CALL SIGN 'CEDAR':

REMEMBERING YURI GAGARIN, THE FIRST MAN IN SPACE

BY CLIFFORD R. MCMURRAY


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The Huntsville Times

Man Enters Space

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To Keep Up, U. S. A. Must Run Like Hell

Cosmonaut Yuri Gagarin became the first human in space in 1961.

IMAGE CREDIT: © COURTESY MSFC HISTORICAL ARCHIVE

The motherland hears, the motherland knows Where her son flies in the sky.

Yuri Gagarin was…whistling? As the world rolled beneath his Vostok spacecraft, and the Russian engineers following his flight listened to his radio transmissions, puzzled expressions gave way to smiles as they recognized the tune of a famous Russian patriotic song written by Shostakovich. Clearly, the first man in space was enjoying his trip.

It was a flight the 27 year old Soviet Air Force Lieutenant had looked forward to ever since earning his Air Force wings one month after Sputnik 1 shot into space. Less than two years later, while serving his first tour of duty in the far north of Russia, the Soviet space probe Lunik 3 returned the first pictures of the far side of the Moon. The call went out for volunteers for cosmonaut training, and he was quick to put his name on the list. Now, two years of intense training later, his moment in history had arrived.

108 MINUTES TO THE HISTORY BOOKS

The seven unmanned test flights of the Vostok gave no great cause for confidence that his flight would succeed. Although the last two flights had gone well, three of the first five had failed in ways that would have killed any human passenger. The last two, both conducted within the past month, had gone according to plan. But there were other dangers, as well. The plan for the first flight was to place the spacecraft in a low orbit that would decay rapidly and bring the pilot back safely to Earth after 10 to 12 days, even if the retrorockets failed. But the life support system had failed its long-duration test, and might not be able to hold out for that long, and neither the capsule nor his ejection seat were likely to float in the event of an emergency water landing.

Safety wasn't guaranteed for anyone in the program, even those staying on the ground. A test pilot had been killed while testing the Vostok ejection seat, and on March 23, less than a month before Gagarin's launch, fellow cosmonaut Valentin Bodarenko had died in a fire during a long-term isolation exercise in a chamber filled with pure oxygen – a mishap that would find an eerie echo in the American space program just a few years later, when the Apollo 1 fire took the lives of astronauts Grissom, White, and Chaffee.

It was thoughts like these that had given Chief Designer Sergei Korolev a sleepless night before the launch. The strains of the race with the Americans had likely contributed to his heart attack just months earlier. Even with his heart medication, he couldn't sleep. Since the launch of Sputnik 1 in October 1957, he'd managed to stay one step ahead of the Americans, collecting every significant record 'first' in the early laps of the space race. But despite the handicap of less powerful boosters – a handicap they were in the process of rectifying – the Americans were coming on strong, putting satellites into space at a pace three times faster than the Soviet Union. The American astronaut Alan Shepard was just weeks away from his own flight. It would be a suborbital hop, but still…

Officially, Gagarin reported that he slept soundly that night. But some time later, he privately admitted to Korolev that he hadn't slept at all.

On the way to the launch pad at Baikonur on the morning of April 12, 1961, Gagarin gave no sign of apprehension. As the bus rolled toward the pad, he felt a need to relieve himself before climbing into the capsule, so the driver stopped the bus and Gagarin got out to urinate on the bus tire – starting one of several preflight traditions that cosmonauts continue to this day. Securely strapped into the capsule, he asked for some music to listen to while the countdown proceeded.

This statue of Yuri Gagarin stands in Star City, the cosmonaut residence and training facility outside Moscow.

At 9:07 local time, the engines of the R-7 launch vehicle, a modified SS-6 ICBM, roared to life. *"Poyekhali!"* Gagarin called. "Let's go!" Minutes later, his booster had delivered him to the planned 196 x 98 nautical mile elliptical orbit. His description of his first view, like so many of the men and women who have followed him, made up in enthusiasm what it lacked in poetry: "I see the Earth! I see the clouds. It's beautiful; what beauty!"

The next hour and a half of his single orbit passed quickly. Thirty minutes after launch, Vostok 1 passed into the shadow of night. Surprisingly, although a television camera beamed pictures of Gagarin to the ground, Gagarin himself had been given no camera to capture the view out the portholes. He had to make do with dictating descriptions of what he was seeing into a tape recorder, and making notes in a notebook. At one point, he released his pencil and watched it floating before his eyes, but it moved out of his reach before he could retrieve it, so he put the notebook away. At 10:00 a.m. Baikonur time, as Vostok 1 passed over the South Pacific on its way around the tip of South America, Radio Moscow told the world that the first man in space was a Soviet citizen – Major Gagarin. The young Air Force officer that had lifted off the pad as a Lieutenant would be making his landing as a Major.

Already the flight was nearing its conclusion. The spacecraft began orienting itself for retrofire, and at 10:22 a.m., nearing the coast of Africa, the retros nudged the capsule into a lower orbit that would bring it home.

