target audience: general.

Copyright: Atomic Industrial Forum.

Subject(s): Radioactive waste disposal in the ground -- United States.

Shows the basic concept of safe permanent disposal of high-level radioactive waste in stable rock formations (beds of rock salt, granite) taking into account new findings in various fields of science. Demonstrates how field research data are used to create computer models for the prediction of geologic stresses and behaviour of transport containers in accidents. Explains the "multiple engineered barrier approach" to minimize risks.

AVN 0716 Using food irradiation to improve food supply, safety and trade.

Canada - Comunicado Associates for The International Consultative Group on Food Irradiation - 1989.

English - 17 min. - sd., col. - video.

Target audience: general.

Copyright: ICGFI.

Subject(s): Food -- Preservation; Radiation preservation of food.

The video, which is made from a slide presentation with synchronized background sound

effects accompanied by narrative, describes how the process of irradiation can enhance food supply, trade and health. In food supply, food irradiation can enhance food security by reducing food losses, wastes and contamination of food such as roots and tubers, fruits and vegetables, stored products, etc. In public health, irradiation can reduce food contamination by pathogens, insects, or fungi, and can replace some chemicals in food. In trade, irradiation will assist governments in reducing trade barriers especially those relating to quarantine and food hygiene. The need for good manufacturing practice and proper control to ensure quality and safety of irradiated food is stressed.

AVN 0717 Nuclear fuel waste research : the Canadian program.

Canada - Crawley Films Limited for AECL - 1980.

English - 24 min. - sd., col. - 16 mm.

Target audience: general.

Copyright: National Film Board of Canada.

Subject(s): Radioactive waste disposal in the ground -- Canada.

The film demonstrates Canada's management of nuclear waste, with emphasis on deep rock burial in the Canadian shield.

AVN 0718 The Capenhurst story.

U.K. - ACE Film production for British Nuclear Fuels Limited - 1987.

English - 8 min. - sd., col. - video.

Target audience: general.

(Copyright: British Nuclear Fuels Ltd.)

Subject(s): Uranium industry -- United Kingdom.

The video presents the BNFL's uranium enrichment plant at Capenhurst, U.K. and explains the enrichment process with the help of animation.

AVN 0719 Springfields : fuel for nuclear electricity.

U.K. - British Nuclear Fuels Limited - 1986.

English - 10 min. - sd., col. - video.

Target audience: general.

Copyright: British Nuclear Fuels Limited.

Subject(s): Nuclear fuels -- United Kingdom.

BNFL's Springfields site manufactures fuel for all Britain's nuclear power stations. Offering a range of products to overseas customers, Springfields has been exporting

nuclear fuel products and services for many years. The programme explains how the site fits into the nuclear fuel cycle, showing the chemical and metallurgical processes involved in making nuclear fuel.

AVN 0720 Sellafield welcomes the world.

U.K. - British Nuclear Fuels Limited - 1988.

English - 8 min. - sd., col. - video.

Target audience: general.

(Copyright: British Nuclear Fuels Ltd.)

Subject(s): Nuclear energy -- United Kingdom.

The film presents Sellafield's new Visitors Centre, opened on 6th June 1988 by HRH the Duke of Edinburgh. The Centre's futuristic exhibition takes visitors on a journey of discovery into the world of nuclear power. An array of life-size working models, computer games, displays, audio-visual presentations and literature explain the concepts of energy, radiation, nuclear fission, and the work of BNFL.

AVN 0721 Sellafield : a future positive.

Supersedes: AVN 0708 'The changing face of Sellafield'.

U.K. - British Nuclear Fuels Limited - 1988.

English - 12 min. - sd., col. - video.

Target audience: general.

(Copyright: British Nuclear Fuels Ltd.)

Subject(s): Reactor fuel reprocessing -- United Kingdom; Nuclear industry -- United Kingdom.

This film takes the audience into parts of the new plant now being commissioned at Sellafield, U.K., and gives some insight into the nature and scale of activities on the site. It explains how reactor fuel is manufactured and what happens to spent fuel which is taken by rail to the massive fuel handling plant at Sellafield where it is reprocessed.

AVN 0722 What about waste?

U.K. - Uden Associates for British Nuclear Fuels Limited - 1989.

English - 28 min. - sd., col. - video.

Target audience: general.

(Copyright: British Nuclear Fuels Limited)

Subject(s): Radioactive waste management -- United Kingdom.

The film explains the nature of radioactive waste, how and why it arises, as well as the methods being used to deal with it. It takes the audience 70 m below the Baltic to explore a repository blasted out from beneath the seabed off the Swedish coast, then to Sellafield to examine the intricate chambers that will reshape the waste in readiness for Great Britain's repository.

AVN 0723 Nucleic acids techniques.

series: The techniques in genetic engineering video library; v.1 (TGE 1)

U.K. - IRL Press Video - 1984.

English - 25 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Recombinant DNA; Molecular cloning; Restriction enzymes, DNA; Gene libraries; Gel electrophoresis.

This first programme in a series of eight (AVN 0723 to AVN 0730) provides a technical summary of the basic manipulations of recombinant DNA and its analysis. At the same time, the viewer is made aware of some potential uses of genetic engineering in medicine, agriculture and industry. The topics covered include: 1) Gene cloning - genomic libraries, DNA libraries, library screening. 2) Restriction enzyme action on DNA. 3) Ligation and recombinant DNA. 4) Restriction enzyme digestion of complex genomes. 5) Agarose gel electrophoresis. 6) Analysis of gene structure --southern hybridization.

AVN 0724 Gene analysis and southern blotting.

series :The techniques in genetic engineering video library; v. 2 (TGE 2)

U.K. - IRL Press Video - 1984.

English - 27 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Immunoblotting; Molecular cloning.

Provides a summary of a particular technique, Southern blotting, within molecular biology, and covers theoretical concepts of this technique in some depth. The first step of most research projects in molecular biology is the cloning of DNA into vectors and the isolation of a single gene sequence. Southern blotting has been a central technique in gene analysis, and therefore this video describes how to use it both for the study of gene structure, and in a family study to follow inheritance of particular genes.

AVN 0725 DNA sequencing using M13.

series :The techniques in genetic engineering video library; v. 3 (TGE 3)

U.K. - IRL Press Video - 1984.

English - 30 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Immunoenzyme technique; Bacteriophage m13; DNA; Molecular cloning.

Steve Brown describes in this video how restriction enzyme techniques combined with new methods using the bacteriophage M13 allow the determination of the base sequence of cloned DNA molecules relatively easily.

AVN 0726 Gene libraries.

series :The techniques in genetic engineering video library; v. 4 (TGE 4)

U.K. - IRL Press Video - 1984.

English - 24 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Cloning.

Cloning - the preparation of gene libraries and the isolation of specific, defined coding sequences from them - is perhaps the single most revolutionary technique to be introduced since microscopy. The video covers this technique in detail.

AVN 0727 Expression of cloned genes.

series :The techniques in genetic engineering video library; v. 5 (TGE 5)

U.K. - IRL Press Video - 1984.

English - 28 min. - sd., col + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Gene expression; Molecular cloning.

Expression is a central subject of this video in which Tim Harris of Celltech talks about production of genes, not in the laboratory but on an industrial scale. While laboratory scientists are aware of the revolutionary developments on a small scale, a similar change is taking place commercially, where traditional high temperature-high pressure processes are being replaced by fermentation vats containing genetically engineered micro-organisms.

AVN 0728 Oligonucleotides - synthesis and use.

series :The techniques in genetic engineering video library; v. 6 (TGE 6)

U.K. - IRL Press Video - 1984.

English - 23 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Restriction enzymes; DNA; Oligonucleotides.

One key set of bio-reagents used in genetic engineering is restriction enzymes, which recognize short DNA sequences and cleave DNA at specific sites to give defined fragments. Their use is widespread. They have become more powerful as tools in molecular biology by our ability to make short oligonucleotides as synthetic primers and complementary sequences, as discussed by Alan Malcolm in this video.

AVN 0729 In vitro mutagenesis.

series :The techniques in genetic engineering video library; v. 7 (TGE 7)

U.K. - IRL Press Video - 1984.

English - 25 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Gene expression; Mutagenesis.

Industrial and agricultural uses require not only that genes can be expressed, but ideally that they can be altered to maximize their expression and optimize their biological activity. One way to change genes (and thus the proteins for which they code, and the mechanisms by which they are controlled) is by site-specific mutagenesis. This topic is discussed by Tony Wilkinson in this video, and he illustrates how the introduction of mutations in the laboratory allows him to determine the sequences of DNA which control the expression of a naturally occurring gene.

AVN 0730 Microdissection and microcloning.

series :The techniques in genetic engineering video library; v. 8 (TGE 8)

U.K. - IRL Press Video - 1984.

English - 18 min. - sd., col. + 1 booklet - video.

Target audience: technical.

Copyright: IRL Press Video.

Subject(s): Microdissection; Molecular cloning.

In this video, Steve Brown discusses his work on microdissection and microcloning of regions of single chromosomes from animal cells. The most obvious immediate applications will be medical. However, scientists working in the agricultural field will also recognize the great advantages in cloning small defined regions of plant cell genomes, for instance, so as to have the ability to look at the way in which genes interact with each other. This technique, coupled with new ways of introducing genes into animal cells and obtaining expression, will be one of those students will need to know for the next generation of experiments on gene structure and function in all organisms from microorganisms to man.

AVN 0731 Radium.

Czechoslovakia - Minervafilm - 1929.

English - 29 min. - sd., b&w - video.

Target audience: general; researchers.

Subject(s): Radium -- History; Uranium -- History; Curie, Marie, 1867-1934.

This film from the year 1929 is one of the first films in science and research produced in the CSSR; the sequence showing the visit of Mme. Curie to Prague was made in 1925. It shows in 4 "chapters" the development of uranium and radium mining and use in the CSSR. 1) History of the discovery of radium, including some famous experiments; 2) Uranium ore mining in Jachymov; 3) Production of uranium dyes and radium; 4) Mme. Curie in Prague.

AVN 0732 Atoms in the service of agriculture : 25 years of co-operation of the Food and Agriculture Organization of the United Nations (FAO) and the International Atomic Energy Agency (IAEA).

Austria - Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture - 1989.

English - 26 min. - sd., col. - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): Radioisotopes in agriculture.

This film displays joint FAO/IAEA co-operation in developing nuclear technology to improve methods in agriculture. The goal of these methods is to help end world hunger without destroying the environment. Such technology includes: monitoring water levels beneath the earth's surface, improving plant varieties, enriching the soil, preserving foods, eradicating harmful insects, etc., by using isotopes and radiation techniques.

AVN 0733 Lessons learned from the TMI-2 accident.

U.S. - The Center for Instructional Design and Interactive Video for American Nuclear Society - 1989.

English - 55 min. - sd., col. - video.

Target audience: semi-technical, technical.

Copyright: American Nuclear Society.

Subject(s): Nuclear reactors -- Accidents -- United States; Three Mile Island Nuclear Power Plant (Pa.) -- Accidents.

The tape includes the highlights of the 2-1/2 hour question and answer meeting which took place on November 4, 1988 with a panel of eleven nuclear industry experts who discussed the lessons learned from the nuclear accident at Three Mile Island (TMI) in 1979. The major points addressed were: core melt, survival of the reactor's lower head, filtered vents, design considerations for future reactors, recovery and cleanup from the accident, the use of robotics in hazardous environments, regulatory and licensing issues, perceptions of the U.S. Nuclear Regulatory Commission as a result of the accident, and the future of nuclear plants.

AVN 0734 50 years with nuclear fission : April 26-28, 1989 : a conference held at the National Institute of Standards and Technology, Gaithersburg, MD.

U.S. - American Nuclear Society - 1989.

English - 12 hrs 40 min. - sd., col. - video (8 cassettes).

Target audience: general; semi-technical.

Subject(s): Nuclear fission -- Congresses; Nuclear industry -- Congresses; Nuclear energy -- History.

The 8 video tapes present the proceedings of the conference "50 years with nuclear fission" held in Gaithersburg, Maryland, April 25-28, 1989. Pioneers of nuclear energy (e.g., G. Seaborg, B. Goldschmidt, P. Savic, J. Wheeler, E. Amaldi, R. Peierls) talk about their role in the development of fission and present a history of important scientific discoveries in this field in their countries.

AVN 0735 Radioactivity and you.

Superseded by AVN 0737 'RCFX : Radiation causes and effect'.

U.K. - Quanta production for United Kingdom Atomic Energy Authority - 1987.

English - 25 min. - sd., col. - video.

Target audience: general; schools.

Copyright: United Kingdom Atomic Energy Authority.
Subject(s): Atmospheric radiation; Radioactivity.

What does it mean when radiation levels are said to have risen? How do we measure radioactivity? Where do we get our exposure to radiation from? This programme answers these and many other questions. It examines the risks we incur through radiation exposure, explains the basic science of radiation measurement, looks at the contributions of natural and man-made sources and tries to remove some misconceptions about radiation.

AVN 0736 Nuclear power.

U.K. - United Kingdom Atomic Energy Authority - 1987.
English - 20 min. - sd., col. - video.
Target audience: general.
Copyright: United Kingdom Atomic Energy Authority.
Subject(s): Nuclear energy -- United Kingdom; Nuclear reactors -- United Kingdom.

The programme describes how a reactor works and examines the different reactor designs including Magnox, AGR (Advanced Gas-cooled Reactor), RBMK (the Russian Chernobyl-type reactor which is being phased out), and PWR (Pressurized Water Reactor). It stresses that the use of uranium, which has no other important commercial use, leaves more of the irreplaceable fossil fuels for transportation and as raw material for making chemicals and fertilizers and provides a potential as a cheap and safe supplier of energy.

