



Volume 37, Issue 6

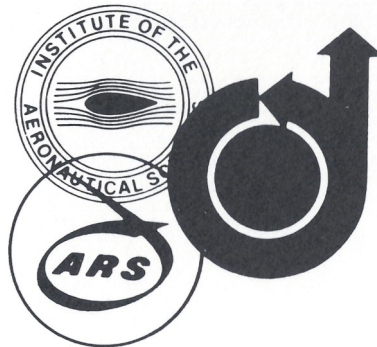
AIAA Houston Section [www.aiaa-houston.org](http://www.aiaa-houston.org)

June 6, 2012

# 1962 - 2012

## 50th Anniversary

### AIAA Houston Section



*The World's Forum for Aerospace Leadership*



**AIAA HOUSTON**  
American Institute of Aeronautics and Astronautics

*Horizons is a bimonthly publication of the Houston Section of the American Institute of Aeronautics and Astronautics.*

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June 6, 2012



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Horizons and AIAA Houston Section Web Site  
AIAA National Communications Award Winner



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*Cover: The 50th Anniversary of AIAA Houston Section.*

*This twenty-page booklet was part of the dinner meeting celebration of June 4, 1987.*

**AIAA**  
*Houston Section*

*25th Anniversary*



American Institute of Aeronautics and Astronautics

*Since the ARS started in 1930 and the IAS started in 1932, AIAA splits the difference and celebrates its start as 1931.*

**T**he American Interplanetary Society, later called the American Rocket Society (ARS), was founded on April 4, 1930. The Institute of the Aeronautical Sciences (IAS), later called the Institute of the Aerospace Sciences, was founded on October 1, 1932.

The Houston Section of the IAS was formed on January 4, 1962, with Dr. Alan J. Chapman of Rice University as Chairman.

On February 1, 1963, the ARS and IAS merged to become the American Institute of Aeronautics and Astronautics, the largest and oldest American technical society devoted to science and engineering in the fields of astronautical and aeronautical technology and systems. It is composed of professionals who themselves provide the energy and ideas to make the society work. In AIAA, the emphasis is on the individual, whether he is preparing a Journal article, participating in a symposium or Section activity, or working on one of AIAA's many committees.

All can be proud of the contributions of the more than 1000 AIAA Houston Section members to our nation's space program.

OUTSTANDING SECTION AWARD      SECTION SPECIAL EVENT AWARD



1975-1976  
1976-1977  
1979-1980  
1980-1981  
1981-1982  
1983-1984



1971-1972  
1972-1973  
1979-1980  
1981-1982  
1983-1984  
1985-1986



## *The Early Days*

NASA - Langley

November 5, 1958

MEMORANDUM For All Concerned

Subject: Space Task Group

1. Effective this date, a Space Task Group reporting directly to NASA Headquarters is established at Langley Field, Virginia to implement a manned satellite project. Mr. Robert R. Gilruth has been appointed as Project Manager and Mr. Charles J. Donlan as Assistant Project Manager.

2. The following Langley Research Center employees are hereby relieved of their present duties and assigned to the Space Task Group:

Bland, William M., Jr.	Lowe, Nancy C.
Bond, Aleck C.	MacDougall, George F., Jr.
Chilton, Robert G.	Magin, Betsy F.
Donlan, Charles J.	Mathews, Charles W.
Faget, Maxime A.	Mayer, John P.
Fields, Edison M.	Muhly, William C.
Gilruth, Robert R.	Purser, Paul E.
Hammack, Jerome B.	Patterson, Herbert G.
Hatley, Shirley J.	Ricker, Harry H., Jr.
Heberlig, Jack C.	Robert, Frank C.
Hicks, Claiborne R., Jr.	Rollins, Joseph J.
Kehlet, Alan B.	Sartor, Ronelda F.
Kolenkiewicz, Ronald	Stearn, Jacquelyn B.
Kraft, Christopher C., Jr.	Taylor, Paul D.
Kyle, Howard C.	Watkins, Julia R.
Lauten, William T., Jr.	Watkins, Shirley P.
Lee, John B.	Zimmerman, Charles H.
Livesay, Norma L.	





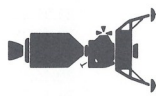
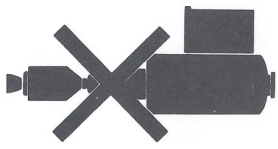

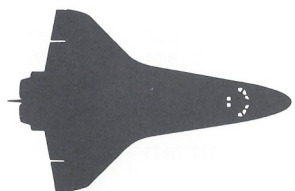
Floyd L. Thompson  
Acting Director

## *The Section Leadership*

### Houston Section Chairmen

1962-63	Alan J. Chapman	Rice University
1963-64	W. Scott Royce	Northrop Corporation
1964-65	Charles B. Appleman	General Electric Company
1965-66	Phil Sansone	RCA
1966-67	George M. Low	NASA
1967-68	Aleck C. Bond	NASA
1968-69	Jack C. White	North American Aviation
1969-70	Joseph G. Thibodaux, Jr.	NASA
1970-71	John Stap, Jr.	Martin Marietta Corporation
1971-72	James C. McLane, Jr.	NASA
1972-73	Ernest L. Kistler	Texas A&M University
1973-74	Joseph S. Algranti	NASA
1974-75	Leland A. Carlson	Texas A&M University
1975-76	Loren E. Wood	TRW
1976-77	Claiborne R. Hicks	NASA
1977-78	Thomas B. Murtagh	NASA
1978-79	Edward L. Hays	NASA
1979-80	Robert R. Stephens	McDonnell Douglas Corporation
1980-81	Norman H. Chaffee	NASA
1981-82	Jack C. Heberlig	IBM
1982-83	Sharon Barnes Castle	NASA
1983-84	Charles V. Wolfers	McDonnell Douglas Corporation
1984-85	Robert V. Glowczwski	Martin Marietta Corporation
1985-86	Robert E. Lewis	NASA
1986-87	Karen D. Godek	NASA

## *The Measure of Progress*

	Program	Man-hours in space	Number of manned flights	Crew- members
	Project Mercury	54	6	1
	Gemini Program	1 940	10	2
	Apollo Program	7 506	11	3
	Skylab	12 352	3	3
	Apollo-Soyuz Test Project	652	1	3
	Space Transportation System	18 632	25	Varies 2 - 8
	Cumulative man-hours in space	41 136 hours 37 minutes 49 seconds		

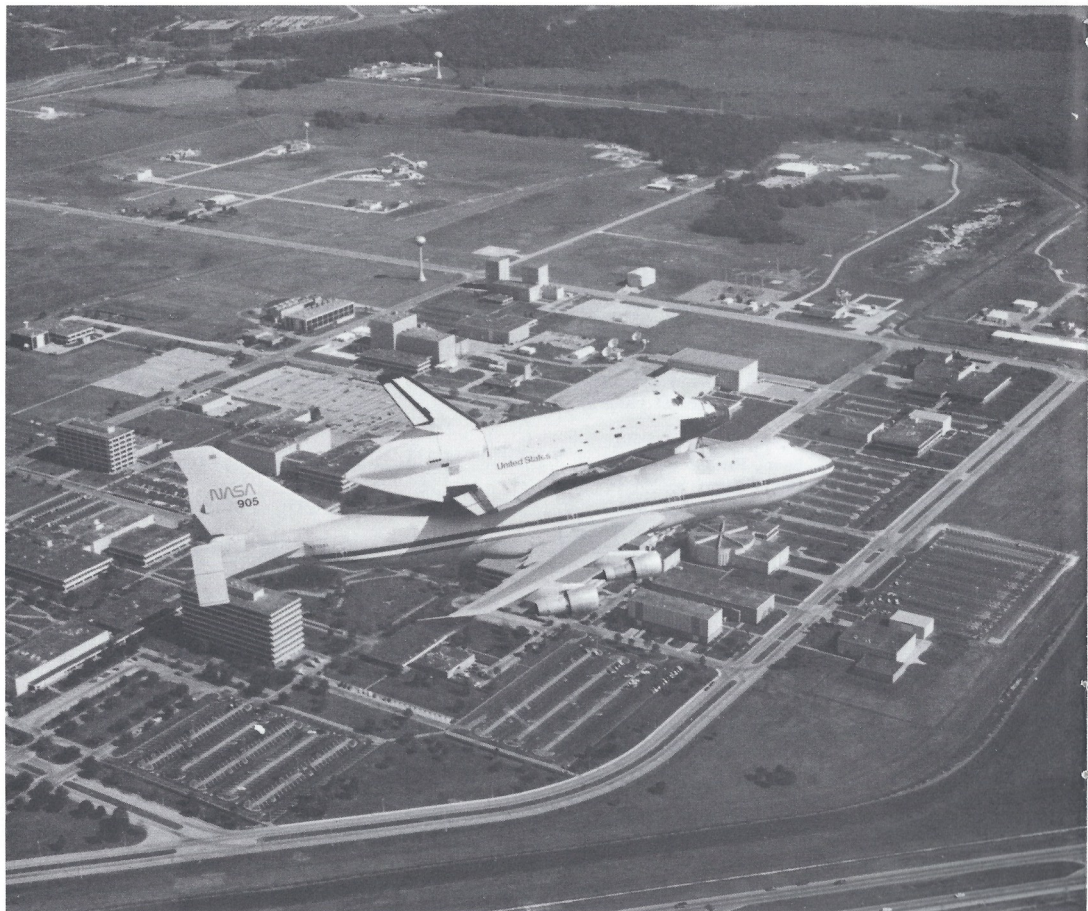
## *U.S. Manned Space-Flight Log*

Mission	Crew	Date	Mission elapsed time, hr:min:sec	Cumulative U.S. manned hrs in space hr:min:sec
Mercury-Redstone 3	Shepard	May 5, 1961	00:15:22	00:15:22
Mercury-Redstone 4	Grissom	July 21, 1961	00:15:37	00:30:59
Mercury-Atlas 6	Glenn	Feb. 20, 1962	04:55:23	05:26:22
Mercury-Atlas 7	Carpenter	May 24, 1962	04:56:05	10:22:27
Mercury-Atlas 8	Schirra	Oct. 3, 1962	09:13:11	19:35:38
Mercury-Atlas 9	Cooper	May 15 and 16, 1963	34:19:49	53:55:27
Total - Project Mercury — 53:55:27				
Gemini-Titan III	Grissom, Young	Mar. 23, 1965	04:53:00	63:41:27
Gemini-Titan IV	McDivitt, White	June 3 to 7, 1965	97:56:11	259:33:49
Gemini-Titan V	Cooper, Conrad	Aug. 21 to 29, 1965	190:55:14	641:24:17
Gemini-Titan VII	Borman, Lovell	Dec. 4 to 18, 1965	330:35:31	1302:35:19
Gemini-Titan VI-A	Schirra, Stafford	Dec. 15 and 16, 1965	25:51:24	1354:18:07
Gemini-Titan VIII	Armstrong, Scott	Mar. 16, 1966	10:41:26	1375:40:59
Gemini-Titan IX-A	Stafford, Cernan	June 3 to 6, 1966	72:21:00	1520:22:59
Gemini-Titan X	Young, Collins	July 18 to 21, 1966	70:46:39	1661:56:17
Gemini-Titan XI	Conrad, Gordon	Sept. 12 to 15, 1966	71:17:08	1804:30:33
Gemini-Titan XII	Lovell, Aldrin	Nov. 11 to 15, 1966	94:34:31	1993:39:35
Total - Gemini Program — 1939:44:08				
Apollo-Saturn 7	Schirra, Eisele, Cunningham	Oct. 11 to 22, 1968	260:09:03	2774:06:44
Apollo-Saturn 8	Borman, Lovell, Anders	Dec. 21 to 27, 1968	147:00:42	3215:08:50
Apollo-Saturn 9	McDivitt, Scott, Schweickart	Mar. 3 to 13, 1969	241:00:54	3938:11:32
Apollo-Saturn 10	Stafford, Young, Cernan	May 18 to 26, 1969	192:03:23	4514:21:41
Apollo-Saturn 11	Armstrong, Collins, Aldrin	July 16 to 24, 1969	195:18:35	5100:17:26
Apollo-Saturn 12	Conrad, Gordon, Bean	Nov. 14 to 24, 1969	244:36:25	5834:06:41
Apollo-Saturn 13	Lovell, Swigert, Haise	April 11 to 17, 1970	142:54:41	6262:50:44
Apollo-Saturn 14	Shepard, Roosa, Mitchell	Jan. 31 to Feb. 9, 1971	216:01:57	6910:56:35
Apollo-Saturn 15	Scott, Worden, Irwin	July 26 to Aug. 7, 1971	295:11:53	7796:32:14
Apollo-Saturn 16	Young, Mattingly, Duke	April 16 to 27, 1972	265:51:05	8594:05:29
Apollo-Saturn 17	Cernan, Evans, Schmitt	Dec. 7 to 19, 1972	301:51:59	9499:41:26
Total - Apollo Program — 7506:01:31				
Skylab SL-2	Conrad, Kerwin, Weitz	May 25 to June 22, 1973	672:49:49	11518:10:53
Skylab SL-3	Bean, Garriott, Lousma	July 28 to Sept. 25, 1973	1427:09:04	15799:38:05
Skylab SL-4	Carr, Gibson, Pogue	Nov. 16, 1973 to Feb. 8, 1974	2017:15:32	21851:24:41
Total - Skylab Program — 12351:43:15				
Apollo-Soyuz Test Program (ASTP)	Stafford, Brand, Slayton	July 15 to 24, 1975	217:28:23	22503:49:50
Total ASTP — 652:25:09				