It was at this point that disaster nearly struck.

The service module that carried the retros, batteries, and other support systems for the capsule was supposed to be jettisoned. The bands attaching the capsule to the service module were released as scheduled, but the umbilical cable from the back of the capsule to the service module failed to detach. The capsule remained tethered to the service module as the reentry began, and it began to oscillate wildly. Gagarin could hear the crackling of the ablative material on his capsule burning. With the spacecraft not stabilized properly, would it burn through? But finally, the wild ride ended when the umbilical burned through and the two parts of the spacecraft separated. As the service module burned up, the capsule finally stabilized as intended.

Now there was just one more hurdle to cross to ensure a safe landing. At about 23,000 feet, as scheduled, the hatch blew off the capsule and Gagarin's ejection seat fired him out into the open air. The Vostok parachute wasn't big enough to lower the capsule to a soft landing, so all Vostok pilots would ride to Earth under a parachute of their own. (No mention of this unusual landing method was made at the time, out of concern that the flight wouldn't be recognized by the Federation Aeronautique Internationale [FAI], the world's governing body for aeronautical world records, as a 'first.' FAI rules for official recognition of a flight require that the pilot remain with his vehicle from takeoff to landing.)

As Gagarin touched Earth at 10:55 a.m. in the plowed field of a collective farm near the village of Smelovka, he looked around to see the astonished faces of his welcoming committee: an elderly peasant woman named Anna Takhtarova, a young girl, and a cow.

ENDINGS AND BEGINNINGS

Yuri Gagarin didn't live to see the end of the race to the Moon. He was killed in an accident in a Mig-15 training aircraft on March 27, 1968. He was cremated and buried in the Kremlin Wall on Red Square, Moscow. Visitors to his office in the cosmonaut training center in Star City today will see his office exactly as he left it, with his notes and appointment book still on the desk and the wall clock stopped at the time of his death. Cosmonauts have continued a tradition of visiting this office before their flights to sit at a table next to his desk, where they sign a book asking for his guidance and blessing on their own flight. Gagarin has become a secular saint of the cosmonaut corps.

Monuments to the first space traveler can be found in many places in Russia and in space. In addition to the statues in Star City and at Gagarin Square in Moscow, there are monuments at the site of his landing from space and the site of his fatal crash. A large impact crater on the far side of the Moon has been named for him, as has main-belt asteroid 1772 Gagarin. Neil Armstrong and Buzz Aldrin carried one of Gagarin's medals to the Moon, where it lies next to the descent stage of *Eagle* today.

Today, 50 years after his first flight, the Space Race in which Gagarin participated so ardently is a matter of history, as is the Soviet government whose banner he carried. Soyuz spacecraft carrying Russian cosmonauts and American astronauts – and paying passengers – lift off the same launching pad from which Gagarin flew, riding to orbit on a booster that is a direct descendant of the Vostok booster. Cosmonauts and astronauts work side by side on the International Space Station, along with astronauts from many other countries. They are all working and waiting together for the day when humanity will once more venture beyond the low Earth orbit that Gagarin pioneered. Human footprints in the lunar dust await the next visitors to the Moon. What will the next 50 years bring?

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STARMAN: THE TRUTH BEHIND THE LEGEND OF YURI GAGARIN

REVIEW BY CLIFFORD R. MCMURRAY

Writing accurate history isn't easy under the best of circumstances, and the propagandists of the Soviet Union made accurate fact-finding about people and events in Russia next to impossible for most of the 20th century. But there was a brief window of opportunity in the 1990s, after the fall of the communists and before the rise of Vladimir Putin, when the people and archives of the U.S.S.R. became accessible to dedicated western journalists. Jamie Doran, a BBC documentary filmmaker, took advantage of that window of opportunity to research and produce a biographical film and draft a biography about Yuri Gagarin. Doran was able to interview members of Gagarin's family, engineers and fellow cosmonauts, and even Gagarin's chauffeur and K.G.B. handlers. The result is a fine addition to our knowledge of the Soviet side of the space race, and a truthful look at a human icon.

Readers will be startled by many of the details in the book, such as the description of a pre-teen Yuri who became an unofficial member of the Russian resistance to German occupation during World War II, sabotaging the batteries of German tanks and trucks after a German soldier tried to hang his baby brother. And who would imagine that the first job he had as a young adult would be as foundry apprentice in a steel mill?

This book shows us an honest and decent man who began as a true believer in the communist state, and ended his short life disillusioned with the corruption of that system. However, he was still determined to do his best within that reality, and determined to fly in space again. Being introduced to the real man behind the cardboard cutout version of Soviet propaganda is a moving experience, and one that has been too long coming.

Title:	*Starman: The Truth Behind the Legend of Yuri Gagarin*
Authors:	Jamie Doran and Piers Bizony
Ages:	Young Adult and up
Format:	Trade Paperback
Pages:	256
Publisher:	Walker & Company
Date:	2011
Retail Price:	$16.00
ISBN:	978-0802779502