

BLAST!

WELCOME TO ASTROPHYSICS INDIANA JONES STYLE!

Dear Writers: In the text below, we have made an effort to avoid spoilers, just as fiction films do. **BLAST!** is structured as a suspenseful adventure story, and by not revealing the ending we hope to maximize enjoyment for the viewer.

BLAST! focuses on the rarely examined real-life of scientists. There are no extensive, detailed science explanations in **BLAST!**. Instead **BLAST!** aspires to be a character-driven, narrative about the humanity of scientists rather than an explanation of the science itself. For **BLAST!** the science provides motivations for the mission and stakes to the story.

LOGLINE

BLAST! is astrophysics Indiana Jones style, a risky adventure story that takes you on an exciting and enlightening journey around the world and across the Universe to launch a revolutionary new telescope on a NASA high-altitude balloon in an effort to understand the origins of our Universe.

SHORT SYNOPSIS

Welcome to Astrophysics Indiana Jones style!

Five time Emmy winner Paul Devlin follows the story of his brother, Mark Devlin PhD, as he leads a tenacious team of scientists hoping to figure out how all the galaxies formed by launching a revolutionary new telescope under a NASA high-altitude balloon.

Their adventure takes them from Arctic Sweden to Inuit polar bear country in Canada, where catastrophic failure forces the team to try all over again on the desolate ice in Antarctica. No less than the understanding of the evolution and origins of our Universe is at stake on this exciting escapade that seeks to answer humankind's most basic question, How did we get here?

BLAST! is about the crazy life of scientists. Their professional obsessions, personal and family sacrifices, and philosophical and religious questioning all give emotional resonance to a spectacular and suspenseful story of space exploration.

LONG SYNOPSIS

Filmmaker Paul Devlin grew up in a family of scientists. He spent summers at the high-energy accelerator, Fermilab, where his particle physicist father was on the team searching for the top quark. One brother attended MIT and the other, Mark, became a prominent astrophysicist at the University of Pennsylvania.

Mark invited Paul to Arctic Sweden to document the launch of Mark's groundbreaking telescope, BLAST - **B**alloon-borne, **L**arge **A**perture, **S**ub-millimeter **T**elescope. BLAST is designed to

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gather information on how our universe evolved by collecting the very faint sub-milimeter light from thousands of the earliest galaxies ever detected. To see these celestial births, the telescope must go through a risky launch on a NASA high-altitude balloon and float above the atmosphere for several days before it lands in Arctic Canada.

When Paul arrives in Sweden, tensions within the collaboration are high as technical obstacles and the worst weather in decades have delayed the experiment for weeks. After a turbulent launch the scientists are devastated to discover that the telescope has a fatal flaw during its 4 days afloat. Then, a harrowing recovery in the Inuit polar bear country of Arctic Canada results in catastrophic destruction, forcing the scientists to try all over again on the ice in Antarctica.

Eighteen months after the disasters in Sweden and Canada, Mark and his team head to McMurdo Station, Antarctica, the most remote research base on the planet. Having learned from mistakes in Sweden, the scientists cautiously anticipate success. "I can't think of anything that really went wrong... so far" declares Mark just prior to launching the multi-million dollar telescope above the atmosphere for the second time.

Apparently Mark spoke too soon. Will BLAST crash during the launch? Can its precious data survive being dragged 120 miles across the Antarctic ice?

The natural suspense of the BLAST process - a group of scientists overcoming one obstacle after another to unlock the secrets of the cosmos - keeps the tension of the film's narrative taut. Cliffhangers allow the story to diverge into vignettes of the science and goals of BLAST. Sophisticated, visually appealing animations illuminate fascinating concepts in a captivating, accessible way.

Moreover, **BLAST!** boldly threads through its narrative a dialogue on science and faith between two lead scientists – one an agnostic and the other a Christian. Mark Devlin and his colleague Barth Netterfield (U. of Toronto) represent opposing sides of a theological argument. Mark, an adventuring instrumentalist, has utter faith in the ability of science to answer the most difficult questions confirming his non-theistic view of the Universe. Barth, a nerdy software genius, is also a devout Christian with a refreshing outlook on the tension between science and religion. Barth views his scientific pursuit as an opportunity to peer into the mind of God. This candor has also allowed **BLAST!** to ignite debate and to inspire general audiences to reconsider the relationship between science and faith.

