

**SATURDAY 07 JULY 2012**

**SAT 19:00 The Blue Planet (b00818zy)**  
Frozen Seas

A look at the survival techniques of creatures that endure the harsh conditions of the Arctic and Antarctic. For animals at both poles, life is dominated by the annual retreat and advance of the freezing sea ice and the challenge of surviving winters when temperatures drop.

In the Arctic the polar bear is the top predator, catching seals on the ice and forcing seabirds to nest high up on cliffs. In Antarctica the flightless penguins have no ground-based predators to deal with but lurking in the water is the constant threat from leopard seals.

Narrated by David Attenborough.

**SAT 20:00 Illuminations: The Private Lives of Medieval Kings (b019jsfg)**  
What a King Should Know

Dr Janina Ramirez unlocks the secrets of medieval illuminated manuscripts and shows how they gave power to the king and united the kingdom in an age of plague, warfare and rebellion. She discovers that Edward III used the manuscripts he read as a boy to prepare him for his great victory at the battle of Crecy and reveals how a vigorous new national identity bloomed during the 100 Years War with France (1340-1453).

In the British Library's Royal Manuscripts collection she finds out that magnificent manuscripts like the Bedford Hours, taken as war booty from the French royal family, were adapted for the education of English princes. Dr Ramirez also explores how knowledge spread through a new form of book - the encyclopaedia.

**SAT 21:00 Mesrine (b01ktd6v)**  
Killer Instinct

After acquiring his first taste for brutality as a French soldier serving in Algeria in the late 1950s, young Jacques returns to France, where his father has fixed him up with a regular job. But the legit lifestyle doesn't stick and Mesrine soon finds himself embroiled in the criminal underworld of local mobster Guido. Following a fraught marriage to a young Spanish woman, Mesrine acquires a new female partner in crime and delves deeper into trouble with a series of reckless armed robberies, a bizarre kidnapping and a daring jailbreak from a high security prison in Quebec.

In French with English subtitles.

**SAT 22:45 The Comet's Tale (b008d2x7)**  
Ancient civilisations thought comets were gods. They believed them to be bringers of life or harbingers of doom - strange, magical, mysterious things that moved through the sky, fiery streaks of light that tore across the heavens.

Isaac Newton was the first to make sense of comets and to him they were the key to unlocking the secrets of gravity - nothing to do with an apple. Hundreds of years later, a new breed of space missions are visiting comets, travelling millions of miles to touch down on these tiny balls of rock flying through space at 20,000 mph. The spectacular images we now have are showing us what comets are really made of, where they come from, and their often surprising influence on events on Earth.

What they reveal is that our ancestors may have been right all along and that comets and meteors really are like gods, or at least they can exert tremendous influence over our world. They have brought terrible destruction to the Earth and may one day do so again. But they also may have brought life itself to the planet.

**SAT 23:45 The Sky at Night (b081tjlk)**  
Venus and the Midnight Sun

The Sky at Night travels to the Arctic Circle and the archipelago of Svalbard to see the transit of Venus. This astronomical wonder, where the planet Venus passes in front of the sun, is the last one in our lifetime, but as ever the clouds test the team's nerves.

**SAT 00:45 Britain's Best Drives (b00j6sje)**  
Richard Wilson Learns to Drive

In preparation for a motor journey around Britain, Richard Wilson is put through his paces as he learns how to use a gear stick again, having driven only automatics for the past 30 years.

He drives classic cars, goes off-road, experiences the thrills and spills of the skidpan and gets a lesson in driving high

performance cars from five-time Le Mans winner Derek Bell.

**SAT 01:15 Illuminations: The Private Lives of Medieval Kings (b019jsfg)**  
[Repeat of broadcast at 20:00 today]

**SAT 02:15 The Blue Planet (b00818zy)**  
[Repeat of broadcast at 19:00 today]

**SUNDAY 08 JULY 2012**

**SUN 19:00 Lonesome George and the Battle for Galapagos (b0074sy3)**

Documentary about Lonesome George, officially the loneliest animal on the planet until his death in June 2012. He was the last remaining Pinta Island giant tortoise in existence and now his race is extinct. He was an icon of his native Galapagos Islands and symbol of the battle to preserve their unique wildlife. The islands are at a critical point in their history - threatened by illegal fishing, the demands of a booming population and an ever-expanding tourism industry - yet the will within the islanders to protect Galapagos is strong. This is both the personal story of Lonesome George and of the local characters intent on turning around the fortunes of their unique tropical paradise.

