

# GeoCinema Schedule

**Monday, 8 April 2013**

- 10:30-11:30     **Eyes on the skies**  
The invention of the telescope was a revolutionary development in astronomy, dramatically increasing our understanding of outer space. This film takes us on a journey of the telescope's history: from the technological breakthroughs and scientific discoveries to successes and failures of the people involved in its invention.
- 11:30-11:45     **Integrated System for Transport Infrastructure surveillance and Monitoring by Electromagnetic Sensing**  
The ISTIMES project focussed on the design of electromagnetic sensors that could be used to monitor transport infrastructures and provide real-time imaging data. This film presents the activities and key results obtained by the project together with what its findings mean for the future.
- 11:45-12:00     **BREAK**
- 12:00-13:00     **Mayon: The volcano princess**  
Interviewing local residents, officials, and scientists, this film is about the people who live around the Mayon volcano in the Philippines: from what it's like to live next to the unceasing threat of lahars, pyroclastic flows and eruptions. It also presents some of the strategies for dealing with volcanic disasters and the problems with evacuating the area.
- 13:00-13:30     **People Coral Mentawai**  
The Mentawai Islands in West Sumatra lie above the giant fault line that generated the Boxing Day earthquake in 2004. This documentary follows a team from the Earth Observatory of Singapore as they meet the people affected by the fault line's disasters and study coral reefs that have been uplifted by earthquakes. This work helps them build an earthquake timeline that can aid earthquake predictions for the future.
- 13:30-13:45     **OxfordSparks "Volcano" and "Towards Absolute Zero"**  
"Volcano" is a quirky animation to illustrate the workings of a subduction zone and in "Towards Absolute Zero" Oxford sparks presents a ride to the land of the extremely cold in another short and informative animation.
- 13:45-14:00     **BREAK**
- 14:00-15:00     **Earth: The inside story**  
Filmed worldwide, from Mongolia to Antarctica, this film traced the origin and evolution of the Earth.
- 15:00-15:15     **BREAK**
- 15:15-16:15     **CNN-Documentary Going Green - Secrets in the Ice**  
"This is where the rubber meets the road when it comes to studying climate change". This film follows CNN's Frederick Pleitgen as he travels to Greenland with a team of climate scientists from the Alfred Wegener Institute for Polar and Marine Research who are gathering up-to-date data on the island's vast ice sheet to gauge how fast it is melting.
- 16:15-16:30     **BREAK**

- 16:30-16:45 **INCA - Implementation of a state-of-the-art weather forecasting system**
- The film is about the risks in conjunction with dangerous meteorological conditions, and the innovations in the very short range forecasting (nowcasting), helping to reduce damages and increase the safety of people in the Balaton area of Hungary. The film follows the INCA-CE (Integrated Nowcasting System for the Central European Area) project's work on storm warning systems.
- Looking Down a Well: A Brief History of Geodesy**
- Geodesy is a field of study that deals with the measurement and representation of the Earth, and it all started when Eratosthenes discovered that you could measure the circumference of the Earth simply by looking down a well. Over time, the field of geodesy has expanded and evolved dramatically, and NASA uses technology like radio telescopes, ground surveys, and satellites to contribute. Learn more about geodesy in this video!
- Using Quasars to Measure the Earth: A Brief History of VLBI**
- VLBI, or Very Long Baseline Interferometry, is a technique that uses multiple radio telescopes to very precisely measure the Earth's orientation. It was originally invented in the 1960s to take better pictures of quasars, but scientists soon found out that if you threw the process in reverse, you could measure how the ground beneath the telescopes moves around, how long days really are, and how the Earth wobbles on its axis as it revolves around the sun. Learn more about VLBI here!
- 16:45-17:00 **Fennec: Into the Saharan Cauldron**
- The central Sahara has one of the most extreme climates on Earth, but prior to the Fennec expedition, little was known about the impact this region had on the rest of the world's weather patterns. This short film covers the story of the observations made of the Central Sahara in the summers of 2011 and 2012. It tells the story of a dedicated set of specialists both on the ground and in the air who managed to deliver the most comprehensive field campaign ever mounted in this fiercely hot and inhospitable region.
- 17:00-18:00 **365 days under Antarctic ice**
- In 1957 the scientific world decided to explore the Antarctic in celebration of the International Geophysical Year. Twelve nations worked together to initiate a research programme that would uncover the mysteries of Antarctica. Three Frenchmen, Jacques Dubois, a meteorologist, Roland Schlich, a geophysicist, and Claude Lorius a glaciologist wintered from January 1957 to January 1958 in an aluminium hut only 24 m<sup>2</sup> in size, buried under the ice without any possibility of relief. The film traces this human and scientific adventure.
- 18:00-18:15 **BREAK**
- 18:15-18:30 **ESA - Space to Relax: Our colourful planet**
- Images in HD quality taken by the optical and radar instruments on board ESA's Envisat Satellite orbiting 800 km above the Earth are set to relaxing music.
- 18:45-19:00 **BREAK**