BLAST! also introduces audiences to the team of young graduate students as they candidly document each other during the early assembly process in Antarctica. As Mark says, "You can't learn this stuff in a classroom, you gotta DO it." Scientific ballooning is the training ground that develops future leaders of NASA.

For many people, complex scientific investigation seems obscure and impersonal. **BLAST!** immerses us in the random, haphazard, personal side of this high stakes world, both marred and enhanced by fallible human nature. The film offers insight into the motivations of passionate scientists, pursuing groundbreaking research, seeking to answer the most basic of human questions - How did we get here?

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REVIEWS

"The magic formula for a successful mainstream science movie. You'll laugh, you'll cry, and you'll walk away astounded." -- Discovery Space

"[BBC's] Storyville is still TV's most unmissable programming strand, continuing to find the best in the world's documentaries. This one from Paul Devlin is a case in point. BLAST! is the simple but compelling story of the quiet, well-reasoned obsessive behaviour that must necessarily accompany groundbreaking scientific research.
-- John Robinson, *The Guardian*, UK

"A jolting, riveting ride!" -- Talking Science

"An adventure tale with twists and turns, lively characters, and some lessons about life, the universe and everything. It's the character-driven approach that guarantees that we care whether they succeed." -- Doc-a-Day

****** (4 stars) *"Inspirational and aspirational!"*** -- Tim Teeman, *The Times*, UK

"One could be forgiven for mistaking BLAST! as a drama and getting lost in the plot. We may still be some distance away from a scientifically literate public, but this film is at least a thoughtful step in the right direction. A refreshing take, not only upon scientists and the practice of their art, but also on humanity as a whole." -- Culture Wars

"A fascinating glimpse into life as an astronomer at the ends of the Earth."
-- Physics World

"In a rare combination of content and storytelling, BLAST! treats the viewer not only to the fruits of cosmic discovery but to the fits and starts of dedicated scientists who navigate paths of research that enable it."

-- Neil deGrasse Tyson PhD, Astrophysicist, American Museum of Natural History and Host of PBS NOVA Science NOW

"A rollercoaster ride of sacrifice, tension and jubilation!" -- Whistler Film Festival

"BLAST! succeeds in making science exciting through drama and personal, identifiable characters who are portrayed as normal people torn between their families and a passion for the Universe." -- DOX Magazine

"We experience the scientists' hopes, tensions and frustrations as their goal of charting distant galaxies is threatened by arctic conditions, damaged mirrors, lost hard drives and polar bears."

-- Ian Johns, *The Observer*, UK

(Complete list of reviews with links at <http://www.blastthemovie.com/reviews.html>)

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STATUS

BLAST! premiered at the Hot Docs film festival in Toronto, the largest documentary film festival in North America. It is now playing at film festivals around the world (<http://www.blastthemovie.com/screenings.html>).

BLAST! has co-production partnerships with BBC Storyville, Discovery Channel Canada, SVT Sweden, and YLE/FST Finland. The movie has also been acquired by VPRO-Netherlands and DR2-Denmark and has interest from many other broadcasters around the world. Broadcasts have started on these stations and will continue through 2009.

Director Paul Devlin was awarded the New York State Council of the Arts (NYSCA) Individual Artist Grant for **BLAST!**, totalling \$25,000.

BLAST! has been shortlisted for a prestigious Grierson Award at the Sheffield Doc/Fest, UK.

The ongoing distribution goals of **BLAST!** include reaching universities and high schools across the world to inspire young audiences to explore the exciting developments in science and to pursue scientific careers.

THE APPROACH

As in Director Paul Devlin's film *Power Trip*, **BLAST!** de-emphasizes talking-head interviews and dispenses with anonymous narration in favor of capturing the action as it happens. The narrative is tight and the stakes and suspense sufficient to allow for an accessible examination of the revolutionary science that motivates these intrepid scientists.

Paul Devlin's experience in sports television has allowed him to bring a dynamic style to factual films. Commentary on his previous films *SlamNation* and *Power Trip* noted the exciting and innovative presentation of the material, often unexpected given the nature of the subject matter. In *Power Trip*, he broke up the otherwise dense narrative with visually arresting montages, lively local music and, when possible, comic relief.

