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The American Institute of Aeronautics and Astronautics

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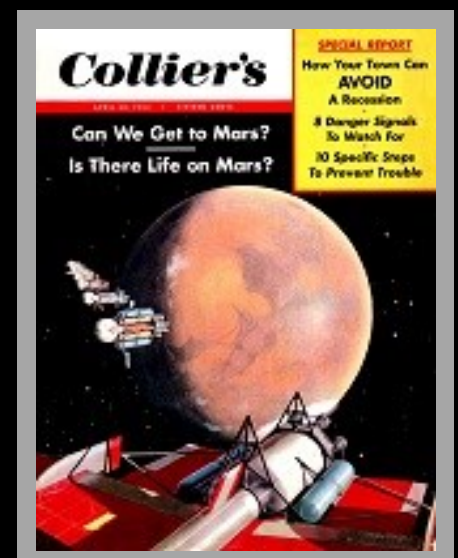
100 Year Starship Public Symposium



**Pathway to the Stars,
Footprints on Earth**

**Hyatt Regency Houston
September 19-22, 2013**

**Also, Continuing in this Issue! Part 8 of 8:
Man Will Conquer Space Soon!
(Collier's 1952-54)**





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

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Horizons and AIAA Houston Section Web Site

AIAA 2013 National Communications Third Place Award Winner: Section Chair Daniel Nobles

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Cover: The interior of the Hyatt Regency hotel in downtown Houston looking up from the lobby. This hotel was the site for the 100 Year Starship 2013 public symposium. Image credit: Wes Kelly.

This page: part of Vincent van Gogh's 1889 painting [The Starry Night](#).

Collaboration for Success in Human Spaceflight Chair's Corner

MICHAEL FROSTAD, CHAIR

A business buzzword with real meaning, collaboration is important whether you are farming in the Midwest, developing new software in Silicon Valley, or working in aerospace at the Johnson Space Center. Since the last Chair's Corner, collaboration has been on full display in human spaceflight.

A collaboration between Orbital and NASA with the Cygnus vehicle that launched September 18th saw to it that the vehicle safely docked to the International Space Station (ISS). After testing out



many functionalities for the first time in space, Cygnus attempted its first approach to ISS. The spacecraft made it to within about 15 kilometers, but encountered an issue with GPS readings between it and ISS. Cygnus safely backed off and the Orbital & NASA team went to work to fix the problem. After analysis and investigative work, a GPS timing issue was found and overcome. This led to a second approach to ISS, which successfully completed further test objectives before capture by the ISS Space Station Remote Manipulator System (SSRMS) and berthing to the ISS.

Further collaboration between NASA and other aerospace businesses culminated in two major project milestones. The first was with Sierra Nevada Corporation's Dream Chaser vehicle at Dryden Flight Research Center. They completed the first free flight test of Dream Chaser on Octo-



ber 26th. During the flight test glide portion, performance was nominal and the craft approached the runway right on target. However, as the craft lowered its

landing gear, the left main gear did not deploy. This resulted in a rough landing. Damage was sustained to the vehicle. However, Sierra Nevada says that it is repairable. The landing gear on the vehicle tested is not the final design to be used on the vehicle. Flight data before the landing will be used to refine the vehicle. This collaboration allowed good flight data to be obtained and it found issues prior to a real flight, exactly the results one desires from a test.

The second collaboration was at Kennedy Space Center on October 28th, with Lockheed Martin and the Orion vehicle's avionics. The avionics systems were installed on the Orion Exploration Flight Test 1 (EFT-1) vehicle and powered on for the first time. The systems worked as expected, completing another step towards the actual flight test mission, targeted for the fall of 2014. The upcoming test will stress avionics, sensors, reaction control jets, and the thermal protection system at higher velocities than any other vehicle designed to carry humans since Apollo. This collaboration continues to build capabilities and the data from the flight test will be very valuable.

