EARTH OBSERVATION SYMPOSIUM (B1)
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EARTH OBSERVATION SYSTEM BASED ON TELESCOPES

Abstract

This paper presents a micro-based telescopes to achieve low cost, High-resolution Earth observation system. The system consist of commercial camerastelescopes and reinforced base composition. The system achieve in less than 1m resolution in the 350km 400km orbital altitude. The system will meet many Performance requirements such as: Adaptive focusing in orbitAdaptive lossless image compressionWireless image transmission and so on. In the system development. Extensive use of commercial electronic components to reduce the cost of software development radically. And using protocols industry accepted and open source software greatly reduces the difficulty of development. Rapid customization and development of short-cycle become easy. Earth observation system based on Telescopes mounted onto microsatellite platform. And the satellite ,weighted 100kg, has rapid mobility and remote delivery capability. The platform, stone six stars, has been quick launched through small carriage. And It has the ability to network formation on orbit. Through the design and principium argumentation of this system, it indicate that the system could implement high precision and high dynamic earth imaging in low orbit. The same time, the system also achieves the survey to soil vegetation, humidity and ice-covered and fire and water etc.