AVN 0737 RCFX : radiation causes and effect.

U.K. - AEA Technology - 1988.
English - 25 min. - sd., col. - video.
Target audience: general; schools.
Copyright: United Kingdom Atomic Energy Authority.
Subject(s): Radiation, Background; Ionizing radiation; Radioactivity; Radiation -- Safety measures.

This video is an introduction to the basic science of ionizing radiation and radioactivity. It deals with the origins of ionizing radiation in the decay of atomic nuclei, explains the difference between radiation and radioactivity and the use of the units Becquerel and Sievert, and sheds light on natural background radiation versus 'man-made' radiation, pointing out the risks to health and the various uses of radiation.

AVN 0738 Working for the environment: a programme for European Year of the Environment 1987-88.

U.K. London - United Kingdom Atomic Energy Authority - 1988.

English - 29 min. - sd., col. - video.

Target audience: general.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Environmental protection -- United Kingdom; Environmental monitoring -- United Kingdom.

"Working for the Environment" is a contribution to European Year of the Environment 1987-88. The video looks at the work of UKAEA which is concerned with environmental protection. Scientists introduce some of their projects to monitor pathways by which radioactivity released by nuclear power stations can come back to man (projects at Harwell, Dounreay, etc.) Special interest is taken in examining the behaviour of released chemicals and heavy metals in the food chain.

AVN 0739 The magic metal: uranium.

U.K. - Gerry Gibbons, Ewart Television, for United Kingdom Atomic Energy Authority - 1985.

English - 15 min. - sd., col. - video.

Target audience: general; schools.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear fuels; Uranium; Nuclear reactors; Nuclear fission.

This film, intended for the younger secondary student, explains in basic terms how uranium is used to produce energy. Starting with the atomic structure, it then describes the process of fission, demonstrates the various parts of a nuclear reactor and their functions, and compares nuclear with other fuels.

AVN 0740 Radiation energy on the move.

U.K. - United Kingdom Atomic Energy Authority - 1986.

English - 15 min. - sd., col. - video.

Target audience: general; students.

(Copyright: United Kingdom Atomic Energy Authority)

Subject(s): Nuclear energy -- History; Atomic structure; Radiation -- Industrial applications; Radiology, Medical.

This programme, dealing with basic nuclear science, describes the electromagnetic spectrum and shows the uses of radiation using examples from every-day life and from industry (radio, television, microwave oven, to X-ray examination for air craft safety and

cancer therapy by gamma radiation). The video looks at the early work of scientists such as Becquerel and the Curies. It uses animation to illustrate the different properties of alpha, beta and gamma radiation and their origin within the atomic structure.

AVN 0741 Isotopes in action.

U.K. - United Kingdom Atomic Energy Authority - 1987.

English - 25 min - sd., col. - video.

Target audience: general.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Radioisotopes in industry; Radioisotopes in medicine.

For most people the obvious application of nuclear technology is in power generation. But there are many other uses for radioactive materials or for products made with their help, as demonstrated in this video which looks at the many applications of radioisotopes in modern society (e.g., testing thickness of paper or metal in factories, radioactive tracers in medicine, etc.).

AVN 0742 Great day.

U K. - Ace Film Productions for United Kingdom Atomic Energy Authority - 1985.

English - 20 min. - sd., col. - video.

Target audience: general.

Copyright: United Kingdom Atomic Energy Authority.

Subject(s): Nuclear energy -- United Kingdom -- History.

The film describes the construction and design of the world's first nuclear power station, Calder Hall, and its opening by H.M. Queen Elizabeth II on October 17, 1956. It is also an interesting historical document reflecting the beliefs and aspirations of the time.

AVN 0743 Nuclear spin-off.

U.K. - RhR Productions for United Kingdom Atomic Energy Authority - 1986.

English - 20 min. - sd., col. - video.

Target audience: general; students.

(Copyright: U.K.A.E.A.)

Subject(s): Nuclear energy -- Industrial applications -- United Kingdom; Nuclear energy -- Medical applications -- United Kingdom.

The focus for nuclear energy research in the UK has been mainly the generation of electricity. This film shows how nuclear technology has been transferred to industry,

agriculture, medicine and other areas, producing revolutionary new materials as well as new measuring and detection techniques.

AVN 0744 From darkness to light.

India - Films Division, Department of Atomic Energy? - 1987?

English - 12 min. - sd., col. - video.

Target audience: general.

(Copyright: Films Division, Govt. of India)

Subject(s): Nuclear energy -- India.

This film stresses the importance of nuclear power for the rapidly growing Indian industry. Nuclear energy is presented as the only economical, non-polluting and safe energy alternative for India.

AVN 0745 An Epoch without summer.

India - Homi D. Sethna, Films Division, Department of Atomic Energy? - 1987?

English - 52 min. - sd., col. - video.

Target audience: general.

(Copyright: Films Division, Govt. of India)

Subject(s): Radiation -- Physiological effect; Nuclear warfare.

The tape begins with a 4 minute cartoon clip in Hindi followed by a film sequence "An Epoch without Summer" which portrays a group of students and professors at a campus in India involved in an anti-nuclear war programme. With various activities (photographs, song, dance) they present the dangers of misused nuclear energy and convey the message that nuclear war will lead to nuclear winter. Film clips showing Einstein, Ghandi, the Hiroshima bombing, the Mount St. Helen's eruption, etc., are used to illustrate the consequences of this global dilemma, and it is stressed that action must be taken to ensure that nuclear energy is not used for destructive purposes.

AVN 0746 Safe working practice in the radiochemical laboratory.

U.K. - Imperial College Television Studio - 1990.

English - 21 min. - sd., col. + 1 booklet - video.

Target audience: technical; radiation workers.

Copyright: Imperial College.

Subject(s): Radioactivity -- Safety measures.

It is important to understand the hazards associated with radioactivity and to know how to minimize them. In this film, the necessity of careful planning of experimental work before commencement is emphasized and the actual procedures to register the work are described. As the film is intended for training, it also contains a small comprehension test.

AVN 0747 Phosphorus-32 : safe handling techniques in biochemical laboratories.

U.K. -Imperial College Television Studio - 1989.
English - 15 min. - sd., col. + 1 booklet - video.
Target audience: technical, radiation workers.
Copyright: Imperial College.
Subject(s): Radiation protection; Nuclear safety.

This video programme is designed to form part of the training for workers using phosphorus -32 in biochemical laboratories. As explained in the introduction by Prof. Peter Grant, all the usual precautions for safe working with radioactive materials must be observed. When using phosphorus-32, however, special equipment and techniques are needed, some of which are demonstrated in this programme.

AVN 0748 Iodine-125 safety procedures in a biochemical laboratory.

UK - Imperial College Television Studio - 1989.
English - 12 min. - sd., col. - video.
Target audience: technical; radiation workers.
Copyright: Imperial College.
Subject(s): Radiation protection; Nuclear safety; Radioisotopes; Iodine.

Radioactive isotopes of iodine are of considerable importance in biochemical research. This programme, presented by Prof. Peter Grant, is designed to give workers an introduction to the radiation safety aspects of their use.

AVN 0749 Safe packaging of radioactive waste.

Austria - Gesellschaft fuer Nuklear-und Umwelttechnik, Linkenheim, for International Atomic Energy Agency - 1989.
English, French, Spanish - 16 min. - sd., col. + 1 training booklet - video.
Target audience: technical.
Copyright: International Atomic Energy Agency.

Subject(s): Radioactive waste disposal.

The use of radioactive materials in industry, medicine and research results in the generation of radioactive waste. This presentation covers the conditioning of such material from radioactive spent sealed sources and demonstrates a typical practice showing radium, caesium and cobalt isotopes being safely conditioned and packaged.

AVN 0750 La energia nuclear en Chile.

Chile - Public Relations Department, Comision Chilena de Energia Nuclear - n.d.

Spanish, English - 15 min. and 13 min. - sd., col. - video.

1. La energia nuclear en Chile (15 min.) - 2. Programa Chileno difusion usos pacificos de la energia nuclear (13 min.) - 3. Chilean program for the promotion of the peaceful uses of nuclear energy (13 min.)

Target audience: general.

(Copyright: Comision Chilena de Energia Nuclear)

Subject(s): Nuclear energy -- Chile.

The first film on this video explains the goals and objectives of the Chilean Nuclear Energy Commission, which was founded in 1964. The second film (recorded in Spanish and in English) describes how the Chilean Nuclear Energy Commission promotes the peaceful uses of nuclear energy. Educational programmes for students, professors, technicians, scientists and the general public trying to change negative attitudes towards nuclear energy are introduced.

AVN 0751 International Chernobyl project.

Austria. - Division of Public Information, International Atomic Energy Agency - 1991.

English - 29 min. - sd., col. - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986 -- Environmental aspects.; Radioactive pollution -- Ukraine.

The 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.

AVN 0752 Chernobyl as viewed from the 90's.

USSR - Scientific and Technical Video Information, I.V. Kurchatov Institute of Atomic Energy - 1991.

English - 21 min. - sd., col. - video.

Target audience: general.

Copyright: I.V. Kurchatov Institute of Atomic Energy.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Radioactive contamination; Environmental impact assessment.

It is admitted in this film that after the Chernobyl accident there was a lot of unnecessary secrecy which created a great deal of confusion among the public. The film shows the investigations within the reactor and the efforts undertaken to put the remnants of the reactor into a safe state, including the construction of the sarcophagus which was built around it. The film also presents the radiological environmental monitoring, as well as the health aspects of Chernobyl.

AVN 0753 Nuclear energy and environment.

Austria - Division of Public Information, International Atomic Energy Agency - 1990.

English - 11 min - sd., col. + 1 script - video.

Target audience: general.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Coal-fired power plants; Nuclear power plants; Greenhouse effect, Atmospheric; Atmospheric carbon dioxide.

The film stresses that a drastic reduction in carbon dioxide emissions, mainly from the burning of fossil fuels, must be achieved to limit a dangerous concentration of greenhouse gases in the atmosphere. It compares the environmental costs of different energy sources, in particular the wastes of a coal-fired versus a nuclear plant, and mentions the measures taken to reinforce protection against the risk of nuclear accidents.

AVN 0754 Conditioning of spent sources in developing countries.

Austria - PekkaVision for International Atomic Energy Agency - 1990.

English - 10 min. - sd., col. + 1 script and 1 training material - video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Radioactive waste disposal; Low level radioactive waste disposal facilities.

This video presents the safe handling and conditioning of radioactive spent sealed sources when technological resources are limited and specialized equipment is not available. The process is divided into three phases which are demonstrated in detail: 1) Planning, including training; 2) Conditioning, which is the actual incorporation of the spent sources; and 3) Follow-up, which includes radiological control, documentation and safe storage.

AVN 0755 Illinois low level radioactive waste.

U.S. - Bates Video Production for Illinois Department of Nuclear Safety - 1988?

English - 14 min. - sd., col. - video.

Target audience: general.

Copyright: Illinois Department of Nuclear Safety.

Subject(s): Radioactive waste disposal -- United States.

Today's life style is characterized by an increased demand for energy. As about 46% of the total energy production of the state of Illinois is provided by nuclear energy, the high energy demand leads to an increase in radioactive waste. This video demonstrates how low level radioactive waste is handled, which technologies and safety features are applied and how monitoring programmes ensure that waste disposal does not affect the environment.

AVN 0756 Mitigation of the radiological and radioecological consequences of the 1957 accident in the Southern Urals.

USSR - I.V. Kurchatov Institute of Atomic - 1989.

English - 18 min. - sd., col. - video.

Target audience: semi-technical, technical; radiation experts.

Copyright: I.V. Kurchatov Institute of Atomic Energy.

Subject(s): Nuclear accidents -- USSR; Radioactive contamination; Environmental impact assessment.

This film was produced for the 30th anniversary of the radiation accident in the Southern Urals, at the site of the first radiochemical plant in the USSR for the production of plutonium for military purposes. It describes the causes for the accident and the measures taken to mitigate the radiological and radioecological consequences of the accident for the population and the environment.

AVN 0757 Man and nuclear radiation = L'Homme face au rayonnement nucléaire.

France - Phaestos - 1990.

English - 20 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: Phaestos.

Subject(s): Radiation -- Physiological effect; Nuclear medicine.

The human body has always been exposed to ionizing radiation from various natural sources. Man has created new sources, radiation is used in medical therapy and radiography. Accidental irradiation/contamination may occur. This video explains the properties of ionizing radiation, radioactive decay, and the biological effects of ionization, e.g. lesions in DNA and genetic mutations in the cell. Different methods of assessing and monitoring the exposure of the human body to ionizing radiation as well as decontamination methods are also presented.

AVN 0758 Alien Beans.

U.K. - United Kingdom NIREX Ltd. - 1991.

English - 9 min. - sd., col. - video.

Target audience; general; schools.

Copyright: United Kingdom Nirex Ltd.

Subject(s): Nuclear energy.

This animated video presents a humorous look at how casual visitors from another planet might view the use of nuclear power on earth. Though geared for the younger viewer, it may also serve as a useful discussion starter for other age groups.

AVN 0759 A tunnel in time.

U.K. - United Kingdom Nirex Ltd. - 1991.

English - 20 min. - sd., col. - video.

Target audience: general; schools.

Copyright: United Kingdom Nirex Ltd.