**SUN 20:00 How to Go Faster and Influence People: The Gordon Murray F1 Story (b01f11hp)**

In the secretive world of F1 designers, Professor Gordon Murray is a legendary figure. Having spent 40 years designing one innovative car after another, his portfolio includes the most successful F1 car ever raced and what is widely considered to be the greatest sports car of all time. But today Professor Murray has set himself even more challenging goals as his focus turns from racetrack to public road.

In an ever more congested world, Murray believes that personal mobility has become a defining problem of our times. As a car lover, he is powerfully motivated to preserve the freedom of the open road - his solution is a new city car called T-25. For T-25 Murray aims to transfer F1 technology to an inexpensive, lightweight city car for the masses. But is the industry at large prepared for the radical overhaul that Murray plans?

From Brabham and the eccentric 'Fan Car', through unbeatable designs for Senna and Prost and the milestone McLaren F1 sports car, and right up to date with the arrival of T25, How To Go Faster and Influence People is a compelling account of Gordon Murray's remarkable design journey.

**SUN 21:00 The Hollow Crown (p00s91pm)**  
Series 1

Henry IV - Part 1

The heir to the throne Prince Hal defies his father King Henry by spending his time at Mistress Quickly's tavern in the company of the dissolute Falstaff and his companions. The king is threatened by a rebellion led by Hal's rival Hotspur, his father Northumberland and his uncle Worcester. In the face of this danger to the state, Prince Hal joins his father to defeat the rebels at the Battle of Shrewsbury and kill Hotspur in single combat.

**SUN 22:55 Shakespeare Uncovered (b01ktf9j)**  
Jeremy Irons on the Henrys

In Henry IV and Henry V, Jeremy Irons (who is playing Henry IV in the new BBC films) uncovers the extraordinary appeal of Shakespeare's History Plays. He unravels the differences between the real history and the drama that Shakespeare creates. He discovers what William's sources were - and how he distorts them! And he invites us behind the scenes at the filming of some of the most important scenes in the new films of all of these plays.

The History plays were the big hits of the 1590s because they allowed the ordinary men and women of Elizabethan England the chance to talk and think about power and politics without being controlled by the church or the state. In these plays Shakespeare appears to be writing heroic and patriotic propaganda - but as soon as you look at them in more detail, you discover that he was also undermining all those values at the same time. With detailed coverage of the filming of these plays by Richard Eyre and Thea Sharrock for the BBC and with clips from these new films as well as other iconic versions from Laurence Olivier and Kenneth Branagh, Jeremy uncovers the truth behind the version of history that Shakespeare was telling and even uncovers the very sources that inspired him to write some of the most famous speeches he ever composed. He travels to the true locations described in the plays but also to

Shakespeare's Globe to see how these extraordinarily ambitious plays were performed in Shakespeare's time.

As Jeremy himself visits the battlefield at Agincourt in Northern France, which is the climax of these history plays, the truth emerges that Shakespeare's view of History was rather more subversive and less patriotic than some of his most ardent admirers often think.

**SUN 23:55 Still Ringing After All These Years: A Short History of Bells (b018ct1c)**

The sound of bells ringing is deeply rooted in British culture. Bells provide the grand soundtrack to our historic moments, call out for our celebrations and toll sadly in empathy with our grief. No important event seems complete without their colourful ringing.

But how did bells become so rooted in our culture and entwined with our national identity?

Richard Taylor travels the country to unravel the 1,500 years of history that have made bells such a key British sound. He meets the people who work with bells and those who understand their significance in our past and present. The story he tells is an extraordinary one.

Richard explores the magical qualities of bells and how they came to be synonymous with Christian worship. He discovers how they diversified to impact on every aspect of medieval life - and how some of the practices which originated then still hold sway in our modern lives. He gets to the bottom of what bell ringing is and how this 'sport' came to represent the sound of England, and he reveals how bells embodied the hopes of the nation in her darkest hours.