## Tuesday, 9 April 2013

- 10:30-10:45 **Submarine canyon processes in sediment-undersupplied margins: The CUMECS expedition.**
- CUMECS is an interdisciplinary oceanographic expedition, which aims to understand the processes involved in submarine canyon formation in sediment-undersupplied margins, together with their influence on benthic habitats. This film follows the CUMECS project as they head into the field to investigate the wonders of submarine canyons.

- 10:45-11:00 **Volcano Waw an Namus Lybia geoexploring: water and petrology**  
 This film presents the adventure of exploring Volcano Waw an Namus in Lybia. It took two expeditions to make some amazing discoveries about the region – from diving deep below the volcano to investigate fresh and saltwater lakes to assessing the volcano’s activity on the surface!
- 11:00-11:15 **INCA-CE: A Central European Initiative in Nowcasting**  
 The film is about the ongoing INCA-CE project (Integrated Nowcasting through Comprehensive Analysis in Central Europe). The partnership combines many meteorological and hydrological disciplines to improve very short-term and high-resolution weather forecasting (nowcasting). These developments reduce the risks of hazardous weather events by enabling public risk management bodies to issue more geographically specific warnings.
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- 11:45-12:00 **The Making of the Fittest: Evolving Switches, Evolving Bodies**  
 Marine stickleback populations were stranded in freshwater lakes throughout the northern Hemisphere at the end of the last ice age. They have adapted to thrive in a freshwater environment and have undergone dramatic morphological transformations. This film documents evolution in action and how we can use key genes to peer deep into the evolutionary past.
- 12:00-13:15 **The Day the Mesozoic Died (3 parts)**  
 This film traces clues that led to the discovery of the asteroid that struck the Earth 66 million years ago, causing the extinction of many animals, plants, and microorganisms at the end of the Cretaceous. From Europe to North America, this film tells the story of how geology, physics, biology, chemistry and palaeontology combined to form a revolutionary theory.

