

Of the millions of technical components which all had to perform in perfect working order, so as to ensure a safe landing on the Moon, I can only record a few here, which particularly impressed me. At the ‘Cape’ itself, there was the unforgettable ‘crawler’, a gigantic moving platform to transport—in its vertical position—the completely assembled Saturn V rocket with its attached, ‘umbilical’ tower, serving as essential support and as a fuel pipe.

Inside the VAB, all rocket components were erected, one on top of another, and in this vertical position had to be moved, on the crawler, proceeding at walking pace, to the launch site, 5.6 km away. To do this, two 2750 horse power diesel generators produced electricity to drive 16 electric motors which in turn moved four huge First-World-War tanks under the corners of the crawler. It weighed almost 3000 tons and was able carry a load of 5900 tons. It was an almost outrageous concept to let sensors keep the 110 m tall rocket perfectly vertical and move it in that position over several kilometers. But the engineering genius of its designers made it work perfectly, as the whole world was able to see on television.

Even more impressive—with imagination—was the large amount of computer-crunching that lay behind the many stages of each Apollo voyage. From launch to splash-down, which took up to 12 days, there were 16 crucial points where decisions had to be made, commands to be issued from Mission Control in Houston to the spacecraft, where they had to be executed correctly to the second, absolutely essential to keep the spacecraft on its true flight-path over more than 400000 km from Earth to Moon, and back. Very large computers were needed in the 1960s to calculate orbital corrections, too heavy to carry aboard. Only simple calculations were possible on the spacecraft.

The third and most admirable triumph was the human performance of all astronauts, at least during their active service with NASA. The only astronaut whom I personally knew well was Michael Collins of Apollo 11. After his service with NASA, he was appointed Director of the National Air and Space Museum in Washington where I often met him and liked, respected and admired him sufficiently to invite him to join the Editorial Board of ISR.

As a general comment on the Homeric crew of Apollo astronauts: They behaved in “Triumph and Disaster” as Officers and Gentlemen—which they were—selected from the hundreds of applicants, predominantly from the officer corps of the American Navy, Army and Air Force. Many had scientific degrees, all were male and white. Destined to become heroes, they played their role perfectly, whatever they may have thought and felt during the tedious press conferences, during their White House visits, World Tour and all-too-rare Ticker-Tape parades in New York.