We have heard the sound of bells so many times that we can take them for granted - it is time to prick up our ears and listen to their incredible story.

**SUN 00:55 God Bless Ozzy Osbourne (b01bgs9r)**  
Documentary telling the story of Ozzy Osbourne's torturous and emotionally fraught journey to sobriety, which the iconic musician regards as his greatest accomplishment. Featuring interviews with Ozzy's brothers and sisters, as well as Jack, Sharon, Aimee and Kelly Osbourne. Featuring never-seen-before footage uncovered from the archives and interviews with Sir Paul McCartney, Tommy Lee, Henry Rollins and others.

Emerging from a working class family in war-torn England, Osbourne and his neighbourhood friends formed Black Sabbath. For ten years, Ozzy was happy to feed the myth of the rock and roll wildman. This lifestyle worked for a while, but then it began to back-fire. He lost his family, his wife, even his livelihood when Black Sabbath fired him.

Despite this, Ozzy became one of the biggest-selling artists of the 1980s. But the good times did not take. Tragedy befell Osbourne when his musical collaborator Randy Rhoads was killed in a plane crash while on tour in 1982. Rhoad's passing, along with the death of Osbourne's father, sent Ozzy into a tailspin that lasted almost 30 years.

**SUN 02:30 Classic Albums (b00vlq0y)**  
Black Sabbath: Paranoid

The second album by Black Sabbath, released in 1970, has long attained classic status. Paranoid not only changed the face of rock music, but also defined the sound and style of heavy metal more than any other record in rock history. The result of a magic chemistry which had been discovered between four English musicians, it put Black Sabbath firmly on the road to world domination.

This programme tells the story behind the writing, recording and success of the album. Despite vilification from the Christian and moral right and all the harsh criticism that the music press could hurl at them, Paranoid catapulted Sabbath into the rock stratosphere.

Using exclusive interviews, musical demonstration, archive footage and a return to the multi-tracks with engineer Tom Allom, the film reveals how Ozzy Osbourne, Tony Iommi, Geezer Butler and Bill Ward created their frighteningly dark, heavy and ear-shatteringly loud sound.

Additional comments from Phil Alexander (MOJO & Kerrang! editor), Geoff Barton (Classic Rock editor), Henry Rollins (writer/musician) and Bill Ward created their frighteningly dark, heavy and ear-shatteringly loud sound.

**SUN 03:25 How to Go Faster and Influence People: The Gordon Murray F1 Story (b01f11hp)**  
[Repeat of broadcast at 20:00 today]

**MONDAY 09 JULY 2012****MON 19:00 World News Today (b01knshe)**

The latest national and international news, exploring the day's events from a global perspective.

**MON 19:30 Talking Landscapes (b0074lzn)**

The Weald

Aubrey Manning sets out to uncover the history of Britain's ever-changing landscape. This edition focuses on the Weald, investigating why so much woodland has survived here when so much ancient forest has been felled elsewhere. A trip to the Mary Rose and Nelson's Victory reveals the full story of the Weald and its valuable timber.

**MON 20:00 Timeshift (b00nm7k)**

Series 9

The Men Who Built the Liners

Many of the most famous passenger liners in history were built in the British Isles, several in the shipyards along the banks of the Clyde. Timeshift combines personal accounts and archive footage to evoke a vivid picture of the unique culture that grew up in the Clyde shipyards. Despite some of the harshest working conditions in industrial history and dire industrial relations, it was here that the Queen Mary, the Queen Elizabeth and the QE2 were built. Such was the Clyde shipbuilders' pride in their work, and the strength of public support, that in 1971 they were able to defy a government attempt to close them down and win the right to carry on shipbuilding.

**MON 21:00 How to Build a Cathedral (b00b09rb)**

The great cathedrals were the wonders of the medieval world - the tallest buildings since the pyramids and the showpieces of medieval Christianity. Yet they were built at a time when most of us lived in hovels. Architectural historian Jon Cannon explores who the people were that built them and how they were able to achieve such a bold vision.

**MON 22:00 Wainwright Walks: Coast to Coast (b00jqp0m)**

Gateway to the Lakes

Julia Bradbury follows in the footsteps of legendary guidebook writer Alfred Wainwright by walking across the whole of northern England from the west to the east coast.