Mission	Crew	Date	Mission elapsed time, hr:min:sec	Cumulative U.S. manned hrs in space hr:min:sec
<b>Space Transportation System</b>				
STS-1 (OFT)	Young, Crippen	April 12 to 14, 1981	54:20:53	22612:31:36
STS-2 (OFT)	Engle, Truly	Nov. 12 to 14, 1981	54:13:12	22720:58:00
STS-3 (OFT)	Lousma, Fullerton	March 22 to 30, 1982	192:04:49	23105:03:38
STS-4 (OFT)	Mattingly, Hartsfield	June 27 to July 4, 1982	169:11:11	23443:22:40
STS-5	Brand, Overmyer, Allen, Lenoir	Nov. 11 to 16, 1982	122:14:25	23932:19:40
STS-6	Weitz, Bobko, Peterson, Musgrave	April 4 to 9, 1983	120:23:42	24413:54:28
STS-7	Crippen, Hauck, Ride, Fabian, Thagard	June 18 to 24, 1983	146:23:59	25145:54:23
STS-8	Truly, Brandenstein, D. Gardner, Bluford, W. Thornton	Aug. 30 to Sept. 5, 1983	145:08:40	25871:37:43
STS-9	Young, Shaw, Garriott, Parker, Lichtenberg, Merbold	Nov. 28 to Dec. 8, 1983	247:47:24	27110:34:43
41-B	Brand, Gibson, McCandless, McNair, Stewart	Feb. 3 to 11, 1984	191:15:55	28066:54:18
41-C	Crippen, Scobee, van Hoften, G. Nelson, Hart	April 6 to 13, 1984	191:40:05	29025:14:43
41-D	Hartsfield, Coats, Resnik, Hawley, Mullane, C. Walker	Aug. 30 to Sept. 5, 1984	144:57:00	29894:56:43
41-G	Crippen, McBride, Ride, Sullivan, Leestma, Garneau, Scully-Power	Oct. 5 to Oct. 13, 1984	197:23:37	31079:18:25
51-A	Hauck, D. Walker, D. Gardner, A. Fisher, Allen	Nov. 8 to Nov. 16, 1984	191:44:56	32038:03:05
51-C	Mattingly, Shriver, Onizuka, Buchli, Payton	Jan. 24 to 27, 1985	73:33:27	32405:50:20
51-D	Bobko, Williams, Seddon, Hoffman, Griggs, C. Walker, Garn	April 12 to 19, 1985	167:55:23	33581:18:01
51-B	Overmyer, Gregory, Lind, Thagard, W. Thornton, van den Berg, Wang	April 29 to May 6, 1985	168:08:47	34758:19:30
51-G	Brandenstein, Creighton, Lucid, Fabian, Nagel, Baudry, Al-Saud	June 17 to 24, 1985	169:39:00	35606:34:30
51-F	Fullerton, Bridges, Musgrave, England, Henize, Acton, Bartoe	July 29 to Aug. 6, 1985	190:45:26	36941:52:32
51-I	Engle, Covey, van Hoften, Lounge, W. Fisher	Aug. 27 to Sept. 3, 1985	170:17:42	37793:21:02
51-J	Bobko, Grabe, Hilmers, Stewart, Pailes	Oct. 3 to 7, 1985	97:46:38	38282:14:12
61-A	Hartsfield, Nagel, Buchli, Bluford, Dunbar, Furrer, Messerschmid, Ockels	Oct. 30 to Nov. 6, 1985	168:15:51	39123:33:27
61-B	Shaw, O'Connor, Cleave, Spring, Ross, Neri-Vela, C. Walker	Nov. 26 to Dec. 3, 1985	165:04:49	40114:02:21
61-C	Gibson, Bolden, Chang-Diaz, Hawley, G. Nelson, Cenker, B. Nelson	Jan. 12 to 18, 1986	146:03:51	41136:29:18
51-L	Scobee, Smith, Resnik, Onizuka, McNair, Jarvis, McAuliffe	Jan. 28, 1986	00:01:13	41136:37:49
<b>Total-STS Program — 18632:47:59</b>				



## *The Johnson Space Center Today*

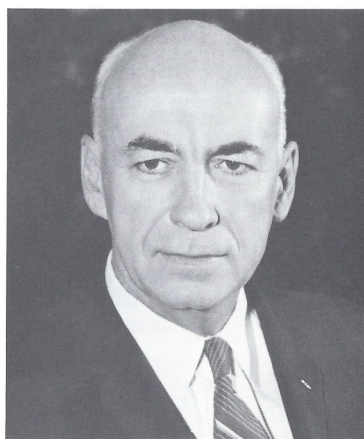


## *To Honor One and All*

One of the primary responsibilities of a professional society is to regularly survey its technological realm, identify those practitioners in its arts and sciences who have made notable and significant contributions, and honor in public ceremony those so identified with symbols of acclaim and esteem.

### **Honorary Fellows**

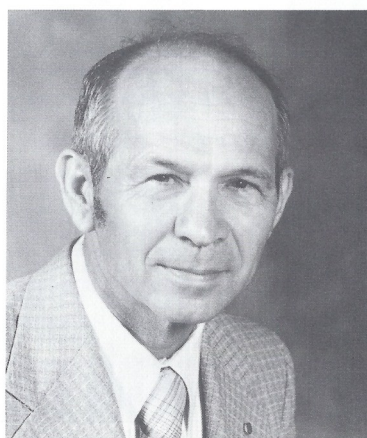
Honorary Fellows are persons of eminence in aeronautics and astronautics, recognized by a long and highly contributive career in the arts, sciences or technology thereof.



Robert R. Gilruth



Christopher C. Kraft, Jr.



Maxime A. Faget

## Fellows

Fellows are persons of distinction in aeronautics or astronautics who have made notable and valuable contributions to the arts, sciences or technology thereof.



Vance D. Brand



Aaron Cohen



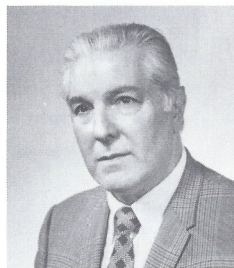
Robert L. Crippen



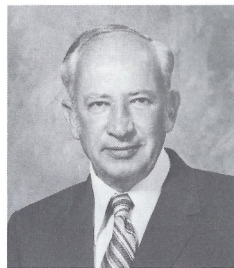
Gerald D. Griffin



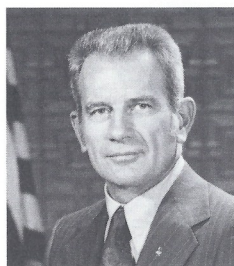
Glynn S. Lunney



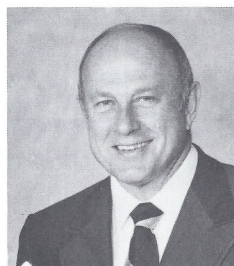
Angelo Miele



Sigurd A. Sjoberg



Donald K. Slayton



Robert F. Thompson



John W. Young



## *Houston Section Individual Awards*

### **Goddard Astronautics Award**

For notable achievement in the field of astronautics, honoring Robert H. Goddard, rocket visionary, pioneer, bold experimentalist, and superb engineer whose early liquid rocket engine launches opened up the world of astronautics

1962 — Robert R. Gilruth

1979 — Maxime A. Faget

### **Louis W. Hill Space Transportation Award**

For significant contributions indicative of American enterprise and ingenuity in the art and science of Space flight, named in the memory of the transportation pioneer Louis W. Hill.

1961 — Robert R. Gilruth

1969 — George M. Low

1970 — Christopher C. Kraft, Jr.

1975 — Glynn S. Lunney

### **Reed Aeronautics Award**

To honor notable achievement in the field of aeronautical science and engineering, in memory of Dr. Sylvanus Albert Reed, aeronautical engineer, designer, and founder member of the former Institute of the Aeronautical Sciences.

1950 — Robert R. Gilruth

1962 — Walter C. Williams

### **De Florez Training Award**

Named in honor of the Late Admiral Luis de Florez and presented for an outstanding improvement in aerospace training in either aeronautics or astronautics

1966 — Warren J. North

1970 — Harold G. Miller

1973 — Carroll H. Woodling

1980 — Carl B. Shelley

### **Distinguished Service Award**

Gives recognition to an individual member of AIAA who has made great contributions over a period of years through service to the Institute.

1974 — Charles B. Appleman  
1981 — William H. Simmons  
1983 — Norman H. Chaffee

### **Von Karman Lectureship in Astronautics**

Presented to honor an individual who has performed notably and distinguished himself technically in the field of astronautics, given in honor of Theodore von Karman, world renowned and beloved fundamentalist in the aerospace sciences.

1979 — Christopher C. Kraft, Jr.  
1984 — Aaron Cohen  
Robert F. Thompson

### **Lawrence Sperry Award**

For notable contribution made by a young person to the advancement of aeronautics or astronautics, given in honor of Lawrence B. Sperry, pioneer aviator and inventor

1962 — Robert O. Piland  
1966 — Joe H. Engle  
1967 — Eugene F. Kranz  
1969 — Edgar C. Lineberry, Jr.  
1970 — Glynn S. Lunney  
1971 — Ronald L. Berry  
1984 — Sally K. Ride

### **Space Systems Awards**

To recognize outstanding achievement in the field of systems analysis, design, and implementation as applied to spacecraft and launch vehicle technology

1970 — Maxime A. Faget  
1975 — Caldwell C. Johnson, Jr.  
1984 — Richard H. Kohrs  
1986 — Robert F. Thompson



**Wyld  
Propulsion  
Award**

For outstanding achievement in the development or application of rocket propulsion systems, honoring the developer of the regeneratively cooled rocket engine, James H. Wyld

1970 — Joseph G. Thibodaux, Jr.

**Mechanics  
and Control  
of Flight  
Award**

For outstanding recent technical or scientific contribution by an individual to the mechanics, guidance, or control of flight in space or the atmosphere

1969 — John P. Mayer

1971 — Kenneth J. Cox

1982 — Angelo Miele

**Jeffries  
Medical  
Research  
Award**

For outstanding contribution to the advancement of aerospace medical research, in honor of the memory of the American physician who made the earliest recorded scientific observations from the air

1966 — Charles A. Berry

1971 — Richard S. Johnston

1975 — Lawrence F. Dietlein

1980 — Stephen L. Kimzey

1981 — Sam L. Pool

1985 — William Edgar Thornton

**Pendray  
Aerospace  
Literature  
Award**

Presented for an outstanding contribution or contributions to aeronautical and astronautical literature in the relatively recent past

1982 — Angelo Miele

**Aerospace  
Contribution  
to Society Award**

To recognize a notable contribution to society through the application of aerospace technology to societal needs

1979 — Richard S. Johnston

## Chanute Flight Award

For outstanding contribution made by a pilot or test personnel to the advancement of the art, science, and technology of aeronautics, in honor of the memory of Octave Chanute, pioneer U.S. aeronautical investigator

1962 — Neil A. Armstrong      1976 — Thomas P. Stafford  
1966 — John L. Swigert, Jr.  
1975 — Alan L. Bean  
Owen K. Garriott  
Jack R. Lousma

## Robert J. Collier Trophy Award

For the greatest achievement in aeronautics or astronautics in America with respect to improving the performance, efficiency, or safety of air or space vehicles, the value of which has been thoroughly demonstrated by actual use during the preceding year; established in 1912 by Robert J. Collier, publisher and pioneer aviation enthusiast

1962 — M. Scott Carpenter	1971 — David R. Scott
L. Gordon Cooper, Jr.	James B. Irwin
John H. Glenn, Jr.	Alfred M. Worden
Virgil I. Grissom	Robert R. Gilruth
Walter M. Schirra, Jr.	1973 — Charles Conrad, Jr.
Alan B. Shepard, Jr.	Joseph P. Kerwin
Donald K. Slayton	Paul J. Weitz
1968 — Frank Borman	Alan L. Bean
James A. Lovell, Jr.	Owen K. Garriott
William A. Anders	Jack R. Lousma
1969 — Neil A. Armstrong	Gerald P. Carr
Edwin E. Aldrin, Jr.	Edward G. Gibson
Michael Collins	William R. Poage

