Spacesuits: The Smithsonian National Air and Space Museum Collection

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Amanda Young : Spacesuits: The Smithsonian National Air and Space Museum Collection before purchasing it in order to gage whether or not it would be worth my time, and all praised Spacesuits: The Smithsonian National Air and Space Museum Collection:

0 of 0 people found the following review helpful. A great book about spacesuits.By larrybIf you like books on anything space related then this is a book you need to have in your collection. The photos and accompanying descriptions about the development of space suits are fantastic. I am sure you will enjoy the book. If my review has been helpful, please let me know.2 of 2 people found the following review helpful. Build, Sew, and GLUE a better Space Suit!By M. FrantaBuilding a Better SpacesuitRocketing to the Moon was a mission that involved tens of thousands of very intelligent and highly resourceful people. It also required the involvement of brave men who were required to show proof of bravery and nerves of steel. While all this was being measured and written down, somebody along the way was designing the ultimate space clothes. A spacesuit was required that would be airtight and custom-fitted to our astronauts. There was no style to adhere to; only functionality in the vacuum of space and the ability to withstand the extreme variations in temperature that occurs in space. What kind of people design space suits? Requirements for space suits are extremely rigorous --- since human life can exist only in the thinnest of atmospheric variance.While a person wears a space suit, their body temperature has to remain constant in the vacuum of space. It has to receive oxygen, stay pressurized and keep the cold and heat out. The suit has to be an absolutely closed system so that nothing leaks out of it. It also has to be capable of allowing human waste to be excreted while the person is wearing it.During the APOLLO era, it was essential that the space wardrobe consist of a fully contained suit, where the astronauts had to wear their oxygen supply on their backs, and the system was created to resemble a back pack. When Armstrong and Aldrin were out there on the surface of the moon, it was imperative that their space suits were strong enough to withstand sharp rocks while they walked about, and the extreme heat of direct sunlight, which was 275 degrees farenheight!No one person can fully take credit for all this evolution of spacesuits; it all began with one man wanting to make a flight which required him to reach 40,000 feet and remain there alive, warm and comfortable until he reached his destination. It was in the 1930's when Wiley Post first donned his crude and primitive air suit. It resembled more a welder's outfit than a pilot's pressure suit, but it did the job. BF Goodrich jumped into the fray in designing air suits, which eventually evolved into the US Navy and US Air force taking the lead for these amazing spacesuits that NASA utilized for their space program.Looking at this book, I was very impressed with the odd size of it. I wonder if it was designed to fit smartly into the pockets of Space Shuttle astronauts. Or perhaps the book would slide expertly into the pocket book of the glue-pot ladies who worked so precisely and with such dedication for the APOLLO program? Measuring 6 inches across and 12 inches down, this quality bound text is a must-have for all space flight aficionados. Opening the hard cover, I was surprised at the thickness of the paper used for publication. Like the spacesuits utilized by our US Space Program, nothing was skimped upon. No expense was spared. Only the best quality materials were used to construct this book, and I was also amazed by the stunning colors that I saw throughout the book!I never considered just how many prototypes were involved in building the best space suit in the world. Looking at the early models felt like a wind blowing my hair back out of my face. The silver suits of the Mercury Program are a study in sixties technology! I was just a young girl in those early years of space exploration; I would see pictures of the Magnificent Seven Astronauts and I asked my mom to make me a spacesuit out of aluminum foil. I thought that's the material they were created out of, but when we tried to fashion a space suit for me, the aluminum foil crinkled, it itched really badly and tore quite easily. I learned then that those astronauts must have had a stronger grade of foil, but they had to learn to get used to the crinkliness of the fabric! I think every kid in America experimented with making their own space suits in that era.Helmet technology is another aspect of space travel entirely. After reading the entire book, which doesn't take a whole lot of time, because it contains loads of wonderful colorful pictures, I learned a great deal of what considerations are paramount in developing helmets for the human head, (but I still crave much more detail.) I suppose having much more detail would be a threat to national security however, but this little book shines the light on a lot of what goes into making a spacesuit for our modern space astronauts and space tourists.The first pressure suit was estimated to cost $75.00 and it wasn't safe in space.Today, our most evolved spacesuit and helmet with boots is in the cost range of $2 million dollars a piece, but nowadays we reuse various components of the space suits, to save money. So, one suit doesn't run two million a piece, it can be refurbished and reused by another high-achiever.Most all of the spacesuits ever sewn and worn are now being kept in a clean room at The Smithsonian National Air and Space Museum in Washington DC. On pages 128,9,30 31, one can take a gander at how these fragile suits are spending their days in captivity. They served a noble and grand purpose and now they have become national treasures; a testimony of man's greatest technological challenge. A special grant called, "Save America's Treasure's" provides the funding necessary to collect these endangered artifacts of our space history and to provide a protective environment for these fragile suits. Of the 200 + suits in the collection, only about 70 of the spacesuits are on display at any one time. This is because display conditions for theses suits must be controlled in respect to atmospheric humidity, natural light, warmth and risk for mold being embedded in the suits.