This was Wainwright's last great venture and has become his greatest legacy - a beautifully simple proposition, linking three national parks that lie between the Irish and the North Sea.

36 years after its creation, Julia is off, through sunshine, wind and rain to cross the changing landscape, understand the history and meet the people that make up almost 200 miles of northern England.

Enthusiasm and expectation are high as Julia begins her grand adventure at the western extremity of northern England, St Bees Head. The coast of west Cumbria is an oft-forgotten industrial strip lying just outside the Lake District, but as Julia reaches the doorway to Wainwright's favourite playground, the weather deteriorates quickly, leaving her no choice but to tackle her first Lakeland valley in appalling conditions.

**MON 22:30 The Choir (b0195vs2)**

Military Wives: Compilation

Choirmaster Gareth Malone believes singing can help people through the most difficult times of their lives. Gareth has been invited to RMB Chivenor Military base in north Devon, where the troops are about to deploy for a six-month tour of duty in Afghanistan. While the troops are away, Gareth starts a choir with the wives and girlfriends who've been left behind.

With the choir proving such a success at Chivenor, Gareth decides to start a new choir at a base in Plymouth, whose troops are suffering fatalities out in Afghanistan. Gareth has to manage emotions that ride high as the two choirs struggle to combine, and then he has to persuade them that they are good enough to sing together.

Finally singing as one choir, Gareth sets the Chivenor and Plymouth military wives the biggest challenge of their lives: to perform at the Royal Albert Hall on Remembrance Sunday. The women contribute letters and lyrics to a song that is specially created for them by royal wedding composer Paul Mealar.

After a six-month wait, and agonising reports of multiple injuries and fatalities on the frontline, the choir members' husbands finally return, to joyous reunions. Now Gareth has to make sure his choir members give it their all, for the once-in-a-lifetime Royal Albert Hall performance.

**MON 00:00 Timeshift (b00nm7k)**

[Repeat of broadcast at 20:00 today]

**MON 01:00 The Strange Case of the Law (b01kg409)**

Presumed Innocent

Although England had a well-developed legal system by the 19th century, the trial process was stacked against the defendant. Crimes like theft and damage to property could be punished by death, but trials were often over in minutes and most defendants had no-one to put their case other than the judge himself.

Harry Potter explores the incredible transformation that enshrined fairness in English court procedure and put the defence on an equal footing with the prosecution. It was a change shaped by seismic shifts in English society, from the Industrial Revolution to the rise of the popular press. Above all, it saw the emergence of the star turn of the courtroom drama - the defence barrister. Harry's journey involves spies, forgery, fraud and murder, and a visit to the set of drama series *Garrow's Law*.

**MON 02:00 Talking Landscapes (b0074lzn)**

[Repeat of broadcast at 19:30 today]

**MON 02:30 How to Build a Cathedral (b00b09rb)**

[Repeat of broadcast at 21:00 today]

**MON 03:30 Wainwright Walks: Coast to Coast (b00jqp0m)**

[Repeat of broadcast at 22:00 today]

**TUESDAY 10 JULY 2012****TUE 19:00 World News Today (b01knshj)**

The latest national and international news, exploring the day's events from a global perspective.

**TUE 19:30 Time to Remember (b00vnfrg)**

Nations at Play

Lesley Sharp narrates as original newsreel and 1950s voiceover are used to illustrate how Britons spent their leisure time during the first half of the 20th century. Includes footage of Henley regattas, frolics at the seaside, the Victorian fairground, horse riding in Hyde Park, Royal Ascot in 1919, Deauville in the 20s and the British Empire Exhibition at Wembley.

**TUE 20:00 Timeshift (b00nf0nl)**

Series 9

The Golden Age of Liners

Paul Atterbury embarks on an alluring journey into the golden age of ocean liners, finding out how these great ships made such a mark on the popular imagination and why they continue to enchant to this day.

Paul's voyage takes him around Britain and reveals a story of design, politics, propaganda, Hollywood glamour and tragedy. Along the way, he uncovers some amazing survivals from the liners of the past - a cinema in Scotland built from the interiors of the SS Homeric, a house in Poole in which cabins from the Mauretania are lovingly preserved - as well as the design inspiration behind the first great liners.