## Information Systems Award

Presented for technical and/or management contribution in space and aeronautics computer and sensing aspects of information technology and science

1983 — Lynwood C. Dunseith

### **Support Systems Award**

Presented for significant contribution to the overall effectiveness of aerospace systems through the development of improved support systems technology  
1981 — John W. Kiker

### **Space Science Award**

Given to an investigator who has distinguished himself through his achievement in studies of the physics of atmospheres of celestial bodies or of the matter, fields, and dynamic and energy transfer processes occurring in space or experienced by space vehicles  
1973 — Paul W. Gast

### **Aerospace Maintenance Award**

Presented to an individual who has made a major contribution to aerospace maintenance, specifically in aviation, missiles and space, resulting in a significant improvement in operational and cost effectiveness  
1987 — James D. A. van Hoften

### **Digital Avionics Award**

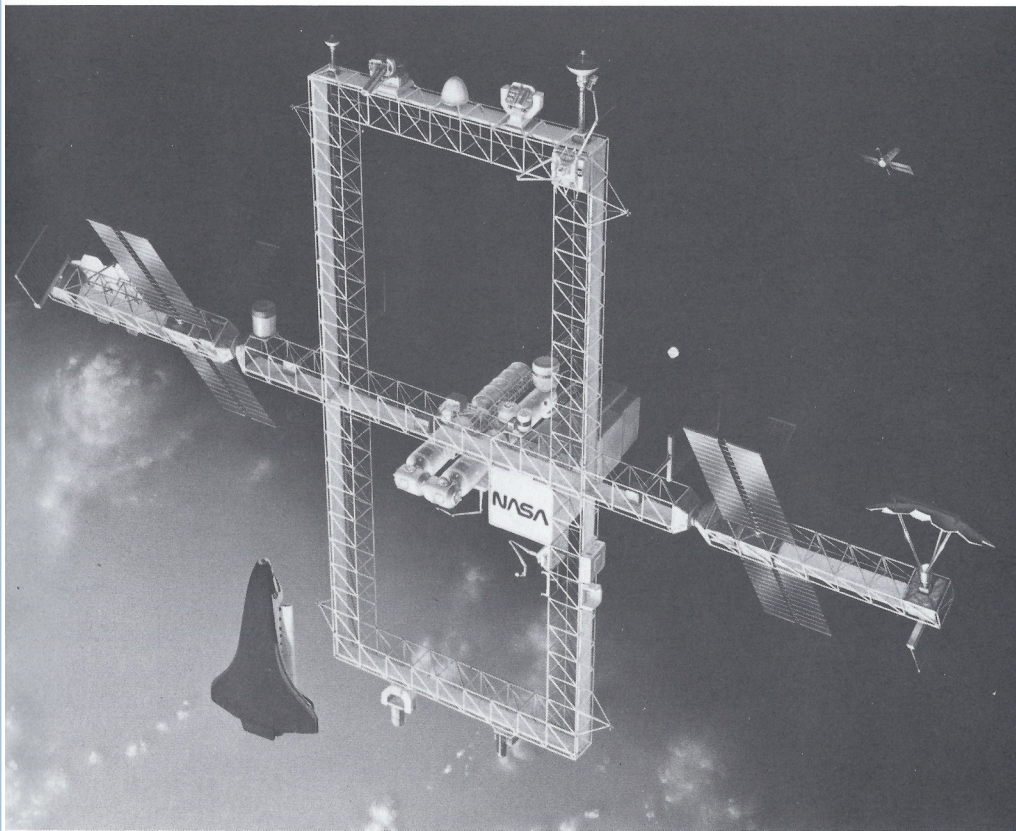
This award established in 1984 is presented to recognize outstanding achievement in technical management and/or implementation of digital avionics in space or aeronautical systems to include system analysis, design, development or application  
1986 — Kenneth J. Cox

## Haley Space Flight Award

For outstanding contribution by an astronaut or flight test personnel to the advancement of the art, science, or technology of astronautics, in honor of Andrew G. Haley, one of the founders of the American Rocket Society

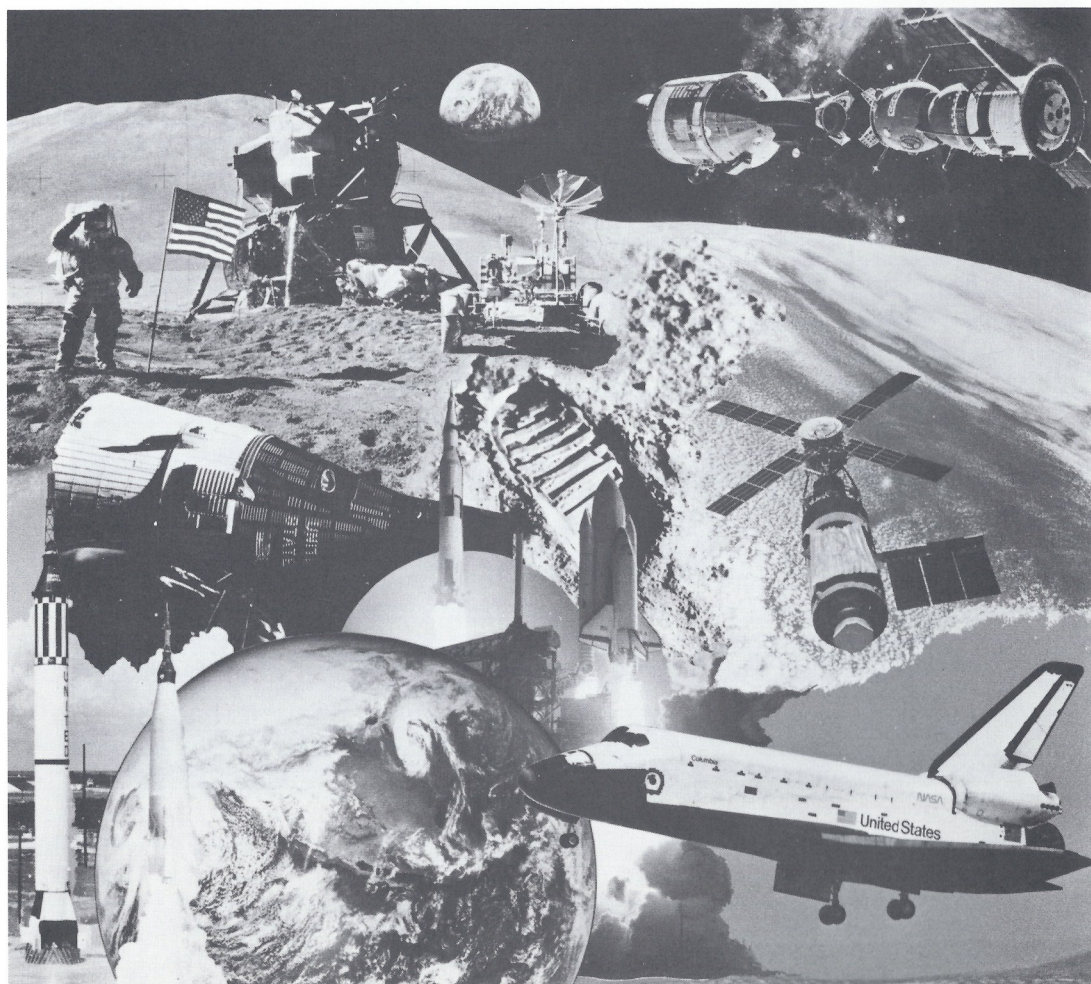
- |                               |                            |
|-------------------------------|----------------------------|
| 1961 — Alan B. Shepard, Jr.   | 1980 — C. Gordon Fullerton |
| 1962 — John H. Glenn, Jr.     | Joe H. Engle               |
| 1963 — Walter M. Schirra, Jr. | Richard H. Truly           |
| L. Gordon Cooper, Jr.         | Fred W. Haise, Jr.         |
| 1964 — Walter C. Williams     | 1982 — John W. Young       |
| 1966 — Neil A. Armstrong      | Robert L. Crippen          |
| David R. Scott                | 1984 — John W. Young       |
| 1967 — Edward H. White II     | Brewster H. Shaw           |
| 1968 — Virgil I. Grissom      | Owen K. Garriott           |
| 1969 — Donn F. Eisele         | Robert A. R. Parker        |
| Walter Cunningham             | Ulf Merbold                |
| Walter M. Schirra, Jr.        | Byron K. Lichtenberg       |
| 1970 — Frank Borman           |                            |
| James A. Lovell, Jr.          |                            |
| William A. Anders             |                            |
| 1971 — John L. Swigert, Jr.   |                            |
| Fred W. Haise, Jr.            |                            |
| James A. Lovell, Jr.          |                            |
| 1972 — Alfred M. Worden       |                            |
| David R. Scott                |                            |
| James B. Irwin                |                            |
| 1973 — John W. Young          |                            |
| Thomas K. Mattingly II        |                            |
| Charles M. Duke, Jr.          |                            |
| 1974 — Paul J. Weitz          |                            |
| Charles Conrad, Jr.           |                            |
| Joseph P. Kerwin              |                            |
| 1975 — Gerald P. Carr         |                            |
| William R. Pogue              |                            |
| Edward G. Gibson              |                            |
| 1978 — Vance D. Brand         |                            |
| Donald K. Slayton             |                            |
| Thomas P. Stafford            |                            |

## *The Future is Now*





## *Houston Section 25th Anniversary 1962-1987*

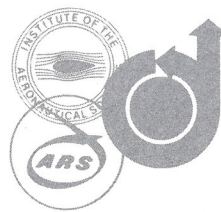


*Page 19 was blank in this 1987 booklet.*



*ISS027-E-036637, 685 & 759 (23 May 2011) --- This image of the International Space Station and the docked space shuttle Endeavour, flying at an altitude of approximately 220 miles, was taken by Expedition 27 crew member Paolo Nespoli from the Soyuz TMA-20 following its undocking on May 23, 2011 (USA time). The pictures taken by Nespoli are the first taken of a shuttle docked to the International Space Station from the perspective of a Russian Soyuz spacecraft. Onboard the Soyuz were Russian cosmonaut and Expedition 27 commander Dmitry Kondratyev; Nespoli, a European Space Agency astronaut; and NASA astronaut Cady Coleman. Coleman and Nespoli were both flight engineers. The three landed in Kazakhstan later that day, completing 159 days in space. Image credits: NASA.*

An event recognizing the 25th Anniversary  
of the Aerospace Pioneers  
of the Johnson Space Center and  
the Houston Section — AIAA





# A Celebration of the 50th Anniversary of AIAA Houston Section 1962 - 2012

DOUGLAS YAZELL, EDITOR

As we celebrate our 50th anniversary with this dinner meeting, each paid attendee receives a lapel pin and one of the four medallions illustrated on this page, if all goes as planned. The medallions from Winco are official NASA commemoratives containing flown metal. Once NASA stops ordering fabrication, the number produced for each

medallion will probably be known. For example, the NASA 50th Anniversary medallion, not shown here and not used for this event, was limited to 5,592, according to [collectSPACE.com](http://collectSPACE.com).

The lapel pin (100 of them) was ordered from NWT Mint, based on the appearance of an Air Force lapel pin, as well as

the blue and white colors of some of the AIAA logos.

Thirteen Apollo 40th anniversary medallions are in work, for the twelve manned Apollo missions 1 and 7 through 17, and one medallion with the round NASA logo in place of an Apollo mission patch. All of these medallions have the Apollo 40th anniversary logo on one side. The medallions already for sale in this series are the NASA logo and Apollo 11, 12, 13 and 17. The medallion for Apollo 16 went on the market just in time for our celebration, and the Apollo 15 medallion will be next.

NASA artifacts will be on display in the Alamo Ballroom during our celebration in the Discovery Room and the Alamo Ballroom of the NASA/JSC Gilruth Center.

## Dinner Meeting

*Dinner meeting of  
June 6, 2012.*



*Image credits for the Space Shuttle medallion and the Constellation medallion:*

[collectSPACE.com](http://collectSPACE.com). Image credit for the Apollo 11 medallion (the 40th anniversary): [The Space Store](http://TheSpaceStore.com). Image credit for the Apollo 16 patch: NASA/KSC. Image credit for the Air Force lapel pin: [NWT Mint](http://NWT Mint).



