

## Air and Space this Week

### Item of the Week

# SPACE SHUTTLE *ENTERPRISE* AND NICHELLE NICHOLS

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*We are living in an interesting calendar confluence of two milestones, one happy and one sad. Friday, August 12 is the 45<sup>th</sup> anniversary of the first free flight by the Space Shuttle Enterprise test vehicle, named for the starship in the original series of Star Trek, and the original Lieutenant Uhura, played by Nichelle Nichols, passed away on July 30. She parlayed her fame from the show into a productive lifetime of civil rights and education promotion.*

### **OV-101**

NASA's post-Apollo goal for manned spaceflight was to create a system to go to and from Low Earth Orbit (LEO) much more economically than previously possible. But building a reusable spacecraft was no mean feat. The leading candidate was for a spaceplane that would take off like a rocket, but land like an airplane. [Dyna-Soar](#) Déjà vu! A lot of new technology and hardware would have to be invented to make the Space Shuttle a reality.

One of the biggest program hurdles was the Space Shuttle's ability to fly like an airplane and land safely, especially since the pilot would be making a very long approach to a dead-stick landing. NASA did not want to finalize the design or risk a Spaceflight-capable craft on glide and landing tests, so they planned to build an atmospheric test model. It would be weighted with dummy engines to have the same center-of-gravity, and of course, would have flight-capable controls. NASA's original plan was to name the atmospheric test model the *Constitution*, and roll it out to the public on Constitution Day, September 17, in 1976.

Fans of *Star Trek* had wanted to have a Space Shuttle named after the starship *Enterprise* ever since the Shuttle program had been announced, and they mounted a letter-writing campaign that sent hundreds of thousands of letters to the White House. President Ford was initially disinclined to instruct NASA to make a name change for the *Constitution*, but he was a politician and that many letters helped change his mind. The facts that the *U.S.S. Enterprise* (the "Big E") had earned a stellar reputation in WWII and NASA wouldn't be risking a craft named for our nation's founding document, was icing on the cake. *Enterprise* it was!

NASA still made the roll-out of *Enterprise* on September 17, 1976, and Gene Roddenberry and the primary cast of *Star Trek* was on hand for the ceremony. Their presence attracted a lot of media/public attention. One of the cast members there was Nichelle Nichols.

The *Enterprise* made the first of its five flights on August 12, 1977. All were successful, and the few problems that cropped up were able to be corrected for *Columbia's* first flight. *Enterprise* was then used for vibration and other engineering tests at Marshall SFC. Following those, *Enterprise* returned to California to be converted into an operational spacecraft. However, the conversion process was found to be more expensive than building an orbiter from scratch, so NASA turned to another Structural Test Article and converted it into the *Challenger*.

*Enterprise* was sent out on an international tour, and then was sent to the Smithsonian in late 1985. NASA briefly flirted with the idea of converting *Enterprise* to operational status after the loss of *Challenger*, but decided to build *Endeavor* out of back-up parts built at the same time as *Discovery* and *Atlantis*.

NASA again turned to *Enterprise* after the loss of *Columbia*, using parts of its wing for foam impact tests, which helped prove that the cause of *Columbia's* loss was wing damage sustained at launch.

NASM had the *Enterprise* on display in the Udvar-Hazy Center since its opening in 2013. When the Space Shuttle program was canceled, NASM had first dibs on the senior Shuttle, *Discovery*. *Enterprise* would go to the Intrepid Museum in New York. The 747 Shuttle carrier came out with *Discovery* on top, made a low pass over the UHC, then flew by DC, low and slow (some even maintain it did a pylon turn around the Washington Monument, but they were exaggerating, but only a bit). Then they flew back to the UHC, made another low pass, and landed. For a few days, both *Discovery* and *Enterprise* were parked nose-to-nose, behind the UHC building. What a [great photo op](#) that was!

