Lunar Exploration (2)
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AFRICA'S PROGRESS TOWARDS HUMAN & ROBOTIC SPACE EXPLORATION

Abstract

In 1970, a Zambian-based Sister named Mary Jucunda wrote a letter to the then Assocciate Director of Science at NASA'S Marshall Space Flight Center, inquiring about his continuing research into a piloted mission to Mars. Her question was simple, she wanted to know the rationale behind spending billions of dollars on space exploration, when there were many starving children all around the world. Today, this same question reverberates through the collective consciousness of African minds. This time, the question is: "Why is Africa so invested in advancing this cause? What does Africa stand to gain from human and robotic space exploration?" To answer this question, it's best to begin with a brief exposé on the progress made in this field. It may surprise most to know that Africa has made tentative but meaningful steps to realising this ambition, and the resulting spin-off benefits are impressive. We have been closely mapping Africa's initiative and development level in terms of human and robotic exploration of the solar system, and so far, we have determined that Africa has at least 5 astronauts, 4 analog sites, more than 80 NewSpace startups, 12 countries with space professionals, and more than 25 countries with space educational programmes, all of which have some focus on human and robotic space exploration of the solar system. That said, this presentation will unpack each node of this space exploration journey from an engineering and law perspective, highlighting interesting case studies and afrocentric examples along the way. This paper presents the challenges, opportunities and progress towards Africa's autonomy in human and robotic space exploration, and the authors opine that this is will be an integral component of the African space industry development.