## Sister Sections

## AIAA Houston Section International Sister Sections

DOUGLAS YAZELL, EDITOR

James C. McLane, Jr., established our Chinese sister section relationship in 1987, working with many others, especially Li Furong in Shanghai, China, and the Shanghai Astronautical Society (SAS), a part of the Chinese Society of Astronautics (CSA). In 1988 a delegation of engineers and spouses traveled from Houston to China for a five-city tour of China, hosted by our sister section. They visited space program facilities around the country and visited tourism sites including The Great Wall of China. In 1990 a delegation of Chinese engineers visited Houston, and while tours of space facilities were appreciated, flights in small, private airplanes probably impressed

them more. In 1992, a second delegation visited China from Houston. Both of the two American delegations produced trip reports, and those PDF files were on our web site but those links are temporarily broken at the moment. Chris Taylor visited our sister section in Shanghai in about 2004 while working in China in the oil and gas business. Our contact person for this work is now Marlo Graves, a graduate of a summer session of The International Space University (ISU). She studied during that session in Strasbourg, France, the home campus of ISU. The following summer, she worked for ISU as they help their summer session in Beijing, China. Marlo later visited Beijing

and Shanghai on behalf of AIAA Houston Section.

Other sister sections followed, notably with India and Dr. Zafar Taqvi. Chris Burrmeister did some similar work, possibly with Austria, where he later worked for a short time as an engineer. Russ Filler visited Australia as part of his sister section work there.

In 2007, Douglas Yazell's French sister section initiative (inspired by James C. McLane, Jr.) was realized. Alain Chevalier, President of l'Association Aeronautique et Astronautique de France, Midi-Pyrenees Chapter (3AF MP) contacted Douglas from Toulouse, France. Garrett Smith and Philippe Mairet joined in the work from France as the sister section work started a successful three-year trial period. Following votes in both Toulouse and Houston, this relationship was made permanent in 2010, during the 3AF MP presidency of Francis Guimera. Newsletter articles are exchanged frequently. The 3AF MP welcomed Douglas Yazell and his wife twice in France, in 2008 and 2011.

The current chair of AIAA Houston Section International Space Activities Committee (ISAC) is Ludmila Dmitriev-Odier.

*Below: The Great Wall of China near Beijing in July 2006. Image source: Wikipedia, public domain. Image author: Nicolas M. Perrault.*





# AIAA Historic Aerospace Sites in Houston

DOUGLAS YAZELL, EDITOR

AIAA HAS



*Left: View of the Shuttle Challenger atop the Shuttle Carrier Aircraft (SCA), NASA-905, during its return to Kennedy Space Center (KSC) and flyover of the Johnson Space Center (JSC) at southeast edge of Houston on Saturday, April 9, 1983. Great Images in NASA (GRIN) Image #S83-30236. Features a NASA Boeing 747 -100. Source for caption and image: Wikipedia.*

*NASA/Johnson Space Center became an AIAA Historic Aerospace Site in 2005.*



*Left: The 1940 Air Terminal Museum in August of 2010. It became an AIAA Historic Aerospace Site in 2009. Image credit: Douglas Yazell.*

[1940 Air Terminal Museum](http://www.1940airterminal.org)  
 8325 Travelair Street  
 Houston, Texas 77061  
 (713) 454-1940  
[www.1940airterminal.org](http://www.1940airterminal.org)

## Section Awards

**AIAA Houston Section Awards Since 1986**

DOUGLAS YAZELL, EDITOR

The AIAA web site has these records at the address shown below. We cannot search all years at the moment, but maybe these are all of the Section awards won by AIAA Houston Section over the years.

Jon Berndt is the Newsletter Editor who helped greatly to win those Communications awards from 2005 through 2007. Our Horizons newsletter probably started in 1971, when its only name was AIAA Houston Section Newslet-

ter. Jon presided over the newsletter when it made the difficult decision to stop mailing copies to the homes of members. Since then, we email announcements of Horizons to our members and other audiences, and Horizons is an online-only, free-to-download PDF file.

The application for the Communications Award shows that mailing newsletters to homes of members is appreciated by AIAA, and emailing newsletters to members is appreciated. Those are goals

we might pursue one day, as well as an HTML version of Horizons.

Jon started as Horizons Editor in about 2004 with a different format than we see today in Horizons, but his second experiment in format is the one he kept, and we still use that format today. Jon recommended Microsoft Publisher as opposed to Word, Adobe InDesign, etc. Since Jon stepped down as Editor at the end of 2007, we have been following his advice about using Publisher.

Horizons and AIAA Houston Section Web Site  
AIAA National Communications Award Winner



OUTSTANDING SECTION AWARD      SECTION SPECIAL EVENT AWARD



1975-1976  
1976-1977  
1979-1980  
1980-1981  
1981-1982  
1983-1984



1971-1972  
1972-1973  
1979-1980  
1981-1982  
1983-1984  
1985-1986

The web site [www.aiaa.org](http://www.aiaa.org) provides some of this data using this [link](https://www.aiaa.org/HonorsAndAwardsList.aspx?id=5859), which is provided in detail below:

Year	Outstanding Section	Career Enhancement	Communications	Membership	Young Professional	Precollege Outreach	Public Policy	Outstanding Event	Sum	Chair, AIAA Houston Section
1998-1999	1	1	1	1	1		1		6	Russ Filler
1999-2000	1	1		1		1			4	Dr. Merri Sanchez
2000-2001			1	1	1				3	Dr. Garland Bauch
2001-2002	1			1	1		1		4	Darby Cooper/Jorge Molina
2002-2003	1			1	1	1		1	5	L. Nicole Smith
2003-2004	1	1	1		1	1			5	Michael Oelke
2004-2005	1		1	1		1			4	T. Sophia Bright
2005-2006	1		1	1					3	Steve King
2006-2007	1		1		1				3	Dr. Jayant Ramakrishnan

# A NASA Space Shuttle Log

DOUGLAS YAZELL, EDITOR

Human  
Spaceflight

Table 1 of 3  
Source: Wikipedia

	Date	Mission	Orbiter	Crew	Duration	Rendezvous	Landing Site
1	April 12, 1981	STS-1	Columbia	2	02d 06h		Edwards
2	November 12, 1981	STS-2	Columbia	2	02d 06h		Edwards
3	March 22, 1982	STS-3	Columbia	2	08d 00h		White Sands
4	June 27, 1982	STS-4	Columbia	2	07d 01h		Edwards
5	November 11, 1982	STS-5	Columbia	4	05d 02h		Edwards
6	April 4, 1983	STS-6	Challenger	4	05d 00h		Edwards
7	June 18, 1983	STS-7	Challenger	5	06d 02h		Edwards
8	August 30, 1983	STS-8	Challenger	5	06d 01h		Edwards
9	November 28, 1983	STS-9	Columbia	6	10d 07h		Edwards
10	February 3, 1984	STS-41-B	Challenger	5	07d 23h		Kennedy
11	April 6, 1984	STS-41-C	Challenger	5	06d 23h	Solar Max	Edwards
12	August 30, 1984	STS-41-D	Discovery	6	06d 00h		Edwards
13	October 5, 1984	STS-41-G	Challenger	7	08d 05h		Kennedy
14	November 8, 1984	STS-51-A	Discovery	5	07d 23h	Palapa & Westar	Kennedy
15	January 24, 1985	STS-51-C	Discovery	5	03d 01h		Kennedy
16	April 12, 1985	STS-51-D	Discovery	7	06d 23h		Kennedy
17	April 29, 1985	STS-51-B	Challenger	7	07d 00h		Edwards
18	June 17, 1985	STS-51-G	Discovery	7	07d 01h		Edwards
19	July 29, 1985	STS-51-F	Challenger	7	07d 22h		Edwards
20	August 27, 1985	STS-51-I	Discovery	5	07d 02h	Leasat-3	Edwards
21	October 3, 1985	STS-51-J	Atlantis	5	04d 01h		Edwards
22	October 30, 1985	STS-61-A	Challenger	8	07d 00h		Edwards
23	November 26, 1985	STS-61-B	Atlantis	7	06d 21h		Edwards
24	January 12, 1986	STS-61-C	Columbia	7	06d 02h		Edwards
25	January 28, 1986	STS-51-L	Challenger	7	<b>01m 13s</b>		N/A
26	September 29, 1988	STS-26	Discovery	5	04d 01h		Edwards
27	December 2, 1988	STS-27	Atlantis	5	04d 09h		Edwards
28	March 13, 1989	STS-29	Discovery	5	04d 23h		Edwards
29	May 4, 1989	STS-30	Atlantis	5	04d 00h		Edwards
30	August 8, 1989	STS-28	Columbia	5	05d 01h		Edwards
31	October 18, 1989	STS-34	Atlantis	5	04d 23h		Edwards
32	November 22, 1989	STS-33	Discovery	5	05d 00h		Edwards
33	January 9, 1990	STS-32	Columbia	5	10d 21h	LDEF	Edwards
34	February 28, 1990	STS-36	Atlantis	5	04d 10h		Edwards
35	April 24, 1990	STS-31	Discovery	5	05d 01h		Edwards
36	October 6, 1990	STS-41	Discovery	5	04d 02h		Edwards
37	November 15, 1990	STS-38	Atlantis	5	04d 21h		Kennedy
38	December 2, 1990	STS-35	Columbia	7	08d 23h		Edwards
39	April 5, 1991	STS-37	Atlantis	5	05d 23h		Edwards
40	April 28, 1991	STS-39	Discovery	7	08d 07h		Kennedy
41	June 5, 1991	STS-40	Columbia	7	09d 02h		Edwards
42	August 2, 1991	STS-43	Atlantis	5	08d 21h		Kennedy
43	September 12, 1991	STS-48	Discovery	5	05d 08h		Edwards
44	November 24, 1991	STS-44	Atlantis	6	06d 22h		Edwards
45	January 22, 1992	STS-42	Discovery	7	08d 01h		Edwards



Human  
Spaceflight

## A NASA Space Shuttle Log

DOUGLAS YAZELL, EDITOR

Table 2 of 3  
Source: Wikipedia

	Date	Mission	Orbiter	Crew	Duration	Rendezvous	Landing Site
46	March 24, 1992	STS-45	Atlantis	7	08d 22h		Kennedy
47	May 7, 1992	STS-49	Endeavour	7	08d 21h		Edwards
48	June 25, 1992	STS-50	Columbia	7	13d 19h		Kennedy
49	July 31, 1992	STS-46	Atlantis	7	07d 23h		Kennedy
50	September 12, 1992	STS-47	Endeavour	7	07d 22h		Kennedy
51	October 22, 1992	STS-52	Columbia	6	09d 20h		Kennedy
52	December 2, 1992	STS-53	Discovery	5	07d 07h		Edwards
53	January 13, 1993	STS-54	Endeavour	5	05d 23h		Kennedy
54	April 8, 1993	STS-56	Discovery	5	09d 06h		Kennedy
55	April 26, 1993	STS-55	Columbia	7	09d 23h		Edwards
56	June 21, 1993	STS-57	Endeavour	6	09d 23h		Kennedy
57	September 12, 1993	STS-51	Discovery	5	09d 20h		Kennedy
58	October 18, 1993	STS-58	Columbia	7	14d 00h		Edwards
59	December 2, 1993	STS-61	Endeavour	7	10d 19h	HST	Kennedy
60	February 3, 1994	STS-60	Discovery	6	07d 06h		Kennedy
61	March 4, 1994	STS-62	Columbia	5	13d 23h		Kennedy
62	April 9, 1994	STS-59	Endeavour	6	11d 05h		Edwards
63	July 8, 1994	STS-65	Columbia	7	14d 17h		Kennedy
64	September 9, 1994	STS-64	Discovery	6	10d 22h		Edwards
65	September 30, 1994	STS-68	Endeavour	6	11d 05h		Edwards
66	November 3, 1994	STS-66	Atlantis	6	10d 22h		Edwards
67	February 3, 1995	STS-63	Discovery	6	08d 06h	Mir	Kennedy
68	March 2, 1995	STS-67	Endeavour	7	16d 15h		Edwards
69	June 27, 1995	STS-71	Atlantis	7/8	09d 19h	Mir	Kennedy
70	July 13, 1995	STS-70	Discovery	5	08d 22h		Kennedy
71	September 7, 1995	STS-69	Endeavour	5	10d 20h		Kennedy
72	October 20, 1995	STS-73	Columbia	7	15d 21h		Kennedy
73	November 12, 1995	STS-74	Atlantis	5	08d 04h	Mir	Kennedy
74	January 11, 1996	STS-72	Endeavour	6	08d 22h	Space Flyer Unit	Kennedy
75	February 22, 1996	STS-75	Columbia	7	15d 17h		Kennedy
76	March 22, 1996	STS-76	Atlantis	6/5	09d 05h	Mir	Edwards
77	May 19, 1996	STS-77	Endeavour	6	10d 00h		Kennedy
78	June 20, 1996	STS-78	Columbia	7	16d 21h		Kennedy
79	September 16, 1996	STS-79	Atlantis	6/6	10d 03h	Mir	Kennedy
80	November 19, 1996	STS-80	Columbia	5	17d 15h		Kennedy
81	January 12, 1997	STS-81	Atlantis	6/6	10d 04h	Mir	Kennedy
82	February 11, 1997	STS-82	Discovery	7	09d 23h	HST	Kennedy
83	April 4, 1997	STS-83	Columbia	7	03d 23h		Kennedy
84	May 15, 1997	STS-84	Atlantis	7/7	09d 05h	Mir	Kennedy
85	July 1, 1997	STS-94	Columbia	7	15d 16h		Kennedy
86	August 7, 1997	STS-85	Discovery	6	11d 20h		Kennedy
87	September 25, 1997	STS-86	Atlantis	7/7	10d 19h	Mir	Kennedy
88	November 19, 1997	STS-87	Columbia	6	15d 16h		Kennedy
89	January 22, 1998	STS-89	Endeavour	7/7	08d 19h	Mir	Kennedy
90	April 17, 1998	STS-90	Columbia	7	15d 21h		Kennedy