Getting *Enterprise* to New York was easy, but getting it to the *Intrepid*, on the west side of Manhattan, not so much. I was in the meeting where the issue was discussed. This was just after the "Miracle on the Hudson." The meeting was dragging a bit, so I piped up with, "I'm guessing that the *Intrepid* still has its arresting cables either on deck or nearby in storage. Why don't we get those in place, hang a big tail hook on *Enterprise*, and get Captain Sully to cut loose from the 747 and dead-stick *Enterprise* right on the deck of the *Intrepid*?" There was a three-second pause before everyone started chuckling. They thought I was kidding. Well, maybe.

The *Enterprise* got barged up the Hudson from JFK, and has been on prominent display at the Intrepid Museum since 2012.

## NICHELLE NICHOLS

Grace Dell Nichols was born on December 28, 1932, in Robbins, Illinois. Her father was a factory worker, and he also was elected town mayor. She didn't really like her name, and asked her parents to change it. They chose "Nichelle," their feminine-ized variation of "Nike," (victorious maiden). She aspired to be a singer and actress, and was discovered by Duke Ellington while still in her teens. She went on tour as a singer in both the Duke Ellington and Lionel Hampton bands, and got her first acting break (albeit brief) in a 1961 production called "Kicks and Co." – a satire of *Playboy* magazine. The play flopped, but Hugh Hefner, in a wry

twist, hired her for the Chicago Playboy Club. She still continued with a singing and acting career with modest but growing success, and modeled between gigs. One of her brief acting assignments was on an episode of the short-lived TV series, *The Lieutenant*, the first production by a former-cop-turned-writer, Gene Roddenberry, in 1964.

Another career break came in January, 1967, when she made the cover of *Ebony* magazine. She was getting more prominent acting roles, too, notably in the James Baldwin play, [\*Blues for Mister Charlie\*](#).

A life-changing opportunity then came her way when she was offered the role of Lt. Uhura on Gene Roddenberry's latest project, *Star Trek*.

## LIEUTENANT UHURA

Explaining the mid-1960s to someone who didn't live through them is quite difficult. It was an exciting, confused time. Civil rights and anti-War demonstrations were common, and the media, especially television, played a key role in raising awareness about social justice and inclusivity. This was certainly a hallmark of Nichelle Nichols career to that point; both her guest role on *The Lieutenant* and in *Blues for Mister Charlie* were very much civil rights related. [The military supported the TV show at first, but the topics in her episode of *The Lieutenant* caused them to withdraw support, killing the show after one season.] Blacks were getting more prominent roles in movies and TV, no longer relegated to portraying domestics or providing comic relief. For example, Diahann Carroll won the 1968 Golden Globe Award for Best Actress in a Television Series for her title role in *Julia*. But by then Nichelle Nichols had been Lt. Uhura for two years.

The Uhura role as particularly important. Nichols wasn't the lead, but her character was in a leadership position. *Star Trek's Enterprise* was named for, and loosely modeled after, the famous Navy aircraft carrier, with a clearly-defined command hierarchy. This put her in the chain-of-command, somewhat removed from the top, but still in a position of great responsibility. There was no other black actor similarly situated at the time.

The first season of *Star Trek* did not really flesh out the Uhura character, and Nichelle was still interested in the singing and stage part of her career. She was tired of opening hailing frequencies and falling out of her chair when aliens attacked, and she was seriously considering moving on after *Star Trek's* first season. Roddenberry tried to get her to change her mind, but to no avail. He asked her to think about her future over the weekend.

Immediately thereafter, she met Dr. Martin Luther King, Jr.

The NAACP was hosting a banquet that weekend, and Nichelle attended. Someone saw her and said that a fan on the other side of the room really wanted to talk to her.

Expecting a Trekkie, she went over and was amazed to find that the fan was Dr. King. He told her that he was her greatest admirer, and that *Star Trek* was the only show he and his family made a point of watching together. He was shocked when she said she was going to leave *Star Trek* and return to Broadway. He strongly insisted she stay, explaining that hers was the first TV

role in history to showcase a black person in an important professional position. She was a role model to young black girls (and boys, too) across the county, and it was her great opportunity and great duty to continue.

