



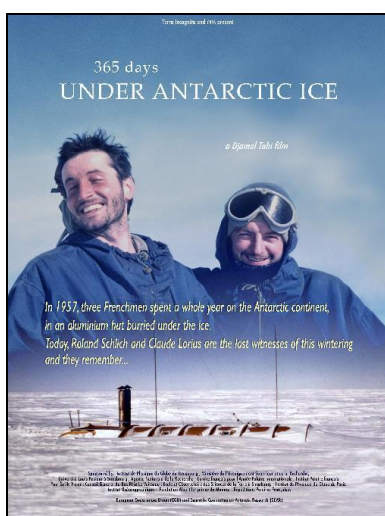
European Geosciences Union General Assembly 2012

GeoCinema: Film information

All films are either spoken or subtitled in English. Blurbs provided by the filmmakers.

365 Days under Antarctic Ice; 60 mins

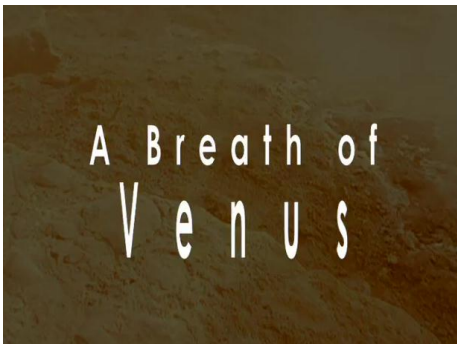
The 1st July 1957 marks the beginning of the International Geophysical Year. The scientific world decided to explore the Antarctic. Twelve nations would join efforts to initiate a vast research programme aimed to uncover the mysteries of the white continent. Three Frenchmen, Jacques Dubois, a meteorologist, Roland Schlich, a geophysicist, and Claude Lorius a glaciologist, occupied the Charcot Station built near the South magnetic pole and located 320 km from the coast, during a whole year without any possibility of relief. They wintered from January 1957 to January 1958 in an aluminium hut only 24 m² in size, buried under the ice. Today, Roland Schlich of the School and Observatory of Earth Sciences, Strasbourg and Claude Lorius of the Laboratory of Glaciology and Geophysics of the Environment, Grenoble, are the last witnesses of this wintering and they remember... The film traces this human and scientific adventure, thanks to their evidence and unpublished documents, filmed 50 years ago. The English version of the film is sponsored by the European Geosciences Union (EGU) and the Scientific Committee on Antarctic Research (SCAR)



1, 2, 3, Planète!; 26 mins (French with English subtitles)

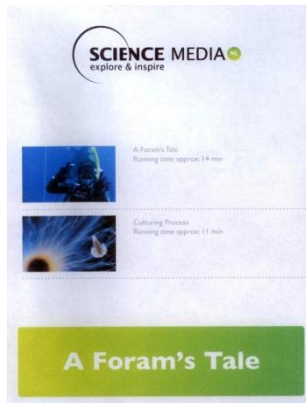
In 2006, the International Astronomical Union decided to reclassify the objects of the Solar System. Now, the Solar System contains three main groups of objects: the planets, the dwarf planets, and the small bodies. Pluto, which has been named the ninth planet since its discovery in 1930, has been reclassified as a dwarf planet. In this educational film, Alain Doressoundiram, astrophysicist at the Paris Observatory and his colleagues Daniëlle Briot (Paris Observatory) and Bernard Schmitt (University Joseph Fourier de Grenoble) explore the history of our understanding of the Solar System. They explain why Pluto is not a planet anymore and how modern research is done on Trans Neptunian Objects, these small icy bodies at the very edge of the Solar System.





