

The movie and book of the International Astronomical Union celebrating 400 years of the telescope

EYES ON THE SKIES

400 Years of Telescopic Discovery

Govert Schilling, Lars Lindberg Christensen

Includes official International
Year of Astronomy 2009

DVD *Eyes on the Skies*



Special opportunity for:

Broadcasters
Magazines
Newspapers
Planetariums
Science centres
Publishers



 WILEY-VCH

www.eyesontheskies.org

Free Full HD documentary on Blu-ray or TV!

About *Eyes on the Skies*

The movie and book of the International Astronomical Union celebrating 400 years of the telescope for the International Year of Astronomy 2009.

THE INVENTION OF THE TELESCOPE is the single most revolutionary development in the history of astronomy. For thousands of years, astronomers had to rely on their eyes to unravel the mysteries of the Universe. The telescope unveiled an embarrassment of astronomical riches, and led to a dramatic increase in knowledge about the wider world we live in. The *Eyes on the Skies* DVD movie and accompanying book explore the many facets of the telescope — historical development, scientific importance, technological breakthroughs, and the people behind this ground-breaking invention, their triumphs and failures...

We can offer a free non-exclusive exploitation of the movie (TV or DVD), and a chance to translate the movie subtitles as well as the accompanying book.

Book

- Appealing to a lay audience
- Hardcover
- 132 pages
- The *Eyes on the Skies* book is available in English, German and Finnish (from November 2008). We are in discussion over a Chinese version and seeking publishers in other languages
- Publishers: Wiley-VCH (English, German), URSA (Finnish)
- Text boxes and illustrations give an understandable overview of processes, telescopes and background information
- Similar in style to the popular *Hubble — 15 Years of Discovery* book
www.spacetelescope.org/projects/anniversary
- Ready for the International Year of Astronomy 2009
www.astronomy2009.org
- Size: 247 mm (W) x 297 mm (H)

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Foreword

- 1. New Views of the Skies
- 2. Bigger is Better
- 3. Technology to the Rescue
- 4. From Silver to Silicon
- 5. Seeing the Invisible
- 6. Beyond Earth
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The Movie

Eyes on the Skies is a movie produced in standard DVD and High Definition (Blu-ray) format. It explores the many facets of the telescope — historical development, scientific importance, technological breakthroughs, and also the people behind this ground-breaking invention, their triumphs and failures. It is presented by Dr. J, aka Dr. Joe Liske, a professional astronomer from the European Southern Observatory and host of the Hubblecast video podcast. The DVD lasts nearly an hour and contains subtitles in several languages. The movie is freely available to TV broadcasters (contact us for further information).

Features

- Available in Full HD (1080p) and standard DVD/PAL broadcast formats
- The official movie for the International Year of Astronomy 2009 and the International Astronomical Union
- 56 minutes
- Visual elements: animations, computer simulations, science results, rich never seen before timelapse footage from many famous observatories
- Narration: English (+ up to 5 additional languages)
- Subtitles: English, Icelandic, Greek (+ up to 15 additional languages)

Credits

- Soundtrack by movetwo
- Produced by ESA/Hubble, the team behind the widely distributed movie *Hubble — 15 Years of Discovery*
- Directed by Lars Lindberg Christensen
- Visual Design by Martin Kornmesser
- Written by Govert Schilling and Lars Lindberg Christensen

Movie Chapters

1. New Views of the Skies
2. Bigger is Better
3. Technology to the Rescue
4. From Silver to Silicon
5. Seeing the Invisible
6. Beyond Earth
7. What's Next?

Availability

The movie and book are available from December 2008.



1 NEW VIEWS OF THE SKIES

The telescope is astronomy's miracle worker. It reveals faint stars and nebulae and magnifies distant objects. Telescopes take astronomers on a journey to the distant reaches of the universe, where sparkling galaxies adorn the darkness of the void. But they also serve as time machines, providing scientists with a view of the earliest cosmic eras. No other single instrument has done so much for our view of mankind's place in time and space. Astronomy would barely exist as a science without the telescope. Four hundred years ago the early pioneers began a journey that led from the chance alignment of two simple lenses to today's complex space-based observatories and massive mountaintop...

"A landscape of craters, mountains, and valleys. A world like our own."



In 1609 Galileo Galilei pointed his telescope at the Moon, revealing for the first time the rugged landscape of the Moon's surface. He discovered that the surface of the Moon is not smooth, uniform, and perfectly spherical as a good number of philosophers believed it to be. Galileo's rough and full of craters and mountains, being not unlike the face of the Earth.



"Almost five hundred individual segments will make up one enormous mirror as tall as a seven-story apartment!"

When you think of a telescope, you probably think of a long tube with a lens at each end. But the new generation of telescopes are quite different. The first new design for the Giant Magellan Telescope (GMT) has already been built at the Las Campanas Observatory in Chile, which is already home to the two 8.2-meter Magellan Telescopes. The GMT has no less than seven mirrors, arranged like the petals of a flower and each with a different curvature. Together they will collect as much light as a 33.8-meter mirror and provide the same resolving power as a mirror 14.5 meters across. Construction is expected to start in 2014.