Nichelle was flabbergasted. She couldn't say "no" to Martin Luther King; he really opened her eyes to her role in the civil rights movement. This was the pivotal point in her lifetime, and it changed her life forever. She immediately went back to Roddenberry, and found that he had already torn up her letter of resignation, sure that Nichelle would continue as Uhura.

[I saw Ms. Nichols twice. I'll tell you about the first below; I met her a second time at the *Curiosity* launch. She was part of a live webcast, and told the MLK story. She had a number of the audience members in tears by the time she was done, I passed out dozens of tissues up and down the rows of the meeting room.]

## AFTER THE SHOW

Ten years after *Star Trek* (TOS) was cancelled, Nichelle was invited to join the board of directors of the newly-formed [National Space Society](#). She went to DC and gave a talk there about new opportunities for the humanization of Space. In it, she criticized NASA for not including women and minorities in the Astronaut corps (she was well familiar with the women who had applied but not seriously considered, including the Mercury 13). The next day, she was invited to NASA HQ, where NASA officials asked her to assist them in diversifying the Astronaut corps. She was skeptical, but NASA was quite serious. With her help, they ended up selecting six women, three black males, and an Asian male, in the next Astronaut class. Former NASA Administrator Charles Bolden was one of them; first black astronaut Guion Bluford was another; and first U.S. woman astronaut Sally Ride was one, too. [Judith Resnick and Ronald McNair were others.] She was also an inspiration for Mae Jemison, the first black woman astronaut. For her aid in recruitment, NASA named Nichelle Nichols their Woman of the Year for 1979. What a legacy!

Ms. Nichols was also put herself "on call" for NASA, any time she was needed to help promote Space exploration and the educational/motivational outreach to young people, especially those of color. I know this for a fact because I witnessed it personally.

As I relate more fully [here](#), I had the opportunity to work with Nichelle on a NASA outreach project. My first assignment at NASA HQ was to provide support for the launch of the *GRAIL* mission to the Moon in September, 2011. I was planning our activities with my new boss, and had just done the A+StW installment for the week of the launch. I mentioned that *GRAIL*'s prospective launch date was the 45<sup>th</sup> anniversary of the premiere of the first *Star Trek* episode. My boss gave me an odd look, and I thought I had hurt my reputation with her. Not to worry. There was a *Star Trek* exhibit in the Kennedy Space Center Visitor Center, complete with a replica of the *Enterprise* bridge and a number of costumes and props from the show. It was scheduled for removal a few days before the launch. Two quick calls from my new boss halted the removal until after the launch, and arranged with Nichelle to make a personal appearance at the launch outreach event.

Any launch at the Cape is popular with the Space Coast residents, but *GRAIL* was a smaller mission, one difficult to explain to the public. NASA had received only four press access requests for the launch, all from weekly newspapers in the area. Once word got out that Lt. Uhura would be there, another 20 requests came in, including those from all of the local affiliates of the major national networks, more than *hextupling* media attention. Mother Nature lent a hand, too. Launch day dawned with clear weather, and many locals pulled the kids out of school, took a day off work, and came out to see us launch a rocket to the Moon. But winds aloft were unacceptably high, so the launch was scrubbed. By then it was too late to get back to school or work, so everyone went to the Visitor Center. They were very happy to see that Lt. Uhura was going to make a personal appearance, so they stayed right there.

I suggested to the building security team that they might want to bring over a few more folks to help with crowd management, only to be rebuffed a bit gruffly. Then they saw the line forming up to meet Nichelle. It grew and grew until it wrapped twice around the Visitor Center building where the *Star Trek* exhibit was. I smiled knowingly at the guards.