# A NASA Space Shuttle Log

DOUGLAS YAZELL, EDITOR

Human  
Spaceflight

Table 3 of 3  
Source: Wikipedia

	Date	Mission	Orbiter	Crew	Duration	Rendezvous	Landing Site
91	June 2, 1998	STS-91	Discovery	6/7	09d 19h	Mir	Kennedy
92	October 29, 1998	STS-95	Discovery	7	08d 21h		Kennedy
93	December 4, 1998	STS-88	Endeavour	6	11d 19h	ISS	Kennedy
94	May 27, 1999	STS-96	Discovery	7	09d 19h	ISS	Kennedy
95	July 23, 1999	STS-93	Columbia	5	04d 22h		Kennedy
96	December 19, 1999	STS-103	Discovery	7	07d 23h	HST	Kennedy
97	February 11, 2000	STS-99	Endeavour	6	11d 05h		Kennedy
98	May 19, 2000	STS-101	Atlantis	7	09d 21h	ISS	Kennedy
99	September 8, 2000	STS-106	Atlantis	7	11d 19h	ISS	Kennedy
100	October 11, 2000	STS-92	Discovery	7	12d 21h	ISS	Edwards
101	November 30, 2000	STS-97	Endeavour	5	10d 19h	ISS	Kennedy
102	February 7, 2001	STS-98	Atlantis	5	12d 21h	ISS	Edwards
103	March 8, 2001	STS-102	Discovery	7/7	12d 19h	ISS	Kennedy
104	April 19, 2001	STS-100	Endeavour	7	11d 21h	ISS	Edwards
105	July 12, 2001	STS-104	Atlantis	5	12d 18h	ISS	Kennedy
106	August 10, 2001	STS-105	Discovery	7/7	11d 21h	ISS	Kennedy
107	December 5, 2001	STS-108	Endeavour	7/7	11d 19h	ISS	Kennedy
108	March 1, 2002	STS-109	Columbia	7	10d 22h	HST	Kennedy
109	April 8, 2002	STS-110	Atlantis	7	10d 19h	ISS	Kennedy
110	June 5, 2002	STS-111	Endeavour	7/7	13d 20h	ISS	Edwards
111	October 7, 2002	STS-112	Atlantis	6	10d 19h	ISS	Kennedy
112	November 23, 2002	STS-113	Endeavour	7/7	13d 18h	ISS	Kennedy
113	January 16, 2003	STS-107	Columbia	7	15d 22h		N/A (Ken.)
114	July 26, 2005	STS-114	Discovery	7	13d 21h	ISS	Edwards
115	July 4, 2006	STS-121	Discovery	7/6	12d 18h	ISS	Kennedy
116	September 9, 2006	STS-115	Atlantis	6	11d 19h	ISS	Kennedy
117	December 9, 2006	STS-116	Discovery	7/7	12d 21h	ISS	Kennedy
118	June 8, 2007	STS-117	Atlantis	7/7	13d 20h	ISS	Edwards
119	August 8, 2007	STS-118	Endeavour	7	12d 18h	ISS	Kennedy
120	October 23, 2007	STS-120	Discovery	7/7	15d 02h	ISS	Kennedy
121	February 7, 2008	STS-122	Atlantis	7/7	12d 18h	ISS	Kennedy
122	March 11, 2008	STS-123	Endeavour	7/7	15d 18h	ISS	Kennedy
123	May 31, 2008	STS-124	Discovery	7/7	13d 18h	ISS	Kennedy
124	November 14, 2008	STS-126	Endeavour	7/7	15d 20h	ISS	Edwards
125	March 15, 2009	STS-119	Discovery	7/7	12d 19h	ISS	Kennedy
126	May 11, 2009	STS-125	Atlantis	7	12d 21h	HST	Edwards
127	July 15, 2009	STS-127	Endeavour	7/7	15d 16h	ISS	Kennedy
128	August 28, 2009	STS-128	Discovery	7/7	13d 21h	ISS	Edwards
129	November 16, 2009	STS-129	Atlantis	7/7	10d 19h	ISS	Kennedy
130	February 8, 2010	STS-130	Endeavour	6	13d 18h	ISS	Kennedy
131	April 5, 2010	STS-131	Discovery	7	15d 03h	ISS	Kennedy
132	May 14, 2010	STS-132	Atlantis	6	11d 18h	ISS	Kennedy
133	February 24, 2011	STS-133	Discovery	6	12d 19h	ISS	Kennedy
134	May 16, 2011	STS-134	Endeavour	6	15d 18h	ISS	Kennedy
135	July 8, 2011	STS-135	Atlantis	4	12d 18h	ISS	Kennedy



## Human Spaceflight

## A NASA Space Shuttle Log

DOUGLAS YAZELL, EDITOR

*Flight Statistics*  
Source: Wikipedia

Shuttle	Flights	Flight days	Orbits	Longest flight	STS	First flight		Last flight		Mir/ISS docking
						Launched	STS	Launched	STS	
Columbia	28	300d 17h 47m 15s	4,808	17d 15h 53m 18s	STS-1	12-Apr-1981	STS-107	16-Jan-2003		0 / 0
Challenger	10	62d 07h 56m 15s	995	08d 05h 23m 33s	STS-6	4-Apr-1983	STS-51-L	28-Jan-1986		0 / 0
Discovery	39	364d 22h 39m 29s	5,830	15d 02h 48m 08s	STS-41-D	30-Aug-1984	STS-133	24-Feb-2011		1/13
Atlantis	33	306d 14h 12m 43s	4,848	13d 20h 12m 44s	STS-51-J	3-Oct-1985	STS-135	8-Jul-2011		7/12
Endeavour	25	296d 03h 34m 02s	4,677	16d 15h 08m 48s	STS-49	7-May-1992	STS-134	16-May-2011		1/12
<b>Total</b>	<b>135</b>	<b>1330d 18h 9m 44s</b>	<b>21,158</b>							<b>9/37</b>

Right: The Shuttle Enterprise with Star Trek cast.

The Shuttle Enterprise rolls out of the Palmdale manufacturing facilities with Star Trek television cast members. From left to right they are: Dr. James D. Fletcher, NASA Administrator, DeForest Kelley (Dr. Bones" McCoy), George Takei (Mr. Sulu), James Doohan (Mr. Scott), Nichelle Nichols (Lt. Uhura), Leonard Nimoy (the indefatigable Mr. Spock), Gene Rodenberry (The Great Bird of the Galaxy), and Walter Koenig (Ensign Pavel Chekov). Image credit: NASA.



*Test Flights*  
Source: Wikipedia

Shuttle	Atmospheric test flights	Flight days	Longest flight	ALT	First flight		Last flight	
					Date	ALT	Date	
Enterprise	5	00d 00h 19m	00d 00h 05m	ALT-12	August 12, 1977	ALT-16	October 26, 1977	

Flight date	Mission	Shuttle	Crew	Duration	Landing		Notes
					Site		
1 12-Aug-1977	ALT-12	Enterprise	2	05m	Edwards		First free flight of Space Shuttle; first non-captive flight of Enterprise
2 13-Sep-1977	ALT-13	Enterprise	2	05m	Edwards		Second free flight
3 23-Sep-1977	ALT-14	Enterprise	2	05m	Edwards		Third free flight
4 12-Oct-1977	ALT-15	Enterprise	2	02m	Edwards		Fourth free flight; first flight without tailcone (operational configuration)
5 26-Oct-1977	ALT-16	Enterprise	2	02m	Edwards		Final free flight; final non-captive flight of Enterprise

# An International Space Station Log

DOUGLAS YAZELL, EDITOR

## Human Spaceflight



*ISS01-E-5392 (16 February 2001) --- This high-angle image of the Space Shuttle Atlantis backdropped over a mountainous coastline was photographed by the three-man Expedition One crew aboard the International Space Station (ISS) shortly after the shuttle and the outpost unlinked following several days of joint operations of the two crews. The scene was recorded with a digital still camera. Image credit: NASA.*

### Completed Expeditions

Table 1 of 3. Source: Wikipedia

Expedition	Crew	Launch date	Flight up	Landing date	Flight down	Duration (days)
Expedition 1	William M. Shepherd Sergei Krikalev Yuri Gidzenko	October 31, 2000 07:52 UTC	Soyuz TM-31	March 21, 2001 07:33 UTC	STS-102	140.98
Expedition 2	Yuri Usachev James S. Voss Susan J. Helms	March 8, 2001 11:42 UTC	STS-102	August 22, 2001 19:24 UTC	STS-105	167.28
Expedition 3	Frank L. Culbertson Mikhail Tyurin Vladimir Dezhurov	August 10, 2001 21:10 UTC	STS-105	December 17, 2001 17:56 UTC	STS-108	128.86
Expedition 4	Yury Onufrienko Carl E. Walz Daniel W. Bursch	December 5, 2001 22:19 UTC	STS-108	June 19, 2002 09:57 UTC	STS-111	195.82
Expedition 5	Valery Korzun Sergei Treshchev Peggy A. Whitson	June 5, 2002 21:22 UTC	STS-111	December 7, 2002 19:37 UTC	STS-113	184.93
Expedition 6	Kenneth D. Bowersox Donald R. Pettit Nikolai Budarin	November 24, 2002 00:49 UTC	STS-113	May 4, 2003 02:04 UTC	Soyuz TMA-1	161.05
Expedition 7	Yuri Malenchenko Edward T. Lu	April 26, 2003 03:53 UTC	Soyuz TMA-2	October 28, 2003 02:40 UTC	Soyuz TMA-2	184.93
Expedition 8	C. Michael Foale Alexander Kaleri	October 18, 2003 05:38 UTC	Soyuz TMA-3	April 30, 2004 00:11 UTC	Soyuz TMA-3	194.77
Expedition 9	Gennady Padalka E. Michael Fincke	April 19, 2004 03:19 UTC	Soyuz TMA-4	October 24, 2004 00:32 UTC	Soyuz TMA-4	185.66
Expedition 10	Leroy Chiao Salizhan Sharipov	October 14, 2004 03:06 UTC	Soyuz TMA-5	April 24, 2005 22:08 UTC	Soyuz TMA-5	192.79