BLAST! takes a similar approach and provides even more opportunity to overturn pre-conceptions as the dramatic obstacles, profound pursuits and stunning landscapes demonstrate that scientists can be thrill-seeking adrenaline junkies!

ARTISTIC STATEMENT

"Why don't you come to Sweden and shoot BLAST?" my brother said casually as he dropped me off at the train station. An astrophysicist, he was soon traveling to Northern Sweden, above the Arctic Circle, to head up a major scientific project launching the sophisticated telescope BLAST on a high altitude balloon with NASA. With only a few weeks to prepare, it seemed like a crazy idea to follow my brother to Sweden to shoot what, a telescope? Is that cinematic?

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But I am drawn to the impossible movie. My film *Power Trip* is about the post-Soviet electricity crisis in Tbilisi, Georgia. At first glance, dry and dull. But by focusing on the human conflict, fascinating absurdities, and overwhelming corruption of this situation, I found an accessible window into the otherwise abstract transition from communism to capitalism. On *Power Trip*, I worked alone, gaining intimate access by using a small mini-DV camera and developing the trust of my subjects with re-visits over two and a half years. The editing process required meticulous digestion of complex material in order to make it accessible, benefiting from the feedback of countless test screenings.

So, now my brother thinks I should do a movie about his telescope. Pretty unlikely. But the sheer audacity of the concept is impressive - tying \$10 million worth of delicate equipment to a balloon so that it can float with the wind, collecting data at the top of the atmosphere for several days, hoping that it does not land in water in Arctic Canada when it's dropped 35 kilometers from the sky.

I could see the potential tension and drama of a group of committed, passionate scientists overcoming one obstacle after another to unlock the secrets of the universe. This might provide an excellent narrative clothesline on which to hang an examination of some fascinating topics. I've always been intrigued by the mind-bending discoveries at the cutting edge of astrophysics and the inevitable confrontation of religion and science at these frontiers.

So, could I make a film about a telescope compelling and illuminate these issues? The only way to find out was to go to Arctic Sweden and start **BLAST!**, a spectacular journey that eventually led to shoots on 5 continents, including Antarctica.

PRODUCTION PERSONNEL

PAUL DEVLIN, director, editor, producer

A five-time Emmy winner for his work on NBC's Olympics and CBS's Tour de France, Paul Devlin's films include *Power Trip*, which screened in 60 countries, theatrically across the United States and on PBS's *Independent Lens*, was nominated for an Independent Spirit Award, and has won 10 film festival awards, including top prizes at Berlin, Hot Docs in Toronto, and Florida.

Paul also made the award-winning film *SlamNation*, which follows the fierce competition at the National Poetry Slam and helped popularize the dynamic genre with its release in theaters and on HBO/Cinemax and Encore/Starz. Paul's current projects include *BLAST!* and *Super Star Dumb*.

BLAST! was presented at the 2006 IFP Market and 2007 Toronto Documentary Forum attracting co-production partners BBC Storyville, Discovery Channel Canada, SVT/Sweden, and YLE/FST Finland. Paul was awarded the 2007 New York State Council on the Arts (NYSCA) Individual Artists Grant for \$25,000 through IFP fiscal sponsorship.

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Other credits include his fiction film *The Eyes of St. Anthony* and his work as producing editor on the Organic Film *FREESTYLE: The Art of Rhyme*, broadcast on VH1 and winner of the Special Jury Award for Documentary Filmmaking at the Florida Film Festival.

As an editor, Paul's extensive credits include commercials, music videos, television shows and major sports broadcasts, including CBS's Super Bowls and ABC/ESPN's World Cup Soccer.

CLAIRE MISSANELLI, producer

Claire Missanelli co-produced *Power Trip*, which won 2 jury awards at the prestigious Berlin film festival and was screened in 60 countries, including the United States. It was broadcast on PBS's Independent Lens, nominated for a 2004 Independent Spirit Award, and garnered 8 other film festival awards including best documentary feature at the Hot Docs Film Festival in Toronto. She is currently works as a producer on the documentaries *Super Star Dumb and BLAST!*, which was presented at the 2006 IFP Market and 2007 Toronto Documentary Forum. Other films include *SlamNation*, a documentary that illuminates the vibrant slam poetry movement, which broadcast on HBO/Cinemax and Encore/Starz. She also works as a consulting and outreach producer for documentary projects.

