

## THREE ASTRONAUTS - FROM RUSSIA, ROMANIA AND UNITED STATES - DOCTOR HONORIS CAUSA OF THE TUM



The personality of a man is the highest synthesis of his moral and professional values, an ethical goal many intend to achieve and actually few reach it. It is a whole human substance and the meeting place between

change and permanency, and creativity of thinking of the people around us.

On April 12, 2012, the International Day of Human Flight in Cosmos, three cosmonauts - from Russia, Romania and United States became Doctor Honoris Causa of the Technical University of Moldova. The Technical University of Moldova Senate met in a festive meeting, dedicated to awarding academic title of Doctor Honoris Causa upon Vladimir Nikolayevich Dezhurov, russian cosmonaut, hero of the Russian Federation, Dumitru-Dorin Prunariu, first romanian astronaut, hero of the Socialist Republic of Romania and former- USSR and Frank Lee Culbertson Jr., american astronaut. The honorary title of D.H.C. was conferred in recognition of their outstanding achievements and contributions to harnessing space, promotion of science and technology internationally, strengthening relations between nations and peoples, education of the young generation of engineers.





**Vladimir Nikolayevich Dezhurov**, Russian cosmonaut, was born on July 30, 1962 in the settlement of Yavas, Zubovo-Polyansky District, Mordovia, Russia. He is a veteran of two spaceflights, to the Mir and International Space Stations. Total during flights - 244 days 5 hours 29 minutes 53 seconds. During his career, Dezhurov also conducted nine spacewalks before his retirement on July 12, 2004. Dezhurov was awarded the Hero of the Russian Federation medal and the Pilot/Cosmonaut title by Decree of the President of the Russian Federation. He has been also awarded three Air Force medals during his career.

He is married to Elena Valentinovna Dezhurova (née Suprina). They have two daughters, Anna, born in 1983, and Svetlana, born in 1987. Dezhurov attended and graduated from the S.I. Gritsevits Kharkov Higher Military Aviation School in 1983 with a pilot engineer's diploma. After graduating, Dezhurov served as a pilot and senior pilot in the Russian Air Force.

In 1987, Dezhurov was assigned to the Cosmonaut Training Center. From December 1987 to June 1989, he underwent a course of general space training. Since September 1989, he has continued training as a member of a group of test cosmonauts. Since 1991, he has been a correspondence student at the Yuri A. Gagarin Air Force Academy.

In March 1994, Dezhurov began flight training as commander of the prime crew of the Mir-18 mission. The crew was launched from the Bajkonur Cosmodrome in Kazakhstan on March 14, 1995 aboard the Soyuz TM-21

spacecraft. Following a two day solo flight, the Soyuz spacecraft docked with the Mir on March 16. There were several technical problems during this mission. The crew also performed life science experiments. Following a 115 day flight, the mission concluded with landing at the Kennedy Space Center in Florida, aboard Space Shuttle Atlantis on July 7, 1995.

On November 12, 2001, Dezhurov conducted his eighth spacewalk together with NASA astronaut Culbertson. This is the portrait for the astronaut and cosmonaut crew members comprising STS-105, including the replacement



or "up" crew (upper right) who will serve Expedition Three. Astronaut Frank L. Culbertson, Jr. (center in the upper right grouping), commander, is flanked by cosmonauts Mikhail Tyurin (left) and Vladimir N. Dezhurov, both flight engineers representing Rosaviakosmos. Vladimir Dezhurov and Frank Culbertson, who commands the third regular ISS (International Space Station) expedition, have successfully completed their space walk. According to the mission-control center, both men, who are now busy drying their space suits, will relax later on. Dezhurov and Culbertson connected cables on the exterior of Pirs for the Kurs automated docking system. They completed checks of the Strela cargo crane, using one space walker at the end of the crane's boom to simulate a cargo. They also inspected and photographed a small panel of one solar array on the Zvezda Service Module that has one portion of a panel not fully unfolded.

Dezhurov lived and worked aboard the International Space Station where he served as a member of the Expedition 3 crew. Space Shuttle *Discovery* carrying Dezhurov and six other crewmembers on STS-105 mission blasted off to space from the Kennedy Space Center (KSC) on August 10, 2001. The shuttle docked with the ISS on 12 August at 18:41 UTC. Dezhurov spent approximately 4 months aboard the station as a flight engineer. During the long duration mission the Expedition 3 crew enjoyed a unique view of the 2001 Leonid meteor storm. At the end of the stay Expedition 3 crewmembers, Dezhurov, NASA astronaut Frank Culbertson and cosmonaut Mikhail Tyurin returned to Earth on board Space Shuttle *Endeavour*. *Endeavour*'s STS-108 mission delivered the Expedition 4 crew to the ISS and landed at KSC on December 17, 2001.