## An International Space Station Log

DOUGLAS YAZELL, EDITOR

*Completed Expeditions*  
Table 2 of 3. Source: Wikipedia

Expedition	Crew	Launch date	Flight up	Landing date	Flight down	Duration (days)
Expedition 11	Sergei Krikalev John L. Phillips	April 15, 2005 00:46 UTC	Soyuz TMA-6	October 11, 2005 01:09 UTC	Soyuz TMA-6	179.02
Expedition 12	William S. McArthur Valery Tokarev	October 1, 2005 03:54 UTC	Soyuz TMA-7	April 8, 2006 23:48 UTC	Soyuz TMA-7	189.01
Expedition 13	Pavel Vinogradov Jeffrey N. Williams	March 30, 2006 02:30 UTC	Soyuz TMA-8	September 28, 2006 01:13 UTC	Soyuz TMA-8	182.65
	Thomas Reiter	July 4, 2006 18:38 UTC	STS-121	Transferred to Expedition 14		
Expedition 14	Michael E. Lopez-Alegria Mikhail Tyurin	September 18, 2006 04:09 UTC	Soyuz TMA-9	April 21, 2007 12:31 UTC	Soyuz TMA-9	215.35
	Thomas Reiter	Transferred from Expedition 13		December 21, 2006 22:32 UTC	STS-116	171.16
	Sunita L. Williams	December 10, 2006 01:47 UTC	STS-116	Transferred to Expedition 15		
Expedition 15	Fyodor Yurchikhin Oleg Kotov	April 7, 2007 17:31 UTC	Soyuz TMA-10	October 21, 2007 10:36 UTC	Soyuz TMA-10	196.71
	Sunita L. Williams	Transferred from Expedition 14		June 22, 2007 19:49 UTC	STS-117	194.75
	Clayton C. Anderson	June 8, 2007 23:38 UTC	STS-117	Transferred to Expedition 16		
Expedition 16	Peggy A. Whitson Yuri Malenchenko	October 10, 2007 13:22 UTC	Soyuz TMA-11	April 19, 2008 08:30 UTC	Soyuz TMA-11	191.8
	Clayton C. Anderson	Transferred from Expedition 15		November 7, 2007 18:01 UTC	STS-120	151.77
	Daniel M. Tani	October 23, 2007 15:38 UTC	STS-120	February 20, 2008 14:07 UTC	STS-122	119.94
	Léopold Eyharts	February 7, 2008 19:45 UTC	STS-122	March 27, 2008 06:28 UTC	STS-123	48.55
	Garrett E. Reisman	March 11, 2008 06:28 UTC	STS-123	Transferred to Expedition 17		
Expedition 17	Sergey Volkov Oleg Kononenko	April 8, 2008 11:16 UTC	Soyuz TMA-12	October 24, 2008 03:37 UTC	Soyuz TMA-12	198.68
	Garrett E. Reisman	Transferred from Expedition 16		June 14, 2008 15:16 UTC	STS-124	95.37
	Gregory E. Chamitoff	May 31, 2008 21:02 UTC	STS-124	Transferred to Expedition 18		
Expedition 18	E. Michael Fincke Yuri Lonchakov	October 12, 2008 07:01 UTC	Soyuz TMA-13	April 8, 2009 07:16 UTC	Soyuz TMA-13	178.01
	Gregory E. Chamitoff	Transferred from Expedition 17		November 30, 2008 21:25 UTC	STS-126	183.02
	Sandra H. Magnus	November 15, 2008 00:55 UTC	STS-126	March 28, 2009 19:13 UTC	STS-119	133.76
	Koichi Wakata	March 15, 2009 23:43 UTC	STS-119	Transferred to Expedition 19		
Expedition 19	Gennady Padalka Michael R. Barratt	March 26, 2009 11:49 UTC	Soyuz TMA-14	Transferred to Expedition 20		
	Koichi Wakata	Transferred from Expedition 18				
Expedition 20	Gennady Padalka Michael R. Barratt	Transferred from Expedition 19		October 11, 2009 04:32 UTC	Soyuz TMA-14	198.7
	Koichi Wakata			July 31, 2009 14:48 UTC	STS-127	144.62
	Timothy L. Kopra	July 15, 2009 22:03 UTC	STS-127	September 12, 2009 00:53 UTC	STS-128	58.12
	Frank De Winne Roman Romanenko Robert B. Thirsk	May 27, 2009 10:34 UTC	Soyuz TMA-15	Transferred to Expedition 21		
	Nicole P. Stott	August 29, 2009 03:59 UTC	STS-128			

# An International Space Station Log

DOUGLAS YAZELL, EDITOR

Human  
Spaceflight

*Completed Expeditions*  
Table 3 of 3. Source: Wikipedia

Expedition	Crew	Launch date	Flight up	Landing date	Flight down	Duration (days)
Expedition 21	Frank De Winne Roman Romanenko Robert B. Thirsk	Transferred from Expedition 20		December 1, 2009 07:16 UTC	Soyuz TMA-15	187.86
	Nicole P. Stott			November 27, 2009 14:44 UTC	STS-129	90.45
	Jeffrey N. Williams Maksim Surayev	September 30, 2009 07:14 UTC	Soyuz TMA-16	Transferred to Expedition 22		
Expedition 22	Jeffrey N. Williams Maksim Surayev	Transferred from Expedition 21		March 18, 2010 11:24 UTC	Soyuz TMA-16	169.04
	Oleg Kotov Timothy J. Creamer Soichi Noguchi	December 20, 2009 21:52 UTC	Soyuz TMA-17	Transferred to Expedition 23		
Expedition 23	Oleg Kotov Timothy J. Creamer Soichi Noguchi	Transferred from Expedition 22		June 2, 2010 03:25 UTC	Soyuz TMA-17	163.23
	Aleksandr Skvortsov Mikhail Korniyenko	April 2, 2010 04:05 UTC	Soyuz TMA-18	Transferred to Expedition 24		
	Tracy E. Caldwell Dyson					
Expedition 24	Aleksandr Skvortsov Mikhail Korniyenko Tracy E. Caldwell Dyson	Transferred from Expedition 23		September 25, 2010 05:23 UTC	Soyuz TMA-18	176.05
	Douglas H. Wheelock Shannon Walker Fyodor Yurchikhin	June 15, 2010 21:35 UTC	Soyuz TMA-19	Transferred to Expedition 25		
Expedition 25	Douglas H. Wheelock Shannon Walker Fyodor Yurchikhin	Transferred from Expedition 24		November 26, 2010 04:46 UTC	Soyuz TMA-19	163.3
	Scott J. Kelly Aleksandr Kaleri Oleg Skripochka	October 7, 2010 23:10 UTC	Soyuz TMA-01M	Transferred to Expedition 26		
Expedition 26	Scott J. Kelly Aleksandr Kaleri Oleg Skripochka	Transferred from Expedition 25		March 16, 2011 07:54 UTC	Soyuz TMA-01M	159.36
	Dimitri Kondratyev Catherine G. Coleman Paolo Nespoli	December 15, 2010 19:09 UTC	Soyuz TMA-20	Transferred to Expedition 27		
Expedition 27	Dimitri Kondratyev Catherine G. Coleman Paolo Nespoli	Transferred from Expedition 26		May 24, 2011 02:27 UTC	Soyuz TMA-20	160.1
	Andrei Borisenko	April 4, 2011 22:18 UTC	Soyuz TMA-21	Transferred to Expedition 28		
	Aleksandr Samokutyayev Ronald J. Garan					
Expedition 28	Andrei Borisenko Aleksandr Samokutyayev Ronald J. Garan	Transferred from Expedition 27		September 16, 2011 00:38 UTC	Soyuz TMA-21	164.1
	Michael E. Fossum Sergey Volkov Satoshi Furukawa	June 7, 2011 20:12 UTC	Soyuz TMA-02M	Transferred to Expedition 29		
Expedition 29	Michael E. Fossum Sergey Volkov Satoshi Furukawa	Transferred from Expedition 28		November 22, 2011 02:26 UTC	Soyuz TMA-02M	167.26
	Daniel C. Burbank Anton Shkaplerov Anatoli Ivanishin	November 14, 2011 04:14 UTC	Soyuz TMA-22	Transferred to Expedition 30		
Expedition 30	Daniel C. Burbank Anton Shkaplerov Anatoli Ivanishin	Transferred from Expedition 29		April 27, 2012 11:45 UTC	Soyuz TMA-22	TBD
	Oleg Kononenko Donald R. Pettit André Kuipers	December 21, 2011 13:16 UTC	Soyuz TMA-03M	Transferred to Expedition 31		



*Below: ISS01-E-5396 (16 February 2001) --- This rarely seen image of the underside of the Space Shuttle Atlantis was photographed by the three-man Expedition One crew aboard the International Space Station (ISS) after the shuttle and the outpost unlinked following several days of joint operations of the two crews. The scene was recorded with a digital still camera. Image credit: NASA.*



*Current Expedition*  
*Source: Wikipedia*

Expedition	Crew	Launch date	Flight up	Landing date	Flight down	Duration (days)
Expedition 31	Oleg Kononenko Donald R. Pettit André Kuipers	Transferred from Expedition 30		TBD	Soyuz TMA-03M	TBD
	Gennady Padalka Sergei Revin Joseph M. Acaba	May 15, 2012	Soyuz TMA-04M	Will transfer to Expedition 32		



# An International Space Station Log

DOUGLAS YAZELL, EDITOR

Human  
Spaceflight

## Planned Expeditions

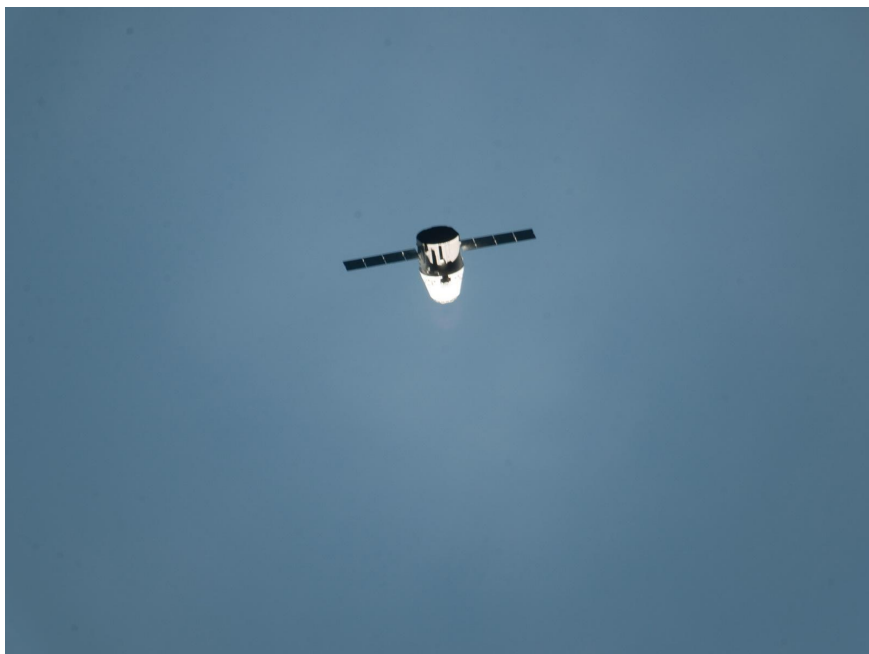
Source: Wikipedia

Expedition	Crew	Launch date	Flight up	Landing date	Flight down	Duration (days)
Expedition 32	Gennady Padalka Sergei Revin Joseph M. Acaba	Will transfer from Expedition 31		TBD	Soyuz TMA-04M	TBD
	Sunita L. Williams Yuri Malenchenko Akihiko Hoshide	July 1, 2012 (planned)	Soyuz TMA-05M	Will transfer to Expedition 33		
Expedition 33	Sunita L. Williams Yuri Malenchenko Akihiko Hoshide	Will transfer from Expedition 32		TBD	Soyuz TMA-05M	TBD
	Kevin A. Ford Oleg Novitskiy Evgeny Tarelkin	October 1, 2012 (planned)	Soyuz TMA-06M	Will transfer to Expedition 34		
Expedition 34	Kevin A. Ford Oleg Novitskiy Evgeny Tarelkin	Will transfer from Expedition 33		TBD	Soyuz TMA-06M	TBD
	Chris Hadfield Roman Romanenko Thomas H. Marshburn	November 1, 2012 (planned)	Soyuz TMA-07M	Will transfer to Expedition 35		
Expedition 35	Chris Hadfield Roman Romanenko Thomas H. Marshburn	Will transfer from Expedition 34		TBD	Soyuz TMA-07M	TBD
	Pavel Vinogradov Aleksandr Misurkin Christopher J. Cassidy	March 1, 2013 (planned)	Soyuz TMA-08M	Will transfer to Expedition 36		
Expedition 36	Pavel Vinogradov Aleksandr Misurkin Christopher J. Cassidy	Will transfer from Expedition 35		TBD	Soyuz TMA-08M	TBD
	Maksim Surayev Karen L. Nyberg Luca Parmitano	May 1, 2013 (planned)	Soyuz TMA-09M	Will transfer to Expedition 37		
Expedition 37	Maksim Surayev Karen L. Nyberg Luca Parmitano	Will transfer from Expedition 36		TBD	Soyuz TMA-09M	TBD
	Oleg Kotov Sergey Ryazansky Michael S. Hopkins	September 1, 2013 (planned)	Soyuz TMA-10M	Will transfer to Expedition 38		
Expedition 38	Oleg Kotov Sergey Ryazansky Michael S. Hopkins	Will transfer from Expedition 37		TBD	Soyuz TMA-10M	TBD
	Koichi Wakata Mikhail Tyurin Richard A. Mastracchio	November 1, 2013 (planned)	Soyuz TMA-11M	Will transfer to Expedition 39		
Expedition 39	Koichi Wakata Mikhail Tyurin Richard A. Mastracchio	Will transfer from Expedition 38		TBD	Soyuz TMA-11M	TBD
	Aleksandr Skvortsov Oleg Artemyev Steven R. Swanson	March 1, 2014 (planned)	Soyuz TMA-12M	Will transfer to Expedition 40		
Expedition 40	Aleksandr Skvortsov Oleg Artemyev Steven R. Swanson	Will transfer from Expedition 39		TBD	Soyuz TMA-12M	TBD
	Gregory R. Wiseman Fyodor Yurchikhin Alexander Gerst	May 1, 2014 (planned)	Soyuz TMA-13M	Will transfer to Expedition 41		
Expedition 41	Gregory R. Wiseman Fyodor Yurchikhin Alexander Gerst	Will transfer from Expedition 40		TBD	Soyuz TMA-13M	TBD
	TBD TBD	September 1, 2014 (planned)	Soyuz TMA-14M	Will transfer to Expedition 42		

## COTS

## Commercial Orbital Transportation System

DOUGLAS YAZELL, EDITOR



Left: ISS031-E-067345 (24 May 2012) --- The SpaceX Dragon commercial cargo craft approaches the International Space Station on May 24, 2012 for a series of tests to clear it for its final rendezvous and grapple on May 25. At 3:58 a.m. (EDT), Dragon performed a height adjust burn to bring it to a path 2.4 kilometers below the station. During this fly-under, Dragon established UHF communication with the station using its Commercial Orbital Transportation Services (COTS) Ultra-high frequency Communication Unit (CUCU). Dragon performed a test of its Relative GPS system, which uses the relative positions of the spacecraft to the space station to determine its location. On May 25, Expedition 31 Flight Engineers Don Pettit and Andre Kuipers will use the Canadarm2 robotic arm to grapple the supply ship about 8:06 a.m., with the berthing to the Earth-facing side of the station's Harmony node following about 11:20 a.m. Dragon is scheduled to spend about a week docked with the station before returning to Earth on May 31 for retrieval. Image credit: NASA.