A Breath of Venus; 20 mins

A Breath of Venus is the main film from a set of four. Planetary scientists Jean-Loup Bertaux (Service d'Aéronomie du CNRS, France) and Jörn Helbert (German Space Agency) go for a hike on the island of Volcano (Italy). They meet different phenomena there and show how those relate to Venus and the study of that planet, in particular with the European Venus Express mission. They also explore the similarities and differences between Earth and Venus and explain how the study of Venus can help us better understand our own planet. The international aspect of the enterprise of a space mission is accentuated by the fact that everybody speaks his or her mother tongue. Painting is used to illustrate more abstract concepts.

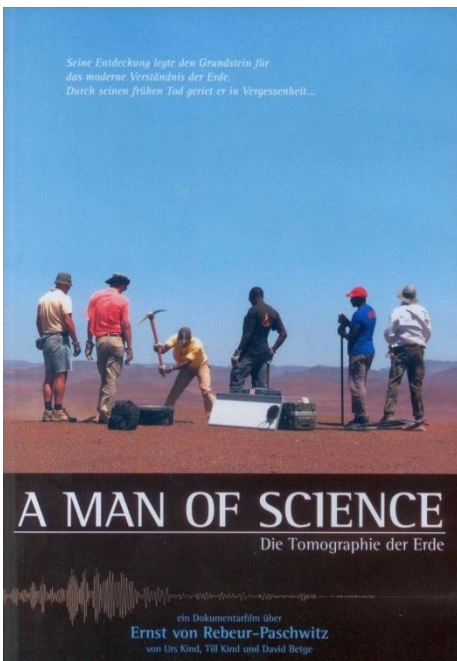


A Forum's Tale; 15 mins

How do scientists reconstruct past climate conditions on Earth? One way of doing this is by culturing living planktonic Foraminifera and analysing their shell composition under present-day conditions in the world oceans. For over thirty years, scientists have been researching these tiny planktonic creatures to unlock the living conditions that lie hidden within their shells. With these insights it is possible to create a suite of tools to analyse the same Foraminifera shells recovered from past times and use them to reconstruct climate and ocean conditions over millions of years.

A Man of Science: Diffusion of radionuclides in clay; 43 mins (German with English subtitles)

The founder of modern seismology, Ernst von Rebeur-Paschwitz, was born 150 years ago. His discovery of the long-range effects of earthquakes laid the foundation for our modern day understanding of the Earth. In April 1889, Tokyo was struck by a strong earthquake. Almost 9000 km away, with seismometers stationed in Wilhelmshaven and Potsdam, Rebeur-Paschwitz registered strange signals. Coincidentally, he learnt about the quake from the newspaper and realized that his recordings in Germany had been caused by the Tokyo earthquake. Until then it had been unknown that earthquake waves spread globally. To gain a better understanding of our planet, Rebeur-Paschwitz suggested to set up as many measuring stations as possible across the globe. With this idea in mind, he was far ahead of his time. Shortly after his discovery he contracted tuberculosis. Though limited by his severe illness, he kept on dedicating his life to science until he died at the age of only 35 in 1895. Despite his pioneering work and ideas, he remained almost unknown. Nowadays, scientists all over the world work on the realization of his ideas, oftentimes without knowledge of the history of his discovery. The realization of his dream seems now within reach. Within seconds, data from measuring stations all over the planet converge at the data processing centre in Potsdam, thus a global network. These data can help to mitigate the worst effects of an earthquake and at the same time contribute to a better understanding of the interior of the planet. The film accompanies scientists who are pursuing the work of Ernst von Rebeur-Paschwitz in Strasbourg, Göttingen, Potsdam, and the Namibian desert, and keep the knowledge about his discovery alive.





CC-WaterS; 24mins

Climate change affects fresh water resources and may have a significant influence on the public drinking water supply. Land use activities exert pressure on water resources and will change according to climate change. It is crucial for the safeguarding of future water supplies to anticipate these climate and land use changes and to assess their impacts on water resources. In CC-WaterS, governmental bodies, water suppliers, and research institutions work together and implement jointly developed solutions, hence to be applied on a regional or local level in SEE. The complementary knowledge of the partners, enhanced by further applicable results of past projects, will provide a strong background.