**TUE 21:00 Heart vs Mind: What Makes Us Human? (b01kpvj1)**

The heart is the most symbolic organ of the human body. Throughout history it has been seen as the site of our emotions, the very centre of our being. But modern medicine has come to see the heart as just a pump; a brilliant pump, but nothing more. And we see ourselves as ruled by our heads and not our hearts.

In this documentary, filmmaker David Malone asks whether we are right to take this view. He explores the heart's conflicting histories as an emotional symbol and a physical organ, and investigates what the latest science is learning about its structures, its capacities and its role. In the age-old battle of hearts and minds, will these new discoveries alter the balance and allow the heart to reclaim something of its traditional place at the centre of our humanity?

**TUE 22:00 Born to Run: The Secrets of Kenyan Athletics (b01ktdr7)**

Former Irish athlete and 5,000m world champion Eamonn Coghlan travels to Kenya's highlands to uncover a little-known story - the role of Irish missionaries in securing Kenya's dominance in world athletics. He meets Brother Colm

O'Connell, a modest priest who played a major role in fostering Kenyan distance running and who is now considered one of the world's top athletics coaches. Watching him train the 800m world-record holder David Rudisha, Eamonn observes at firsthand his unlikely but lasting legacy. Part travelogue, part tribute, the documentary also features an interview with Eamonn's childhood hero, the great Olympic athlete Kip Keino.

**TUE 22:50 The Deadliest Crash: the Le Mans 1955 Disaster (b00sfpts)**

At 6.26 pm, June 11th 1955, the world of playboy racers and their exotic cars exploded in a devastating fireball. On the home straight early in the Le Mans 24-Hour race, future British world champion Mike Hawthorn made a rash mistake. Pierre Levegh's Mercedes 300 SLR smashed into the crowd, killing 83 people and injuring 120 more. It remains the worst disaster in motor racing history.

The story was quickly engulfed by conspiracy theory, blame and scandal. Was the mysterious explosion caused by Mercedes gambling all on untried technologies? Did they compound it by using a lethal fuel additive? Have the French authorities been covering up the truth ever since? Or was the winner, the doomed British star Mike Hawthorn, guilty of reckless driving and did his desire to win at all costs start the terrible chain of events?

**TUE 23:50 How to Go Faster and Influence People: The Gordon Murray F1 Story (b01f11hp)**

[Repeat of broadcast at 20:00 on Sunday]

**TUE 00:50 Timeshift (b00nf0nl)**

[Repeat of broadcast at 20:00 today]

**TUE 01:50 Time to Remember (b00vnfrg)**

[Repeat of broadcast at 19:30 today]

**TUE 02:20 Heart vs Mind: What Makes Us Human? (b01kpvj1)**

[Repeat of broadcast at 21:00 today]

**WEDNESDAY 11 JULY 2012****WED 19:00 World News Today (b01knshp)**

The latest national and international news, exploring the day's events from a global perspective.

**WED 19:30 Time to Remember (b00vtydp)**

The Pursuit of Peace

Material from the 1950s newsreel documentary series *Time to Remember* tells the story of the struggle to maintain peace in the decades after the Great War. The politicians' high hopes for improved international relations through the League of Nations were gradually eroded by expansionism and aggression across the globe.

Includes footage of the signing of the Treaty of Versailles; the first Armistice Day parade in 1919; Ramsay MacDonald addressing the League of Nations in 1924; Neville Chamberlain's visits to Germany to negotiate with Hitler; the liberations of Rome and Paris in the summer of 1944; the signing of the German surrender in 1945; and the signing of the United Nations charter.

**WED 20:00 Timeshift (b00nrtj6)**

Series 9

The Last Days of the Liners

Documentary which tells the story of how, in the years following the Second World War, countries competed to launch the most magnificent passenger ships on the great ocean routes.

National pride and prestige were at stake. The Americans had the United States, the fastest liner of all; the Dutch had the elegant Rotterdam; the Italians had the sleek Michelangelo; the French had the France as their supreme symbol of national culture and cuisine; and Britain had the Queens Mary and Elizabeth.

