

UV radiation in our environment

The sun emits ultraviolet radiation (also called UVR or UV radiation). We cannot see or feel it. The sun's heat is from infrared rays but it is UV radiation that burns our skin.

Some UV radiation from the sun on our skin is good for our health because we make Vitamin D this way. However, too much UV radiation can cause our skin to age, develop skin cancers, and damage our eyes and immune systems. About 90% of skin cancers are caused by too much exposure to UVR.

Clouds

You can get sunburned on cloudy days. Cloud usually reduces UVR, particularly in overcast conditions. However, when there is broken cloud and the sun remains visible, clouds can scatter or reflect UVR so that total UVR may be greater than under clear sky conditions.

Latitude

In New Zealand, the peak summer UVR levels are around 40% higher than the same latitudes in the northern hemisphere.

Sun elevation

The amount of UVR varies with time of day and time of year. The higher the sun is in the sky, the higher the UVR. The shorter your shadow, the higher the UV index is. Be SunSmart during daylight saving months (September to April), especially between 10am and 4pm.

Altitude

In clean air, UVR increases by about 1% for each 1000 metre rise in altitude (going uphill). On our ski fields, the UV radiation can be 20-30% more than at sea level. Snow also reflects UVR. Be SunSmart both summer and winter when up in the mountains.

Working outdoors

Working outdoors means more time in the sun, more exposure to UVR and a greater risk of skin cancer.

Shade

Shade can reduce UV radiation. To reduce UVR by more than 50%, most of the sky needs to be blocked by the shade structure.

Reflection

UVR can be reflected or scattered by different surfaces. White sands can reflect up to 25% of UVR and snow can reflect 80% or more. Water also reflects high levels of UVR. Even under 50cm of water, UVR can still be 40% of its surface value.



Radiation In Our Environment

**United States. Congress. Senate.
Committee on Public Works.
Subcommittee on Environmental
Pollution**

Radiation In Our Environment:

Radioactivity in the Environment Vlado Valkovic, 2019-04-17 Radioactivity in the Environment Second Edition presents the facts on the presence of both natural and manmade radionuclides in the environment Sources of ionizing radiation that can lead to human exposure are discussed including natural sources nuclear explosions nuclear power generation the use of radiation in medical industrial and research purposes and radiation emitting consumer products In this thoroughly updated edition users will find new sections on developments in radioactive nuclides in nature and technologically modified exposure to natural radiation new threats by terrorist individuals groups and countries changes to the status of nuclear power in the world and more Additional new sections cover radioisotopes in geo prospecting and the oil industry the use of radiation in environmental protection detector types and detectors used for personal dosimetry the Dirty Bomb the Fukushima accident and North Korea testing sites and nuclear capabilities Includes details of analytical laboratory procedures for radioactivity measurement in different samples Features a new chapter on decontamination after radiation exposure Expands the discussion on nuclear fusion to cover ITER and other installations **Radioactive Releases in the Environment** John R. Cooper, Keith Randle, Ranjeet S. Sokhi, 2003-05-07 This text brings together in one single comprehensive reference the fundamentals of radioactivity It uniquely fills the gap in the market as no other books deal with environmental radioactivity to this degree Timely and invaluable as the studies of environmental processes and the awareness of the impact of human activity on our environment are increasing Links all three main aspects of environmental radioactivity Principles Transport and Measurement Useful to a wide readership students lecturers researchers companies and environmental consultants **Fluid Mechanics and Thermodynamics of Our Environment** S Eskinazi, 2012-12-02 Fluid Mechanics and Thermodynamics of Our Environment provides an introduction to the mechanical and thermodynamic properties of the environment The book begins with a discussion of the nature of the physical environment namely the earth the atmosphere and the oceans It then reviews the origin definitions and physical characteristics and relations of concepts affecting the state of the geofluid system Separate chapters cover the principles of heat transfer factors affecting the mechanical and thermal equilibrium of the environment the phenomenon of surface tension kinematics and dynamics of the environment inviscid motion of the atmospheric and oceanic free layers and the physical and mathematical behavior of the planetary boundary layer The final chapter discusses some applied problems pertaining to the environment These include problems involving the thermal plume hurricanes and the dynamic response of a balloon in a vortical atmospheric column This book was developed for engineering classes interested in the motion of the environment which is a main carrier of pollutants The selection of topics and the emphasis make the material primarily suited for engineering work **Energy and the Environment** Reza Toossi, 2009 Energy and the Environment is conceived and written at a level suitable for use as an introductory undergraduate textbook in energy and environment for students with very little mathematics or science background It can

also be used by anyone interested in technical political environmental and economical issues related to energy To make the text appropriate for engineering and science students additional topics are included within information boxes placed throughout the book and in the appendices Examples requiring algebra are indicated in a similar manner Depending on the audience instructors can decide to eliminate all or part of this material without loss of continuity Each chapter in Energy and the Environment stands alone and the text can be taught in any order that the instructor deems suitable Widely different curricula can therefore be designed and tailored for any audience simply by focusing on the appropriate sections from the appropriate chapters For example an environmental engineering course might include the summaries of various energy sources types with an emphasis on air pollution radiation and environmental economics A science curriculum might alternately emphasize the various technological sections and incorporate some of the engineering designs This book is now available and can be purchased at <http://vervepublishers.com> You may also order a free examination copy if you are considering adopting the Energy and the Environment for your classes I would be most pleased to receive comments and thank you for your time

