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By MICHAEL WILSON

MM One small step for Man . . ."

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AN STOOD FOR THE FIRST TIME

on another planet last Monday
morning, July 21. An estimated
600 million people, the largest-ever live
audience to watch any human en-deavour, saw on television the bulky figure of the Apollo 11 commander, Neil Armstrong, climb backwards down the aluminium ladder, place his right foot in the spacecraft landing pad, and gingerly step down to the surface of the Moon. Science fiction became fact; the dream of centuries was realised. |
But the first walk on the Moon was almost anti-climactic after the tense period beginning with the separation of Columbia and Eagle (see pages 150-152 of this issue), and leading up to the land-ing. At 1847 BST the two craft undocked and separated slightly, allowing Collins in the command and service module to inspect the LM visually for damage. Adding further drama to this great adventure was the news from Jodrell Bank, at 1925 BST, that the enigmatic Luna 15 had changed its orbit, and was now within ten miles of the surface. Were the Russians planning a simul-taneous landing? No one knew. After a final "clear" from Houston, the LM descent engine was fired (behind the Moon) on the 13th orbit at 2011 BST on

Sunday in the de-orbit burn, to reduce the velocity of the spacecraft so as to put it on a collision-course with the Moon. The command module appeared from behind the Moon, at 2047 BST. Collins' comment was: "Everything's going . just swimmingly." Two minutes later the LM appeared, the imperturbable Armstrong reading out a string of computer data.
During this stage the LM was in a ballistic trajectory, following very closely the computed flight-path, which was vir-tually identical to that of Apollo 10. As a result of the data returned by this flight, a new mathematical model of the Moon and its perturbing mascons had been prepared by Boeing for Appollo 1-1. During the descent some trouble was experienced with voice transmissions from Eagle, owing to an oscillatory con-dition with the steerable communication antenna, and this emphasised the out-standing quality of voice reproduction otherwise characteristic of this flight.
At 2101 BST: "Eagle from Columbia. You're go for PDI" (the CM was relaying the power-descent initiation signal from Houston to the LM); 5min later Eagle had arrived at the "high gate," 50,000ft above the Moon and 260 n.m. from the predicted touchdown

point. With the continued slight pitch-down of the LM, this was the first occasion on which Armstrong and Aldrin were able to see the surface since beginning the de-orbit manoeuvre The descent engine was fired again t provide the braking thrust.
The most critical part of the flight was now approaching. At about 39,500ft the all-important landing radar was switched in to update the altitude data in the LM guidance computer. During this

time each astronaut was paying partcular attention to three instruments: th
spacecraft flight director, the fuel gauges and the indicator displaying range and altitude and their corresponding rates The clipped comments continued steadily "You're go to continue powered descent

(Houston, 2110 BST). "Good radar returns, altitude 33,000ft. This is better
than the simulator" (Eagle, 2112 BST) "Things look real good, you're go for landing." "Fourteen hundred feet, still looking very good" (Houston). Arm-strong had now taken over manua control in order to traverse a football-pitch-sized shallow crater filled with a large number of boulders and rocks.

The stream of comments from Eagle became even more clearly audible "Seven hundred feet, 21 down, 33° . .