



## Space Voyages

4 X 1 HOUR

EPISODIC BREAKDOWN

### 1. Into The Unknown

Technology's growth is rapidly expanding our understanding of the cosmos. But these breath-taking technologies owe their existence to much older breakthroughs. When the space age dawned half a century ago, pioneering engineers had to solve the problems of space travel from scratch. And today's state of the art space exploration deploys technologies built directly upon innovations from the 1960s space program.

In late 2013, a spacecraft to Mars will launch using the same rocket technology that put our first ever spacecraft into orbit in the 1950s. Thanks to these breakthrough systems created by the space pioneers, Curiosity and other spacecraft are now delivering awe-inspiring science from around our solar system. This episode contains reflections from Smithsonian curators, scientists, astronauts, and engineers, past and present.

### 2. The Moon and Beyond

NASA is sizing up a new challenge: re-learning how to travel into deep space, with the goal of sending humans to an asteroid, Lagrange point, or even Mars. As we witness the phenomenal power of an SLS rocket test at Stennis Space Center in Mississippi, and tour NASA's latest Multi-Purpose Crew Vehicle, we travel back in time to hear first hand accounts of the remarkable Apollo breakthroughs that culminated with Neil Armstrong's first step onto the moon.

### 3. Open for Business

After we reached the moon, NASA refocused energy on mastering routine spaceflight and living in earth orbit. With the retirement of the Shuttle program, we explore the massive contributions Low Earth Orbit operations have brought to our lives, and look at the new commercial vehicles which will build on the shuttle's triumphs and learn from its tragedies, to bring us a new age of business in space.

### 4. Surviving the Void

Obama has set NASA's sights on deep space exploration once again – with a goal of sending crewed missions to deep space by 2025. Building the spacecraft is one thing, but it's the fragility of the human body that may be the weakest link to achieving this goal. This film focuses on the

biomedical, technical and transportation obstacles to voyaging long distances and living in space and what we've learned from our endeavours thus far.