The coming of the jetliner and the 1960s' assault on class and privilege might have swept this world away, but as the film explains, the giant vessels sailed on. Today, more people than ever travel on big ships - liners that have a modern take on glamour and romance.

**WED 21:00 Blink: A Horizon Guide to the Senses (b01kptcr)**

Touch, sight, smell, hearing and taste - our senses link us to the outside world. Dr Kevin Fong looks back through 40 years of Horizon archives to find out what science has taught us about our tools of perception - why babies use touch more than any other sense, why our eyes are so easily tricked and how pioneering technology is edging closer to the dream of replacing our human senses if they fail.

**WED 22:00 Garrow's Law (b00p2jkh)**  
Series 1

Episode 4

William Garrow continues to defend the victims of rough justice when he wins the case of a prostitute accused of murdering a client.

Garrow and Southouse's association is still strained until a desperate Mary Hamer arrives in Southouse's office, begging for Garrow to defend her husband. Joseph Hamer has been languishing in Newgate Prison without charge for many months after being arrested on suspicion of sedition.

Joseph's case is followed closely by the Secretary of State, Viscount Melville, and Sir Arthur Hill, who engineer charges of high treason against him.

Lady Sarah admits to a devastated Garrow that they have no future together. After learning of her husband's role in the plot against Joseph Hamer, she intervenes and the trial takes a surprising turn.

**WED 23:00 Timeshift (b00nrtj6)**  
[Repeat of broadcast at 20:00 today]

**WED 00:00 Borgen (b01b4v2f)**  
Series 1

Men Who Love Women

Danish drama series about the fight for political power - and the personal sacrifices and consequences this has for those involved on and behind the political stage.

With the support of her Minister of Trade and Industry, Birgitte puts forth a proposal for gender quotas on Danish companies' boards of directors. The proposal meets resistance both in and out of government - and the country's most powerful businessman gives Birgitte an ultimatum that could have serious consequences. Meanwhile, members of the media choose to focus on the very attractive and ambitious Minister's private life, which turns out to be morally problematic. While Katrine turns down at first an offer of help to take better care of herself, Kasper gets into a muddle with the ladies.

**WED 01:00 Angelic Voices: The Choristers of Salisbury Cathedral (b01f6tb8)**  
Child choristers have been singing at Salisbury for 900 years. This film - an observational portrait, history and musical immersion in one of Britain's most distinctive and beloved cultural traditions - follows Salisbury Cathedral's choristers over Easter and through the summer term of 2011.

Salisbury Cathedral's separate boy and girl choirs each contain 16 of the most musically gifted eight- to 13-year-olds in the country. Their role, now as always, is to sing some of the most sublime music ever written in one of Britain's most beautiful buildings. Indeed there are many who believe the chorister's pure, clear, treble voice is the finest instrument in all music.

The film spends four months with the choristers as they go about their day-to-day lives, discovering their own history and singing some of the most loved music from a sacred canon spanning six centuries from medieval plainsong to the present day. Under the direction of indefatigable choir master David Halls, they rehearse and perform works by Sheppard, Byrd, Purcell, Handel, Mozart, Stanford, Parry, Alcock and Rutter.

Lining up in his black cloak, ten-year-old Alex says he feels like Harry Potter while Freddie, 12, admits, 'Other children think we are weird and actually we are not.' Yet few children perhaps have the poise or conviction of Susanna, 10, who explains, 'Singing for choristers is part of them. If you said to me "You're not allowed to sing anymore", it would be just like me telling you that you can't see your child anymore.' It is doubtful that Salisbury's early choristers, often so hungry they were forced to beg for bread, thought so fondly of their work. But when plainsong turned to polyphony the choristers' plight was transformed - with the top cathedrals in the late middle ages known to pay Premiership-style transfer fees for the most musically gifted boys, some of whom were even kidnapped by rival cathedrals.

Today's top trebles at Salisbury are seen competing for one of the most famed solos in a chorister's repertoire. Will Finnbar,

Freddie or Noah be picked for Stanford's Mag in G?