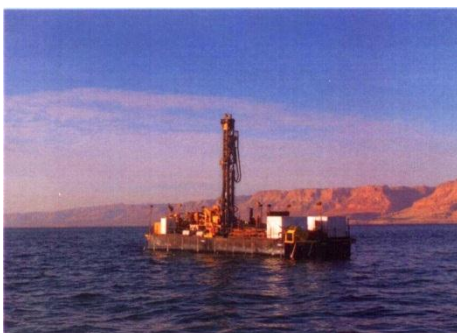
Combating Desertification: Local solutions for a global problem; 8 min

Promotional video for the DESIRE project, showing the global problem of desertification in various areas around the world, and the local solutions that the DESIRE project tries to develop to alleviate these problems.



Congo River: Artery of the forest; 6 mins

Researchers from the Woods Hole Research Centre collected water samples from the Congo River and its major tributaries to understand how climate change and land use (agriculture, logging) can be measured through the properties of the water. The epic journey, complete with guns, bribes, and very narrow canoes, took the team the length of the Republic of Congo, from the capital city of Brazzaville to the jungles of the far north. Along the way the science team surveyed nearly forty different rivers that are all part of the massive Congo River watershed. This effort was part of a larger project studying seven major river watersheds worldwide.



Dead Sea - Research drilling in the Holy Land; 7 mins

Science movie about the Dead Sea scientific drilling programme in 2011, showing lake sediment core recovery operations, interviews with lead principal investigators, as well as initial core opening and logging. The deposits recovered provide insight into climate and tectonic evolution in the Levant Basin over the past 200,000 years.



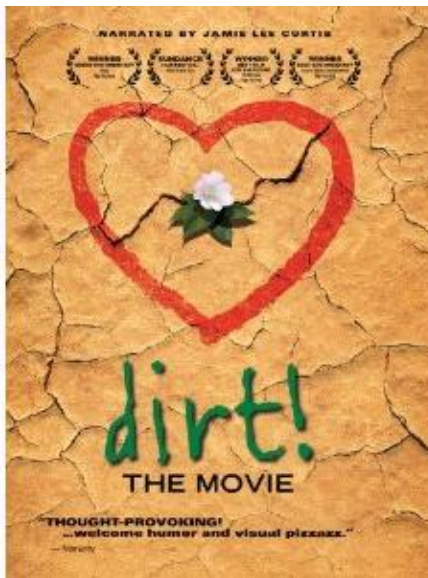
Source: Wikimedia

Diffusion of radionuclides in clay; 5 mins (German with English subtitles)

Several experimental and modelling approaches are used by the Laboratory for Waste Management at the Paul Scherrer Institut to describe radionuclide transport in clay media. The short movie tries to show how methods on different spatial (and temporal) scales (molecular and microscopic; laboratory, and field scales) can be used to predict radionuclide transport from a deep geological repository.

DIRT! The Movie; 86 mins

This is a popular science movie which demonstrates the importance of soil. It raises lots of issues (not always with hard science) but is engaging, thought provoking and fun. The description below is from the film's website (<http://www.dirtthemovie.org>). DIRT! The Movie--directed and produced by Bill Benenson and Gene Rosow--takes you inside the wonders of the soil. It tells the story of Earth's most valuable and underappreciated source of fertility--from its miraculous beginning to its crippling degradation. The opening scenes of the film dive into the wonderment of the soil. Made from the same elements as the stars, plants and animals, and us, "dirt is very much alive." Though, in modern industrial pursuits and clamor for both profit and natural resources, our human connection to and respect for soil has been disrupted. "Drought, climate change, even war are all directly related to the way we are treating dirt." DIRT! the Movie--narrated by Jaime Lee Curtis--brings to life the environmental, economic, social and political impact that the soil has. It shares the stories of experts from all over the world who study and are able to harness the beauty and power of a respectful and mutually beneficial relationship with soil. DIRT! the Movie is simply a movie about dirt. The real change lies in our notion of what dirt is. The movie teaches us: "When humans arrived 2 million years ago, everything changed for dirt. And from that moment on, the fate of dirt and humans has been intimately linked." But more than the film and the lessons that it teaches, DIRT the Movie is a call to action. "The only remedy for disconnecting people from the natural world is connecting them to it again." What we've destroyed, we can heal.



