

over rough roads or a bridge." Another witness described "a rumble like that of a railway train or a distant waterfall." (No one mentioned beeps.) Because no reports later returned from across the Atlantic Ocean, many authorities assume that the Procession never reached Africa, but fell into the sea.

What was the Canadian Fireball Procession of 1913? A cluster of natural space-rocks that gravity dragged down from the atmosphere to an unmarked grave in the South Atlantic? One fact is certain: the massed display of flaming bodies, traversing the sky above the Great Lakes with militarylike precision, was not born of this Earth, because back in 1913 the aviation industry was just getting off the ground.

Only ten years had passed since the Wright Brothers were airborne in their marvelous flying machine at Kitty Hawk, North Carolina. When Canada entered the Air Age in 1909, a flimsy apparatus of silk and bamboo took to the air at Baddeck Bay, Nova Scotia, for a half-mile hop. In 1909, Louis Blériot was proud indeed to be the first aviator across the English Channel with a then-formidable flight of 31 miles. In the United States, several months later, Glenn H. Curtiss (who had recently been awarded this country's first pilot's license) won a \$10,000 grand prize for his 150-mile trip from Albany to New York City, averaging a breathtaking 50 miles an hour.

Another decade passed, however, before the broad Atlantic was spanned. In 1919, a U.S. Navy seaplane pushed from Newfoundland to the Azores, while a British lighter-than-air floated through a round trip to Mineola, New York, in 7 days—not counting time for stopovers. These ocean crossings still fell some 2,000 miles short of the Procession's astonishing flight-track of three years earlier.

Professor Chant was the first to propose that the "shower of stars" within the Canadian Fireball Procession consisted of swarms of meteors clutched by the Earth's gravitational pull and circling the globe as natural satellites—a myriad of mini-moons. He assigned these satellites the necessary velocity of 18,000 M.P.H. to keep them aloft, and positioned them in a neat circular orbit. His theory explained their horizontal track, level with the horizon, and constant altitude above the ground.

His calculated height of not more than 30 miles placed them in the denser layers of our atmosphere, causing them to burn red hot. According to the professor's theory, during their prolonged flight between

Saskatchewan and the coast of Brazil, they were totally consumed, with final remnants disappearing just below the equator. But other scientific minds soon criticized his explanation. One investigator, analyzing distances traveled by the Procession in the given time, arrived at a speed of less than half the 18,000 M.P.H. necessary to keep the satellites airborne. He further insisted that unless the objects were of great tonnage, they would have burned out long before finishing their 5,600-mile trek.

Another authority flatly rejected Chant's hypothesis, stating that the circular orbit and low altitude made his theory impossible. This scientist argued that our Earth is not a perfect ball: it protrudes many miles at the equator; the entire fleet of "meteors," therefore, would have collided with this bulge before reaching Brazil.

The few scientists still interested in the Procession today retain Chant's basic premise of natural meteors, while altering the mechanics of his explanation. One theory replaces the straight-line parade of objects with a towering swarm of space-rocks, orbiting the Earth in a stack perhaps hundreds of miles high. According to this hypothesis, gradually the "flying gravel pit" lost altitude. As the lower echelons of pellets trespassed into our guardian air, they briefly became luminous in the night—single clusters of shooting stars, each flaring and dying within seconds, yet creating the illusion of a "procession" across the sky.

In 1961, a high-ranking official from NASA's Goddard Space Flight Center offered an even more sophisticated explanation in *Sky and Telescope* magazine. He was looking to aerial displays like the Procession as rationale for the origin of tectites. These beautiful glassy objects in bottle-green, black, and brown are shaped like buttons and tiny dumbbells. Rare to most parts of the world, tectites are highly prized by laboratories, museums, collectors.

The NASA scientist first assured his readers, "Many of the shower's phenomena are illuminated by the physical and engineering studies, especially of satellite re-entry, that have been made in the last few years."

For his theory he then replaced the flying gravel pit with an enormous space-rock traveling around our planet in a grazing orbit, making a complete revolution of the globe once every 91½ minutes. Slowly this huge asteroid started dropping lower, theorized the official, to be blasted by furnace-hot temperatures of atmospheric friction. The melting surface spewed off droplets of molten material that observers identified as shooting stars, and that undoubtedly congealed in the air to fall as