**WED 02:30 Time to Remember (b00vtydp)**  
[Repeat of broadcast at 19:30 today]

**WED 03:00 Blink: A Horizon Guide to the Senses (b01kptcr)**  
[Repeat of broadcast at 21:00 today]

**THURSDAY 12 JULY 2012**

**THU 19:00 World News Today (b01knsxh)**  
The latest national and international news, exploring the day's events from a global perspective.

**THU 19:30 Top of the Pops (b01kg4tv)**  
16/06/77

David 'Kid' Jensen looks at the weekly pop chart from 1977 and introduces John Miles, Hot Chocolate, Archie Bell and the Drells, the Foster Brothers, Queen, Tom Petty and the Heartbreakers, Olivia Newton-John, the Muppets and Kenny Rogers.

**THU 20:00 Wonders of the Solar System (b00rz5ys)**  
Original Series

Aliens

Professor Brian Cox visits some of the most stunning locations on earth to describe how the laws of nature have carved natural wonders across the solar system.

Brian descends to the bottom of the Pacific in a submarine to witness the extraordinary life forms that survive in the cold, black waters. All life on Earth needs water so the search for aliens in the solar system has followed the search for water.

Soaring above the dramatic Scablands of the United States, Brian discovers how the same landscape has been found on Mars. And it was all carved out in a geological heartbeat by a monumental flood.

Armed with a gas mask, Brian enters a cave in Mexico where bacteria breathe toxic gas and leak concentrated acid. Yet relatives of these creatures could be surviving in newly discovered caves on Mars.

But Brian's sixth wonder isn't a planet at all. Jupiter's moon Europa is a dazzling ball of ice etched with strange cracks. The patterns in the ice reveal that, far below, there is an ocean with more potentially life-giving water than all the oceans on Earth.

Of all the wonders of the solar system forged by the laws of nature, there is one that stands out. In the final episode of this series, Brian reveals the greatest wonder of them all.

**THU 21:00 Guts: The Strange and Wonderful World of the Human Stomach (p07801ts)**

What's really going on inside your stomach? In this one-off special, Michael Mosley offers up his own guts to find out. Spending the day as an exhibit at the Science Museum in London, he swallows a tiny camera and uses the latest in imaging technology to get a unique view of his innards digesting his food. He discovers pools of concentrated acid and metres of writhing tubing which is home to its own ecosystem. Michael Mosley lays bare the mysteries of the digestive system and reveals a complexity and intelligence in the human gut that science is only just beginning to uncover.

**THU 22:00 Rupture: Living with a Broken Brain (b01kpvwt)**

In 2007 former Bond girl Maryam d'Abo suffered a brain hemorrhage. The experience inspired her to make a film on survivors of brain injuries, giving a sense of hope to those who are isolated from the disease. As she guides us through her personal journey of recovery, she talks to others who have suffered brain injury along the way: literary editor of the London Observer Robert McCrum, jazz guitarist Pat Martino, music producer Quincy Jones and many more. Alongside the testimony of eminent neurosurgeons, neurologists and neuropsychologists, their first-hand stories celebrate man's life force and will to survive.

Directed by Maryam's husband Hugh Hudson, who witnessed her illness, the film offers a unique insight into the fragility of the extraordinary human brain.

**THU 23:10 Heart vs Mind: What Makes Us Human? (b01kpvj1)**

[Repeat of broadcast at 21:00 on Tuesday]

**THU 00:10 Top of the Pops (b01kg4tv)**  
[Repeat of broadcast at 19:30 today]

**THU 00:50 Born to Run: The Secrets of Kenyan Athletics (b01ktrd7)**  
[Repeat of broadcast at 22:00 on Tuesday]

**THU 01:40 Wonders of the Solar System (b00rz5ys)**  
[Repeat of broadcast at 20:00 today]

**THU 02:40 Guts: The Strange and Mysterious World of the Human Stomach (b01kpt6c)**

What's really going on inside your stomach? In this documentary, Michael Mosley offers up his own guts to find out. Spending the day as an exhibit at the Science Museum in London, he swallows a tiny camera and uses the latest in imaging technology to get a unique view of his innards digesting his food. He discovers pools of concentrated acid and metres of writhing tubing which is home to its own ecosystem.

Michael lays bare the mysteries of the digestive system - and reveals a complexity and intelligence in the human gut that science is only just beginning to uncover.