It is not just collaboration between NASA and companies but also between



NASA and other national space programs that continues to support human spaceflight activities, specifically the ISS. ESA's Automated Transfer Vehicle (ATV-4), named *Albert Einstein*, launched and docked with ISS in June 2013. Over the course of its mission it gave two delta-V boosts to the station (1.0 m/s and 1.45 m/s), provided supplies to those on board ISS, provided propellant to the Russian segment of the ISS, and when the *Albert Einstein* left ISS it took out the trash. This was a good mission to sustain the ISS and the people carrying out the science aboard it – accomplished through collaboration.

Image credits: NASA.

Further fruits of collaboration will soon include the launch of ISS Expedition 38 aboard a Soyuz launched from Baikonur Cosmodrome in Kazakhstan, continuing a partnership with Roscosmos. This launch will be a special one as it will be the first



time there have been nine humans in orbit since 2009 without a Space Shuttle docked to the ISS. In addition to rotating the crew of the ISS and maintaining six people aboard the space station, the crew of this Soyuz will have one American astronaut, one Russian Cosmonaut, and one Japanese astronaut – stressing the point of international collaboration and cooperation to push humanity farther than it has ever gone before. The ISS is a laboratory for learning how the body functions in space and how to work in space, and it is more than that. It is a beacon pointing to the future for all of humanity. It is a wonder built by dedication and collaboration.

This list of successful collaborations does not go into detail about the hard work and dedication that comes with any collaborative effort, but it shows the results of collaboration. It shows that if we harness each other's strengths, push through issues, and overcome obstacles that lie in our path, then together we can accomplish amazing feats. The challenge that is left to us is to continue collaborations, to grow them, and to improve them. The next time you hear the word *collaboration*, take a moment to reflect on its meaning, its past successes, and how might you harness it for a future success. A word that gets is done is *collaboration*.

Collier's 1952-54 Man Will Conquer Space Soon! (1952-54)

DOUGLAS YAZELL, EDITOR

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Melvin Schuetz, [bonestell.com](#)

[Frederick Ira Ordway III](#)

John Sisson, [Dreams of Space](#)

Arthur M. Dula

Shirazi Jaleel-Khan

Quite a few more people make these articles possible, including the Horizons team listed on page 2. Thanks to all involved!

Thanks to a great team of volunteers, this issue of Horizons presents the last of the eight installments in this famous Collier's series of space articles from 1952 to 1954, Man Will Conquer Space Soon! This issue of Horizons is the eighth consecutive bimonthly issue used for this project. It was a big job, but we get more out of this volunteer work than we put into it.

Since Horizons is archived on two websites, these page-by-page, high-resolution reprints will always be available. The AIAA Houston Section website is www.aiaahouston.org/newsletter. Horizons is free for anyone to download at this

(Continued on page 31)

“Man Will Conquer Space <u>Soon!</u> ” in 8 Issues of the Weekly Magazine Collier's 1952-54		Cover Image	Page Count
1	March 22, 1952: Man Will Conquer Space <u>Soon!</u> What are we Waiting For? pp. 22-23, The Editors Crossing the Last Frontier, pp. 24-29, 72, 74, Dr. Wernher von Braun A Station in Space, pp. 30-31, Willy Ley The Heavens Open, pp. 32-33, Dr. Fred L. Whipple This Side of Infinity, pg. 34, Dr. Joseph Kaplan Can We Survive In Space? Pp. 35, 65-67, Dr. Heinz Haber Who Owns the Universe? Pp. 36, 70-71, Oscar Schachter Space Quiz Around the Editor's Desk, pp. 38-39	Yes	25
2	October 18, 1952: Man on the Moon Man on the Moon, p. 51, The Editors The Journey, pp. 52-58, 60, Dr. Wernher von Braun Inside the Moon Ship, pg. 56, Willy Ley	Yes	11
3	October 25, 1952: More About Man on the Moon The Exploration, pp. 38-40, 44-48, Dr. Fred Whipple & Dr. Wernher von Braun Inside the Lunar Base, pg. 46, Willy Ley	No	10
4	February 28, 1953: World's First Space Suit Man's Survival in Space, 10 Contributors & 3 Artists, edited by Cornelius Ryan pp. 40-41 Picking the Men, pp. 42-48	Yes	10
5	March 7, 1953: More About (Continuing) Man's Survival in Space Testing the Men, pp. 56-63	No	8
6	March 14, 1953: How Man Will Meet Emergency in Space Travel Concluding Man's Survival in Space: Emergency! pp. 38-44	Yes	9
7	June 27, 1953: The Baby Space Station: First Step in the Conquest of Space Baby Space Station, pp. 33-35, 40, Dr. Wernher von Braun with Cornelius Ryan	Yes	6
8	April 30, 1954: Can We Get to Mars? / Is There Life on Mars? Is There Life on Mars? pg. 21, Dr. Fred L. Whipple Can We Get to Mars? pp. 22-29, Dr. Wernher von Braun with Cornelius Ryan	Yes	10