## Commercial Orbital Transportation System

Source: Wikipedia

Company	Spacecraft	Launch vehicle	Partner	First round participant	First round semi-finalist	Second round participant	Won round
Orbital Sciences	Cygnus	Antares		?	No	Yes	Yes
SpaceX	Dragon	Falcon 9		Yes	Yes	Yes	Yes
Andrews Space	Andrews Cargo Module	Hercules	Alliant Techsystems, MDA	Yes	Yes	Yes	No
Boeing	Automated Transfer Vehicle	Delta IV	Arianespace, EADS Astrium	?	No	Yes	No
PlanetSpace	Orbital Transfer Vehicle[28]	Athena III	Alliant Techsystems, Lockheed Martin	No	No	Yes	No
SpaceHab	ARCTUS	Atlas V	Lockheed Martin	Yes	Yes	Yes	No
Rocketplane Kistler	K-1	K-1	Orbital Sciences	Yes	Yes	No	No
Venturer Aerospace	S-550 Space capsule	Falcon 9	SpaceX	Yes	No	No	No
SpaceDev	Dream Chaser	Atlas V	Lockheed Martin	Yes	Yes	?	No
t/Space	Crew Transfer Vehicle	QuickReach	AirLaunch	Yes	Yes	?	No
Constellation Services International	Progress	Soyuz	RKK Energia	?	No	?	No
Lockheed Martin	ATV, H-II Transfer Vehicle	Atlas V	EADS Astrium, JAXA	?	No	?	No
PanAero	Space Van	Space Van		?	No	?	No
Space Systems/Loral	Space Tug	Aquarius Launch Vehicle	Constellation Services International	?	No	?	No
Advent Launch Services	?	?		?	No	?	No
Exploration Partners	?	?		?	No	?	No
Odyssey Space Research	?	?		?	No	?	No
Thortek Laboratories	?	?		?	No	?	No
Triton Systems	?	?		?	No	?	No

# Commercial Crew Development

DOUGLAS YAZELL, EDITOR

CCDev

Right: This is a printable poster with NASA's Commercial Crew Program (CCP) logo. CCP is leading NASA's effort of accelerating a United States-led capability to the International Space Station by investing in the design and development of the aerospace industry's crew transportation systems. The goal of CCP is to drive down the cost of space travel as well as open up space to more people than ever before by balancing industry's own innovative capabilities with NASA's 50 years of human spaceflight experience. January 12, 2012. Image credit: [NASA](#).



Left: Inside the International Space Station's Node 2 or Harmony, the STS-135 crew presented the Expedition 28 crew this special U.S. flag and mounted it on the hatch leading to Atlantis. The flag was flown on the first space shuttle mission, STS-1, and flew on this mission to be presented to the space station crew. It will remain onboard until the next crew launched from the U.S. will retrieve it for return to Earth. It will fly from Earth again, with the crew that launches from the U.S. on a journey of exploration beyond Earth orbit. July 18, 2011. Image credit: [NASA](#).

## Commercial Crew Development

Source: Wikipedia

Round (years) in \$Millions	CCDev (2010–2011)	CCDev2 (2011–2012)	Total (2010–2012)
<b>Manufacturers of spacecraft:</b>			
The Boeing Company	18	92.3 + 20.61	130.9
Blue Origin	3.7	22	25.7
Sierra Nevada Corporation	20	80.0 + 25.61	125.6
Space Exploration Technologies Corporation (SpaceX)	–	75	75
Excalibur Almaz	–	3	0
<b>Manufacturers of launch vehicles:</b>			
United Launch Alliance	6.7	3	6.7
Alliant Techsystems (ATK)	–	3	0
<b>Others:</b>			
Paragon Space Development Corporation	1.4	–	1.4
<b>Total:</b>	<b>49.8</b>	<b>315.5</b>	<b>365.3</b>

## The Section Leadership

### *AIAA Houston Section Chairs*

1	1962 - 1963	Alan J. Chapman	Rice University
2	1963 - 1964	W. Scott Royce	Northrup
3	1964 - 1965	Charles B. Appleman	General Electric
4	1965 - 1966	Phil Sansone	RCA
5	1966 - 1967	Dr. George M. Low	NASA
6	1967 - 1968	Aleck C. Bond	NASA
7	1968 - 1969	Jack C. White	North American Aviation
8	1969 - 1970	Joseph G. Thibodaux	NASA
9	1970 - 1971	John Stap, Jr.	Martin Marietta
10	1971 - 1972	James C. McLane, Jr.	NASA
11	1972 - 1973	Dr. Ernest Kistler	Texas A&M University
12	1973 - 1974	Joseph S. Algranti	NASA
13	1974 - 1975	Dr. Leland A. Carlson	Texas A&M University
14	1975 - 1976	Loren E. Wood	TRW
15	1976 - 1977	Claiborne R. Hicks	NASA
16	1977 - 1978	Thomas B. Murtagh	NASA
17	1978 - 1979	Edward L. Hays	NASA
18	1979 - 1980	Robert R. Stephens	McDonnell Douglas
19	1980 - 1981	Norman H. Chaffee	NASA
20	1981 - 1982	Jack C. Heberlig	IBM
21	1982 - 1983	Sharon Barnes Castle	NASA
22	1983 - 1984	Charles V. Wolfers	McDonnell Douglas
23	1984 - 1985	Robert V. Glowczwski	Martin Marietta
24	1985 - 1986	Robert E. Lewis	NASA
25	1986 - 1987	Karen D. Godek	NASA
26	1987 - 1988	Carl R. Huss	McDonnell Douglas
27	1988 - 1989	Walter J. Lueke	NASA
28	1989 - 1990	Andre J. Sylvester	NASA
29	1990 - 1991	John Trebes	NASA
30	1991 - 1992	Dr. Zafar Taqvi	McDonnell Douglas
31	1992 - 1993	Steve Zobal	McDonnell Douglas
32	1993 - 1994	Shirley Brandt	Grumman
33	1994 - 1995	Dr. George Nield	NASA
34	1995 - 1996	Don Probe	Lockheed
35	1996 - 1997	Tom Mulder	McDonnell Douglas
36	1997 - 1998	Dr. George Nield	NASA
37	1998 - 1999	Russ Filler	United Space Alliance
38	1999 - 2000	Dr. Merri Sanchez	NASA
39	2000 - 2001	Dr. Garland Bauch	NASA
40	2001 - 2002	Darby Cooper/Jorge Molina	Neo-Star Astronautics/Boeing
41	2002 - 2003	L. Nicole Smith	NASA
42	2003 - 2004	Michael Oelke	Boeing
43	2004 - 2005	T. Sophia Bright	Boeing
44	2005 - 2006	Steve King	Lockheed Martin
45	2006 - 2007	Dr. Jayant Ramakrishnan	ARES Corporation
46	2007 - 2008	Douglas Yazell	Honeywell
47	2008 - 2009	Chad Brinkley	Cimarron
48	2009 - 2010	Ellen Gillespie	United Space Alliance
49	2010 - 2011	Sarah Shull	NASA
50	2011 - 2012	Sean Carter	NASA
51	2012 - 2013	Daniel Nobles	SAIC

Fellows

***AIAA Houston Section Honorary Fellows***

*Angelo Miele is listed as a Fellow in the 1987 booklet.*

Angelo Miele  
John L. Junkins  
Christopher C. Kraft

***AIAA Houston Section Fellows***

Michael L. Coats  
Ellen Ochoa  
Leland A. Carlson  
William C. Schneider  
William S. Saric  
Helen L. Reed  
Brewster H. Shaw  
Fazle Hussain  
Glynn S. Lunney  
Joseph G. Thibodaux  
Robert H. Page  
Robert C. Goetz  
Richard H. Kohrs  
Arthur G. Stephenson  
John F. Cashen  
Kenneth J. Cox



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Above: The AIAA web site allows searching for award winners. The most numerous are the Technical Excellence Awards.

Not all of these awards are identified with the Houston section, but if we recognize a Houston resident or a Houston institution, such as Baylor College of Medicine, we include them here.

## Premier Awards

AIAA Foundation Award for Excellence

Daniel Guggenheim Medal

Distinguished Service Award

Goddard Astronautics Award

International Cooperation Award

Reed Aeronautics Award

### Goddard Astronautics Award

1996– Aaron Cohen

## Service Awards

Public Service Award

Sustained Service Award

### Sustained Service Award

2000– Norman H. Chaffee

2001– Anita E. Gale

2004– William Atwell

2008– John Valasek

2010– Shirley Brandt

## Publication Awards

Children's Literature Award

Gardner-Lasser Aerospace History Literature Award

History Manuscript Award

Pendray Aerospace Literature Award

Summerfield Book Award

### Pendray Aerospace Literature Award

1990– John L. Junkins

## ***Distinguished Lectureships***

Dryden Lectureship in Research Award  
 Durand Lectureship for Public Service  
 von Karman Lectureship in Astronautics Award  
 William Littlewood Memorial Lecture  
 Wright Brothers Lectureship in Aeronautics Award

### ***Dryden Lectureship in Research Award***

2012– William C. Schneider

### ***von Karman Lectureship in Astronautics Award***

1995– Eugene F. Kranz  
 1997– John L. Junkins  
 2003– Brewster H. Shaw, Jr.  
 2006– Paul D. Spudis

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*Above: The AIAA web site allows searching for award winners. The most numerous are the Technical Excellence Awards.*

## ***Educator Awards***

AIAA Foundation Educator Achievement Award  
 Faculty Advisor Award  
 J. Leland Atwood Award

### ***AIAA Foundation Educator Achievement Award***

2000– Karen K. Hall  
 2005– Dolores L. Garay

### ***Faculty Advisor Award***

2004– John Valasek

### ***J. Leland Atwood Award***

1988– John L. Junkins  
 1990– Walter E. Haisler  
 1997– Leland A. Carlson  
 2007– Helen L. Reed

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Above: The AIAA web site allows searching for award winners. The most numerous are the Technical Excellence Awards.

Not all of these awards are identified with the Houston section, but if we recognize a Houston resident or a Houston institution, such as Baylor College of Medicine, we include them here.

## Technical Excellence Awards

### Aeroacoustics Award

1980– Alan Powell (not listed in the 1987 booklet)

### Aerospace Guidance, Navigation & Control Award

2006– John L. Junkins

### Aerospace Maintenance Award

2001– Edward M. Henderson (This award was discontinued in 2005.)

### Aircraft Design Award

1989– John F. Cashen

### Fluid Dynamics Award

2002– Fazle Hussain  
2003– William S. Saric

### Haley Space Flight Award

1987– Bruce McCandless II  
1989– Frederick H. Hauck  
1989– George T. Nelson  
1989– Mike M. Lounge  
1991– Charles F. Bolden  
1991– Loren J. Shriver  
1991– Steven A. Hawley  
1991– Bruce McCandless II  
1991– Kathryn D. Sullivan  
1993– Dan C. Brandestein

### Jeffries Aerospace Medicine & Life Sciences Research Award

2003– Bobby Alford

### Space Operations & Support Award

1995– Kathryn Thornton  
1995– Story Musgrave  
1995– Kenneth Bowersox  
1995– Jeffrey Hoffman  
1995– Tom H. Akers

### Space Systems Award

1994– SpaceHab Team

## Technical Excellence Awards (Continued)

### *Systems Effectiveness & Safety Award*

1996– Gary W. Johnson

### *von Braun Award for Excellence in Space Program Management*

1993– Aaron Cohen

2003– Brewster H. Shaw, Jr.

