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CASES STUDIES OF INNOVATIVE APPLICATIONS IN SPACE TECHNOLOGIES

Abstract

By developing for more than half a century, the research for space technologies is not conducted in a vacuum of simply providing for military or political objectives. Space technologies are also being applied to promote the general welfare. Many key technologies for aerospace are benefiting our everyday lives. For example, nuclear magnetic resonance spectrometer and CT technology are developed on the digital signal processing technology of the Apollo program. Electronics that use wide-bandgap semiconductors were pioneered for advanced radar systems and are now essential to modern communications equipment from satellites to cell phones. Today, many communications technologies, such as code division multiple access(CDMA) which is used in cell phone systems worldwide, owe part of their success to space related technologies. In China, there are also many successful cases of innovative applications in space technologies that promote the economy and science, such as the fire extinguishing systems of the high-rise buildings and the concept of smart cities. This paper will discuss several special stories in this topic to show that space technologies now serve the common good.