This issue

Above: Man Will Conquer Space Soon!, a series of articles from 1952 to 1954, from the weekly magazine Collier's.
Source for most of the table: Wikipedia, Man Will Conquer Space Soon!, an article first written by John Sisson.

(Continued from page 30)

address. The AIAA national website for a Horizons archive is specified in the Editor's column on [page four](#) of every recent issue of Horizons. A username and password are probably required.

Wernher von Braun was a great American whose talents were on display as he led this Collier's team of writers, artists and editors. John Sisson (creator of the [Dreams of Space](#) blog) showed us that advertisement for this Collier's series, an advertisement saying that if we build that Earth-orbiting space station, "*We can guarantee peace—forever!*" I doubt that von Braun wrote that. It was probably written by an employee of the weekly magazine Collier's.

AIAA Houston Section member Dr. Albert A. Jackson IV wrote about this Col-

lier's series in Horizons in 1992 for the 50th anniversary and in 2002 for the 60th anniversary. For the 70th anniversary, he was part of this Horizons Collier's team. Al is also a Fellow of the British Interplanetary Society and an AIAA Associate Fellow.

Horizons started this Collier's reprint series in our July / August 2012 [issue](#). The NASA human space program suffered a cancellation of its Moon-centric *Moon, Mars and Beyond* Constellation program in February of 2010, though the Orion crew capsule was revived in April of 2010. A NASA manager speaking at an AIAA Houston Section event explained about some troubles with Orion, including the units system to be used, English or metric. He explained that commercial companies were willing to change from English to metric units as long as NASA was willing to pay for the cost of that

Collier's 1952-54

change. DARPA and NASA/Ames created the 100 Year Starship (100YSS) program, and its first public symposium took place in Orlando, Florida, in September and October of 2011. The winning team is led by space shuttle astronaut Mae Jemison. The monetary award for 100YSS is a one-time sum which probably could not last for one year, much less 100 years, but 100YSS is doing very well so far.

There are many visions available now for our world's human space programs. NASA is proposing exciting missions for its human space program, such as the current Asteroid Retrieval Mission (ARM).

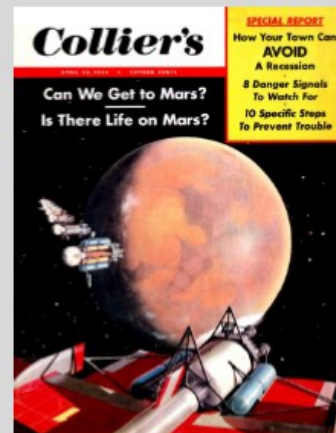
The Collier's series serves as an unforgettable example of *dreams of space* with one's feet firmly planted in reality.