Subject(s): Radioactive waste disposal -- United Kingdom.

This video takes the viewer on a journey through the vastness of geological time. Into this background is set the longevity of radioactive waste and the solution of underground disposal for its long term safety.

AVN 0760 Design for disposal.

U.K. - United Kingdom Nirex Ltd. - 1991.
English - 12 min. - sd., col. - video.
Target audience: general.
Copyright: United Kingdom Nirex Ltd.
Subject(s): Radioactive waste disposal -- United Kingdom.

This video outlines the conceptual design for a possible deep repository at Sellafield for low and intermediate level radioactive waste.

AVN 0761 Sterile insect technique: a field evaluation of the quality of mass-reared fruit flies.

Italy - ENEA in collaboration with Joint FAO/IAEA Division for evaluating performances of new Medfly strains mass-reared by IAEA - 1985.
English - 20 min. - sd., col. + 1 French script - video.
Target audience: technical.
Copyright: International Atomic Energy Agency.
Subject(s): Sterile insect release; Mediterranean fruit-fly -- Control.

To optimize the use of the sterile insect technique it is essential to establish precise programmes for the evaluation of mass-reared flies in comparison with the natural population. This video presents a programme carried out at the island of Prosida which represents an extremely favourable habitat for the development of the flies; the flies are a new strain mass-reared in the IAEA's Laboratory at Seibersdorf, Austria. The technique employed is the Marked Release Recapture Technique, which consists of colouring a predetermined number of flies with fluorescent powder before they are released, and then recapturing them. This method provides valuable data about the flies' adaptability, orientation to the habitat, motility, sexual activity, and reproduction.

AVN 0762 Discovery and the atom.

U.K. - United Kingdom Atomic Energy Authority - 1988.
English - 25 min. - sd., col. - video.
Target audience: general; students.
Copyright: United Kingdom Atomic Energy Agency.
Subject(s): Nuclear energy -- United Kingdom -- History; Rutherford, Ernest, 1871-1937; Chadwick, James R. (James Reid), 1844-1905; Curie, Marie, 1867-1934.

'Discovery and the atom' tells the story of the founding of nuclear physics, from the first

idea of an indivisible 'atomos' to the discovery of the neutron in 1932. Animation explains the science of the classic experiments, such as the scattering of alpha particles by Rutherford. Archive films show the scientists Lord Rutherford, James Chadwick, and Marie Curie.

AVN 0763 What if?

U.K. - United Kingdom Atomic Energy Authority - 1989.

English - 30 min. - sd., col. - video.

Target audience: general, students.

Copyright: United Kingdom Atomic Energy Agency.

Subject(s): Nuclear industry -- United Kingdom; Radioactive waste disposal -- United Kingdom; Nuclear engineering -- Safety measures.

'What if?' is a programme intended for schools and colleges, but is also of interest to the general public. It looks at many aspects of the safety of nuclear power (uranium mining, transport and reprocessing of used nuclear fuel, reactor safety, disposal of nuclear waste, etc.) and tries to answer these questions in a clear and simple manner.

AVN 0764 International radon programme.

Austria - Division of Public Information, International Atomic Energy, in co-operation with Environmental Protection Agency, U.S. - 1991.

English - 12 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: International Atomic Energy Agency.

Subject(s): Radon; Environmental monitoring; Indoor air pollution -- Health aspects; Radiation protection.

Radon, a radioactive noble gas, is formed by radium decay and is inherently associated with radium in uranium ores. Radon and its daughters constitute a potential health hazard (lung cancer) when accumulating in any confined space. This film presents the first stages of a Joint IAEA/US Environmental Protection Agency study in an area in the Central Bohemian massif, where tectonic folds occasionally filled with uranium lead to a high radon concentration in the soil. Subsequently, radon accumulates in cellars and basements and migrates to other inhabited parts of the house. The small town of Petrovice, about an hour's drive south of Prague, was chosen for this study by the national authority as it offers houses with normal and with elevated radon levels relatively close to each other.

AVN 0765 The future of the PWR in Britain.

U.K. - United Kingdom Atomic Energy Authority - 1982.

English - 41 min. - sd., col. - video.

Target audience: general, semi-technical.

(Copyright: United Kingdom Atomic Energy Authority)

Subject(s): Nuclear reactors -- United Kingdom; Pressurized water reactors -- United Kingdom.

Dr. Walter Marshall at the London Chamber of Commerce presents, in simple terms, the differences between various types of nuclear reactors and discusses which type would be most suitable for a safe and cost-effective energy supply in the UK.

AVN 0766 The mediterranean fruit fly.

U.K. - University of Manchester - 1987.

English - 21 min. - sd., col. + English text + French text - video.

Target audience: technical.

Copyright: University of Manchester.

Subject(s): Mediterranean fruit-fly.

The film shows in detail the courtship and mating habits (behaviour patterns) of the mediterranean fruit-fly and illustrates its life cycle.

AVN 0767 Treatment of radiation burns, 1987.

USSR - Zentrnauchfilm - 1986, 1987.

English - 46 min. - sd., col. - video.

Target audience: technical; video is lent to doctors, nurses, hospitals only.

Copyright: Kinostudija.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Radiation injuries.

After the accident at Chernobyl, patients with various degrees of radiation burns were given treatment at Moscow hospital No. 6. The video shows the radiation injuries as well as therapy and treatment in detail.

AVN 0768 The screwworm.

Mexico-United States Screwworm Eradication Commission - 1980.

English, Arabic - 15 min. - sd., col. - video.

Target audience: technical.

Subject(s): Insect sterilization; Screwworm -- Control.

Screwworm flies can live in tropical and subtropical regions of the United States, Central and South America and the Caribbean. They attack all warm-blooded animals, even humans, and can cause severe damage and loss of livestock. The Mexico-United States Screwworm Eradication Commission uses the sterile male technique to control this pest. The training video shows the life cycle and of the flies and their "production " and sterilization in large factories. It stresses the importance of cooperation between livestock producers and commission employees in the collection of samples and the treatment of infested animals.

AVN 0769 Safety of industrial irradiation plants.

Austria -Division of Public Information, International Atomic Energy Agency - 1992.

English - 19 min. - sd., col. - video.

Target audience: semi-technical, technical.

Copyright: International Atomic Energy Agency.

Subject(s): Irradiation; Nuclear safety.

Radiation is nowadays used in many applications in industry and medicine; accidental exposure, however, can have grave consequences as large doses of radiation occur in the 600 accelerator or gamma source plants in use around the world. This film explains the operation of irradiation plants and the safety procedures which must be followed to prevent accidents and to ensure safe use.

AVN 0770 Programa Moscamed.

Mexico - SICA - 1980.

English, Spanish - 25 min. - sd., col. + 1 Spanish script - video.

Target audience: semi-technical, technical.

Subject(s): Insect sterilization -- Mexico; Mediterranean fruit-fly -- Control -- Mexico.

Credits: SARH Secretaria de Agricultura y Recursos Hidraulicos.

Tells the story of the fight against and final extinction of the Mediterranean fruit-fly (*Ceratitis capitata*) in Mexico. By producing billions of high quality sterile flies in the Medfly reproduction and sterilization laboratory in the province of Chiapas and releasing them

over infested areas, the Moscamed Programme succeeded in eradicating this pest from Mexico in 1982.

AVN 0771 Technical Video Documentation UN Security Council Resolution 687.

Lending copy: see AVN 0781 'Mission Iraq'.

Austria - International Atomic Energy Agency - 1991.

English - 23 min. - sd., col. - video.

Target audience: technical.

Copyright: International Atomic Energy Agency.

Subject(s): Nuclear arms control -- Iraq; International Atomic Energy Agency.

This working copy documents the 7th and 8th IAEA inspections to Iraq (Al Tuwaitha, Al Atheer, Al Qa Qaa sites and Al Hat teen High Explosive Test Site) and the destruction and removal of various equipment suitable for nuclear weapon development.

AVN 0772 Atomos para la vida.

Argentina - Departamento de Relaciones Publicas, Comision Nacional de Energia Atomica - 1991?

English - 34 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: Comision Nacional de Energia Atomica.

Subject(s): Nuclear industry -- Argentina.

Introduces Argentina's nuclear programme, giving a view of all aspects of the utilization of nuclear energy for peaceful purposes (supply of radioisotopes for medicine and industry, radiopharmaceuticals, radiosterilization, nuclear medicine and physics, etc.). The film also presents Argentina's nuclear power plants and uranium mines and mills, including the training and research centres at Ezeiza and Bariloche, and the uranium enrichment facility at Pilcaniyeu. 'El cobalto 60 al servicio de la vida' introduces the utilization of gamma ionizing energy yielded by a cobalt 60 source for food irradiation and radiosterilization. The video shows the manufacturing of cobalt 60 at Embalse nuclear power plant, the further processing of the gamma energy sources at Ezeiza Atomic Center, and their final use in industry and medicine.

AVN 0773 CSN Consejo de Seguridad Nuclear.

Spain - Consejo de Seguridad Nuclear - 1991.

Spanish - 17 min. - sd., col. - video.

Target audience: general.

Copyright: C.S.N. Consejo de Seguridad Nuclear.
Subject(s): Nuclear industry -- Spain.

The video presents the purpose and projects of the Consejo de Seguridad Nuclear (Spain) and gives a short overview of all aspects of peaceful uses of nuclear energy. In general terms, it explains natural radiation and nuclear fission, demonstrates uranium mining and the production of nuclear fuel, the functioning of a nuclear power station, disposal of radioactive waste, and the application of isotopes in medicine and industry.

AVN 0774 Vivir con las radiaciones : 10 preguntas y respuestas sobre la radiactividad.

Spain - 1990.
Spanish - 32 min. - sd., col. - video.
Target audience: general.
Copyright: Swiss Nuclear Stations.
Subject(s): Nuclear industry -- Spain.

In ten short parts, the video gives an overview of natural versus artificial radioactivity, explains nuclear fission and introduces the Spanish programmes for the supervision of nuclear power plants and the protection of population and surroundings.

AVN 0775 Interpreting infra-red and NMR spectra.

U.K. - University of Liverpool, Television Service - 1990?
English - 40 min. - sd., col. - video.
Target audience: technical.
Subject(s): Infrared spectroscopy; Nuclear magnetic resonance spectroscopy.

'Interpreting infra-red spectra' demonstrates, in the form of a lecture (tutor and student) and with the help of examples, the methodology and principles of elementary infra-red spectroscopy. 'Interpreting NMR spectra' explains the basic physical principles of Nuclear Magnetic Resonance spectroscopy , a method which provides the most important physical technique for structure determination in organic chemistry.

AVN 0776 In-situ corrosion monitoring.

Austria. - Quantec Nuclear Technologies and Services - 1992.
English - 6 min. - sd., col. + 1 English booklet and 1 German booklet - video.
Target audience: technical.
Copyright: Quantec Technologies.

Subject(s): Gamma ray spectrometry; Semiconductor nuclear counters.

This video promotes the isotope-selective, in-situ, non-destructive gamma spectrometry method for the scanning and determination of the specific activities of corrosive particles and impurities on the inner walls of the primary loops of nuclear power reactors. This new method, developed originally for the nuclear power plant Paks, Hungary, uses a portable high-resolution semiconductor detector. The nuclear physicist Edward Teller, who was present at the introduction of the device in Vienna, described the invention as interesting, as it could contribute to the safety of a reactor and extend the lifetime of a nuclear power plant.

AVN 0777 The transport of radioactive materials.

U.S. - Argonne National Laboratory's Film and Video Group for United States Nuclear Regulatory Commission - 1962.

English - 14 min. - sd., col. - video.

Target audience: general; researchers.

Of historical interest only.

(Copyright: U.S. Nuclear Regulatory Commission)

Subject(s): Radioactive substances -- Transportation -- History.

Provides general audiences with a description of the safety requirements that apply to radioactive materials transport in the United States.

AVN 0778 Sellafield geological investigations.

U.K. - Geofilms Ltd. for United Kingdom Nirex Ltd. - 1992.

English - 10 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: United Kingdom Nirex Limited.

Subject(s): Radioactive waste disposal in the ground -- United Kingdom; Radioactive waste sites -- United Kingdom; Engineering geology -- United Kingdom.

In order to plan the safe disposal of radioactive waste, the prospective site must be examined very carefully. This video shows in detail Nirex's comprehensive geological investigations at Sellafield.

AVN 0779 Moscamed.

Peru - United Nations Development Programme and International Atomic Energy Agency - 1984?

English, Spanish - 12 min. - sd., col. - video.

Target audience: general.

(Copyright: International Atomic Energy Agency)

Subject(s): Insect pests -- Control -- Peru; Mediterranean fruit-fly -- Control -- Peru; Insect sterilization -- Peru.

The Mediterranean fruit-fly (Medfly, *Ceratitis capitata*) was first detected in Peru in 1956 in the province of Huanuco. From there, it subsequently spread to all of the fruit-growing areas of the country. In 1960 it was found in the Tacna valley, where it accounted for more than 25% of the damage to the fruit crop, causing a loss of more than 7.5 million dollars a year. The video presents the Peruvian Medfly Project which was launched in 1984 in the province of Tacna with the primary aim of eradicating the Mediterranean fruit-fly through comprehensive pest control.

AVN 0780 Direct disposal - the alternative way of spent fuel management.

Germany - Ahrens Film GmbH for Kernforschungszentrum Karlsruhe - 1993?

English - 21 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: Kernforschungszentrum Karlsruhe.

Subject(s): Radioactive waste disposal in the ground -- Germany; Spent reactor fuels.