LOUISE ROSEN, Co-Producer

Louise Rosen is a media executive with over 25 years experience in international television and film finance and distribution. She has set up numerous, award-winning co-productions between producers and broadcasters around the world including recipients of the Oscar, the Emmy, the International Emmy, the Grimme Prize, the Prix Italia and Sundance Festival Awards. In addition to *BLAST!*, current projects include *Secrecy* from Robb Moss and Peter Galison (Sundance, SXSW, Tribeca Film Fests), *1000 Journals* from Andrea Kreuzhage (AFI Fest Los Angeles, Berlinale) and *Killer Poet* (Hot Docs Film Fest) and *Johnny Cash at Folsom Prison Prison* (in post production) from Northern Light Productions.

JULIE ANDERSON, consulting producer

Julie Anderson, director of *Mr. Conservative: Goldwater on Goldwater*, has a long career in television production. She began her work as a producer at ESPN, contributing on Sports Center, the Olympics, the NFL and NBA. She later worked as a production liaison for Lorne Michaels at *Saturday Night Live*. After a five-year stint as a documentary filmmaker at HBO Sports, Anderson was hired as an executive at HBO Original Programming by Sheila Nevins, President of HBO Documentaries.

Over her ten years at HBO, Anderson produced and directed many award-winning features and documentaries, including the Peabody Award-winning documentary *Dare To Compete: The Struggle of Women in Sports*, about the history of the fight for women's equality in sports, and the Emmy® Award-winning *Arthur Ashe: Citizen of the World*. She served as associate producer on the Academy Award®-nominated *4 Little Girls*, about the 1963 bombing of the Birmingham Baptist Church in Alabama.



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Over her career, Anderson has garnered four Emmy® Awards, several CableACE Awards, and two Peabody Awards for her work on documentary films. She was a 2001 Sundance Institute Fellow and is a consultant for the Hamptons International Film Festival, Tribeca Film Festival, and Aspen Comedy Festivals.

ROBERT HAWK, Independent Consultations for Independents, consultant

Robert Hawk, independent film producer and consultant, is owner/founder of ICI (Independent Consultation for Independents). Hawk is co-producer of the independent films *Trick*, *The Slaughter Rule*, and *Ballets Russes*, and has acted as consultant on many films, including Paul Devlin's *SlamNation*, *Power Trip*, and currently *BLAST!* Robert is an invaluable resource for pre-production and production planning, and film festival and theatrical distribution outreach strategies.

Robert critiques films at all stages - from first draft to fine cut; assess a film's potential; consult on festival/distribution strategies. All consultations are conversations - in person or by phone - this dialogue offering maximum opportunities for a catalytic exchange of ideas, problem solving and brainstorming.

**MARK DEVLIN, PhD, Department of Physics and Astronomy, University of Pennsylvania
BLAST Principal Investigator, Advisor**

Mark Devlin initiated the BLAST project and is prepared to do whatever it takes to make it a success. A no-nonsense instrumentalist, Mark likes to build things and is much more at home climbing on top of the telescope with heavy tools in hand, rather than sitting in front of a computer analyzing data. Mark's research focuses on experimental cosmology at millimeter and sub-millimeter wavelengths. Cosmology is the study how the Universe came into being and how it evolved into what we see today. Unlike a traditional astronomer who might study an individual star or galaxy to determine its properties, he collects data from which he makes statistical inferences about the evolutionary history of the Universe.

Christine Moh & Bob Mickens, Artifactuality – BLAST! Graphics

Christine Moh was born in Taiwan and came to the United States as a teenager. She graduated from The Cooper Union for the Advancement of Science and Art in New York City. At Cooper, she studied with some of the giants of graphic design including Paul Rand and developed her craft as a sensitive typographer and skilled designer. Her career path brought her to the world of broadcast design where she created design campaigns at CNBC, MSNBC, Oxygen Networks and MTV's *Total Request Live*, the *Video Music Awards* as well as *The Real World* series.