Radioactivity in the Environment Ronald L. Kathren, 1984 **Radiation in Our Environment** Walter Lee, 1995-09-01 There is a big concern about radiation because of its biological effects on our daily lives because the amount of environmental radiation is constantly increasing RADIATION IN OUR ENVIRONMENT gives conceptual understandings insights into the nature impact of radiation These far reaching influences deserve our attention basic understanding Numerous illustrations are included to make understanding a breeze NO MATH IS REQUIRED for the reader to use or understand RADIATION IN OUR ENVIRONMENT is divided into two parts Part one is a description of radiation concepts a distinction between sensed non sensed radiation Part two gives examples of the effects of radiation on living things of various species radiation in the environment the earth our homes workplaces The book also explains environmental terms like radiation contamination ozone the greenhouse effect A short conclusion follows Each one of us may be affected by radiation Our controls include understanding what it is guarding our health by limiting our exposure to it EVERYBODY SHOULD KNOW ABOUT RADIATION This is an ideal hand ready reference for many of the health environmental topics that are in the news general discussions Under 200 pages Environmental Radioactivity and Emergency Preparedness Mats Isaksson, Christopher L. Raaf, 2017-01-06 Radioactive sources such as nuclear power installations can pose a great threat to both humans and our environment How do we measure model and regulate such threats Environmental Radioactivity and Emergency Preparedness addresses these topical questions and aims to plug the gap in the lack of comprehensive literature in this field The book explores how to deal with the threats posed by different radiological sources including those that are lost or hidden and the issues posed by the use of such sources It presents measurement methods and approaches to model and quantify the extent of threat and also presents strategies for emergency preparedness such as strategies for first responders and radiological triage in case an accident should happen Containing the latest recommendations and procedures

from bodies such as the IAEA this book is an essential reference for both students and academicians studying radiation safety as well as for radiation protection experts in public bodies or in the industry

Eco-Neurobiology, and How the Environment Shapes Our Brains Andreas M. Grabrucker, 2019-10-23 Eco neurobiology is a field of neuroscience that investigates how environmental factors impact the brain through development and aging This book takes the reader on a journey through the most recent findings in this field covering how non genetic factors influence our brain and may contribute to the development of disorders as well as the everyday function of our minds The things we eat the stressfulness of our lives and traumatic events all have effects on our brains that we are just beginning to understand

Nuclear Energy and the Environment Essam E. El-Hinnawi, 2013-10-22 Nuclear Energy and the Environment provides an assessment based on the opinions and findings of international experts in the field of atomic energy of the environmental impact of the different stages of the nuclear fuel cycle Chapters in the book cover different subjects in the use of nuclear energy such as the environmental impacts of energy production and use the environmental impact of mining and milling of radioactive ores upgrading processes and the fabrication of nuclear fuels none radiological environmental implications of nuclear energy and the technology and environmental hazards of nuclear waste disposal Nuclear scientists environmentalists ecologists nuclear engineers and policy makers will find the book interesting

Choosing Our Environment: Environmental Protection Agency: long-range forecasting and public policy United States. Congress. Senate. Committee on Public Works. Panel on Environmental Science and Technology, 1976

Energy and the Environment R. Swarup, S.N. Mishra, V.P. Jauhari, **Choosing Our Environment** United States. Congress. Senate. Committee on Public Works. Panel on Environmental Science and Technology, 1976

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Detecting Environmental Radioactivity Manuel García-León, 2022-11-30 This textbook presents the principles and methods for the measurement of radioactivity in the environment In this regard specific low level radiation counting and spectrometry or mass spectrometry techniques are discussed including sources distribution levels and dynamics of radioactivity in nature The author gives an accurate description of the fundamental concepts and laws of radioactivity as well as the different types of detectors and mass spectrometers needed for detection Special attention is paid to scintillators semiconductor detectors and gas ionization detectors In order to explain radiochemistry some concepts about chemical separations are introduced as well The book is meant for graduate and advanced undergraduate students in physics chemistry or engineering oriented to environmental sciences and to other disciplines where monitoring of the environment

and its management is of great interest *Choosing Our Environment, Can We Anticipate the Future?: Environmental Protection Agency: long-range forecasting and public policy* United States. Congress. Senate. Committee on Public Works. Subcommittee on Environmental Pollution, 1976 **Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-level Radioactive Waste at Yucca Mountain, Nye County, Nevada: Appendixes A through O** ,2002 The purpose of this environmental impact statement EIS is to provide information on potential environmental impacts that could result from a Proposed Action to construct operate and monitor and eventually close a geologic repository for the disposal of spent nuclear fuel and high level radioactive waste at the Yucca Mountain site in Nye County Nevada The EIS also provides information on potential environmental impacts from an alternative referred to as the No Action Alternative under which there would be no development of a geologic repository at Yucca Mountain
EPA-SAB-RAC. ,1995

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