Direct disposal of nuclear waste in underground repositories was developed as an alternative type of spent fuel management. In Germany, geologically stable salt domes were selected for this purpose. The film presents the background information for choosing the site and demonstrates the safety measures ensuring safe handling of waste.

AVN 0781 Mission Iraq.

Austria - International Atomic Energy Agency, Division of Public Information - 1994.

English - 38 min. - sd., col. + 1 English script - video.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): Nuclear arms control -- Iraq; International Atomic Energy Agency.

This video summarizes the activities of the IAEA inspection teams, assisted by the UN Special Commission on Iraq, to uncover, neutralize and prevent the restart of Iraq's military nuclear programme. It documents the destruction or rendering harmless of various sites and equipment used for nuclear weapon development, sometimes under very difficult conditions, and points out the necessity of establishing a comprehensive and sustainable monitoring system for the future.

AVN 0782 Operation Smash Hit : fact or fake?

U.K. - Central Electricity Generating Board - 1985.

English - 15 min. - sd., col. - video.

Target audience: general, semi-technical.

(Copyright: Central Electricity Generating Board)

Subject(s): Radioactive substances -- Transportation.

In 1984, CEGB carried out a series of tests, the most spectacular one being a staged train crash at Old Dalby, Leicester, in order to demonstrate the strength of the nuclear fuel transport flasks. Greenpeace has accused CEGB of "rigging" this dramatic train crash and of perpetrating a "multi-million pound deception of the public, of Parliament, of the trade unions and of Councils". This video, produced in association with British Rail and Over Arup and Partners, the Board's engineering consultants, refutes these accusations.

AVN 0783 Screwworm programme in Libya.

Norway - TV Communication - 1992.

English - 14 min. - sd., col. - video.

Target audience: technical.

Copyright: TV Communication.

Subject(s): Screwworm -- Control -- Libya.

The screwworm fly, which caused millions of dollars damage in the United States and Mexico, spread from the Americas to Africa, threatening humans, livestock and wildlife, and was first found on the African continent, in Libya, in 1989. The video explains the Screwworm Eradication Programme using the sterile male technique, which breaks the reproductive cycle of the fly. In Libya, a weekly release of 40 million sterile Mexican flies over a period of several months resulted in the eradication of the pest in mid-1992.

AVN 0784 The tsetse [Nigeria - BICOT].

Nigeria - Life Productions - 1984.

English - 30 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: Life Productions.

Subject(s): Tsetse-flies -- Biological control -- Nigeria; Insect sterilization.

In Nigeria, the use of insecticides for eradication of the tsetse fly (*Glossina palpalis palpalis*) was not very successful in areas of dense foliage. Therefore it was decided to

introduce the BICOT (Biological Control of Tsetse) Project, which led to the eradication of the tsetse fly by means of the sterile insect technique.

AVN 0785 Biological control of pink bollworm in San Joaquin Valley : Integrated Pest Management (IPM) in action.

U.S. - Department of Food and Agriculture - 1987?

English - 9 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: *California Department of Food and Agriculture.*

Subject(s): Pink bollworm -- Control; Insect sterilization.

The video presents the pink bollworm rearing facility in Phoenix, Arizona, which produces millions of sterile pink bollworm moths daily. The sterile insect technique is used to biologically eradicate the moths in California, where they cause great damage to the cotton harvest.

AVN 0786 Culling the codling moth : sterile insect release program.

Canada - Okanagan's Very Own CHBC - 1994?

English - 23 min. - sd., col. - video.

Target audience: semi-technical.

Subject(s): Insect sterilization.; Codling moth -- Control.

The codling moth, an orchard pest that affects apples and pears, causes millions of dollars damage for the fruit producers in British Columbia. The growing concern over the impact of agricultural practices on the environment has led to the development of the sterile insect release program. The video presents the program, which consists of mass rearing, sterilization and release of millions of codling moths over a period of several years, eventually breaking the repopulation cycle of the insect. There is a pre-release sanitation phase, a rearing and release phase, and a post-eradication monitoring phase, which should be finished by the year 2000.

AVN 0787 Safe transport of radioactive material.

Austria - Division of Public Information, International Atomic Energy Agency - 1994.

English - 28 min. - sd., col. + 1 English script - video.

Target audience: semi-technical, general.

Supersedes: AVN 0631 'Safe transport of radioactive materials', 1977.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Radioactive substances -- Safety regulations; Radioactive substances -- Transportation.

Delivering radioactive material to where it is needed is a vital service to industry and medicine. Millions of packages are shipped all over the world by all modes of transport. The shipments pass through public places and must meet stringent safety requirements. This video explains how radioactive material is safely transported and describes the rules that carriers and handlers must follow.

AVN 0788 The Sterile Insect Technique (SIT) against tsetse flies.

Austria - Joint FAO/IAEA Division - 1984.

English - 41 min. - sd., col. - video.

Target audience: technical.

Copyright: International. Atomic Energy Agency.

Subject(s): Insect sterilization -- Nigeria; Tsetse-flies -- Nigeria.

The video gives general information on the reproductive anatomy and the reproductive cycle of tsetse flies, shows in detail the steps to make a membrane for food supply of mass-reared flies, and explains how their feed is prepared and processed. The different stages of mass-rearing of flies, including their irradiation and the effects of irradiation on eggs and spermatozoa, are demonstrated. The video also introduces the insect sterilization programme BICOT carried out in Nigeria.

AVN 0789 Ganado ganador.

S.I. - CINEPRO Ltda. for Programa de Erradicacion del Gusano Barrenador del Ganado/APHIS - 1992.

English - 20 min. - sd., col. - video.

Target audience: technical.

Copyright: CINEPRO Ltda./USDA, APHIS.

Subject(s): Insect sterilization -- Central America; Screwworm -- Control -- Central America.

The video shows the damages caused by screwworm infestation and introduces the screwworm eradication programme in Mexico, Guatemala, El Salvador, Belice, Honduras, Panama, Costa Rica and Nicaragua, which, with the help of the sterile insect technique, will be instrumental in bringing the pest under complete control. It also shows the sterile insect production plant in Chiapas, Mexico, and demonstrates how livestock owners can assist the programme.

AVN 0790 Manejo Integrado de moscas de la fruta.

Mexico - SICA - 1983?

Spanish - 25 min. - sd., col. - video.

Target audience: semi-technical, technical.

Subject(s): Insect sterilization -- Mexico; Fruit-flies -- Mexico.

Introduces different species of fruit-flies and their reproduction cycle and suggests various methods for controlling insect pests (insect traps, treatment of infested fruits, chemical, legal, and biological control - sterile male technique).

AVN 0791 Spoiled rotten : the Medfly threat to California.

U.S. - The Dolphin Group, Inc. for the Alliance for Food and Fiber - 1994.

English - 16 min. - sd., col. - video.

Target audience: general.

Copyright: The Dolphin Group, Inc.

Subject(s): Insect sterilization -- United States; Mediterranean fruit-fly -- Control -- United States.

The mediterranean fruit-fly poses, through export restrictions due to quarantine, extra costs of eradication programmes and the need for increased use of pesticides, a serious threat to California's agriculture. The video informs the public about the measures taken to eliminate the medfly (sterile insect release in the L.A. Basin and use of the insecticide Malathion in other areas) and shows how every individual can contribute to this programme.

AVN 0792 The bug.

Title on box: Cassava mealybug biological control programme.

[S.I.] - Jonathan Power - 1987.

English - 25 min. - sd., col. - video.

Target audience: technical.

Subject(s): Mealybugs -- Biological control -- Africa; Cassava -- Diseases and pests.

Africa's most important staple, the food of the poor, is cassava. In the 1970's, the cassava plantations in Zaire, Nigeria and Senegal were infested by an insect, the mealybug (*Phenacoccus manihoti*), brought into the country by accident from South America. It rapidly spread across the tropical midbelts of Africa, causing severe harvest losses. The video tells the story of the fight of a group of scientists against this plague, which they finally won by mass rearing and releasing a natural enemy, a parasitic wasp.

AVN 0793 Tsetse control activities on Buvuma islands.

Uganda - Educational Broadcasting - 1989.

English - 25 min. - sd., col. - video.

Target audience: technical.

Subject(s): Tsetse-flies -- Control -- Africa; Insect sterilization -- Africa.

In 1987, a project funded by the International Atomic Energy Agency in cooperation with the government of Uganda was started in order to control tsetse-fly (*Glossina fuscipes fuscipes*) and tripanosomiasis on Buvuma islands, Uganda. The video describes the integrated approach used to reach this goal: pyramidal traps, impregnated swinging targets and controlled use of insecticides to reduce the number of flies, and sterile insect technique (S.I.T.).

AVN 0794 Campana nacional contra moscas de la fruta.

Mexico - Secretaria de Agricultura y Recursos Hidraulicos - 1993.

Spanish - 31 min. - sd., col. - video.

Target audience: general.

Copyright: Acuerdo SARH-IIICA; Direccion General de Sanidad Vegetal.

Subject(s): Mediterranean fruit-fly -- Control -- Mexico; Insect sterilization -- Mexico.

Fruit export is one of the main factors of Mexican economy. The video shows, in basic terms, the fight of the Mexican government against a major pest, the various species of fruit flies which attack almost all sorts of fruit. It demonstrates integrated control which comprises the choice of resistant trees, proper fertilisation and irrigation, collection and analysis of infested fruits, and the use of insect traps, insecticides and the sterile insect technique.

AVN 0795 The medfly.

Israel - Ministry of Agriculture, Extension Service - 1987.

English - 13 min. - sd., col. - video.

(Copyright: Ministry of Agriculture Extension Service)

Target audience: general, semi-technical.

Subject(s): Mediterranean fruit-fly -- Control -- Israel; Insect sterilization -- Israel.

Israel, a main exporter of fruit, needs to control orchards in order to guarantee quality and minimize losses due to insect pests. The video demonstrates various methods, such as traps, aerial spraying, ground spraying, destruction of infested fruits, and use of sterile male technique. The need for a nationwide control system is stressed.

AVN 0796 The New world screwworm: *Cochliomyia hominivorax*.

Italy - Radio and TV section, Information Division, Food and Agriculture Organization - 1990.

English, Spanish - 7 min. - sd., col. - video.

Target audience: general.

Copyright: FAO.

Subject(s): Screwworm -- Control -- Libya; Insect sterilization.

The new world screwworm, a parasitic insect, affects warm-blooded animals including humans and causes great losses of livestock and wildlife. It was eradicated from the U.S. and most of Mexico but was found in Libya in the 90's, threatening to spread to all of Africa, Southern Europe and the Near East. The video introduces the eradication plan for Libya, using the sterile insect technique.

AVN 0797 Control of fruit flies by using the sterile insect technique at Ang Khang, Chiang Mai.

[Thailand] - Office of Atomic Energy for Peace - 1983?

English - 10 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: Office of Atomic Energy for Peace.

Low technical quality.

Subject(s): Insect sterilization -- Thailand; Fruit-flies -- Control -- Thailand.

Presents the use of the sterile insect technique to control fruit flies (*Dacus dorsalis*, *Dacus correctus* and *Dacus zonatus*) in Northern Thailand.

AVN 0798 Le ver est dans le fruit.

Reunion. - APR Audiovisuel - 1993.

French - 19 min - sd., col. - video.

Target audience: semi-technical.

Subject(s): Fruit-flies -- Control -- Reunion.

Fruit-flies provoke considerable losses in fruit harvest and are nowadays the main 'enemy' of Reunion's fruit growers. The video explains the life-cycle of the insects, shows the research being done in this field, and demonstrates methods for fruit-fly control.

AVN 0799 International safeguards.

Austria - International Atomic Energy Agency, Division of Public Information - 1995.

English - 22 min. - sd., col.- video.

Target audience: general.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Nuclear nonproliferation; International Atomic Energy Agency.

The system of international safeguards carried out by the IAEA is designed to verify that governments are living up to pledges to use nuclear energy only for peaceful purposes under the NPT (Treaty on the non-proliferation of nuclear weapons) and similar agreements. The film illustrates the range of field inspections and analytical work involved. It also shows how new approaches are helping to strengthen the system.

AVN 0800 How nuclear power plants work.

Austria - International Atomic Energy Agency, Division of Public Information - 1991.

English - 14 min. - sd., col. - video.

Target audience: general, students.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Nuclear power plants.

Explains in basic terms and with the help of animation the functioning of nuclear power plants.

AVN 0801 Demonstration polymerase chain reaction (PCR)

U.S. - Taped Technologies - 1991.

English - 11 min - sd., col. - video.

Target audience: technical.

Copyright: Taped Technologies.

Subject(s): Polymerase chain reaction; DNA polymerases.

Contains excerpts of 4 video programs on polymerase.

AVN 0802 The discovery of x-rays : 100 years on.

Germany - KTV Krippendorff Tele-Video-Film Produktion - 1994.

English, French, Spanish - 30 min. - sd., col. - video.

Target audience: general.

Copyright: KTV Krippendorff Tele-Video-Film Produktion.

Subject(s): X-rays; Roentgen, Wilhelm Conrad, 1845-1923.

Honoring the 150th birthday of Wilhelm Conrad Roentgen (March 27, 1845) and the 100th anniversary of the discovery of the radiation named after him (November 8, 1895), this film documents the milestones in the life of W.C. Roentgen and the development of x-ray procedures from the early days up to the age of computerized x-ray tomography. It shows the continuing role that x-rays play in industry, environmental protection, archaeology and astronomy.