Christine started Artifactuality in 2005 where it has won, under her direction several awards for excellence in creativity, design and execution. Recently, her design work, as part of the LIVE broadcast of the *Real World Hollywood Reunion Special*, was displayed in the giant HD screen outside the famous MTV studio in the heart of Times Square, New York City.

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Bob Mickens partnered with Christine at Artifactuality in 2005 and brought 20+ years of design and production experience in the Broadcast industry to Artifactuality. With several Emmys, and a group of peer awards from the Broadcast Designer Association, he has worked within the network/cable news graphics, sports, and entertainment beat with every major broadcast network in New York City.

With the arrival of new data technology and the need of broadcasters to supply mapping data to viewers, Bob became a specialist in broadcast mapping and started an offshoot of Artifactuality called MapMastery. MapMastery provides training and implementation of mapping systems for broadcasters and filmmakers. MapMastery recently helped to tell the story of polar adventurers in the science documentary *BLAST!*. To many broadcasters, Bob has earned the nickname the “Map King of New York.”

Artifactuality® specializes in creating memorable images designed for multimedia graphics, web sites, movies, and television. Led by Christine Moh and Bob Mickens, the company offers creative services, including print, video, web site design, TV show and film opening, motion graphic design and production, and MapMasterySM, which is the premier source for on-air advanced broadcast map design, as seen on network, cable, and local TV stations. Artifactuality “creates beautiful things.” For more information about Artifactuality, call 973-337-5252, e-mail: creativepartners@artifactuality.com, or visit www.artifactuality.com.



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Paul Josiah Devlin
272 First Avenue, 12H, New York, NY 10009
212 677-8581 - paul@pauljdevlin.com

INDEPENDENT PROJECTS

BLAST! (2008) – Producer/Director/Editor

Feature nonfiction narrative about the real, human story of scientific pursuit and the launch of a one of a kind telescope was presented at the 2006 IFP Market and 2007 Toronto Documentary Forum attracting co-production partners BBC Storyville, Discovery Channel Canada, SVT/Sweden, and YLE/FST Finland. Paul was awarded the 2007 New York State Council on the Arts (NYSCA) Individual Artists Grant for \$25,000 through IFP fiscal sponsorship. World Premiere at the 2008 Hot Docs Film Festival. www.blastthemovie.com

Power Trip (2003) – Producer/Director/Editor

Feature nonfiction narrative about an American company trying to solve the energy crisis in Tbilisi, capital of the former Soviet Republic of Georgia, amidst street riots, institutional corruption, political assassination. Winner of 10 US & international film festival awards, including Berlin, Florida, and Hot Docs in Toronto. Nominated for an Independent Spirit Award, screened in 60 countries and 50 US cities and broadcast on PBS's *Independent Lens*. On DVD through New Video/Docurama. www.powertrip-themovie.com

Freestyle: The Art of Rhyme (2002) – Producing Editor (Preditor)

Documentary on rappers who can improvise their rhymes, exploring the roots, community, spiritual values, as well as the competitive edge of contemporary hip hop. Winner of several festival awards, including a Special Jury Award for Documentary Filmmaking at the 2002 Florida Film Festival. Broadcast on VH1 and distributed on DVD by Palm Pictures.

SlamNation (1998) – Producer/Director/Editor

Award-winning feature length nonfiction narrative film about competitive, Olympic-style poetry, focusing on the 1996 National Poetry Slam. Opened theatrically in New York City at Film Forum, NYC summer '98. Distributed nationally in theaters, video, and HBO/Cinemax & Starz/Encore, on DVD through New Video/Docurama. www.slamnation.com.

Slammin' (1995) – Producer/Director/Editor

Television pilot, presenting a Nuyorican Poets Cafe semi-final slam as a sporting event. Broadcast in several PBS markets including New York's *Reel New York* & Chicago's *Image Union*. On DVD through New Video/Docurama. **Nominated for 2 New York Emmy Awards.**

The Eyes of St. Anthony (1992) – Producer/Director/Editor

Fiction film, winner of several film festival awards and distributed internationally by Tapestry International.