Preservation of these rare suits is the all-consuming goal of the Space Museum today.The big question is, where are all the missing spacesuits? I hear rumors that they are in the hands of the astronauts themselves, saving them for prosperity and all such good thoughts, but in reality, those suits should be handed over to the Smithsonian for safe-keeping. Each space suit is a history lesson; a tangible piece of our space travel and this belongs to everybody, not a wealthy private collector or black market guru.I read this book several times and I have to award to it my highest recommendation. No one person will in their lifetime ever be able to see all these magnificent space suits in one location. They will live on inside of this elegant publication for all mankind to gaze upon and give wonder. I strongly recommend you buy this book and keep it on your prized bookshelf. It is a rare gem of a book and one feels very privileged to gaze on these marvelous space suits of our past and present.0 of 0 people found the following review helpful. Spacesuits R UsBy Stephen G.I selected this book in preparation for a trip to the Air Space Museum in Washington, D.C. and a Smithsonian trip to Star City in Russia to learn about the Russian space program. The book is primarily a catalog of the space suits at the Smithsonian. I was a little disappointed in that it did not go into the makings of and operation of the space suits. Overall though, I enjoyed the book and the photographs in it and it did enlighten me about some of the workings of the suits. I would recommend this book to anyone who has an interest in American space suits.

The goal of landing a man on the Moon and returning him safely to Earth required the development of three things: spacecraft, launch vehicles, and protective clothing. Spacesuits: Within the Collections of the Smithsonian National Air and Space Museum takes the reader through the development of the last category, the spacesuits used during this venture. Highlighting the pressure suits created during the years leading up to the lunar missions and beyond, this book features dramatic photographs of the Smithsonians collection, as well as never-before-published historical images of spacesuit development and testingrange-of-motion studies, for example, in which researchers wore spacesuits while playing baseball and football. The book also includes a group of advanced spacesuits, which, though never used on a mission, are in many respects the most exciting suits ever created. One suit glove has steel fingernails and sharkskin pads, in an attempt to harness the abilities of the human hand. Spacesuits are surprisingly fragile; they are made for a short lifespan in the most extreme of conditions, and long-term survival is not part of their design process. The final chapter touches briefly on the current conditions of historic suits, how they have held up over time, the reasons for their deterioration, and the rewards and difficulties associated with caring for and preserving these very complex and iconic artifacts. From the first spacesuit designs of the 1930s through those worn on the landmark Apollo-Soyuz program of 1975, Spacesuits provides a behind-the-scenes look at the history of these remarkable creations, including some that have never before been publicly displayed.

About the AuthorAmanda Young is a museum specialist in Spacesuits and Astronaut Equipment for the Division of Space History of the Smithsonian National Air and Space Museum. She was responsible for the Air and Space portion of American Festival Japan 94, a major exhibit in Tokyo, and in 2001 co-wrote the collections care booklet The Preservation, Storage and Display of Spacesuits. She was also a contributor to Extreme Textiles: Designing for High Performance (Princeton Architectural Press, 2005) and After Sputnik: 50 Years of the Space Age (Collins, 2007). She continues to conduct research into the causes of spacesuit deterioration. Mark Avino In the Cockpit: Inside 50 History-Making Aircraft (Collins Design, 2007) and At the Controls: The Smithsonian National Air and Space Museum Book of Cockpits (Boston Mills Press, 2001). A graduate of the Rochester Institute of Technology, he joined the Smithsonian Institution in 1983. He lives with his wife and three children in Burke, Virginia. Allan A. Needell is the Curator of Human Space Flight in the Division of Space History at the National Air and Space Museum. He has published on the history of physics, the origins of American national laboratories, and government/science relations. He is the author of a study of the career of a major American science administrator, Science, Cold War and the American State: Lloyd V. Berkner and the Balance of Professional Ideals (Routledge, 2000). Needell joined the National Air and Space Museum in 1981 and is currently responsible for the museums Apollo space flight collection. Thomas P. Stafford is a retired Lieutenant General of the U.S. Air Force and a former NASA astronaut. Stafford piloted Gemini VI, the first rendezvous in space (1965), and commanded the Apollo 10 lunar mission (1969) and the historic Apollo-Soyuz Test Project (1975). He is the recipient of many awards in aviation and honorary degrees from American universities.