AVN 0803 Demonstration of cell culture videos.

U.S. - Taped Technologies - 1992.

English - 11 min. - sd., col. - video.

Target audience: technical.

Copyright: Taped Technologies.

Subject(s): Cell culture.

Contains excerpts of 5 video programs on basic cell culture technique.

AVN 0804 What'll we do with the waste when we're through? : transportation and disposal of high level nuclear waste.

U.S. - American Nuclear Society - 1988.

English - 13 min. - sd., col. + 1 study guide - video.

Target audience: general; schools.

Copyright: American Nuclear Society.

Subject(s): Radioactive waste disposal -- United States; Radioactive substances --

Transportation -- United States.

In very basic terms and based on U.S. standards, the video addresses the question of nuclear waste and explains its transport and disposal.

AVN 0805 Demonstration - excerpts from recombinant DNA videos.

U.S. - Taped Technologies - 1994.

English - 14 min. - sd., col. - video.

Target audience: technical.
Copyright: Taped Technologies.
Subject(s): Recombinant DNA.

Contains excerpts of 10 video programs on recombinant DNA experiments.

AVN 0806 Time out for science : benefits and uses of nuclear technology.

U.S. - United Learning, Inc. - 1990.
English - 24 min. - sd., col. + 1 teacher's guide - video.
Target audience: general; students.
Copyright: American Nuclear Society.
Subject(s): Nuclear energy -- Industrial applications -- United States; Nuclear energy -- Medical applications -- United States.

By a time-travel mechanism, three students of the 1990s are accidentally transported back to the 1950s. As members of a science club in the past help the time travellers, the students exchange information about the many scientific advances that have taken place in the past forty years.

AVN 0807 Sterile Insect Production Center [Arica, Chile].

Chile - S.A.G. Servicio Agrícola y Ganadero - 1994.
English - 7 min. - sd., col. - video.
Target audience: technical.
Subject(s): Mediterranean fruit-fly -- Control -- Chile; Insect sterilization -- Chile.

The video introduces the Sterile Insect Production Center which was opened in 1993 at Arica. With the funding of the International Development Bank, Servicio Agrícola y Ganadero and the International Atomic Energy Agency, this center was built to help control the Mediterranean fruit-fly in Chile.

AVN 0808 La mosca del mediterraneo [Mendoza]

Argentina - Dealers, Departamento T.V. - 1992?
English - 26 min. - sd., col. - video.
Target audience: semi-technical.
Subject(s): Insect sterilization -- Argentina; Mediterranean fruit-fly -- Control -- Argentina.

The video describes the mediterranean fruit fly (*ceratitis capitata*) and its reproduction cycle. It introduces an integrated national programme using the sterile insect technique for fighting the fly in the Mendoza province, and presents the insect production center which was opened in Mendoza in 1991.

AVN 0809 Planta productora de moscas esteriles - Chiapa de Corzo.

Mexico - 1980.

Spanish - 30 min. - sd., col. - video.

Target audience: technical.

Subject(s): Insect sterilization; Screwworm -- Control -- Mexico.

The video introduces in detail the sterile insect production plant at Chiapa, Mexico. In this centre, millions of sterile screwworm flies (*Gusano barrenador del ganado*) are produced and released in order to control screwworm infestation in Mexico.

AVN 0810 The use of ^{32}P labelled fertilizer in field and greenhouse.

Austria - International Atomic Energy Agency, in collaboration with the Food and Agriculture Organization of the United Nations - 1983.

English - 41 min. - sd., col. - video; low optical and sound quality.

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): Phosphatic fertilizers; Plant-soil relationships; Fertilizers -- Agricultural applications.

This training film deals with the use of ^{32}P -labelled materials in field and greenhouse experimentation in soil-plant relationship studies. All technical aspects, including safe handling and radiation protection procedures to be considered in the layout and harvesting of field experiments are documented in detail. Procedures followed in the evaluation of P fertilizers (such as rock phosphates) under greenhouse conditions are described. Several soil injection techniques available for the determination of the root activity pattern of trees are shown.

AVN 0811 Compatibility tests of medfly mating behaviour.

Unknown place of publication - 1993.

No sound - 8 min. - col. + 1 transcript of video text.

Target audience: technical.

Subject(s): Insect sterilization; Mediterranean fruit-fly.

The success of a medfly sterile insect technique programme depends on the sexual compatibility of the sterile mass reared males and the local wild female flies. The video presents mating tests in greenhouses allowing careful evaluation of medfly courtship behaviour in order to establish more specific quality control criteria for mass produced flies.

AVN 0812 The international atom : for peace and prosperity.

Austria - International Atomic Energy Agency, Division of Public Information - 1996.
English, Spanish - 26 min. - sd., col. - video.

Target audience: general.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Nuclear nonproliferation; Nuclear energy -- Agricultural applications; Nuclear energy -- Medical applications; Nuclear energy -- Industrial applications; International Atomic Energy Agency.

This video introduces the International Atomic Energy Agency (IAEA) in all its aspects, presents its functions and tasks and discusses its achievements. Various aspects of peaceful use of nuclear energy (health, food irradiation, environmental issues such as pollution detection, insect pest control, etc.) are shown, as well as the IAEA's role in implementing and controlling international nuclear conventions.

AVN 0813 Programa de erradicacion de la mosca del mediterraneo en Mendoza.

Argentina - Atilio Spinello Video Films - 1995.

English - 12 min. - sd., col. - video.

Target audience: general, semi-technical.

Subject(s): Insect sterilization -- Argentina; Mediterranean fruit-fly -- Control -- Argentina.

The video gives an overview of the mediterranean fruit-fly sterilization and eradication programme which was carried out successfully in Mendoza, Argentina.

AVN 0814 Mururoa sampling.

Austria - International Atomic Energy Agency, Division of Public Information - 1996.
English - 3 min. - sd., col. - video

Target audience: general, semi-technical.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Radioactive pollution -- Environmental aspects -- Mururoa Atoll.

Short version (TV clipping) of AVN 0815 The two atolls (Mururoa and Fangataufa).

AVN 0815 The two atolls (Mururoa and Fangataufa).

Austria - International Atomic Energy Agency, Division of Public Information - 1996.

English -12 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Radioactive pollution -- Environmental aspects -- Mururoa Atoll; International Atomic Energy Agency.

After three decades of testing nuclear devices on the atolls of Mururoa and Fangataufa, France stopped the tests in 1996. The International Atomic Energy Agency was requested to carry out an independent study of the radiological situation on the atolls. The study covers a wide range of disciplines of science and aims to establish whether any residual radioactive material could represent a health hazard. The video shows the first stages of the study: sampling the environment, and chemical analysis of plant and fish specimen in order to test the distribution and migration of radioisotopes in the lagoon.

AVN 0816 Medfly adult incubation and release : sterile insect technique - Los Angeles, California.

U.S. - [s.n.] - 1994.

Spanish - 51 min. - sd., col. - video.

Target audience: semi-technical. Video was filmed on site. Not a professional production.

Subject(s): Insect sterilization -- California; Mediterranean fruit-fly -- Control -- United States.

The video shows the Medfly Site Los Alamitos, California, and explains in detail the breeding and release of sterile insects in the Los Angeles area.

AVN 0817 Office of Atomic Energy for Peace.

Thailand - Public relations section, Office of Atomic Energy for Peace - 1995.

English - 21 min. - sd., col. - video.

Target audience: general.

Subject(s): Nuclear energy -- Thailand.

This public relations video presents the functions and tasks of the Office of Atomic Energy for Peace (OAEP), the Thai Atomic Energy Agency. This agency coordinates all activities in connection with the peaceful uses of nuclear energy, such as radiation protection and control, research, development and training, food irradiation, sterile insect technique, non-destructive testing and radiography. It also runs two gamma-ray irradiators and a research reactor which are presented in the video.

AVN 0818 Radon : risks and remedies.

Austria - International Atomic Energy Agency, Division of Public Information - 1996.

English - 25 min. - sd., col. - video.

Target audience: general.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Radon -- Health aspects; Indoor air pollution -- Health aspects; Housing and health; Consumer education.

Radon is a radioactive gas which occurs naturally, through the decay of uranium in the soil. It disperses in the air but concentrates in closed space such as homes, and has recently been found to cause lung cancer. The video stresses that this is a global problem, giving examples from various countries, and shows ways to determine exposure and fix elevated levels.

AVN 0819 Nuclear energy for our future.

Hong Kong - Hong Kong Nuclear Investment Corporation - 1996.

English - 10 min. - sd., col. - video.

Target audience: general, semi-technical.

Copyright: Electric Shadow Limited, Hong Kong.

Subject(s): Nuclear power plants -- China -- Daya Bay; Pressurized water reactors -- China.

The video highlights the development of the Daya Bay station, China's first major commercial nuclear power station. It also explains the structure of the company running the station (Guandong Nuclear Power Joint Venture Co. Ltd.), and shows how electricity from Daya Bay is distributed.

AVN 0820 Vigilancia del gusano barrenador del ganado.

Mexico - Comision Mexico-Americana para la Erradicacion del Gusano Barrenador del Ganado - 1992.

Spanish - 25 min. - sd., col. - video.

Target audience: semi-technical, technical.

Subject(s): Insect sterilization; Screwworm -- Control -- Mexico.

The video tells the story of the eradication of the new world screwworm (*Cochliomyia hominivorax*) in Mexico. It briefly describes the life cycle of the insect, presents the sterile insect production plant at Chiapa, and recommends measures to prevent a re-infestation.

AVN 0821 To get beyond there : INIS system.

Hungary - Real Film - 1997.

English - 30 min. - sd., col. - video.

Pt.1. To get beyond there... (27 min.) - pt.2. Prince Award ceremony (3 min.)

Target audience: general.

Copyright: International Atomic Energy Agency.

Subject(s): INIS (Information retrieval system)

Prince Award, 1997.

The video presents all aspects of the work of IAEA's International Nuclear Information System (INIS) and introduces search possibilities for online information retrieval.

AVN 0822 Discussing nuclear energy at school.

France - OECD Nuclear Energy Agency - 1993.

English - 16 min. - sd., col. - video.

Target audience: semi-technical; teachers.

Copyright: OECD/NEA.

Subject(s): Nuclear energy -- Study and teaching.

This video has been developed by the OECD Nuclear Energy Agency (OECD/NEA) to support its action in the field of energy and education. Based on the lessons learnt from the NEA International Seminar on Teachers and Nuclear Energy held in Oxford, U.K., in 1993, the video aims at improving teachers' awareness of opportunities to tackle nuclear energy at school. It is also intended to acquaint them with the experience available in this field from several OECD countries.

AVN 0823 The sterile screwworm fly dispersal center Nicaragua.

Nicaragua - Screwworm Eradication Program of the Minister of Agriculture and Lifestock of Nicaragua and the Department of Agriculture of the United States - 1997.
English - 20 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: The Screwworm Eradication Program MAG-USDA.

Subject(s): Insect pests -- Control -- Nicaragua; Screwworm -- Control -- Nicaragua;
Insect sterilization -- Nicaragua.

Presents the sterile screwworm dispersal center at Managua, Nicaragua and shows in detail the production and air dispersal of sterile screwworm flies. This joint Nicaragua/U.S. program is aimed at eradicating the screwworm fly from Nicaragua by the end of 1997.

AVN 0824 Barley isolated microspore culture protocol.

Canada - University of Quelp - 1995.

English - 13 min. - sd., col. - video.

Target audience: technical.

Copyright: University of Quelp.

Subject(s): Plant breeding; Barley -- Breeding; Barley -- Genetics.

This technical video illustrates the following topics: donor plant growth; harvesting of spikes and anther pre-treatment; isolation and induction procedures; differentiation and regeneration.

AVN 0825 The nuclear age.

Austria - International Atomic Energy Agency, Division of Public Information - 1997.

English, German - 12 min. - sd., col. - video.

Target audience: general.

Copyright: Division of Public Information, International Atomic Energy Agency.

Subject(s): Nuclear energy -- History; International Atomic Energy Agency -- History.

This film traces briefly the history of how nuclear energy was harnessed to produce electricity, preserve food, eradicate insect pests, grow better crops and combat cancer. It also looks ahead to new challenges and highlights the role played for over four decades by the International Atomic Energy Agency as the main global forum on nuclear matters.

AVN 0826 Mosca da fruta [Madeira].

Portugal. 1995?

English - 12 min. - sd., col. - video.

Target audience: semi-technical.

Subject(s): Insect sterilization -- Madeira; Mediterranean fruit-fly -- Control -- Madeira;

Fruit flies -- Control -- Madeira.

Gives a summary of the SIT (sterile insect technique) programmes carried out in Madeira and introduces Europe's first fly biofactory. The aim is to control insect pests (medfly, citrus whitefly and greenhouse whitefly) which cause great damage to Madeira's agriculture.

AVN 0827 Mediterranean fruit fly : detection and delimitation trapping.

U.S. - United States Department of Agriculture - 1995.

English - 19 min. - sd., col. - video.

Target audience: technical; people involved in insect pest control.

(Copyright: United States Department of Agriculture)

Subject(s): Insect sterilization -- United States; Mediterranean fruit-fly -- Control -- United States.

Target audience: technical; people involved in insect pest control. Introduces different sorts of insect traps and gives detailed information about medfly trapping - how to place and service traps, how to select host trees, fill in the pest submission forms, communicate with the public, etc.

AVN 0828 Mediterranean fruit fly : larval survey and fruit collecting/holding.

U.S. - United States Department of Agriculture - 1995.

English - 13 min. - bsd., col. - video.