- 13:15-13:45 **People Coral Mentawai**  
 The Mentawai Islands in West Sumatra lie above the giant fault line that generated the Boxing Day earthquake in 2004. This documentary follows a team from the Earth Observatory of Singapore as they meet the people affected by the fault line's disasters and study coral reefs that have been uplifted by earthquakes. This work helps them build an earthquake timeline that can aid earthquake predictions for the future.
- 13:45-14:00 **BREAK**
- 14:00-15:15 **The Boiling Sea**  
 The Mediterranean, especially the deeper parts, is warming up faster than the other seas on the planet. This film takes a look at the effect this is having on the Mediterranean ecosystem as a whole, from nutrient fluxes and algal blooms to the impact declining fish populations are having on local economies. Drawing on the regions geological history and our present interaction with the environment The Boiling Sea documents the history of the Mediterranean region and proposes new solutions to problems currently faced here.
- 15:15-15:30 **BREAK**
- 15:30-16:30 **Italy: Mediterranean masterpiece**  
 Italy has an incredibly varied geological history – this film is about its geological story.
- 16:30-17:15 **Aurora and Nacreous Cloud at Kiruna, Sweden**  
 The Aurora Borealis is one of the world's most beautiful phenomena. This film describes how we classify auroral colour and motion, its frequency and formation, together with examples of nacreous cloud.
- 17:15-17:30 **BREAK**
- 17:30-19:00 **Hubble: 15 years of discovery**  
 This film takes a look at how the Hubble Space Telescope has advanced our knowledge of the universe. With spellbinding footage photographs taken from Hubble, this film presents some of the major discoveries Hubble has helped us achieve, from enhancing our understanding of wormholes and black monsters to the details of event horizons.

## Wednesday, 10 April 2013

- 10:30-11:45 **Europe to the stars**  
 From site testing and explaining the best conditions for observing the sky to how telescopes are built and the mysteries of the Universe astronomers are unravelling, this movie takes us through 50 years of Exploring the Southern Sky. Focussing on the European Southern Observatory in the 50 years since it was established, we find out what it takes to design, build and operate some of the most powerful ground-based telescopes on the planet.
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- 15:15-16:00 **ESA - Space to Relax: Paolo Nespoli's collection of photos**  
 A breathtaking collection of photos taken by ESA Astronaut Paolo Nespoli during his 6-month mission on the International Space Station 25 December 2010 - 24 May 2011.
- 16:00-17:00 **CNN-Documentary Going Green - Secrets in the Ice**  
 "This is where the rubber meets the road when it comes to studying climate change". This film follows CNN's Frederick Pleitgen as he travels to Greenland with a team of climate scientists from the Alfred Wegener Institute for Polar and Marine Research who are gathering up-to-date data on the island's vast ice sheet to gauge how fast it is melting.
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- 17:15-17:30 **BREAK**
- 17:30-19:00 **Dirt: The Movie**  
 Soil is a fascinating part of any ecosystem, from its formation, to its degradation. This movie demonstrates the importance of soil and our influence on it, focussing agricultural impacts and the need for sustainable methods.

## Thursday, 11 April 2013

- 10:30-11:15 **Aurora and Nacreous Cloud at Kiruna, Sweden**  
 The Aurora Borealis is one of the world's most beautiful phenomena. This film describes how we classify auroral colour and motion, its frequency and formation, together with examples of nacreous cloud.

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Filmed worldwide, from Mongolia to Antarctica, this film traced the origin and evolution of the Earth.

## Friday, 12 April 2013

10:30-10:45 **“Fathoming the Sea” Royal NIOZ**

A film focusing on how oceans work, global climate history, the dynamics of the coastal Waddenzee and the significance of Dutch maritime research.

### **5<sup>th</sup> International Symposium on Deep-Sea Corals**

Deep-sea corals contain unique records of ambient ocean water conditions and bear rich benthic habitats that are more biodiverse than their tropical equivalents. This film presents some of the latest developments in our understanding of cold-water corals together with the needs for improving the management of these amazing habitats.

10:45-11:15 **IODP 342 Newfoundland Documentary**

The mission of IODP (Integrated Ocean Drilling Program) Expedition 342: recover sediments that tell the story of climate change, ocean currents and glaciations over millions of years. The main drilling target: an interval in the geologic past when the Earth was a lot warmer than today. The sediments of the Newfoundland ridges contain enough detail to teach us precisely what happened, when and why. Join the scientists and crew to learn what they were looking for and what they've found.

11:15-11:30 **“A Foram’s Tale” Documentary**

One way reconstructing past climates is to culture living planktonic Foraminifera and analyse their shell composition under present day conditions in the world’s oceans. With these insights it is possible to create a suite of tools to analyse the Foraminifera to reconstruct climate and ocean conditions over million of years. This film takes a look at how we do this and what we’ve found out so far.