ECORD: Exploring the Earth under the sea; 16 mins

The video features four scientific drilling expeditions operated by the European Consortium for Ocean Research Drilling (ECORD) as part of the Integrated Ocean Drilling Program (IODP). The expeditions brought together international teams of scientists, both at sea and onshore, and took place in the ice-covered waters of the Arctic Ocean and the shallow waters of the Great Barrier Reef, the New Jersey platform, and off the island of Tahiti.



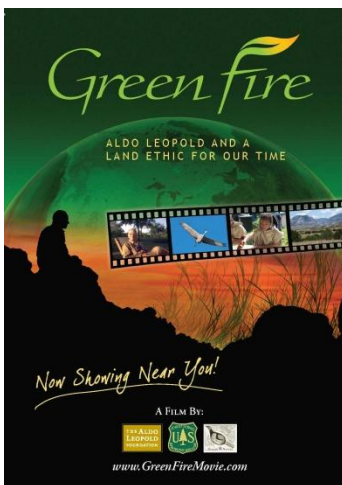
Fraser River: running free; 6 mins

The Fraser River watershed, located in the Canadian province of British Columbia, includes the rain-soaked peaks of the Coast Range, the Canadian Rockies, and the dry sagebrush prairie ecosystem in between. The Fraser is unique—it escaped the flurry of dam building that has altered nearly every other large river on the planet. Yet, the Fraser faces other threats. The mountain pine beetle epidemic, which is raging unchecked due to a string of mild winters, may eliminate up to 80% of the native pine forest. As these dead trees are harvested, the exposed soil will receive more of the sun's heat, which will increase the temperature of the river water. If the water temperature exceeds 20 degrees C, salmon will no longer return to the Fraser—dubbed "the World's Greatest Salmon River"—to breed. Pollution from logging and pulp mills and excess nutrient input and contamination from mining operations also impact the health of the river.



Green Fire: Aldo Leopold and a land ethic for our time, 73 mins

Aldo Leopold is considered the most important conservationist of the 20th century because his ideas are so relevant to the environmental issues of our time. He is the father of the national wilderness system, wildlife management and the science of ecological restoration. His classic book *A Sand County Almanac* inspires us to see the natural world as a community to which we belong. *Green Fire* explores Leopold's personal journey of observation and understanding. It reveals how his ideas resonate with people across the entire American landscape, from inner cities to the most remote wild lands. The film challenges viewers to contemplate their own relationship with the land.



Heavy Metal Contamination in Soils: Using magnetic proxies to make it visible; 14 mins

Heavy metal pollution due to fly ash emission and deposition into soil, dumping of klinker or mine tailings is an important threat to the environment. Efficient low-cost methods for supporting screening and monitoring of potentially polluted sites are of great importance for practical site characterization. The video shows a case-study around the coal-burning power plant complex "Schwarze Pumpe" demonstrating a stepwise approach of fast *in situ* magnetic screening and chemical analyses for the sake of an optimized site assessment. The film was produced by the Media Dept of Tübingen University in collaboration with scientists and includes lab and field scenes, various statements and animations, all guided by a professional speaker.





Hot Spots in the Cold Deep: HERMIONE, a European research pProject; 6 mins

Corporate Video of HERMIONE, giving an overview about the different research fields of HERMIONE and the connection to policy.



Ice Crystals: A scientific exploration of waterfall ice; 12 mins (French with English subtitles)

This DVD presents the frame and the results of a scientific project performed at Laboratoire de Glaciologie in Grenoble about waterfall ice structure, their nature, and mechanical behaviour. This study, financed by the Petzl Foundation, aimed at providing a better insight, from the scientific point of view, of waterfall ice for ice climbers around the world.