Target audience: technical; people involved in insect pest control.

(Copyright: United States Department of Agriculture)

Subject(s): Insect sterilization -- United States; Mediterranean fruit-fly -- Control -- United States.

The video is intended as a training tool for project personnel in medfly eradication programmes. It gives detailed instructions on how to identify a host tree, how to conduct a

larval survey, how to cut and examine fruit, how to fill out the required papers, and how to interact with the public.

AVN 0829 Mediterranean fruit fly : regulatory inspection.

U.S. - United States Department of Agriculture - 1995.

English - 13 min. - sd., col. - video.

Target audience: technical; people involved in insect pest control.

(Copyright: United States Department of Agriculture)

Subject(s): Insect sterilization -- United States; Mediterranean fruit-fly -- Control -- United States.

The video is intended as a training tool for project personnel in medfly eradication programmes. It gives detailed instructions to regulatory inspectors on how to conduct an inspection after a wild medfly has been detected, how to implement an agricultural quarantine, map regulated sites, control the sale of fruit, fill out the required reports, and properly interact with the public.

AVN 0830 Unhatching the screwworm.

Austria - Peter Kasperak Film Production Austria; produced by Information and Communication Division, International Fund for Agricultural Development - 1990.

English - 8 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: IFAD.

Subject(s): Screwworm -- Control -- Libya; Insect sterilization.

The video introduces IFAD's 1989 regional pilot programme for screwworm biological control and eradication in Libya. This programme combines the effective application of animal movement control, quarantine, inspection and wound treatment, careful use of pesticides and improved livestock management with the release of sterile screwworm flies mass-reared in Mexico and is intended to ultimately eradicate the new world screwworm fly (*cochliomyia hominivorax*) from North Africa.

AVN 0831 A. Einstein : how I see the world.

U.S. - Yorkshire International Thomson Multimedia - 1991.

English - 60 min. - sd., col. - video.

Target audience: general; students.

Copyright: VPI-Videfilm Producers International Ltd.

Subject(s): Physicists -- Biography; Einstein, Albert, 1879-1955.

Chronicles how the Nobel Prize winning scientist Albert Einstein became an advocate for peace. Includes authentic film and press photographs to explore the public figure, and home movies and family snapshots to reveal the private man.

AVN 0832 Chernobyl: the bitter taste of Wormwood.

U.S. - Films for the Humanities - 1987?

English - 52 min. - sd., col.- video.

Target audience: general.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986 - Environmental consequences -- Scandinavia.

A vivid account of the nuclear accident at Chernobyl, explaining the far-reaching effects of radioactivity, monitoring radiation, evacuation of victims, etc. The video deals mainly with the impact and consequences of the accident in Sweden and Ukraine.

AVN 0833 Understanding radiation.

U.K. - Resources for Learning Ltd. for British Nuclear Fuels - 1994.

12 min. - sd., col. + 1 teachers' notes - video.

Target audience: general; secondary schools.

(Copyright: British Nuclear Fuels Limited)

Subject(s): Ionizing radiation.

The video gives a practical demonstration of the penetrating power of ionizing radiation and the shielding which can be used to contain it. Alpha, beta and gamma sources are discussed.

AVN 0834 The key to radiation safety.

Canada - University of Calgary - 1996.

60 min. - sd., col. - video (3 cassettes); Pt.1. Contamination control (20 min.) - pt.2.

Contamination; detection (20 min.) - pt.3. Decontamination procedures (20 min.)

Target audience: technical; laboratory staff, students.

Copyright: The University of Calgary Board of Governors.

Subject(s): Laboratories -- Quality control.; Laboratories -- Radiation -- Safety measures.

A video program which demonstrates good and poor procedures for handling open source radioactive materials. Designed to aid in-service training, it is assumed that students are already familiar with the principles of ionizing radiation, the use of personal protective

clothing, and radiation detection methods and instrumentation. The special effects utilised in this program which make the normally unseen dangers visible will help all viewers to better appreciate the principles of safe working procedures.

AVN 0835 A farewell to tsetse.

Austria - International Atomic Energy Agency, Division of Public Information - 1997.

English - 10 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: International Atomic Energy Agency; Division of Public Information.

Subject(s): Insect sterilization -- Africa; Tsetse-flies -- Control -- Zanzibar.

The tsetse fly, a blood sucking insect which transmits a lethal disease, Trypanosomosis, to animals and people, is found in vast areas of Africa. A promising method to get rid of this pest is the sterile insect technique where millions of sterile but competitive male flies break the reproductive cycle. This technique was successfully used on the island of Zanzibar for the eradication of tsetse fly in 1996.

AVN 0836 Nuclear power and safety.

Title on container: Nuclear safety series 1-13.

Hong Kong - Hong Kong Nuclear Investment Co. Ltd. - 1993.

English - 65 min. - sd., col. - video.

Target audience: general; semi-technical.

Copyright: Electric Shadow Limited, Hong Kong.

Subject(s): Nuclear power; Nuclear power plants -- China -- Daya Bay.

Discusses the operation of a nuclear power plant, as well as the safety and environmental issues, with special reference to the nuclear power station in Daya Bay, Guangdong Province, China.

AVN 0837 Jag har cesium i blodet och aerr raedd = I have cesium in my blood, and I am afraid.

Sweden - Sveriges Television AB - 1989.

Swedish - 59 min. - sd., col. - video.

Target audience: semi-technical.

Copyright: Sveriges Television AB.

Subject(s): Radiation injuries -- Brazil -- Goiania; Radioactive pollution -- Brazil -- Goiania.

Documentary recorded from Swedish TV, mostly interviews with affected people (in Portuguese with Swedish subtitles; Swedish commentary).
Gives an overview of the radiological accident in Goiania, Brazil, where several people and the environment were contaminated by the improper handling of a cesium-137 teletherapy unit.

AVN 0838 Power from Forsmark.

Sweden - Vattenfall Forsmarksverket - 1990?
English - 12 min. - sd., col. - video.
Target audience: general.
(Copyright: Vattenfall Forsmarksverket)
Subject(s): Nuclear power plants -- Sweden; Boiling water reactors -- Sweden.

Half of Sweden's energy production comes from nuclear power. The video introduces one of the four Swedish nuclear power plants, Forsmark, and explains in some detail the functioning of a boiling water reactor and the power production process.

AVN 0839 Uranio per il Cirene.

Italy - ENEA - [1985]
Italian - 23 min. - sd., col. - video.
Target audience: technical.
(Copyright: ENEA)
Subject(s): Nuclear fuel elements; Heavy water reactors -- Italy.

Shows in detail the fabrication of uranium fuel pellets and fuel rod assembly for the Cirene reactor at Latina.

AVN 0840 PEC : energia per il domani.

Italy - ENEA - 1980?
Italian - 26 min. - sd., col. - video.
Target audience: semi-technical; researchers. Of historical interest only.
(Copyright: ENEA)
Subject(s): Nuclear energy -- Italy -- History.

Presents the fast neutron experimental power reactor PEC, 60 km from Bologna.

AVN 0841 Chernobyl : chronicle of difficult weeks.

Cassette also contains: The BAM zone : permanent residents.

Series: The Glasnost film festival ; video 4.

1. Chernobyl : chronicle of difficult weeks (54 min.) - 2. The BAM zone : permanent residents (18 min.)

U.S. - The Video project - 1986-1987.

Russian with English subtitles - 72 min. - sd., col. - video.

For German version, please see AVN 0698.

Target audience: general.

Copyright: Ukrainian Documentary Film Studios.

Subject(s): Chernobyl Nuclear Accident, Chernobyl, Ukraine, 1986; Baikalo-Amurskaia magistral; Documentary films -- Ukraine; Documentary films -- Russian S.F.S.R. -- Siberia.

1. Chernobyl : chronicle of difficult weeks. Shevchenko's film crew was the first in the disaster zone following the meltdown of the core of the Chernobyl nuclear power plant in 1986. They shot continuously for more than three months. Portions of the film are exposed with white blotches - a radiation leakage. The film demonstrates how authorities and volunteers dealt with the accident, shows the efforts to get the fire under control, to take care of patients with radiation injuries, and to evacuate about 100 000 inhabitants of the area.

2. The BAM zone : permanent residents. The Baikal-Amur Mainline (BAM) railroad in Siberia is called the longest monument to the stagnation of the Brezhnev years. The film shows the lives and fates of the people in contrast to the marches and songs praising the project.

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- AVN 0393 Scintillation scanning of the spleen.
- AVN 0435 Radioisotopes in medical diagnosis and investigation.
- AVN 0534 Doorway to diagnosis.
- AVN 0539 The radioisotope-powered cardiac pacemaker.
- AVN 0540 Short-lived radioisotopes in nuclear medicine.
- AVN 0580 Radiotherapie a visee curative = Curative radiotherapy.
- AVN 0582 Histoire de papillons.
- AVN 0607 Nuclear medicine.
- AVN 0656 Single photon emission tomography of brain and liver with a rotating gamma camera and clinical data processing system.

Nuclear nonproliferation

- AVN 0551 Safeguarding nuclear energy.
- AVN 0670 Headquarters Vienna.
- AVN 0799 International safeguards.
- AVN 0812 The international atom : for peace and prosperity.

Nuclear physicists

- AVN 0661 I work in atomic energy.

Nuclear physics

- AVN 0163 Radiation and matter.

Nuclear power

- AVN 0649 Power from the atom.
- AVN 0714 A play half written : the energy adventure.
- AVN 0836 Nuclear power and safety.

Nuclear power -- Economic aspects

AVN 0451 Atoms in the marketplace : nuclear materials safeguards and management.

Nuclear power -- France -- History

AVN 0598 St. Laurent des eaux.

Nuclear power -- Peaceful uses

AVN 0242 Nuclear power for space - SNAP-9A.

Nuclear power -- United States -- History

AVN 0117 SNAP-3 operational tests.

AVN 0151 Our nearest star.

AVN 0155 Nuclear reactors for space.

AVN 0314 Power for propulsion.

AVN 0396 SNAP-8 - system for nuclear auxiliary power.

Nuclear power industry -- Canada -- History

AVN 0642 Energy from the atom.

AVN 0643 This nuclear age.

Nuclear power industry - United Kingdom

AVN 0704 Energy - the nuclear option.

Nuclear power plants

AVN 0711 Into the atom : the electric connection.

AVN 0753 Nuclear energy and environment.

AVN 0800 How nuclear power plants work.

Nuclear power plants -- Accidents

AVN 0681 Radiological emergencies - planning and preparedness.

Nuclear power plants -- Canada -- History

AVN 0490 Douglas Point - nuclear power station.

AVN 0643 This nuclear age.

Nuclear power plants -- China -- Daya Bay

AVN 0819 Nuclear energy for our future.

AVN 0836 Nuclear power and safety.

Nuclear power plants -- Czechoslovakia -- History

AVN 0425 Pressure vessel for A1, the first Czechoslovak nuclear power station.

Nuclear power plants -- Environmental aspects

AVN 0531 Environmental monitoring for nuclear power stations.

Nuclear power plants -- Environmental aspects -- Sweden

AVN 0691 A warmer Life : a film about fish, plants and seals at Forsmark.

Nuclear power plants -- Environmental aspects -- United States

AVN 0611 Nuclear power and the Perry environment.

Nuclear power plants -- Finland -- History

AVN 0560 Nuclear power from Loviisa I.

Nuclear power plants -- Germany -- History

AVN 0139 Atomkraftwerk Kahl.

Nuclear power plants -- Japan -- History

AVN 0513 Awakened peninsula.

AVN 0514 Tokai power station.

Nuclear power plants -- Puerto Rico -- History

AVN 0400 Bonus for Puerto Rico.

Nuclear power plants -- Sweden

AVN 0690 Klart Forsmark = Forsmark is ready.

AVN 0838 Power from Forsmark.

Nuclear power plants -- United Kingdom

AVN 0702 Nuclear power - the next generation.

AVN 0703 Chernobyl - could it happen here?

Nuclear power plants -- United Kingdom -- History

AVN 0105 Atomic achievement.

Nuclear power plants -- United States -- History

AVN 0208 PM-3A nuclear power plant Antarctica.

AVN 0511 Retirement of the Hallam nuclear power facility.

AVN 0611 Nuclear power and the Perry environment.

AVN 0695 Headstart on tomorrow.

Nuclear power plants -- USSR -- History

AVN 0078 The first in the world.

AVN 0331 Packaged atomic power plant 'Arbus'.

AVN 0339 Transportable nuclear power station TES-3.

AVN 0340 Beloyarsk Atomic Power Plant.

AVN 0341 On the upper reaches of the Don river.

Nuclear power plants -- Washington (State) -- History

AVN 0517 Miracle in the desert: the story of Hanford.

Nuclear pressure vessels

AVN 0632 The MIS - in - service inspection machine.

Nuclear pressure vessels -- Czechoslovakia -- History

AVN 0293 Fabrication du modele de cuve sous pression pour la premiere centrale electrique nucleaire en Tchecoslovaquie.

Nuclear pressure vessels – United Kingdom -- History

AVN 0049 Engineering at Calder Hall - the pressure vessel.

Nuclear reactors

AVN 0649 Power from the atom.

AVN 0653 The atom, a closer look.

AVN 0739 The magic metal: uranium.

Nuclear reactors -- Accidents

AVN 0005 Experimental Breeder Reactor-I core disassembly after meltdown.

Nuclear reactors -- Accidents -- United States

AVN 0107 Restoration of the NRX reactor.