### *Wyld Propulsion Award*

2001– Franklin Chang Diaz

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*Above: The AIAA web site allows searching for award winners. The most numerous are the Technical Excellence Awards.*

*Section Awards are summarized elsewhere in this publication.*

*The list of Special Service Citations seems to be incomplete. Up to five of these can be awarded for each Region per year.*

## Special Service Citations

1996– Charles Teixeira

2002– John D. Jacklin

2005– Edgar A. Bering III



## Orion MPCV & SLS

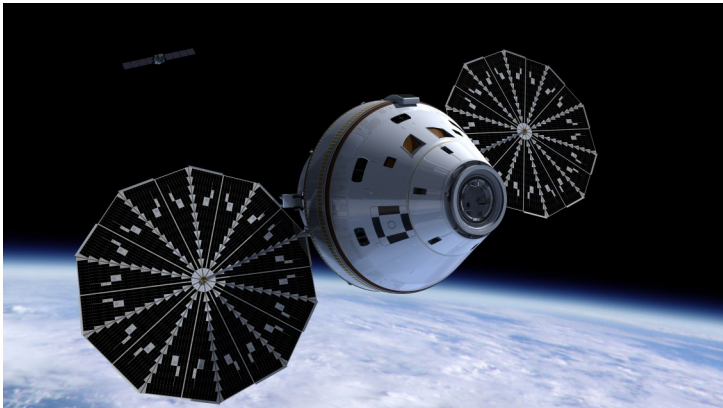
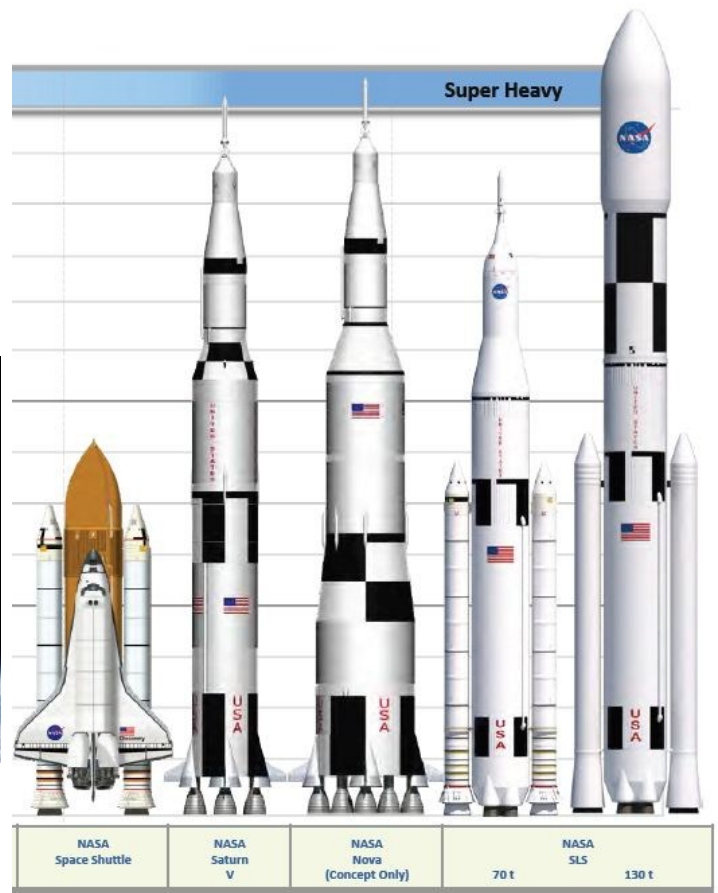
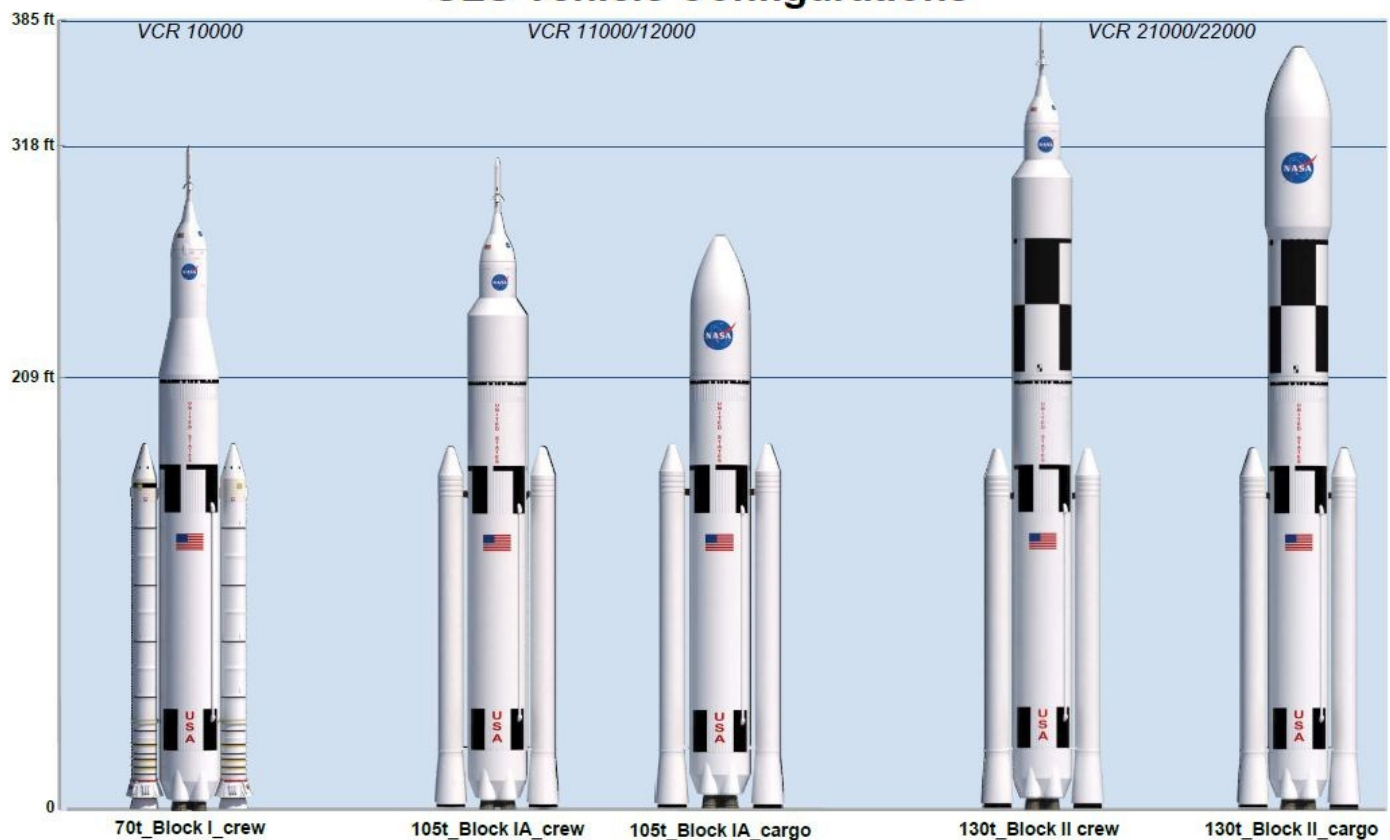


Image credits: Orion Multi-Purpose Crew Vehicle (MPCV):  
NASA/GRC. The NASA Space Launch Vehicle (SLS):  
[NASASpaceFlight.com](http://NASASpaceFlight.com).



## SLS Vehicle Configurations



## Robonaut 2

DOUGLAS YAZELL, EDITOR

NASA

*In the background: the Vehicle Assembly Building (VAB).*



*Robonaut R2A on Centaur 2 at KSC*

*Robonaut R2A on the Centaur 2 mobile platform at Kennedy Space Center awaiting the launch of STS-133. Space Shuttle Discovery is carrying Robonaut R2B up to the International Space Station. R2B will be the first humanoid robot in space.*

*Location: Kennedy Space Center*

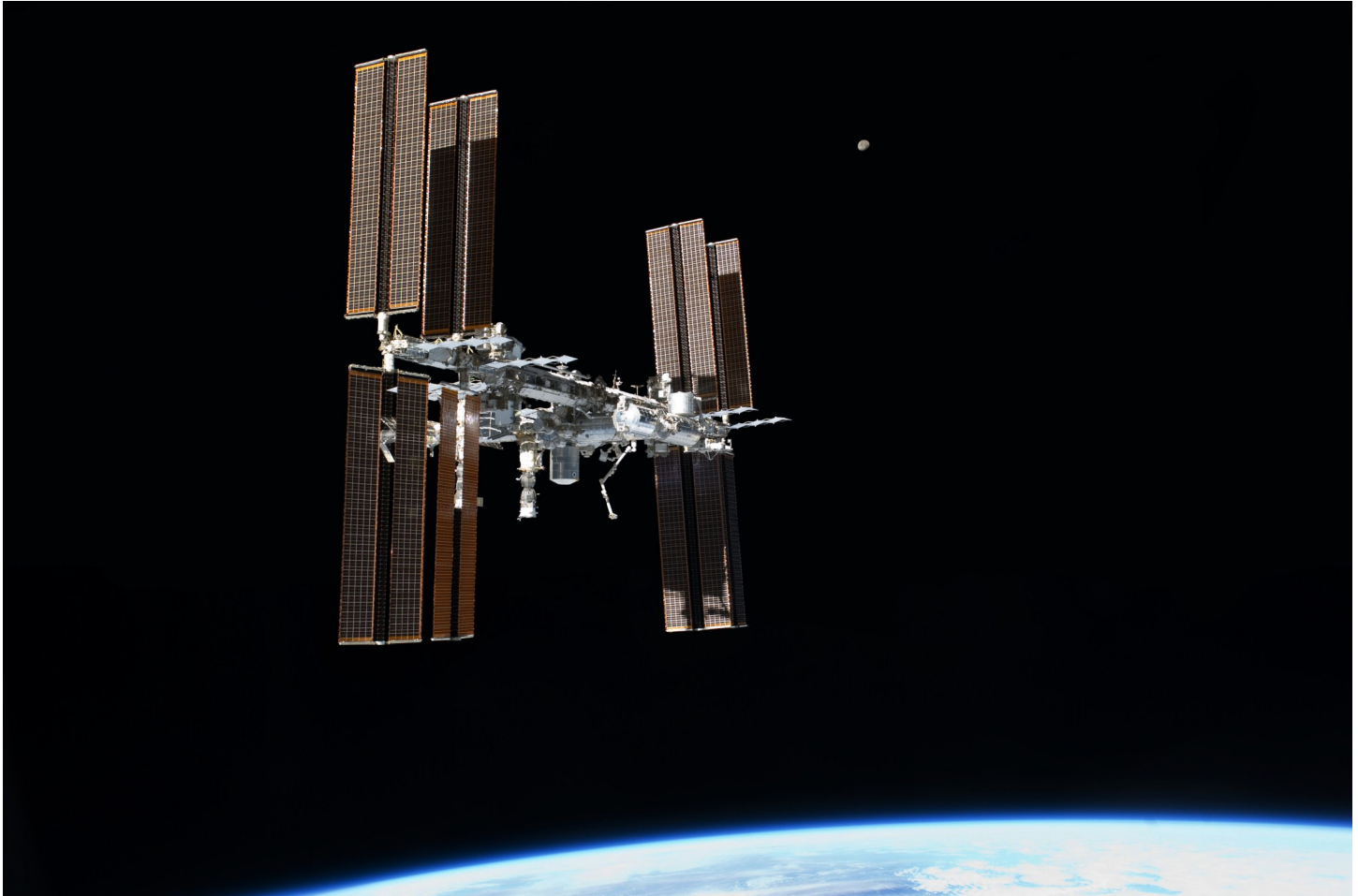
*Photographer: Joe Bibby*

*Image credit: NASA. Image source: Flickr via NASA web site.*



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Webster, TX 77598

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#### *STS-135 final flyaround of ISS*

*This picture of the International Space Station was photographed from the space shuttle Atlantis as the orbiting complex and the shuttle performed their relative separation in the early hours of July 19, 2011. Onboard the station were Russian cosmonauts Andrey Borisenko, Expedition 28 commander; Sergei Volkov and Alexander Samokutyaev, both flight engineers; Japan Aerospace Exploration astronaut Satoshi Furukawa, and NASA astronauts Mike Fossum and Ron Garan, all flight engineers. Onboard the shuttle were NASA astronauts Chris Ferguson, STS-135 commander; Doug Hurley, pilot; and Sandy Magnus and Rex Walheim, both mission specialists. Image credit: NASA. Image source: Wikipedia.*

### **AIAA Mission & Vision Statement**

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