Issue 3 of 8:
The cover image
is not related to
*Man Will Conquer
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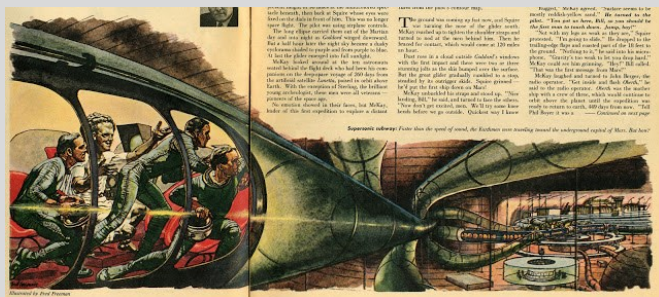
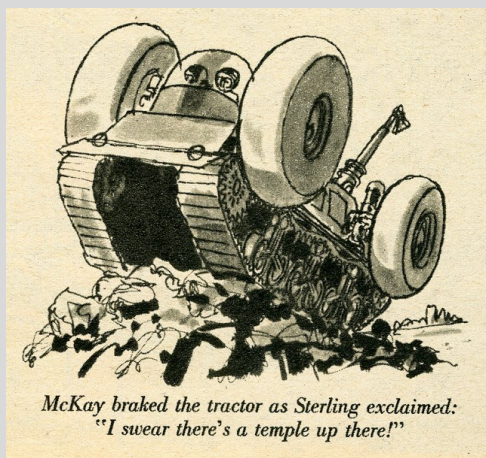
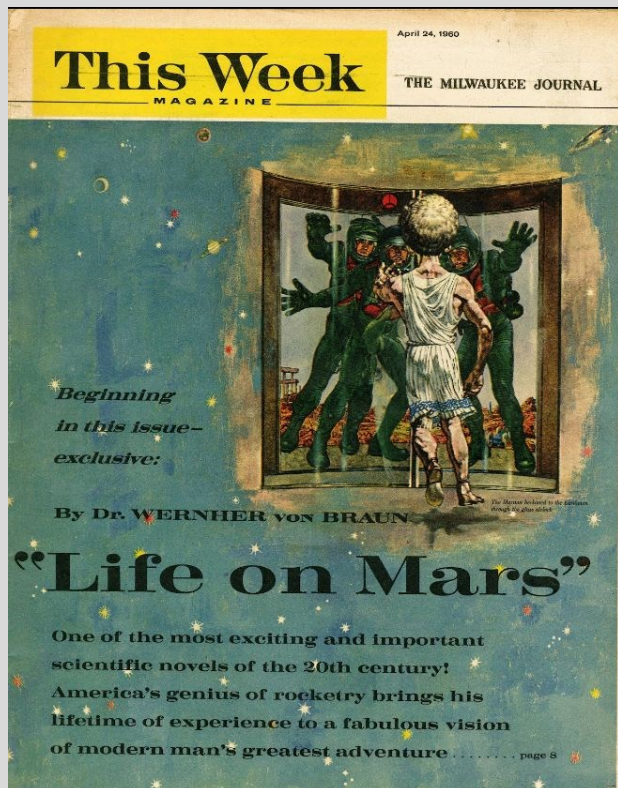
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Above: Image credits: Scott Lowther, with help from other Horizons Collier's team members.

Dreams of Space Books & Ephemera

Non-Fiction Children's Books
about Space Flight from 1945 to 1975
<http://dreamsofspace.blogspot.com/>