The California Multi-Mirror Telescope (CMT), due to be completed around the same time, is made like a giant mosaic of dark, coated hexagonal individual segments and will make up one enormous mirror as tall as a seven-story apartment. It will be able to collect ten times more light than the largest telescope and to see three times more detail. This is made possible by the use of the telescope's adaptive optics, which correct for atmospheric turbulence. The CMT itself is being developed at the University of California, Santa Cruz.



"Not everything revolves around the Earth, as the Greeks had always believed."

Kepler's Laws

1. Elliptical Orbits	$a^3 = P^2$
2. Equal Areas in Equal Times	$r^2 \dot{\theta} = \text{constant}$
3. Harmonic Law	$\frac{a^3}{P^2} = \frac{GM}{4\pi^2}$
4. Coplanar Orbits	
5. Eccentricity	



Kepler's laws describe the motion of planets around the Sun. The first law states that the orbit of a planet is an ellipse with the Sun at one of the two foci. The second law states that a line segment joining a planet and the Sun sweeps out equal areas during equal intervals of time. The third law states that the square of the orbital period of a planet is directly proportional to the cube of the semi-major axis of its orbit.

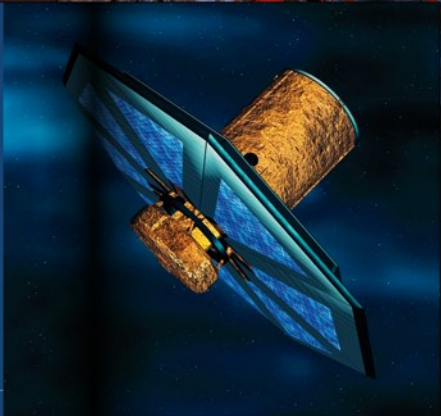
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"It's hard to imagine that Earth is the only living planet in the entire Universe."

One day the telephone ring awakes me of my most profound questions: are we alone in the Universe? We know there are other star systems out there. We know there are other planets out there. We know there are other life forms out there. But we don't know for sure. It is hard to imagine that our little planet is the only one in the entire Universe where the conditions of matter and energy combined - the combination of chemistry, physics, and biology - have produced life. It is hard to imagine that our little planet is the only one in the entire Universe where the conditions of matter and energy combined - the combination of chemistry, physics, and biology - have produced life.

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Movie (DVD)

There are two editions of the DVD. Both are available at production cost:

1. **Basic edition.** Cardboard encased DVD to be distributed for free at any IYA2009 event or activity or with a newspaper or magazine. Although this version is not intended for resale, a small surcharge can be added if necessary. This version is also available in a plastic sleeve.
 - Standard Definition: 0.27 € per disc + shipping and customs
 - High Definition/Blu-ray: ~1.36 € per disc + shipping and customs
2. **Deluxe edition.** Deluxe DVD edition in a jewel-box with cellophane wrapping, as a value added product:
 - Standard definition: 0.50 € per disc + shipping and customs
 - High Definition/Blu-ray: ~1.78 € per disc + shipping and customs

It is possible to have extra logos placed on the disc and packaging for an additional fee.

Translations and National Distribution

The *Eyes on the Skies* movie is currently available in English and the book in English, German and Finnish. We offer a unique opportunity, to have the movie and book translated into your language with the scripts available on request. The IYA2009 Secretariat can add your national subtitles to the master DVD for the final production. National publishers, distributors and TV channels are also welcome to team up with the project and provide wider distribution and visibility for the book and movie. In the case of the book translation, a simple standard publication contract with the authors is required.

Special prices & partnership opportunities for IYA2009 Participants

Building on the success of the *Hubble — 15 Years of Discovery* (www.spacetelescope.org/projects/anniversary/), the IYA2009 Secretariat has decided to celebrate the 400th anniversary of the telescope with the production of a book and a movie, called *Eyes on the Skies*. We would like to invite you and all the IYA2009 partners to collaborate with us in this unique celebration.



English and German covers of *Eyes on the Skies*

Book

The standard price for the book is 29.90 US\$ (English)/24.90 € (German):

- English version: Wiley-VCH (wiley-vch.de & amazon.com)
- German version: Wiley-VCH (wiley-vch.de & amazon.de)
- Finnish version: URSA (www.ursa.fi)

Order form

All these items are offered at production cost.

DVD

- Standard Definition, cardboard wrapping (min. 1000 copies):
_____ (@ 0.27 € + shipping and customs)
- High Definition/Blu-Ray, cardboard wrapping (min. 1000 copies):
_____ (@ ~1.36 € + shipping and customs)
- Standard Definition, deluxe DVD case (min. 1000 copies):
_____ (@ 0.50 € + shipping and customs)
- High Definition/Blu-Ray, deluxe DVD case (min. 1000 copies):
_____ (@ ~1.78 € + shipping and customs)
- TV footage (free)
- Number of logos on the packaging: _____ (surcharge TBD)

Additional material

- Poster: _____ (FREE)
- DVD sampler: _____ (FREE)
- Movie script: _____ (FREE)
- I am interested in making subtitles or narration in my language.

Name: _____

Address: _____

Zip + city: _____

Country: _____

Send to the IYA2009 Secretariat ASAP (before 29 September 2008)

E-mail: iya2009@eso.org

Phone: +49 89 320 06 195

Fax: +49 89 320 06 703

www.eyesontheskyies.org