11:30-11:45 **HERMIONE: Hot Spots in the Cold Deep**

The HERMIONE (Hotspot Ecosystem Research and Man's Impact on European Seas) project is focused on investigating marine ecosystems around the world, from hydrothermal vents and submarine canyons to seamounts, cold seeps and deep basins. They support a huge diversity of life that is vulnerable to the impacts of climate change and human activities. Here, the HERMIONE Scientists are researching their natural dynamics, gathering information can be used to create effective management plans that will help to protect our oceans for the future.

### **The Secret Life of Plankton**

New videography techniques have opened up the oceans' microscopic ecosystem, revealing it to be both mesmerisingly beautiful and astoundingly complex. Using footage from the Plankton Chronicles project, this film ignites wonder and curiosity about this hidden world that underpins our own food chain.

11:45-12:00 **“In Search of Tricho” Part ONE WHO**

Scientists from the Woods Hole Oceanographic Institution on the research vessel R/V Oceanus undertake a cruise to study health and function of plankton in the western North Atlantic. This is the first in a 3 part series documenting the cruise, the research, and the scientists.

### **Expedition Blue Planet: AGE OF LIMITS**

The Colorado River powers city lights and fuel urban growth and agriculture, supplying the energy demands of 30 million people across seven states through the Hoover Dam. Today, a combination of drought and overuse have drained it half dry



leaving a 135 foot high "bathtub ring" mark around Lake Mead. This film explores what the future holds for the region.

12:00-12:15

**BREAK**

12:15-12:45

**Dead Heat**

This film takes a closer look at extreme weather events and highlights the importance of accurate meteorological records. Using a blog to challenge a historical temperature record in El Azizia, Lybia – a suspicious 58 °C high.

12:45-13:00

**Volcano Hazards**

Just because a volcano isn't close to a population centre doesn't mean it won't have widespread impacts. From the consequences of explosive eruptions to dealing with their effects, this film takes a look at the hazards caused by explosive eruptions.

**Perspective**

This short animation puts historic natural disasters into perspective, comparing familiar, recent events with ones that have shaken the Earth in the past.

**Green Ninja**

The Green Ninja project is a collaborative effort between scientists, educators and artists to create a compelling experience illustrating the connections between humans and the environment. This short film focuses on our changing climate and the ever-pressing need to reduce greenhouse gas emissions.

13:00-13:15

**Earthquake: Evidence of a Restless Planet**

A sweeping geological journey, Earthquake explores the forces that transform the surface of our planet. Data-driven visualizations illustrate Earth's story, revealing how subtle motions and sudden ruptures have shaped our planet over eons-and how geological activity influences the course of human history. Finally, we see how scientists and engineers help society prepare for a safer future.

13:30-13:45

**Yosemite Nature Notes: Half Dome**

The granite monolith of Half Dome is recognised throughout the world as an icon of Yosemite National Park. Thousands of visitors hike to the summit each year, rewarded with spectacular views and an experience that is not easily forgotten. This film explores its wonders.

13:45-14:00

**BREAK**

14:00-14:30

**Rosetta's Comet Touchdown**

What does a scientist do to help visualise a spacecraft's journey? Build a model of course. A model of Europe's Rosetta comet chaser constructed out of LEGO® blocks started out in this small way and has grown into a project to build a high-fidelity Rosetta Lander Education kit, supported by the German Aerospace Centre, DLR, the European Space Agency, ESA, and the LEGO Group.

14:30-14:45

**Mars Insight Mission Overview**

Mars – just the right size to give us insight into early planetary processes. This film gives an overview of scientific instruments involved in the Mars Insight mission.

14:45-15:00

**BREAK**

15:00-15:15

**Volcano Waw an Namus Lybia geoexploring: water and petrology**

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