**FRIDAY 13 JULY 2012**

**FRI 19:00 World News Today (b01knsj4)**  
The latest national and international news, exploring the day's events from a global perspective.

**FRI 19:30 The Passions of Vaughan Williams (b00bfmt4)**  
Fifty years after his death, this musical and psychological portrait of Ralph Vaughan Williams explores the passions that drove a giant of 20th-century English music. It explores the enormous musical range of an energetic, red-blooded composer whose output extends well beyond the delicate pastoralism of his perhaps most famous piece, The Lark Ascending.

The film tells the story of his long marriage to his increasingly disabled wife Adeline and his long affair with the woman who eventually became his second wife, Ursula. The effect of these complicated relationships on his music is demonstrated in performances of orchestral and choral works, specially filmed at Cadogan Hall, London by the Philharmonia Orchestra conducted by Richard Hickox and by the singers of Schola Cantorum of Oxford.

Among the contributors is the late Ursula Vaughan Williams, who was interviewed shortly before she died at the age of 96.

**FRI 21:00 Legends (b00fzv3y)**  
Roy Orbison - The 'Big O' in Britain

Roy Orbison was the best singer in the world. That's what Elvis Presley said, and he should know.

To mark the 20th anniversary of Orbison's death, this programme celebrates the extraordinary talent of 'The Big O' and his relationship with his most loyal and enduring fans, British musicians and the British public. Through a combination of interview and archive, it charts Orbison's career in Britain, from the sell-out tour with the Beatles that sky-rocketed him to international superstardom, right up to the collaboration with lifelong friend George Harrison on the Travelling Wilburys project in the late 1980s. Effortlessly cool, musically sophisticated, Orbison was a rock and roll legend, whose legacy continues to captivate both the listeners and performers of today.

**FRI 22:00 Roy Orbison Live in 1965: The Monument Concert (b010q7qs)**

To honour what would have been Roy Orbison's 75th birthday on April 23rd, a celebration of the legend of the quiet Texan with the soaring voice who toured with the Beatles, sang some of the defining hits of the early 60s and brilliantly revived his career as a solo artist and member of the supergroup the Travelling Wilburys in the mid-80s.

Filmed in black and white in Holland in 1965, this short concert features the Big O performing hits from the classic catalogue of songs he recorded for the American independent label Monument in the early 60s. Filmed in what appears to be a gym or school hall in front of an appreciative but respectful audience, Orbison performs Only the Lonely, Running Scared, It's Over, Oh Pretty Woman and more.

**FRI 22:25 Roy Orbison and Friends: A Black and White**

**Night (b00g6349)**

First broadcast in 1988 and filmed in black and white (hence the title!), this TV concert classic features Roy Orbison performing his classic songs with friends like Bruce Springsteen, Tom Waits, Elvis Costello, Jackson Browne, kd lang, Jennifer Warnes and Bonnie Raitt.

The TCB Band which backs all featured artists was Elvis Presley's band till his death in 1977 and includes James Burton, Glen D Hardin, Jerry Scheff and Ronnie Tutt with musical director T Bone Burnett.

Filmed at the Coconut Grove nightclub in Los Angeles, the show was first broadcast on HBO in 1988, the year of Roy Orbison's death.

**FRI 23:30 Arena (b00hbj01)**

Woody Guthrie

First transmitted in 1988, Arena presents a documentary programme exploring the life of Woody Guthrie, the travelling American singer-songwriter who paved the way for the likes of Bob Dylan and Bruce Springsteen.

Born in Okemah, Oklahoma in 1912, Guthrie became a spokesman for a whole generation of downtrodden Americans during the 1930s, with poignant songs like Vigilante Man, Pastures of Plenty and the anthemic, This Land is Your Land.

**FRI 00:40 Legends (b00fzv3y)**

[Repeat of broadcast at 21:00 today]

**FRI 01:40 Roy Orbison Live in 1965: The Monument Concert (b010q7qs)**

[Repeat of broadcast at 22:00 today]

**FRI 02:05 Roy Orbison and Friends: A Black and White Night (b00g6349)**

[Repeat of broadcast at 22:25 today]

**FRI 03:10 Arena (b00hbj01)**

[Repeat of broadcast at 23:30 today]