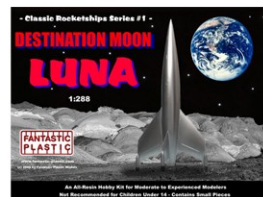


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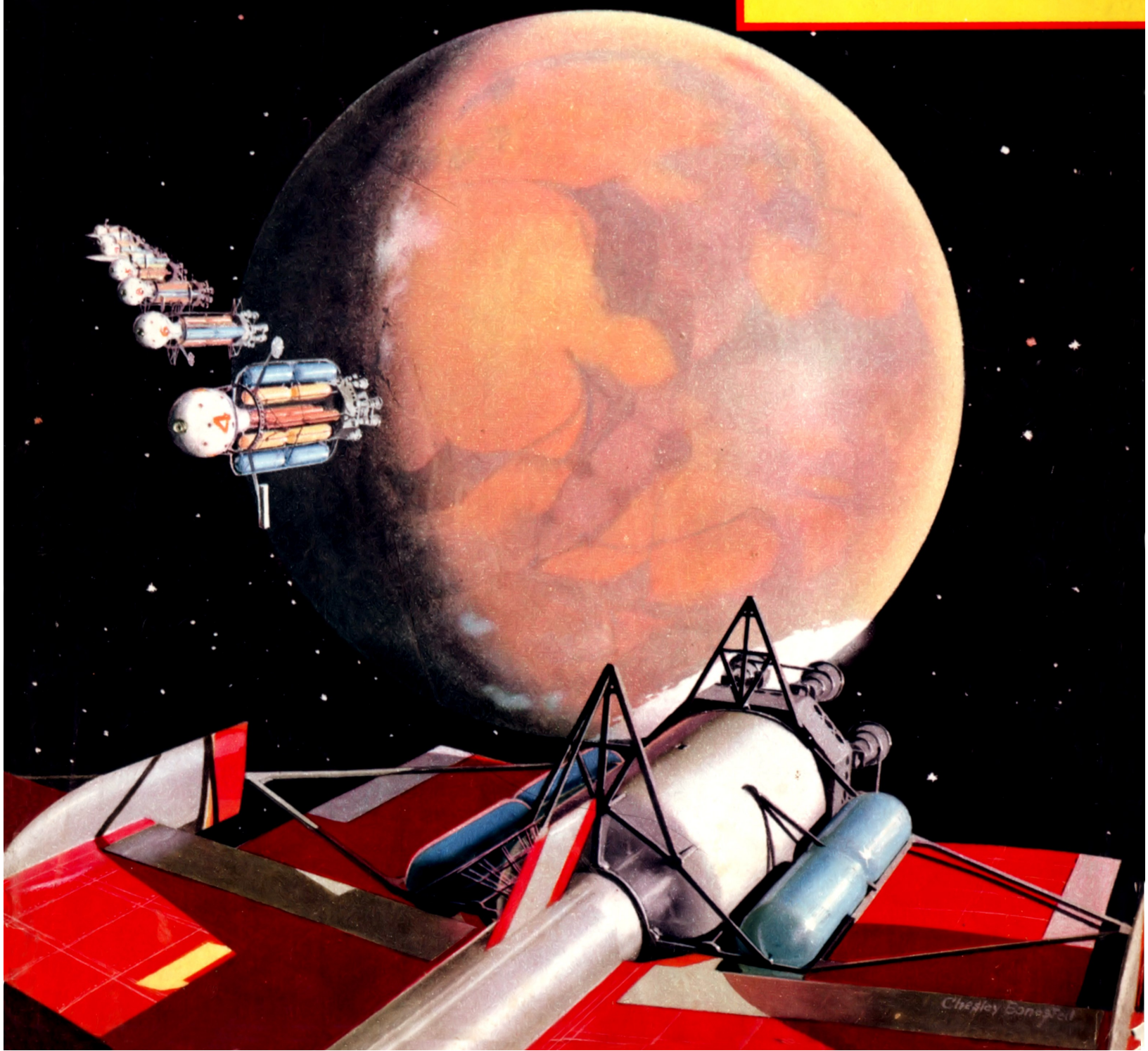
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THE COVER . . Chesley Bonestell

From an orbit around Mars, the first visitors from the earth prepare to land on the most intriguing of our neighbor planets. The winged rocket in the foreground is preparing for the descent; the ships

that remain, all cargo carriers, will stay in the orbit. When will this visit occur—and what will it uncover? Leading scientists give the answers in a special nine-page report, starting on page 21

The characters in all stories and serials in this magazine are purely imaginary. No reference or allusion to any living person is intended.

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