



## **WONDERS OF THE SOLAR SYSTEM**

### ***Episode Guide***

Airs Wednesdays at 9 PM ET Beginning August 4

#### ***Empire of the Sun***

**Wednesday, August 4 at 9 PM ET**

At the heart of our Solar System is our Sun. In this first episode Brian explores the Sun's magisterial rule over every world in the Solar System. He travels to India to catch a remarkable quirk of nature – a total solar eclipse. The scale of our star's power is hard to imagine but in the Brazilian rainforest, Brian describes how every molecule of every drop of water is moved around our blue planet by the Sun's energy, creating some of the most remarkable sights on Earth. Yet heat and light are not the only power of the Sun reigning over the Solar System. In the Arctic Circle, Brian witnesses the battle between the Sun's wind and our planet, as the night sky dances with a magical display of the Northern Lights. Brian explains how the Sun's greatest power, its gravity, reaches out for hundreds of billions of miles, where the lightest gravitational touch encircles our Solar System in a mysterious cloud of comets.

#### ***Order out of Chaos***

**Wednesday, August 11 at 9 PM ET**

In the second episode of his stunning exploration of the Solar System, Professor Brian Cox reveals how the beauty we see in our cosmic backyard emerged from a chaotic clouds of gas, and how the same laws of nature that shaped all this order also created two extraordinary wonders here on earth. The rhythms of our lives are governed by the movement of the Earth through space. With the aid of specialist photography and the astounding night sky over the Atlas Mountains, Brian describes how we first became aware of other planets. Chasing tornados in Oklahoma, Brian explains how the same physics that create these spinning storms, shaped the vast cloud of gas and dust that eventually gave rise to the young Solar System. And out of this celestial maelstrom emerged the finest example of how nature shapes itself - the magnificent rings of Saturn, Brian's second Wonder of the Solar System. Brian reveals how simple physics has produced the ordered complexity that created most of the rings of Saturn. Using the latest scientific data and breath-taking graphics he paints a vivid picture of the intricate beauty of the rings.

#### ***Thin Blue Line***

**Wednesday, August 18 at 9 PM ET**

In this weeks episode Professor Brian Cox reveals how something as flimsy as an atmosphere - can create some of the most wondrous sights in the Solar System. Brian takes a ride to the top of Earth's atmosphere. Soaring to 11.18 Miles he sees the darkness of space above and the thin blue line of our atmosphere below. It is this unique atmosphere that gives us the air we breathe, the water that sustains us, and a line of defense against the violence of outer space. These veneers of gas define all the worlds of the Solar System. On the frigid Canadian prairies, Brian joins a team of scientists scouring the ground for melted fragments of a 10 ton meteor that slammed into the atmosphere at 50 times the speed of sound.

Amongst the ancient dune fields of Namibia, Brian explains how a robot sent to roam Mars made a mysterious discovery, which proves the planet once had an atmosphere more like

Earth's. It's against the stunning backdrop of the glaciers of Alaska, that Brian reveals his fourth Wonder. A place gripped by brittle cold, yet wrapped with the most Earth-like atmosphere in the Solar System which has had an extraordinary impact.

### ***Dead or Alive***

**Wednesday, August 25 at 9 PM ET**

Standing on the edge of the most famous natural wonder on Earth, the Grand Canyon, Brian reflects on the apparent similarity between our home planet and Mars. In this episode Brian examines how the universal laws of nature that govern every thing in the Solar System can produce such extraordinarily different worlds. He travels to the tallest mountain on Earth, the volcano Mauna Kea on Hawaii, to show how something as basic as a planet's size can make the difference between life and death. The planet was killed off by its small size but our other neighbor, Venus, is so similar to Earth it's often called our twin. And more volcanoes have been spotted on Venus than any other planet in the Solar System. But, like Mars, it all went wrong for Venus millions of years ago. Gazing over the vista of the Deccan Traps in India, Brian explains how the remnants of the massive outpouring of lava that stretches out for hundreds of thousands of square miles is a small echo of what happened to Venus, and how a massive volcanic outpouring set the planet on a path of self-destruction. Yet the fifth Wonder in the series isn't on a planet at all. It's on a tiny moon of Jupiter, Io. This fragment of rock should be cold and dead. With the volcanic landscape of Eastern Ethiopia as a backdrop, Brian reveals why the rocky surface of Io rises and falls by as much as 100 yards each day, and why that has made Io home the largest volcanic eruptions in the Solar System, with giant plumes erupting 300 miles into space.

### ***Aliens***

**Wednesday, September 1 at 9 PM ET**

In the Final Episode, Professor Brian Cox descends to the bottom of the Pacific in a submarine. The deep ocean is one of the most alien places on Earth, yet life thrives here in bizarre oases. In this episode, Brian casts an eye over the Solar System to see whether there may be other worlds that could harbour life. Sifting through the dust of the Atacama Desert in Chile, Brian explains how even the most basic life forms need liquid water so the search for aliens has been led by the search for water in the Solar System. Donning a gas mask to protect himself from toxic gas, Brian enters a cave in southern Mexico. In the pitch black he finds a mysterious life-form, nicknamed a snottite that looks as bad as it sounds, feeds off rock instead of sunlight and pees strong acid. And it's thought that relatives of these creatures could be surviving in newly-discovered caves on Mars. Brian's 6<sup>th</sup> Wonder is a different kind of hidden, dark world. Jupiter's moon Europa is a dazzling ball of ice etched with strange cracks and red markings. 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. Some scientists believe the red streaks could even be the tell-tale sign of bacteria. But 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.