EDITING

The Tour De France – CBS Sports, 2001-2005 - **3 EMMY AWARDS**

The NFL Today (preview show on CBS) – 1998-Present

The Road to the Final Four (NCAA Basketball Tournament) – CBS Sports, 1999-Present

Super Bowl – CBS Sports, Tampa Bay, FL 2001, Houston, TX 2004, Miami, FL 2007

Sports Feature & Promo Editor – NBC Sports, 1996-2000

Soccer World Cup, Paris - ABC / ESPN / ESPN2, 1998

Winter Olympic Games, Nagano, Japan - CBS Sports, 1998 (Feature Editor)

Summer Olympic Games, Atlanta - NBC Sports, 1996 - **EMMY AWARD**

Summer Olympic Games, Barcelona - NBC Sports, 1992 - **EMMY AWARD**

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CREDITS

Directed, Edited and Produced by

Paul Devlin

Produced by

Claire Missanelli

Executive Producer for the BBC

Nick Fraser

Co-Editor

Laura Minnear

Antarctic Unit Co-directors

Christopher Semisch

Matthew Truch

Gaelen Marsden

Co-producer

Louise Rosen

Consulting Producers

Robert Hawk

Julie Anderson

Associate Producers

Hillary Kollos

Amber Yoder

Music by

Richard Martinez

Science Writer

Emily Kagan

Produced in association with

BBC Storyville

Discovery Channel Canada

SVT Sweden

YLE/FST Finland

ARTE France

Funding Provided by

The New York State Council on the Arts

Espace Space Center, Swedish Space Corporation

Camera

Paul Devlin

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Additional Camera

Christopher Semisch
Matthew Truch
Gaelen Marsden
Ben Bachelder
Jim Lockridge
Craig Mazur
Ralph Maestas
Kevin Evetalegak
Mark Devlin
Marie Rex
Mark Halpern
Bob Erickson
Ed Chapin
Eric Geringas
Jared Lorenz
Katia Moscano

Additional Editing

Melissa Hacker
Darryl Thurston

Editing Consultants

Vince Sherry
Ernie Fritz
Kurt Engfehr
Paul Rachman

Associate Editors

Andres Otero
Zita Vasilisinova

Assistant Editors

Aster Caplan
Julien Dalrymple
Jonathan Kroberger
Andrea Listenberger
Malik Parker
Brandon Paul
Kimberly Kriete Prince
Milena Thomsen
Eric Williams

On-line Editor/Colorist

Steve Pequignot
Glue Editing & Design, NYC

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Audio Post

Evan Benjamin
David Wilson

Graphics by

Artifactuality

Animations Provided by

International Astronomical Union
Max-Planck Institute for Astrophysics, Garching, Germany
NASA/Goddard Space Flight Center Conceptual Image Lab
NASA/ESA Hubble Space Telescope
NASA/JPL-Caltech
NASA/Space Telescope Science Institute
University of Chicago
University of Innsbruck

Additional Footage Provided by

Anthony Powell
CosmoCam, Scott Murphy
Esrang Space Center, Swedish Space Corporation
National Science Foundation
Nature Library
Rolondo / ACT Telescope

Appearing in the film

Mark Devlin, PhD, Department of Physics and Astronomy, University of Pennsylvania
Barth Netterfield, PhD., Associate Professor of Observational Cosmology, University of Toronto
Victor Davison, Launch Director, NASA Columbia Scientific Ballooning Facility
Jeff Klein, Researcher of Astrophysics, University of Pennsylvania
Ed Chapin, Postdoc in Astrophysics, University of British Columbia
Gaelen Marsden, Astrophysics Graduate Student, University of British Columbia
Enzo Pascale, Astrophysics Researcher, University of Toronto
Marie Rex, Astrophysics Graduate Student, University of Pennsylvania
Christopher Semisch, Astrophysics Graduate Student, University of Pennsylvania
Nick Thomas, Astrophysics Graduate Student, University of Miami
Matthew Truch, Astrophysics Graduate Student, Brown University
Marco Viero, Astrophysics Graduate Student, University of Toronto
Don Wiebe, Astrophysics Graduate Student, University of Toronto

Running time : 73:20 minutes Aspect ratio: 1.78:1 and 1.33:1
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Year of production: 2008

Sales Agent:

Louise Rosen LTD
16 High Street, Brunswick, ME 04011
Tel: 207 725-8125 / Fax: 207 725-8057 / LrosenLtd@aol.com / www.louiserosenltd.com