In Search of Tricho Webisodes: Parts One, Two and Three; 25 mins

A short documentary series posted on YouTube that follows scientists from the Woods Hole Oceanographic Institution, USA on the research vessel R/V Oceanus. WHOI supported a three week cruise to study health and function of plankton (*Trichodesmium*) in the western North Atlantic. The final instalment in a three-part series documenting the cruise, the research, and the scientists by ScienceMedia.nl from The Netherlands



KDM - The German Marine Research Consortium; 6 mins

Corporate Video of the KDM (The German Marine Research Consortium). Overview of the different fields of work of the KDM



MARUM-the ocean in depths: Part 1 - Cold water corals; 5 mins

Film about cold water corals, their appearance and lifestyle, as well as their future prospects in the face of human impact.



Models and Reality: Alfred Wegener Medal Lecture by Prof. Pierre Morel, 47 mins

Discusses the role, in the advancement of science, of theoretical investigation as opposed to observation of natural phenomena.



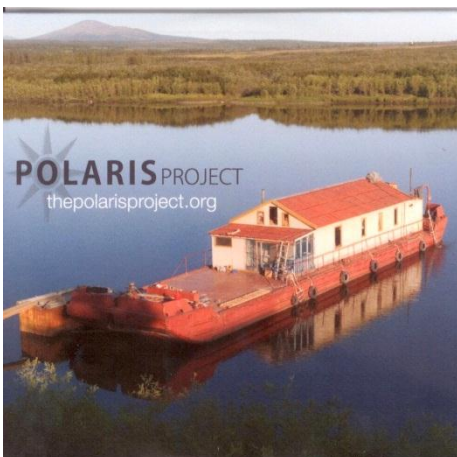
Our Last Transit of Venus; 6 mins

This is a teaser for the 2012 documentary film project entitled Transit of Venus.



Rosetta's Comet Touchdown; 19 mins

Rosetta's Comet Touchdown is part of the pilot educational kit: Hands-on Comet. The kit is composed of, (1) a LEGO® MINDSTORMS® demonstration model of the Rosetta lander Philae, (2) this film providing with background information about the scientific and technological aspects of the mission, using the LEGO® MINDSTORMS® model, and, (3) interdisciplinary activities sheets with suggestions for how to this kit can be used. The project is based on an original idea by Steven Canvin (LEGO® MINDSTORMS® team), Maarten Roos (Lightcurve Films) and Detlef Koschny (ESA), and is supported by the European Space Agency, the DLR German Aerospace Center, the European Planetology Network and the LEGO Group, LEGO® MINDSTORMS® team.



The Polaris Project: Science in Siberia; 11 mins

The core of the Polaris Project is a field course studying arctic system science at the Northeast Science Station in Cherskiy, Siberia (north of the Arctic Circle on the Kolyma River). It is one of the most remote and beautiful places on the planet. But it is also potentially one of the most important. As our planet's climate warms, carbon that has been frozen away in the permafrost is now being thawed and released into the rivers, lakes, and atmosphere. Siberia's "carbon bomb" can have far-reaching impacts on our entire planet and way of life. This multimedia piece documents the students, the research, and this unique and fragile environment.



VIRTIS, a space instrument; 29 mins (French or Italian with English subtitles)

VIRTIS, the Visible and InfraRed Thermal Imaging Spectrometer, is a science instrument that flies in space on the Rosetta and Venus Express space missions from the European Space Agency ESA and the Dawn mission from NASA. This film provides with a glimpse behind the scenes of how such an instrument is conceived and built. This film is presented by the INAF Istituto Nazionale di Astrofisica, the Agenzia Spaziale Italiana, Italy and the Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique of the Observatoire de Paris, France.



Visualization and data analysis in Earth and climate sciences; 11 mins

Various visualization examples from climate and earth system simulations.