**Dumitru-Dorin Prunariu**, romanian astronaut, was born on September 27, 1952 in Braşov, Romania. Prunariu is married to Crina Prunariu and has two sons and three grandchildren.

He is graduated from the Physics and Mathematics high school in Braşov in 1971 and from the University POLITEHNICA of Bucharest in 1976, obtaining a degree in Aerospace Engineering. Prunariu worked as a Diploma Engineer at "*Industria Aeronautică Română IAR- Braşov*", an aircraft industry facility, prior to enrolling in the Romanian Air Force Officers Training School in 1977.

He was selected for spaceflight training in 1978 as a part of the Intercosmos Program. Obtaining the maximum marks during three

years of preparation he was selected for a joint space flight with the Russian cosmonaut Leonid Popov. In May 1981 they completed an eight-day space mission on board Soyuz 40 and the Salyut 6 space laboratory where they completed scientific experiments in the fields of astrophysics, space radiation, technology, medicine and biology. Prunariu became the 103<sup>rd</sup> human being to fly into the Outer Space.



In 1981, after completing the flight, he received the awards of Hero of the Socialist Republic of Romania and Hero of the Soviet Union (22 May 1981) and the medal "*Golden Star*". He was also awarded the Order of Lenin. Prunariu is a member of the International Academy of Astronautics (1992 - corresponding member, 2008 - full member) and a member of the Romanian National COSPAR Committee (1994). In 1984 he was awarded the "*Hermann Oberth Gold Medal*" by the German Rocket Society "*Hermann Oberth - Wernher von Braun*". In 1985 he joined the Association of Space Explorers (ASE), which currently (2012) comprises over 350 flown individuals from 35 countries. Since 1993 until 2004 he has been the permanent representative of the Association of Space Explorers at the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) sessions. Since 1996 Prunariu has been a member of the Executive Committee of ASE for two terms of three years. Since 1992 he has represented the Government of Romania to the UN COPUOS sessions. Since 1995 Prunariu is the Vice-President of the International Institute for Risk, Security and Communication Management (EURISC), Bucharest.

From 1998 to 2004 Prunariu was the President of the Romanian Space Agency, and from 2000 - an Associate Professor on Geopolitics within the Faculty of International Business and Economics, Academy of Economic Studies, Bucharest, Romania. In 2004 he was elected as the Chairman of the Scientific and Technical Subcommittee of the UN COPUOS for a two years term. On 1 December 2000, he was awarded the highest state order of Romania, Star of Romania in rank of a Grand Officer.

From May 2004 until August 2005 Prunariu was the itinerary Ambassador Extraordinary and Plenipotentiary of Romania to the Russian Federation.

In February 2007 he completely retired from the Ministry of Defence with the rank of a Major-General, continuing to work on the same positions as a civilian servant. Until September 2008 he accomplished the duties of the Director of the Romanian Office for Science and Technology to the European Union (ROST) in Brussels. Currently, Prunariu is working for the Romanian Space Agency as an expert within the Airspace Consulting Association. He was elected as Chairman of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) for the period of June 2010-June 2012. In addition to that, at the 23rd Congress of the Association of Space Explorers that took place in Kuala Lumpur, Malaysia, in the period of 5-10 October 2010, D. Prunariu was elected the President of the new organized Chapter of the association, ASE Europe. In appreciation of his activity within the Association of Space Explorers and his active involvement, at the 24th Congress of ASE which took place in September 2011, in Moscow, D. Prunariu was elected the President of the full ASE, with a mandate of 3 years. In November 2011 Prunariu became a Honorary Member of the Romanian Academy.

Prunariu is a co-author of several books regarding space technology and space flight and has presented/published numerous scientific papers. His PhD thesis produced new developments in the field of space flight dynamics.



**Frank Lee Culbertson Jr.**, american astronaut, was born on May 15, 1949, in Charleston, South Carolina, but considers Holly Hill, South Carolina to be his hometown. In June 1987 he married the former Rebecca Ellen Dora of Vincennes, Indiana. He has five children and five grandchildren. A veteran of three space flights, Culbertson has logged over 146 days in space.