AVN 0167 The SL-1 accident, phases 1 and 2.

AVN 0188 The SL-1 accident, phase 3.

AVN 0733 Lessons learned from the TMI-2 accident.

Nuclear reactors -- Canada -- History

AVN 0072 Atomic energy in Canada.

AVN 0203 Nuclear power demonstration (NPD).

Nuclear reactors -- Control – History

AVN 0182 New methods of controlling nuclear reactors.

Nuclear reactors -- Czechoslovakia – History

AVN 0182 New methods of controlling nuclear reactors.

Nuclear reactors -- France -- History

AVN 0068 Vers l'age atomique.

AVN 0308 Siloe.

AVN 0598 St. Laurent des eaux.

Nuclear reactors -- Germany -- History

AVN 0608 Am Netz: Atomstrom (Lingen nuclear power station)

Nuclear reactors -- Materials -- Testing -- France -- History

AVN 0428 Osiris.

Nuclear reactors -- Materials -- Thermal properties

AVN 0015 Plutonium fuel fabrication for MTR.

Nuclear reactors -- Safety measures

AVN 0703 Chernobyl - could it happen here?

Nuclear reactors -- United Kingdom

AVN 0736 Nuclear power.

AVN 0765 The future of the PWR in Britain.

Nuclear reactors -- United Kingdom -- History

AVN 0048 Construction of Calder Hall.

AVN 0049 Engineering at Calder Hall - the pressure vessel.

AVN 0142 Nuclear power reactors.

AVN 0294 Windscale A.G.R.

AVN 0556 In-service inspection of water-cooled nuclear reactors.

Nuclear reactors -- United States -- History

AVN 0007 Zero power reactor III.

- AVN 0010 Vallecitos boiling water reactor.
- AVN 0011 Dresden nuclear power station.
- AVN 0039 Engineering test reactor.
- AVN 0046 Power reactors - U.S.A.
- AVN 0092 Argonne fast source reactor.
- AVN 0126 Remote repair and modification of the HRE-2 core vessel.
- AVN 0270 EBR-2 fuel facility.
- AVN 0322 SPERT destructive test - 1.

Nuclear reactors -- USSR -- History

- AVN 0323 Hot laboratory for testing materials.
- AVN 0324 Research reactor SM-2.
- AVN 0334 Direct conversion reactor Romashka.

Nuclear research -- United States -- History

- AVN 0613 Building an atomic accelerator.

Nuclear research -- USSR -- History

- AVN 0337 Siberian nuclear research centre.
- AVN 0381 Dubna - city of friends in science.

Nuclear safeguards

- AVN 0451 Atoms in the marketplace : nuclear materials safeguards and management.

Nuclear safety

- AVN 0245 Radiological safety.
- AVN 0673 Handle with care.
- AVN 0633 Nuclear risks: emergency organization.

- AVN 0671 Reactor safety.
- AVN 0747 Phosphorus-32 : safe handling techniques in biochemical laboratories.
- AVN 0748 Iodine-125 safety procedures in a biochemical laboratory.
- AVN 0769 Safety of industrial irradiation plants.

Nuclear scientists

- AVN 0091 The atom - peace and friendship.
- AVN 0494 The Enrico Fermi awards.

Nuclear ships – Germany -- History

- AVN 0597 Atomschiff Otto Hahn.

Nuclear ships -- United States -- History

- AVN 0088 Full speed ahead.
- AVN 0094 Under way.
- AVN 0280 The nuclear ship 'Savannah'.

Nuclear ships -- USSR -- History

- AVN 0120 First miles.

Nuclear structure

- AVN 0653 The atom, a closer look.
- AVN 0711 Into the atom : the electric connection.

Nuclear warfare

- AVN 0745 An Epoch without summer.

Oligonucleotides

- AVN 0728 Oligonucleotides - synthesis and use.

Organic cooled reactors – USSR -- History

AVN 0331 Packaged atomic power plant 'Arbus'.

Particle accelerators – Italy -- History

AVN 0097 Sincrotrone.

Particle accelerators -- United States -- History

AVN 0032 High energy particle accelerator.

AVN 0364 Fabrication of the accelerator structure.

AVN 0439 A beginning without end.

AVN 0519 Exploring the atomic nucleus.

AVN 0623 The heart of the matter.

Particle accelerators – USSR -- History

AVN 0327 Element 102 produced at the Joint Institute for Nuclear Research.

Particles (Nuclear physics)

AVN 0097 Sincrotrone.

AVN 0236 The high energy people.

AVN 0499 Strangeness minus three.

AVN 0519 Exploring the atomic nucleus.

AVN 0623 The heart of the matter.

Peaceful nuclear explosions -- United States

AVN 0027 Industrial applications of nuclear explosives.

AVN 0237 Project gnome.

AVN 0288 Civilian applications of nuclear explosives.

AVN 0312 Project Dugout.

AVN 0376 Plowshare.

AVN 0377 Safety in the Plowshare program.

AVN 0440 Return to Bikini.

AVN 0444 Project Gasbuggy : the resourceful atom.

AVN 0505 Schooner.

Peaceful nuclear explosions -- USSR

AVN 0508 A nuclear explosion put out a gas well blaze.

AVN 0509 Underground nuclear explosion excavates artificial lakes.

Phosphatic fertilizers

AVN 0810 The use of ³²P labelled fertilizer in field and greenhouse.

Photosynthesis

AVN 0348 Down on the farm.

AVN 0360 The riddle of photosynthesis.

AVN 0526 Controlled photosynthesis.

Physicists -- Biography

AVN 0831 A. Einstein : how I see the world.

Pinch effect (Physics)

AVN 0333 Plasma poses.

Pink bollworm -- Control

AVN 0785 Biological control of pink bollworm in San Joaquin Valley :
Integrated Pest Management (IPM) in action.

Plant biotechnology

AVN 0705 Better plants through mutations: the Joint FAO/IAEA
Division's programme in plant breeding and genetics.

Plant breeding

AVN 0603 La radioagronomie.

AVN 0824 Barley isolated microspore culture protocol.

Plant cell culture

AVN 0677 In vitro techniques for crop improvement.

Plant micropropagation

AVN 0676 Bananas and plantains.

AVN 0677 In vitro techniques for crop improvement.

AVN 0680 Better bananas.

Plant mutation breeding

AVN 0678 Mutation induction in plants by ionizing radiation.

AVN 0679 Chemical mutagenesis for crop improvement.

AVN 0705 Better plants through mutations: the Joint FAO/IAEA Division's programme in plant breeding and genetics.

Plant regulators

AVN 0412 Plant growth in compensated fields.

Plant tissue culture

AVN 0677 In vitro techniques for crop improvement.

AVN 0705 Better plants through mutations: the Joint FAO/IAEA Division's programme in plant breeding and genetics.

Plants, Effect of radiation on

AVN 0678 Mutation induction in plants by ionizing radiation.

Plant-soil relationships

AVN 0810 The use of ³²P labelled fertilizer in field and greenhouse.

Plasma confinement

AVN 0333 Plasma poses.

AVN 0658 Fusion: the ultimate fire.

AVN 0665 Nuclear fusion : energy for the 21st century.

Plasma diagnostics

AVN 0330 Plasma diagnostics.

Plasma physics

AVN 0295 Power from fusion.

AVN 0337 Siberian nuclear research centre.

Plowshare program

AVN 0183 Project Sedan.

AVN 0237 Project Gnome.

AVN 0376 Plowshare.

AVN 0377 Safety in the Plowshare program.

Plutonium

AVN 0015 Plutonium fuel fabrication for MTR.

AVN 0016 Plutonium metal preparation

AVN 0149 Plutonium fuel fabrication, EBR-I Mark IV.

AVN 0175 Naissance du plutonium.

AVN 0302 Reprocessing nuclear fuel.

AVN 0313 Current methods in plutonium fuel fabrication.

AVN 0350 The fuel of the future.

AVN 0406 Plutonium fuel.

AVN 0523 A journal of plutonium.

Plutonium -- Safety measures

AVN 0093 Fabrication of plutonium disks.

AVN 0636 Safe handling of plutonium in research laboratories.

Polymerase chain reaction

AVN 0801 Demonstration polymerase chain reaction (PCR)

Power resources

AVN 0619 Energy - the American experience.

AVN 0626 The ultimate energy.

AVN 0630 Energy : the nuclear option.

AVN 0666 The energy problem : the nuclear solution.

AVN 0714 A play half written : the energy adventure.

Power resources -- Canada

AVN 0672 Energy for the future.

Power resources -- India -- History

AVN 0213 Story of energy.

Power resources -- United Kingdom

AVN 0648 Energy for all.

Pressure vessels

AVN 0425 Pressure vessel for A1, the first Czechoslovak nuclear power station.

Pressurized water reactors -- Canada

AVN 0671 Reactor safety.

Pressurized water reactors -- China

AVN 0819 Nuclear energy for our future.

Pressurized water reactors -- United Kingdom

AVN 0702 Nuclear power - the next generation.

AVN 0765 The future of the PWR in Britain.

Project Gasbuggy

AVN 0444 Project Gasbuggy : the resourceful atom.

Project SNAP

AVN 0117 SNAP-3 operational tests.

AVN 0151 Our nearest star.

AVN 0155 Nuclear reactors for space.

AVN 0242 Nuclear power for space - SNAP-9A.

AVN 0266 Fabrication of SNAP-7D fuel sources.

AVN 0344 Pax atomis : SNAP-7 terrestrial isotopic power systems.

AVN 0396 SNAP-8 - system for nuclear auxiliary power.

Protons

AVN 0328 The discovery of proton radioactivity.

Public health

AVN 0434 Radiation and public health.

Public information

AVN 0692 The IAEA's activities in implementing the conventions on early notification and emergency assistance.

Pulsed reactors – USSR -- History

AVN 0326 Fast neutron pulsed reactor.

Quantum theory

AVN 0572 A new reality.

Radiation

AVN 0162 Alpha, beta and gamma.

AVN 0163 Radiation and matter.

AVN 0320 Atomic radiation.

Radiation, Background

AVN 0659 The management of nuclear waste.

AVN 0667 All around us radiation.

AVN 0737 RCFX : radiation causes and effect.

Radiation -- Accidents

AVN 0489 Radiation accident patients - emergency handling for hospitals and rescue squads.

AVN 0647 Medical management of radiation accidents.

Radiation -- Industrial applications

AVN 0740 Radiation energy on the move.

Radiation -- Measurement

AVN 0659 The management of nuclear waste.

Radiation -- Physiological effect

AVN 0745 An Epoch without summer.

AVN 0689 Waste in the rock.

AVN 0757 Man and nuclear radiation = L'Homme face au rayonnement nucléaire.

Radiation -- Safety measures

AVN 0165 Control of radiation hazards in the surroundings.

AVN 0667 All around us radiation.

AVN 0737 RCFX : radiation causes and effect.

Radiation detection

AVN 0558 An added sense : the detection of nuclear radiation.

Radiation dosimetry -- History

AVN 0372 Personnel Monitoring.

AVN 0633 Nuclear risks: emergency organization.

AVN 0660 Nuclear accident dosimetry.

Radiation dosimetry -- Standards

AVN 0699 The dosimetry programme of the IAEA.

Radiation injuries

AVN 0767 Treatment of radiation burns, 1987.

Radiation injuries -- Brazil -- Goiania

AVN 0837 Jag har cesium i blodet och aerr raedd = I have cesium in my blood, and I am afraid.

Radiation injuries -- Treatment

AVN 0647 Medical management of radiation accidents.

Radiation monitoring

AVN 0116 Fire fighting in the nuclear age.

AVN 0576 Calibration of radiation monitoring instruments.

Radiation preservation of food

AVN 0716 Using food irradiation to improve food supply, safety and trade.

AVN 0687 Food irradiation - a new way to process food.

Radiation protection

AVN 0116 Fire fighting in the nuclear age.

AVN 0165 Control of radiation hazards in the surroundings.

AVN 0245 Radiological safety.

AVN 0323 Hot laboratory for testing materials.

AVN 0377 Safety in the Plowshare program.

- AVN 0379 R-A-P Radiological assistance program.
- AVN 0434 Radiation and public health.
- AVN 0480 The safe handling of enriched uranium.
- AVN 0558 An added sense : the detection of nuclear radiation.
- AVN 0566 Glove box fires.
- AVN 0747 Phosphorus-32 : safe handling techniques in biochemical laboratories.
- AVN 0748 Iodine-125 safety procedures in a biochemical laboratory.
- AVN 0764 International radon programme.

Radiation workers

- AVN 0661 I work in atomic energy.

Radioactivation analysis

- AVN 0259 Neutron activation analysis.
- AVN 0261 The atomic fingerprint.
- AVN 0287 Neutron activation.
- AVN 0529 The atom and the environment.
- AVN 0535 Isotopes in environmental control.

Radioactivation analysis in archaeology

- AVN 0617 The atom and archaeology.

Radioactive contamination

- AVN 0752 Chernobyl as viewed from the 90's.
- AVN 0756 Mitigation of the radiological and radioecological consequences of the 1957 accident in the Southern Urals.

Radioactive dating

- AVN 0503 Nuclear fingerprinting of ancient pottery.

Radioactive decontamination

AVN 0633 Nuclear risks: emergency organization.

AVN 0713 April 6, 1986.

Radioactive decontamination -- France

AVN 0601 Speleologie nucleaire : accident of October 17, 1969 at St. Laurent des Eaux.

Radioactive pollution -- Brazil -- Goiania

AVN 0837 Jag har cesium i blodet och aerr raedd = I have cesium in my blood, and I am afraid.