Ms. Nichols had come in with a tall stack of 8x10 glossies. We put her in Kirk's command chair (think about that), and she sat and signed and chatted and posed for photos for hours, until everyone there had gotten to visit with her. She ran out of pictures to sign early on, and we practically melted two color copies in the VC office trying to keep up with her. She wasn't young, but had the strength of her convictions to carry her through; I was amazed at her stamina and unflagging promotion of NASA and its mission.

*GRAIL* launched the next day and was a successful, probing the internal structure of the Moon. Ms. Nichols went on to continue to build her legacy. She will be missed!

And she passed knowing that she had made the highest accomplishment of all:

***She Had Made a Difference!***

## REFERENCES

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[https://en.wikipedia.org/wiki/Space\\_Shuttle\\_Enterprise#/media/File:The\\_Shuttle\\_Enterprise\\_-\\_GPN-2000-001363.jpg](https://en.wikipedia.org/wiki/Space_Shuttle_Enterprise#/media/File:The_Shuttle_Enterprise_-_GPN-2000-001363.jpg)

Picture of *Enterprise* and *Discovery* Together: <https://airandspace.si.edu/explore-and-learn/multimedia/detail.cfm?id=4054>

Intrepid Museum: Space Shuttle Pavilion:

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## Nichelle Nichols

Nichelle Nichols was the subject of a 2019 documentary, *Woman in Motion*, see: <https://www.imdb.com/title/tt4512946> and <http://womaninmotionmovie.com>

[Be sure to see!] The Smithsonian Channel posted a YouTube piece on Nichols' Radical Impact: [https://www.youtube.com/watch?v=rtMNAHwPSgA&ab\\_channel=SmithsonianChannel](https://www.youtube.com/watch?v=rtMNAHwPSgA&ab_channel=SmithsonianChannel)

A 2021 CBS piece about how *Star Trek* actress Nichelle Nichols changed NASA: [https://www.youtube.com/watch?v=gr0ux\\_Q9Tys&ab\\_channel=CBSMornings](https://www.youtube.com/watch?v=gr0ux_Q9Tys&ab_channel=CBSMornings)

Ms. Nichols wrote a book about her *Star Trek* experiences, entitled, *Beyond Uhura – Star Trek and Other Memories*, 1994, Putnam's Sons, ISBN-13: 978-0399139932. She also co-wrote a SF book with Margaret Wander Bonanno, *Saturn's Child*, ISBN-13: 978-0399141133.

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NPR: <https://www.npr.org/2022/07/31/1114792935/nichelle-nichols-dies-star-trek>

Last year's Item about Gene Roddenberry and the early days of *Star Trek*: [here](#).

*Smithsonian Magazine* article on 6/23/2011, "Q&A: Nichelle Nichols, AKA Lt. Uhura, and NASA" – it's no longer on the SM website, but archived here:

<http://blogs.smithsonianmag.com/aroundthemall/2011/06/q-a-nichelle-nichols-aka-lt-uhura-and-nasa>

Nichelle Nichols sang twice on the original series, most notably on the episode entitled, *Amok Time*, called *Beyond Antares*. She even recorded it, see/hear here:

<https://redshirtsalwaysdie.com/2021/04/02/must-hear-watch-nichelle-nichols-sings-beyond-antares>.

## DIDJA KNOW?

You Trekkers out there might be wondering why I omitted the **"first inter-racial kiss on TV"** from the Item of the Week. It didn't cause the stir it might have because it was obviously an act forced by malevolent aliens, not a romantic thing, and didn't have the civil rights component her position on the show did. I see the kiss as a gimmick, the only thing I can pleasantly remember about what was one of *Star Trek's* worst episodes. It wasn't the first inter-racial kiss on TV anyway; Nancy Sinatra had kissed Sammy Davis, Jr. on her variety show a few months earlier.

Gene Roddenberry met Nichelle Nichols when she guest-starred on an episode of *The Lieutenant*. Even though the show only lasted one season, it was where he met Gene Coon, Gary Lockwood, Leonard Nimoy, and D.C. Fontana! For more on Gene and *Star Trek's* early days, see [here](#).

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