Culbertson graduated from Holly Hill High School in 1967 and received a bachelor of science degree in aerospace engineering from the U.S. Naval Academy in 1971. He holds membership of a number of organisations including Senior Fellow of the American Institute of Aeronautics and Astronautics, member of the Association of Naval Aviators, Aircraft Owners & Pilots Association, the Aviation Boatswains Mates Association, and the Association of Space Explorers. Culbertson served as the commander of the International Space Station for almost four months in 2001. He is currently a Senior Vice President responsible for human spaceflight programs at Orbital Sciences, including commercial transportation to the ISS.

Selected as a NASA astronaut candidate in May 1984, Culbertson completed basic astronaut training in June 1985. Technical assignments since then included: member of the team that redesigned and tested the Space Shuttle nosewheel steering, tires, and brakes; member of the launch support team at Kennedy Space Center for Shuttle flights STS-61-A, STS-61-B, STS-61-C, and STS-51-L; in 1986, worked at the NASA Headquarters Action Center in Washington, D.C., assisting with the

*Challenger* accident investigations conducted by NASA, the Presidential Commission, and Congress.

Culbertson became lead astronaut at the Shuttle Avionics Integration Laboratory (SAIL); lead of the First Emergency Egress Team; and lead spacecraft communicator (CAPCOM) in the Mission Control Center for seven missions (STS-27, STS-29, STS-30, STS-28, STS-34, STS-33, and STS-32). Following his first flight, he served as the Deputy Chief of the Flight Crew Operations Space Station Support Office as well as the lead astronaut for Space Station Safety. Following STS-51, Culbertson was Chief of the Astronaut Office Mission Support Branch; then Chief of the Johnson Space Center Russian Projects Office. In 1994, Culbertson was named Deputy Program Manager, Phase 1 Shuttle-Mir, and in 1995 became Manager of the Shuttle-Mir Program. He was responsible for a multinational team which executed nine Shuttle docking missions to the Russian Space Station Mir, with seven astronauts spending 30 months cumulatively on-board the Mir Station. Just prior to his current flight assignment, Culbertson spent one year as Deputy Program Manager for Operations of the International Space Station Program.

STS-38 *Atlantis* (November 15–20, 1990) was a five-day mission during which the crew conducted Department of Defense operations. The mission concluded after 80 orbits of the Earth in 117 hours, 54 minutes, 28 seconds, the first Shuttle to land in Florida since 1985.



STS-51 *Discovery* (September 12–22, 1993) was a ten-day mission during which the

crew deployed the U.S. Advanced Communications Technology Satellite (ACTS/TOS), and the Shuttle Pallet Satellite (ORFEUS/SPAS) carrying U.S. and German scientific experiments, including an ultraviolet spectrometer. A seven-hour EVA was also conducted to evaluate Hubble Space Telescope repair tools and methods. After the SPAS spacecraft had completed six days of free flight some 40 miles from Discovery, the crew completed a successful rendezvous and recovered the SPAS with the Shuttle's robot arm. The mission concluded with the first night landing of the Shuttle at the Kennedy Space Center. Mission duration was 158 Earth orbits in 236 hours and 11 minutes.

The Expedition 3 crew launched on August 10, 2001 aboard STS-105 *Discovery* and docked with the International Space Station (ISS) on August 12, 2001. Culbertson lived and worked aboard the station for a total of 129 days, and was in command of the station for 117 days. The Expedition-3 crew left the station on December 15 aboard STS-108 *Endeavour*, landing at Kennedy Space Center, Florida, on December 17, 2001.

Culbertson has received numerous awards including the Legion of Merit, the Distinguished Flying Cross, the Defence Superior Service Medal, the NASA Outstanding Leadership Medal, NASA Space Flight Medals, Navy Commendation Medal, Air Force Commendation Medal, the Armed Forces Expeditionary Medal, the Humanitarian Service Medal, and various other unit and service awards. Distinguished graduate, U.S. Naval Test Pilot School. He has been awarded Honorary Doctor of Science Degrees from the College of Charleston, 1994, and Lander University, 1999. Culbertson has also been awarded the Komarov Certificate for Space Flight Achievement, 1994, the AAS Flight Achievement Award for STS-51, 1994, *Aviation Week & Space Technology* 1997 Laurel for Achievement in Space, IEEE/ASME Award for Manager of the Year, 1997, and the Space Center Rotary Club Stellar Award for 1998.