Radioactive pollution -- Environmental aspects -- Bikini Atoll

AVN 0440 Return to Bikini.

Radioactive pollution -- Environmental aspects -- Mururoa Atoll

AVN 0814 Mururoa sampling.

AVN 0815 The two atolls (Mururoa and Fangataufa).

Radioactive pollution -- Law and legislation

AVN 0692 The IAEA's activities in implementing the conventions on early notification and emergency assistance.

Radioactive pollution -- Ukraine

AVN 0751 International Chernobyl project.

Radioactive substances -- Safety measures

AVN 0184 The safe handling of radioisotopes.

AVN 0602 Securite dans les transports radioactifs.

Radioactive substances -- Safety regulations

AVN 0787 Safe transport of radioactive material.

Radioactive substances -- Transportation

- AVN 0707 Operation Smash Hit.
- AVN 0782 Operation Smash Hit : fact or fake?
- AVN 0787 Safe transport of radioactive material.

Radioactive substances -- Transportation -- History

- AVN 0367 The wooden overcoat.
- AVN 0398 Atoms on the move : the transportation of radioactive materials.
- AVN 0463 Transportability.
- AVN 0602 Securite dans les transports radioactifs.
- AVN 0631 Safe transport of radioactive materials.
- AVN 0696 Accident testing.
- AVN 0777 The transport of radioactive materials.

Radioactive substances -- Transportation -- United States

- AVN 0804 What'll we do with the waste when we're through? :
transportation and Radioactive waste disposal in the ground.

Radioactive tracers

- AVN 0300 Radioisotopes in biology and agriculture.
- AVN 0360 The riddle of photosynthesis.
- AVN 0421 The radioisotope : methodology.
- AVN 0503 Nuclear fingerprinting of ancient pottery.
- AVN 0526 Controlled photosynthesis.
- AVN 0529 The atom and the environment.
- AVN 0535 Isotopes in environmental control.
- AVN 0582 Histoire de papillons.
- AVN 0596 Les radiotraceurs et le genie chimique.

AVN 0657 Utilisation des techniques nucleaires en sedimentologie dynamique.

Radioactive waste disposal

AVN 0653 The atom, a closer look.

AVN 0659 The management of nuclear waste.

AVN 0749 Safe packaging of radioactive waste.

AVN 0754 Conditioning of spent sources in developing countries.

Radioactive waste disposal -- United Kingdom

AVN 0759 A tunnel in time.

AVN 0760 Design for disposal.

AVN 0763 What if?

Radioactive waste disposal -- United States

AVN 0755 Illinois low level radioactive waste.

AVN 0804 What'll we do with the waste when we're through? :
transportation and Radioactive waste disposal in the ground

AVN 0651 Spent reactor fuel storage in granite.

AVN 0804 What'll we do with the waste when we're through? :
transportation and Radioactive waste disposal in the ground

Radioactive waste disposal in the ground -- Canada

AVN 0684 Planning for tomorrow : nuclear fuel waste disposal.

AVN 0717 Nuclear fuel waste research : the Canadian program.

AVN 0673 Handle with care.

AVN 0674 Developing tomorrow's energy.

Radioactive waste disposal in the ground -- Finland

AVN 0697 TVO studies the bedrock.

Radioactive waste disposal in the ground – Germany

AVN 0675 Aufgaben und Loesungen : nukleare Entsorgung

AVN 0780 Direct disposal - the alternative way of spent fuel management.

Radioactive waste disposal in the ground -- Sweden

AVN 0689 Waste in the rock.

Radioactive waste disposal in the ground – United Kingdom

AVN 0778 Sellafield geological investigations.

Radioactive waste disposal in the ground -- United States

AVN 0712 The science of managing nuclear waste.

AVN 0715 Fitting the pieces.

Radioactive waste management

AVN 0404 Waste handling for isotope users.

Radioactive waste management -- France -- History

AVN 0304 La concentration des effluents radioactifs par evaporation naturelle.

Radioactive waste management -- Hungary

AVN 0641 Radioactive waste processing and storing facility in Puspiokszilagy, Hungary.

Radioactive waste management -- United Kingdom

AVN 0709 Nuclear fuel service.

AVN 0722 What about waste?

Radioactive waste management -- United Kingdom -- History

AVN 0060 Exercise Mermaid.

AVN 0130 The Winfrith pipeline.

Radioactive waste management -- United States -- History

AVN 0511 Retirement of the Hallam nuclear power facility.

Radioactive waste sites -- United Kingdom

AVN 0778 Sellafield geological investigations.

Radioactivity

AVN 0323 Hot laboratory for testing materials.

AVN 0328 The discovery of proton radioactivity.

AVN 0640 Using radioactivity.

AVN 0735 Radioactivity and you.

AVN 0737 RCFX : radiation causes and effect.

Radioactivity -- Safety measures

AVN 0398 Atoms on the move : the transportation of radioactive materials.

AVN 0746 Safe working practice in the radiochemical laboratory.

AVN 0424 Practice of radiological safety.

Radiobiology

AVN 0166 Radiation in biology - an introduction.

AVN 0194 Time - the surest poison.

AVN 0195 The immune response.

AVN 0196 Building blocks of life.

AVN 0197 The living solid.

AVN 0558 An added sense : the detection of nuclear radiation.

Radiocarbon dating

AVN 0617 The atom and archaeology.

AVN 0179 Carbone-14 ou Le temps retrouve.

AVN 0319 Carbon-14.

AVN 0588 Signals from our water.

Radiochemistry

AVN 0285 Radiation effects in chemistry.

AVN 0342 Radiation chemistry.

Radiography, Medical -- Complications -- Germany.

AVN 0686 Record for tomorrow.

Radiography, Medical -- Complications -- Japan.

AVN 0686 Record for tomorrow.

Radioimmunoassay

AVN 0693 Animals and atoms.

Radioisotope scanning

AVN 0290 The scintillation camera.

AVN 0361 Radioisotope scanning in medicine.

AVN 0393 Scintillation scanning of the spleen.

AVN 0435 Radioisotopes in medical diagnosis and investigation.

AVN 0540 Short-lived radioisotopes in nuclear medicine.

AVN 0607 Nuclear medicine.

Radioisotopes

AVN 0355 Transcurium elements : synthesis, separation and research.

AVN 0399 Development and fabrication of HFIR target elements.

AVN 0421 The radioisotope : methodology.

AVN 0452 Isotopes in hydrology =Izotopy v gidrologii.

- AVN 0566 Glove box fires.
- AVN 0640 Using radioactivity.
- AVN 0748 Iodine-125 safety procedures in a biochemical laboratory.

Radioisotopes -- Environmental aspects

- AVN 0531 Environmental monitoring for nuclear power stations.

Radioisotopes -- Safety measures

- AVN 0184 The safe handling of radioisotopes.
- AVN 0422 Radioisotopes in agricultural research.

Radioisotopes in agriculture

- AVN 0045 Radioisotopes.
- AVN 0300 Radioisotopes in biology and agriculture.
- AVN 0348 Down on the farm.
- AVN 0373 Atomic energy in agriculture.
- AVN 0422 Radioisotopes in agricultural research.
- AVN 0429 Isotopes, rayonnements, agriculture (radio-agronomie).
- AVN 0482 Atoms in agriculture.
- AVN 0507 Nuclear research in agriculture.
- AVN 0603 La radioagronomie.
- AVN 0650 Sludge disposal: a new option.
- AVN 0732 Atoms in the service of agriculture : 25 years of co-operation of the Food and Agriculture Organization of the United Nations (FAO) and the International Atomic Energy Agency (IAEA).

Radioisotopes in animal culture

- AVN 0693 Animals and atoms.

Radioisotopes in animal nutrition

AVN 0693 Animals and atoms.

Radioisotopes in biology

AVN 0166 Radiation in biology - an introduction.

AVN 0300 Radioisotopes in biology and agriculture.

Radioisotopes in geology

AVN 0432 Penetration logging methods in engineering and construction work.

Radioisotopes in industry

AVN 0045 Radioisotopes.

AVN 0297 Eye for isotopes.

AVN 0325 Pulsed neutron-neutron logging.

AVN 0430 Desalting the seas.

AVN 0512 Radioisotope analytical techniques in mineral processing.

AVN 0536 Nuclear innovations in process control.

AVN 0596 Les radiotraceurs et le genie chimique.

AVN 0652 Man and radiation.

AVN 0741 Isotopes in action.

Radioisotopes in medicine

AVN 0045 Radioisotopes.

AVN 0298 Radioisotope application in medicine.

AVN 0652 Man and radiation.

AVN 0741 Isotopes in action.

Radioisotopes in plant nutrition

AVN 0706 Atoms for increased soil productivity.

Radiology, Medical

AVN 0740 Radiation energy on the move.

Radioscopic diagnosis

AVN 0435 Radioisotopes in medical diagnosis and investigation.

Radioscopy

AVN 0534 Doorway to diagnosis.

Radiotherapy

AVN 0284 Diagnosis and therapy with radiation.

AVN 0291 Heavy particle beams in medicine.

AVN 0338 The aim is life.

AVN 0580 Radiotherapie a visée curative = Curative radiotherapy.

Radium -- History

AVN 0731 Radium.

Radon

AVN 0764 International radon programme.

Radon -- Health aspects

AVN 0818 Radon : risks and remedies.

Rare earth metals

AVN 0217 Atomic fuel.

Reactor fuel reprocessing

AVN 0175 Naissance du plutonium.

AVN 0595 Microspheres for nuclear energy.

AVN 0629 Energy for a healthy future.

AVN 0639 The chemical processing of irradiated fuel.

Reactor fuel reprocessing -- United Kingdom

AVN 0721 Sellafield : a future positive.

AVN 0709 Nuclear fuel service.

AVN 0710 The technology of nuclear fuel reprocessing.

Reactor fuel reprocessing -- United Kingdom -- History

AVN 0302 Reprocessing nuclear fuel.

AVN 0463 Transportability.

Reactor fuel reprocessing -- United States -- History

AVN 0113 Reactor fuel processing.

AVN 0351 A breeder in the desert.

AVN 0375 Shear-leach process for spent nuclear fuels.

Recombinant DNA

AVN 0723 Nucleic acids techniques.

AVN 0805 Demonstration - excerpts from recombinant DNA videos.

Restriction enzymes, DNA

AVN 0723 Nucleic acids techniques.

Relativity

AVN 0668 Einstein's universe.

Renewable energy sources

AVN 0704 Energy - the nuclear option.

Research reactors -- U.K. -- History

AVN 0354 Dragon.

Research reactors -- United States -- History

AVN 0003 Naval research laboratory reactor.

AVN 0004 Oak Ridge Research Reactor.

AVN 0044 Medical research reactor.

Research reactors -- USSR -- History

AVN 0326 Fast neutron pulsed reactor.

AVN 0336 New research nuclear centre of the USSR.

Restriction enzymes

AVN 0723 Nucleic acids techniques.

AVN 0728 Oligonucleotides - synthesis and use.

Rinderpest

AVN 0693 Animals and atoms.

Roentgen, Wilhelm Conrad, 1845-1923

AVN 0802 The discovery of x-rays : 100 years on.

Rutherford, Ernest, 1871-1937

AVN 0317 Lord Rutherford on 'The atom'.

AVN 0762 Discovery and the atom.

Saline water conversion

AVN 0430 Desalting the seas.

AVN 0533 The bitter and the sweet.

AVN 0599 La mer est bonne a boire.

Savannah (nuclear ship)

AVN 0088 Full speed ahead.

AVN 0280 The nuclear ship 'Savannah'.

Scattering (Physics)

AVN 0141 Analysis of nucleon-nucleon scattering experiments.

AVN 0157 Dispersion theory approach to nucleon-nucleon scattering.

Scintillation counters

AVN 0361 Radioisotope scanning in medicine.

Screwworm -- Control

AVN 0768 The screwworm.

Screwworm -- Control -- Central America

AVN 0789 Ganado ganador.

Screwworm -- Control -- Libya

AVN 0783 Screwworm programme in Libya.

AVN 0796 The New world screwworm: *Cochliomyia hominivorax*.

AVN 0830 Unhatching the screwworm.

Screwworm -- Control -- Mexico

AVN 0809 Planta productora de moscas esteriles - Chiapa de Corzo.

AVN 0820 Vigilancia del gusano barrenador del ganado.

Screwworm -- Control -- Nicaragua

AVN 0823 The sterile screwworm fly dispersal center Nicaragua.

Screwworm -- Control -- United States

AVN 0153 Roundup.

Sedimentation and deposition

AVN 0657 Utilisation des techniques nucleaires en sedimentologie dynamique.

Semiconductor nuclear counters

AVN 0776 In-situ corrosion monitoring.

Separation (Technology)

AVN 0200 The art of separation.

Sewage sludge

AVN 0650 Sludge disposal: a new option.

Shielding (Radiation)

AVN 0116 Fire fighting in the nuclear age.

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AVN 0710 The technology of nuclear fuel reprocessing.

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- AVN 0441 An orange for Don Miguel.
- AVN 0669 Mediterranean fruit fly.
- AVN 0761 Sterile insect technique: a field evaluation of the quality of mass-reared fruit flies.

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- AVN 0499 Strangeness minus three.

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- AVN 0344 Pax atomis : SNAP-7 terrestrial isotopic power systems.
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- AVN 0481 Atomic revolution in wood.

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- AVN 0639 The fast reactor.

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- AVN 0235 Principles of thermal, fast and breeder reactors.

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