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A New Chapter in Space: Pakistan's Launch of iCube Qamar

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(By Muhammad Awais)

In an age where the stars are not just points of light but destinations, Pakistan has solidified its presence in the cosmos with the successful deployment of two satellites prior to its latest venture. The Pakistan Remote Sensing Satellite (PRSS), an earth observation optical satellite, was launched from China's Jiuquan Satellite Centre on 9 July 2018. Alongside it, the Pakistan Technology Evaluation Satellite (PakTES-1A) marked Pakistan's earnest beginnings in space technology. Building on this foundation, Pakistan has now made a monumental stride into the final frontier with the launch of its first satellite, iCube Qamar. This landmark event, in collaboration with China's Chang'E6 mission from Hainan, China, signifies not only a technical achievement but also a bright new chapter in Pakistan's space exploration narrative.

As the rocket soared into the azure sky from Hainan, carrying iCube Qamar, it symbolized an example of innovation and international cooperation. This satellite, a product of profound collaboration between the Institute of Space Technology (IST) in Islamabad, China's Shanghai University, and Pakistan's national space agency, SUPARCO, indicates the technological prowess and scientific ambition of Pakistan in the field of space technology. The design and development of iCube Qamar by IST, underline the importance of international partnerships in achieving technological milestones. As noted in Tariq Malik's The Stars Beckon, "The partnership between nations in space endeavors is not merely about sharing resources; it's about bridging humanity." This collaborative spirit is vividly captured in the joint mission, illustrating how teamwork on a global scale can lead to breakthroughs that benefit multiple nations.

Renowned astrophysicist Carl Sagan, in his book Cosmos, reflects on the power of human imagination in propelling us to the stars. iCube Qamar is a testament to the endless potential of concerted human creativity and technical skill. It stands as a beacon, guiding the way towards a future where Pakistan not only participates in space exploration but also contributes significantly to our collective understanding of the universe. The capabilities of the satellite extend into critical areas such as environmental monitoring and disaster management. Echoing the sentiments of Rachel Carson from her work, Silent Spring, "The human race is challenged more than ever before

to demonstrate our mastery, not over nature but of ourselves." iCube Qamar, in this regard, serves as a pivotal tool for sustainable development and responsible environmental stewardship in Pakistan.

Furthermore, iCube Qamar's mission parameters include advanced Earth imaging technologies, which are crucial for precise and efficient natural resource management. By providing vital data on water resources, forest cover, and urban expansion, the satellite will play a significant role in shaping Pakistan's policies on environmental conservation and urban planning. The satellite is equipped with experimental payloads designed to test new technologies in communication and navigation. These tests are aimed at improving data transmission rates and reliability, which are essential for enhancing Pakistan's capabilities in satellite communication infrastructure.

The launch of iCube Qamar is a landmark step in Pakistan's journey through space, signifying both progress and the bright promise of future achievements. This landmark episode is not merely about showcasing technological capabilities but is also an evidence to the dreams and aspirations of a nation eager to explore new horizons. Reflecting on our quest to understand the cosmos, astrophysicist Neil deGrasse Tyson in Astrophysics for People in a Hurry reminds us of our responsibility to pursue knowledge of the universe. Pakistan, through initiatives like iCube Qamar and its collaboration with global partners, holds this challenge, poised to uncover new knowledge

and inspire generations.

In sum, the successful launch of iCube Qamar with China's Chang'E6 marks a significant advance in Pakistan's space capabilities and underscores its commitment to contributing valuably to the international space community. It personifies the spirit of innovation and discovery that will undoubtedly propel Pakistan to new heights in the dominion of space exploration.

Pakistan Zindabad!

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"The writer is an engineer by vocation and has a deep, research-based knowledge of Pakistan's polity."

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