



Sixty Years of South Pole Flights

A single plane landed at the South Pole six decades ago this week, paving the way for groundbreaking science that continues today

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On October 31, 1956, a plane descended out of the clear, blue sky at the bottom of the planet. The twin-engine R4D-5 Skytrain, named *Que Sera Sera*, touched down on the frigid Antarctic plateau just yards away from the unmarked geographic South Pole. Though other planes had flown over the pole, this was the first ever to land there. The people on board were the first to set foot at 90 degrees south latitude since the ill-fated Robert Falcon Scott expedition 44 years before.

The successful flight paved the way for the South Pole to become, in the ensuing decades, the site of world-class scientific research. What was a remote and empty landing ground in 1956 is now the site for sophisticated equipment that conducts long-term monitoring of the Earth's atmosphere; instruments, such as BICEP and the South Pole Telescope, that study the origins and make-up of the cosmos; and the IceCube Neutrino Observatory, a massive particle detector built into the ice sheet.

But 60 years ago, the solitary plane piloted by Lt. Commander Conrad "Gus" Shinn, a veteran of the U.S. Navy's Antarctic operations, was the only artificial feature on the icescape. Shinn was accompanied by six Navy men including co-pilot Captain William "Trigger" Hawkes, Captain Douglas Cordiner and Rear Admiral George Dufek. Navigator John Swadener steered them south, J. P. Strider served as crew chief, while William Cumbie manned the radio.

"I was just keeping my mind on where we were and operating the aircraft because there were a lot of unknown unknowns," Shinn said in a recent interview with the Antarctic Sun.

As one of the most experienced pilots who had served in the Navy's Operation Deep Freeze, Shinn had flown many missions around the world and in the Antarctic.

"I've had a lot of experience with a lot of tricky flying, so it was just another one of them," Shinn said. "The weather was good, the aircraft was operating [well] and it was just another one of those flights. Of course there's nobody up on the surface up there to give you a hand if



photo: U.S. Navy

The R4D-5 Skytrain Que Sera Sera is parked at the South Pole behind the American flag after landing at the South Pole in 1956, the first plane ever to do so.

you did get into trouble."

After taxiing to a stop, Strider stepped out to pull down the plane's stairs, becoming the 11th person—and first American—to set foot at the South Pole. The admiral and two captains then walked out into the minus 60-degree (Fahrenheit) air, while Shinn and the crew stayed on the plane and kept the engines running. They planted the U.S. Flag at the pole and set up a radar reflector to guide future flights. After about 50 minutes, they climbed back on board the plane to return to McMurdo Station, more than 800 air miles away, their mission—to prove that flights to the South Pole were possible—accomplished.

But when Shinn first gunned the engines to takeoff, he was surprised to find that the plane wouldn't move. In the hour or so they had been at the pole, the plane's skis had frozen to the ice.

"We became stuck like if you put your hand on the freezer and it sticks," Shinn said. "We didn't think about that."

Thinking fast, Shinn started to fire the small jet assisted take-off rocket engines on the side of the plane for the extra thrust to dislodge the skis. After igniting all fifteen of the rocket engines, the plane finally broke free and the team was able to fly home.

Many more flights would soon follow as the Navy built the first South Pole station over the austral summer of 1956 and 1957.

Today, flights to the third iteration of the South Pole station are routine. Nearly all of the people arriving at the National Science Foundation's Amundsen-Scott South Pole Station fly in, as do most of their supplies.

Simply building the station, which required 12 years to complete and was dedicated in 2008, relied heavily on aviation. It required 925 flights by ski-equipped LC-130 aircraft flown by the N.Y. Air National Guard. At 26,000 pounds of cargo per flight, a total of 24 million pounds of cargo were transported, an almost unimaginable difference from Shinn's groundbreaking flight.